Gwinnett’s curriculum for grades K–12 is called the Academic Knowledge and Skills (AKS). The AKS for each grade level spells out the essential things students are expected to know and be able to do in that grade or subject. The AKS offers a solid base on which teachers build rich learning experiences. Teachers use curriculum guides, technology, and instructional resources to teach the AKS and to make sure every student is learning to his or her potential.

The Academic Knowledge and Skills was developed by our teachers, with input from our parents and community, in response to Gwinnett County Public Schools’ mission statement:

*The mission of Gwinnett County Public Schools is to pursue excellence in academic knowledge, skills, and behavior for each student resulting in measured improvement against local, national, and world-class standards.*
Basic Skills of Marketing

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Basic Marketing Concepts
  • define and apply basic marketing concepts to make decisions and solve problems

C - Basic Economic Concepts
  • define and apply basic economic concepts

D - Entrepreneurship and Marketing
  • examine the relationship between entrepreneurship and marketing

E - Marketing Research
  • define and apply marketing research and explain its value to a business

F - Effective Presentations
  • use technology to develop and deliver formal presentations

G - Student Organizations
  • apply professional, leadership, and marketing skills resulting from participating in the local and state marketing and hospitality student organization, DECA

H - Career Portfolios
  • develop a career portfolio
6th Grade Connections-Career and Technical Education

Business and Computer Science

A - Keyboarding
    • develop keyboarding skills by touch with speed and accuracy

B - 21st Century Skills
    • develop and model employability skills
    • develop an individual career plan reflecting personal traits and beliefs

C - Computer Applications
    • apply basic word processing skills to documents
    • utilize a spreadsheet application
    • investigate the use of database application
    • utilize desktop publishing software
    • design and produce a multimedia presentation

D - Internet and Safety
    • demonstrate computer safety and file maintenance
    • discuss Internet safety and security issues
    • utilize the Internet as a resource

E - Information Systems
    • classify computer system components

F - Literacy Standards
    • cite specific textual evidence to support analysis of technical texts
    • determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions
    • follow precisely a multistep procedure when performing technical tasks
    • determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific technical context
    • analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to an understanding of the topic
    • analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text
    • integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table)
6th Grade Connections-Career and Technical Education

F - Literacy Standards (continued)

• distinguish among facts, reasoned judgment based on research findings, and speculation in a text
• compare and contrast the information gained from experiments, simulations, video or multimedia sources with that gained from reading a text on the same topic
• read and comprehend technical texts in the grades 6-8 text complexity band independently and proficiently by the end of grade 8
• write arguments focused on discipline-specific content
• write informative/explanatory texts, including the narration of historical events or technical processes
• produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience
• develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience
• use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas clearly and efficiently
• conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration
• gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation
• draw evidence from informational texts to support analysis reflection, and research
• write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences
6th Grade Connections-Career and Technical Education

Career Connections

A - Interpersonal Skills
- identify positive interpersonal skills

B - Management Skills
- discover management skills

C - Goal Setting
- identify employability and educational goals

D - Literacy Standards
- cite specific textual evidence to support analysis of technical texts
- determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions
- follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks
- determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific technical context
- analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to an understanding of the topic
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- develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience
6th Grade Connections-Career and Technical Education

D - Literacy Standards (continued)

• use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas clearly and efficiently
• conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration
• gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation
• draw evidence from informational texts to support analysis reflection, and research
• write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences
A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Safety
   • demonstrate proper safety techniques and tool usage in the engineering and technology laboratory

C - Impact of Technology
   • identify engineering and technology and its impact on society

E - Engineering Design Process
   • apply the engineering design process to generate a solution to hands-on design challenges

F - Careers
   • examine and research careers in fields related to engineering & technology

G - Student Organizations
   • explore how related career and technology student organizations are integral parts of career and technology education courses; students will develop leadership, interpersonal, and problem-solving skills through participation in co-curricular activities associated with the Technology Student Association (TSA)
6th Grade Connections-Career and Technical Education

Exploring Marketing Education

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Marketing Concepts
   • define and apply foundational concepts in business, marketing and entrepreneurship

C - Functions of Marketing
   • utilize foundational knowledge of marketing concepts to understand the seven functions of marketing (distribution, marketing information management, product service management, pricing, financing, selling, and promotion)

D - New Product Development
   • utilize elements of the marketing functions to develop a new product

E - Communication and Promotion
   • utilize foundational knowledge of presentation skills to gauge the impact of communication and promotion on products and services in the marketplace

F - Leadership Development
   • apply professional, leadership, and marketing skills resulting from participating in the local and state marketing and hospitality student organization, DECA

G - Career Portfolio
   • develop a career portfolio
Family and Consumer Science

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Student Organizations
  • examine how related student organizations are integral parts of career and technology education courses through leadership development, school, and community service projects, and competitive events

C - Nutrition and Food Science
  • apply principles of nutrition and food science and their relationships to human growth, development, health and wellness using technology and hands-on experiences to support informed decision-making skills needed to maintain a healthy lifestyle

D - Culinary Arts
  • analyze and apply culinary-related knowledge, technology and skills necessary for food preparation and service in a safe and sanitary work environment

E - Fashion Design
  • analyze factors (i.e., social, psychological, cultural, economic) affecting fibers and apparel decisions for individuals and families

F - Interior Design
  • analyze factors (i.e., social, psychological, cultural, economic) affecting housing and interior design decisions for individuals and families

G - Early Childhood Education
  • examine the growth and development of the child, ages birth to five

H - Teaching as a Profession
  • examine the knowledge, skills, and practices of the educational workforce

I - Finance
  • explain the relationships of social (family/friends) and financial (money) skills needed to develop personal and business interactions

J - Consumers
  • analyze factors (i.e., social, psychological, cultural, economic) affecting consumers (individuals) and business decisions for individuals and families
6th Grade Connections-Career and Technical Education

Family and Consumer Science

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Student Organizations
   • examine how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, and competitive events

C - Nutrition and Food Science
   • apply principles of nutrition and food science and their relationships to human growth, development, health, and wellness using technology and hands-on experiences to support informed decision-making skills needed to maintain a healthy lifestyle

D - Culinary Arts
   • employ culinary-related knowledge, technology and skills necessary for food preparation and service in a safe and sanitary work environment

E - Fashion Design
   • analyze factors (social, psychological, cultural, economic) affecting apparel decisions for individuals and families

F - Interior Design
   • analyze factors (i.e., social, psychological, cultural, economic) affecting housing and interior design decisions for individuals and families

G - Early Childhood Education
   • explore the growth and development of the child, ages birth to five

H - Teaching as a Profession
   • identify the knowledge, skills, and practices of the educational workforce

I - Finance
   • identify and explain the relationships of social (family/friends) and financial (money) skills needed to develop personal and business interactions

J - Consumers
   • compare and contrast factors (i.e., social, psychological, cultural, economic) affecting consumers (individuals) and business decisions for individuals and families
Family and Consumer Science

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Student Organizations
  • examine how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, and competitive events

C - Nutrition and Food Science
  • apply principles of nutrition and food science and their relationships to human growth, development, health and wellness using technology and hands-on experiences to support informed decision-making skills needed to maintain a healthy lifestyle

D - Culinary Arts
  • identify and apply culinary-related knowledge, technology and skills necessary for food preparation and service in a safe and sanitary work environment

E - Fashion Design
  • analyze factors (i.e., social, psychological, cultural, economic) affecting fibers and apparel decisions for individuals and families

F - Interior Design
  • explore factors (i.e., social, psychological, cultural, economic) affecting housing and interior design decisions for individuals and families and their overall impact

G - Early Childhood Education
  • explore the growth and development of the child, ages birth to five

H - Teaching as a Profession
  • determine the knowledge, skills, and practices of the educational workforce

I - Finance
  • explain the relationships of social (family/friends) and financial (money) skills needed to develop personal and business interactions

J - Consumers
  • determine factors (i.e., social, psychological, cultural, economic) affecting consumers (individuals) and business decisions for individuals and families
6th Grade Connections-Career and Technical Education

Foundations of Business Administration

A - Employability Skills
• demonstrate employability skills required by business and industry

B - Technology Concepts
• demonstrate functional understanding of technology concepts, systems, and their interactivity

C - Digital Citizenship
• integrate technology in a social, legal, ethical, and safe manner to become lifelong digital citizens

D - Learning, Creativity, and Productivity
• use integrated software as a tool to enhance learning and creativity and to increase productivity in developing projects

E - Business Communications
• apply concepts of effective business communications to relationships as well as documents and correspondence

F - Creating a Positive Business Image
• apply concepts of creating a positive business image and front office environment to serve potential customers

G - Student Organizations
• examine how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, and competitive events
Foundations of Business Management

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Entrepreneurship
  • understand the opportunities and nature of business, the role of an entrepreneur, and the subset of skills most commonly required of an entrepreneur

C - Effective Communications Skills
  • demonstrate effective ways to present ideas to others regarding business opportunities

D - Fundamental Business Decisions
  • understand basic business ideas that affect fundamental business decisions such as the feasibility of a business and its legal form of business ownership

E - Economic Principles and Concepts
  • understand and apply basic economic principles and concepts that are fundamental to entrepreneurship

F - Marketing
  • determine how to identify, reach, and retain customers in a specific target market using a marketing plan

G - Financial Needs
  • understand the financial needs to start and maintain a healthy business venture

H - Operations and Management
  • manage and operate a real business or simulate the operation and management of a business

I - Student Organizations
  • examine how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, and competitive events
Foundations of Computer Programming

A - Employability Skills
   • demonstrate employability skills required by business and industry to explore, research, and present careers in information technology

B - Basic Computing and Programming
   • explore and explain the basic components of computers and their relationships to programming

C - Computational Thinking
   • utilize computational thinking to solve problems

D - Programming
   • design, develop, debug and execute computer programs

E - Hardware and Software
   • compare and contrast the relationship between computer hardware and software

F - Digital Artifacts
   • create digital artifacts to address a current issue
Foundations of Interactive Design

A - Employability Skills
  • demonstrate employability skills required by business and industry to explore, research, and present careers in information technology

B - Web Development
  • develop a plan to create, design, and build a website with digital content to a specific target market

C - Digital Design
  • design digital products that reveal a professional layout and look by applying design principles to produce professional quality digital products

D - Web Design
  • create a single functional web page using a web development platform based on a design mockup and user requirements

E - Site Testing
  • develop and use a test plan to debug each new website version to ensure it runs as intended and meets the end-user requirements for a responsive site

F - Game Design
  • develop a plan to create, design, and build a game with digital content for a specific target market

G - Visual Modeling
  • develop a visual model of a game using the Game Design Document (GDD)

H - Game Development
  • create a functional game, using a game development platform, based on the storyboards, wireframes, and comprehensive layout

I - Game Testing
  • develop a test plan to debug and use each time a version of the game is released to ensure it runs as intended and meets the end-user requirements
6th Grade Connections-Career and Technical Education

Foundations of Investing and Finance

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - The Banking Industry
  • investigate the financial terms and concepts involved in the banking industry

C - Personal Financial Goals
  • identify the characteristics and necessary choices associated with the establishment of personal financial goals

D - Financial Services Industry
  • evaluate and investigate the industry of financial services

E - Accounting Procedures
  • connect accounting procedures to real world experiences

F - Free Enterprise System
  • apply the concepts of free enterprise to the operations of a company

G - Financial Technology (FinTech)
  • explore the changing trends in the use of technology in finance, accounting, and banking (FinTech)

H - Student Organizations
  • examine how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, and competitive events
Foundations of Secure Information Systems

A - Employability Skills
   • demonstrate employability skills required by business and industry to explore, research, and present careers in information technology

B - Components of Computers and Networks
   • investigate and identify the basic components of computers and networks

C - Computational Thinking
   • use computational thinking procedures to analyze and solve problems current to everyday life

D - Networks
   • investigate ways to differentiate networks and how they are used

E - Open Systems Interconnection
   • evaluate and provide a rationale for the levels of the Open Systems Interconnection (OSI) model

F - Basics of Cybersecurity
   • examine the basics of cybersecurity needs for business, government, and organizations

G - Cybersecurity Applications
   • cite evidence regarding the principles of cybersecurity and basic mechanisms used for protecting data and resources

H - Digital Citizenship and Ethics
   • analyze and describe the characteristics of cybersecurity ethics, digital citizenship, and laws governing privacy
6th Grade Connections-Career and Technical Education

Healthcare Diagnostics and Support Services

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Safety in the Health Care Workplace
   • demonstrate the correct work-safety practices and infection control precautions required to ensure a safe work environment in a healthcare setting

C - Careers in Health Care
   • summarize the career aspects and applied anatomy associated with the field of clinical lab diagnostics
   • demonstrate skills and understanding of applied anatomy associated with the field of phlebotomy
   • describe the career aspects and applied anatomy associated with the field of Non-Invasive Diagnostic Technology
   • summarize the careers in the field of support services and understand their role in the field of healthcare

D - Student Organizations
   • explore how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, entrepreneurship development, and competitive events
Healthcare IT and Biotechnology

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Safety in the Health Care Workplace
  • demonstrate the correct work safety practices and infection control precautions required to ensure a safe work environment in a healthcare setting

C - Health Informatics and Health Information Technology
  • explain the strategies used in the field of health informatics and health information technology to protect and ensure patient privacy

D - Health Informatics and Health Information Technology
  • explain and practice common health informatics and health information management office procedures

E - Careers in Biotechnology Research and Development
  • summarize careers, apply skills, and understand anatomy concepts used in the field of biotechnology research and development

F - Student Organizations
  • explore how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, entrepreneurship development, and competitive events
Junior Leadership Corps 6

A - Leadership
- identify key concepts of leadership
- describe and analyze the qualities of leaders and followers
- compare and contrast leadership and followership
- recognize leadership strengths and weaknesses
- demonstrate basic drill movements
- present a professional image through appearance, behavior, and verbal and non-verbal communication
- apply leadership and teamwork skills in collaborating with others to accomplish organizational goals

B - Communication
- compare and contrast verbal and nonverbal means of communication
- communicate using effective writing, speaking, and listening skills
- demonstrate how to communicate effectively as a leader

C - Health
- explain how health impacts personal success
- determine strategies for finding balance between school, personal life, and extra-curricular activities
- explain how nutrition impacts health
- evaluate the consequences of an unhealthy lifestyle

D - Physical Education
- explain the purpose and benefits of physical activity
- identify personal strengths and weaknesses in both individual and group settings
- participate in health-enhancing fitness activities
- demonstrate how to work cooperatively and productively in both cooperative and competitive settings
Law and Public Safety 6

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Careers in Fire and Emergency Management Services
   • explore and evaluate careers in Fire and Emergency Management Services and the
     roles of the various agencies

C - Qualifications for Careers in Emergency Medical and Fire Services
   • identify and describe aspects of fire services

D - First Aid
   • demonstrate the ability to perform head-to-toe assessments and perform basic life-
     saving skills

E - Personal Disaster Planning
   • understand the importance of personal disaster planning and will understand what
     to do in the event of an emergency

F - Federal Emergency Management Agency (FEMA) and Georgia Emergency
   Management Agency (GEMA)
   • describe the roles of the Federal Emergency Management Agency and Georgia
     Emergency Management agency in both natural and man-made disasters

G - Student Organizations
   • explore how related student organizations are integral parts of career and
     technology education courses through leadership development, school and
     community service projects, entrepreneurship development, and competitive
     events
Peer Leadership

A - Introduction to Peer Leadership
• describe the role, functions, and characteristics of a peer leader
• adhere to established ground rules and the National Peer Helping Association ethical guidelines

B - Relationships
• explore and apply the fundamental characteristics of facilitative relationships and communication skills
• identify and demonstrate interpersonal skills necessary to maintain positive peer relationships

C - Problem-Solving
• demonstrate an understanding of problem-solving and/or mediation techniques
• identify methods of conflict/anger management

D - Impact of Biases
• explore the concepts of prejudice and discrimination and their impact on peer relationships

E - Group Dynamics
• identify elements of group interaction
• utilize elements of successful group interactions by participating in a variety of roles within group settings
• participate in assigned targeted groups within the school community

F - Peer Pressure
• define positive and negative aspects of peer pressure
• indicate a variety of alternatives to negative peer pressure

G - Personal Goals
• explore how personal responsibility relates to long and short range life and career goals

H - Peer Tutoring
• establish roles, responsibilities, and procedures related to peer tutoring including effective study habits, test-taking skills, and time management

I - Intervention Strategies
• demonstrate knowledge and skills of peer leadership intervention strategies in a variety of settings
6th Grade Connections-Career and Technical Education

J - Projects

• utilize knowledge and understanding gained through individual and/or group projects
Study Skills

A - Interpersonal Skills
- describe and demonstrate the attitudes and habits necessary for school success
- demonstrate appropriate and effective study methods

B - Goal Setting
- set and work towards appropriate goals

C - Communication
- read for the purposes of gathering information and/or following directions
- learn appropriate listening skills

D - Organization and Time Management
- demonstrate efficient organization and management of time
- demonstrate efficient organization and management of materials and space

E - Problem Solving
- select and demonstrate appropriate problem-solving strategies (e.g., math word problems, brain teasers, personal problem-solving, and study methods)

F - Graphic Aids
- use graphic aids found in textbooks and other sources of information (e.g., maps, graphs, charts, and tables)

G - Test Strategies
- identify appropriate test-taking strategies
Biotechnology

A - Characteristics of Science

- discuss the importance of curiosity, honesty, openness, and skepticism in science and exhibit these traits in efforts to understand how the world works
- design and conduct scientific investigations
- use standard safety practices for all classroom laboratory and field investigations
- use technology to collect, observe, measure, and organize data
- use valid critical assumptions to draw conclusions
- apply computation and estimation skills necessary for analyzing data and developing conclusions
- communicate scientific investigations and information clearly

B - Academic Knowledge

- define biotechnology and explain its application in society
- describe the ethical, moral, and legal issues in the modern world of biotechnology
- describe the types of careers available in biotechnology
- explain how basic chemistry concepts affect living organisms
- analyze basic skills/technologies necessary to be successful in the biotechnology workplace
- describe how biotechnology products are introduced and marketed

C - Literacy Standards

- cite specific textual evidence to support analysis of technical texts
- determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions
- follow precisely a multistep procedure when performing technical tasks
- determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific technical context
- analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to an understanding of the topic
- analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text
- integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table)
C - Literacy Standards (continued)

- distinguish among facts, reasoned judgment based on research findings, and speculation in a text
- compare and contrast the information gained from experiments, simulations, video or multimedia sources with that gained from reading a text on the same topic
- read and comprehend technical texts in the grades 6-8 text complexity band independently and proficiently by the end of grade 8
- write arguments focused on discipline-specific content
- write informative/explanatory texts, including the narration of historical events or technical processes
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- draw evidence from informational texts to support analysis reflection, and research
- write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences
7th Grade Connections-Career and Technical Education

Business and Computer Science

A - Keyboarding Skills
• build and expand proficiency in keyboarding

B - 21st Century Skills
• demonstrate employability skills
• examine pathways to a successful career in Business and Computer Science

C - Computer Applications
• utilize word processing software to create, edit, and manipulate word processing documents
• utilize spreadsheet software to create, edit, and manipulate spreadsheet documents
• utilize database software to create, edit, and manipulate a database
• utilize multimedia software to create, edit, and manipulate a multimedia presentation
• utilize software related to web page design to plan, design, and create a web page

D - Programming
• design a given program to demonstrate an understanding of basic programming concepts

E - Internet and Safety
• investigate the accuracy of Internet-based information
• distinguish between ethical and unethical behaviors when using the Internet
• distinguish among various types of networks

F - Introduction to Business
• identify concepts and fundamentals of entrepreneurship and business ownership

G - Literacy Standards
• cite specific textual evidence to support analysis of technical texts
• determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions
• follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks
• determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific technical context
• analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to an understanding of the topic
7th Grade Connections-Career and Technical Education

G - Literacy Standards (continued)

• analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text

• integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table)

• distinguish among facts, reasoned judgment based on research findings, and speculation in a text

• compare and contrast the information gained from experiments, simulations, video or multimedia sources with that gained from reading a text on the same topic

• read and comprehend technical texts in the grades 6-8 text complexity band independently and proficiently by the end of grade 8

• write arguments focused on discipline-specific content

• write informative/explanatory texts, including the narration of historical events or technical processes

• produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience

• develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience

• use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas clearly and efficiently

• conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration

• gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation

• draw evidence from informational texts to support analysis reflection, and research

• write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences
7th Grade Connections-Career and Technical Education

Career Connections

A - Interpersonal Skills
   • apply positive interpersonal skills to class and community situations

B - Management Skills
   • apply management skills to everyday lives

C - Employability Skills
   • explore employability and educational options

D - Literacy Standards
   • cite specific textual evidence to support analysis of technical texts
   • determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions
   • follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks
   • determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific technical context
   • analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to an understanding of the topic
   • analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text
   • integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table)
   • distinguish among facts, reasoned judgment based on research findings, and speculation in a text
   • compare and contrast the information gained from experiments, simulations, video or multimedia sources with that gained from reading a text on the same topic
   • read and comprehend technical texts in the grades 6-8 text complexity band independently and proficiently by the end of grade 8
   • write arguments focused on discipline-specific content
   • write informative/explanatory texts, including the narration of historical events or technical processes
   • produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience
   • develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience
7th Grade Connections-Career and Technical Education

D - Literacy Standards (continued)

- use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas clearly and efficiently
- conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration
- gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation
- draw evidence from informational texts to support analysis reflection, and research
- write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences
Engineering and Technology

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Safety and Tools
   • demonstrate proper safety techniques and tool usage in the engineering and technology laboratory

C - Inventions and Innovation
   • investigate inventions and innovations and their impact in society

D - Engineering Design Process
   • demonstrate an understanding of the engineering design process through various problem-solving activities
   • invent and/or innovate a technological product or system that addresses a societal need using the engineering design process

E - Student Organizations
   • explore how related career and technology student organizations are integral parts of career and technology education courses; develop leadership, interpersonal, and problem-solving skills through participation in co-curricular activities associated with the Technology Student Association (TSA)
Junior Leadership Corps I

A - Leadership
• analyze the qualities of leaders and followers
• compare and contrast leadership and followership
• assess personal leadership strengths and weaknesses
• assess leadership strengths and weaknesses of others
• determine how teamwork fits into leadership
• define the role of followership in a leadership model
• demonstrate how organization contributes to leadership
• explain how goal setting is a leadership attribute

B - Communication
• define the qualities of effective communication
• identify principles of management
• communicate using effective writing, speaking, and listening skills
• explain how time management affects personal success
• identify the types of skills that are necessary for academic success
• examine a personal time budget
• explain the connection between community service and leadership
• demonstrate how participating in a leadership program contributes to success
• set personal goals related to responsible social media use

C - Health
• explain how health affects personal success
• discriminate between risk-taking behaviors that lead toward positive consequences and those that can have destructive consequences
• evaluate the harmful consequences that result from illegal drug use including anabolic steroid use
• analyze the effects of drugs on body systems
• analyze drug advertisements and promotional products and develop counter-arguments
• identify information on treatment and rehabilitation resources available in the community
7th Grade Connections-Career and Technical Education

D - Physical Fitness

• participate in health-enhancing fitness activities
• apply basic training principles to improve cardiovascular fitness
• demonstrate how to work cooperatively and productively in a group to accomplish a set goal in both cooperative and competitive settings
7th Grade Connections-Career and Technical Education

Law and Public Safety 7

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Careers in Public Safety
   • explore and evaluate careers in legal services, corrections, private security, and protective services

C - Civil, Criminal, and Juvenile Law
   • explain constitutional standards as applied to the proper criminal procedure

D - Careers in the Legal Profession
   • compare and contrast the roles and responsibilities of criminal attorneys and the paralegals who work for them as those roles relate to a criminal trial

E - The Trial Process
   • analyze the trial process to include the opening statements, presentation of evidence, testimony of witnesses and the closing arguments

F - The Court System
   • identify the various court systems and explain the various sentencing options

G - The Corrections System
   • discuss the history of corrections in America

H - Protective Services
   • compare and contrast the role of protective services within the criminal justice system

I - Student Organizations
   • explore how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, entrepreneurship development, and competitive events
Peer Leadership

A - Introduction to Peer Leadership
- describe the role, functions, and characteristics of a peer leader
- adhere to established ground rules and the National Peer Helping Association ethical guidelines

B - Relationships
- explore and apply the fundamental characteristics of facilitative relationships and communication skills
- identify and demonstrate interpersonal skills necessary to maintain positive peer relationships

C - Problem-Solving
- demonstrate an understanding of problem-solving and/or mediation techniques
- identify methods of conflict/anger management

D - Impact of Biases
- explore the concepts of prejudice and discrimination and their impact on peer relationships

E - Group Dynamics
- identify elements of group interaction
- utilize elements of successful group interactions by participating in a variety of roles within group settings
- participate in assigned targeted groups within the school community

F - Peer Pressure
- define positive and negative aspects of peer pressure
- indicate a variety of alternatives to negative peer pressure

G - Personal Goals
- explore how personal responsibility relates to long and short range life and career goals

H - Peer Tutoring
- establish roles, responsibilities, and procedures related to peer tutoring including effective study habits, test-taking skills, and time management

I - Intervention Strategies
- demonstrate knowledge and skills of peer leadership intervention strategies in a variety of settings
7th Grade Connections-Career and Technical Education

J - Projects

• utilize knowledge and understanding gained through individual and/or group projects
Study Skills

A - Interpersonal Skills
  • describe and demonstrate the attitudes and habits necessary for school success
  • demonstrate appropriate and effective study methods

B - Goal Setting
  • set and work towards appropriate goals

C - Communication
  • read for the purposes of gathering information and/or following directions
  • learn appropriate listening skills

D - Organization and Time Management
  • demonstrate efficient organization and management of time
  • demonstrate efficient organization and management of materials and space

E - Problem Solving
  • select and demonstrate appropriate problem-solving strategies (e.g., math word problems, brain teasers, personal problem-solving, and study methods)

F - Graphic Aids
  • use graphic aids found in textbooks and other sources of information (e.g., maps, graphs, charts, and tables)

G - Test Strategies
  • identify appropriate test-taking strategies
8th Grade Connections-Career and Technical Education

**Business and Computer Science**

A - **Keyboarding Skills**
- build and expand proficiency in keyboarding

B - **21st Century Skills**
- use various computer applications to demonstrate effective communication skills in the business world
- demonstrate the ability to problem solve by working through a process
- exhibit critical thinking to make informed, cohesive judgments

C - **Business Foundations**
- examine basics of accounting and personal finance utilizing a spreadsheet
- examine the basics of entrepreneurship while utilizing a variety of software applications and multimedia tools

D - **Information Systems**
- investigate types of networking and Internet access

E - **Internet and Safety**
- differentiate between civil and criminal law as related to Internet safety and computer crimes

F - **Marketing**
- examine the basics of marketing using web and desktop publishing applications
- utilize multimedia software to create, edit, and manipulate a multimedia presentation
- utilize software related to web page design to plan, design, and create a web page

G - **Careers**
- use technology to investigate 21st century computer-related career opportunities

H - **Financial Literacy**
- demonstrate an understanding of economics using different types of software applications

I - **Literacy Standards**
- cite specific textual evidence to support analysis of technical texts
- determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions
- follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks
I - Literacy Standards (continued)

• determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific technical context

• analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to an understanding of the topic

• analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text

• integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table)

• distinguish among facts, reasoned judgment based on research findings, and speculation in a text

• compare and contrast the information gained from experiments, simulations, video or multimedia sources with that gained from reading a text on the same topic

• read and comprehend technical texts in the grades 6-8 text complexity band independently and proficiently by the end of grade 8

• write arguments focused on discipline-specific content

• write informative/explanatory texts, including the narration of historical events or technical processes

• produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience

• develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience

• use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas clearly and efficiently

• conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration

• gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation

• draw evidence from informational texts to support analysis reflection, and research

• write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences
8th Grade Connections-Career and Technical Education

Career Connections

A - Interpersonal Skills
  • develop and demonstrate positive interpersonal skills

B - Management Skills
  • apply management skills to everyday lives

C - Employability Skills
  • set employability and educational goals

D - Literacy Standards
  • cite specific textual evidence to support analysis of technical texts
  • determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions
  • follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks
  • determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific technical context
  • analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to an understanding of the topic
  • analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text
  • integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table)
  • distinguish among facts, reasoned judgment based on research findings, and speculation in a text
  • compare and contrast the information gained from experiments, simulations, video or multimedia sources with that gained from reading a text on the same topic
  • read and comprehend technical texts in the grades 6-8 text complexity band independently and proficiently by the end of grade 8
  • write arguments focused on discipline-specific content
  • write informative/explanatory texts, including the narration of historical events or technical processes
  • produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience
  • develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience
8th Grade Connections-Career and Technical Education

D - Literacy Standards (continued)

• use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas clearly and efficiently

• conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration

• gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation

• draw evidence from informational texts to support analysis reflection, and research

• write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences
8th Grade Connections-Career and Technical Education

Communications

A - History of Mass Media
   • identify early mass communication inventions
   • identify key developments and individuals relating to the history of the graphics and design industry

B - Trade Terminology
   • utilize and understand trade terminology in an appropriate manner

C - Safety
   • identify safety and health procedures utilized in the classroom/lab environment

D - Careers and Ethics
   • explore and demonstrate ethical use of equipment and storyboarding
   • demonstrate interpersonal and employability skills required for job retention in the workplace
   • explore careers available in the field of graphic communications and design
   • examine professional and ethical issues involved in the graphic communications industry

E - Video Broadcast Production
   • demonstrate the preproduction planning process
   • exhibit appropriate production performance techniques
   • identify editing methods in post production

F - Literacy Standards
   • cite specific textual evidence to support analysis of technical texts
   • determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions
   • follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks
   • determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific technical context
   • analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to an understanding of the topic
   • analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text
8th Grade Connections-Career and Technical Education

F - Literacy Standards (continued)

- integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table)
- distinguish among facts, reasoned judgment based on research findings, and speculation in a text
- compare and contrast the information gained from experiments, simulations, video or multimedia sources with that gained from reading a text on the same topic
- read and comprehend technical texts in the grades 6-8 text complexity band independently and proficiently by the end of grade 8
- write arguments focused on discipline-specific content
- write informative/explanatory texts, including the narration of historical events or technical processes
- produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience
- develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience
- use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas clearly and efficiently
- conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration
- gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation
- draw evidence from informational texts to support analysis reflection, and research
- write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences
Engineering and Technology

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Safety
  • demonstrate proper safety techniques and tool usage in the engineering and technology laboratory

C - Systems
  • identify and explain the variety of components that make up several examples of a system model

D - Engineering Design Process
  • apply the engineering design process along with the knowledge of a systems model in the production of a prototype solution to a design problem

E - Human-system Interaction
  • develop an understanding of how humans interact with systems

F - Technological System Evolution
  • describe how technological systems continuously improve from one iteration to another

G - Student Organizations
  • explore how related career and technology student organizations are integral parts of career and technology education courses; develop leadership, interpersonal, and problem-solving skills through participation in co-curricular activities associated with the Technology Student Association (TSA)
Junior Leadership Corps II

A - Personal Success

• analyze personal performance in all classes, and set appropriate goals accordingly
• examine the importance of financial awareness
• define personal role sets
• compare the actions and reactions of conflicting roles
• describe personal responsibility within the community
• analyze why self-assessment is critical to personal success
• identify the importance of written goals and plans
• describe how personal goals can vary with changing abilities, priorities, and responsibilities
• demonstrate how participating in a leadership program contributes to success
• set personal goals related to responsible social media use

B - Health

• examine personal health status
• explain how nutrition affects health
• distinguish between emotional and mental health
• contrast a balanced lifestyle to an unbalanced lifestyle
• determine the role nutrition plays in personal success
• identify stressors that affect overall health
• examine the relationship between body image and weight control
• examine the effects of unsafe weight-loss methods and the characteristics of a safe weight-loss program
• analyze the changes in prospective parents' lifestyle and responsibility before and after the birth of a baby
• recognize that sexual behaviors are conscious decisions and the importance of saying "no" to premarital and inappropriate sexual relations
• recognize abstinence from sexual activity as the only sure method of preventing pregnancy and sexually transmitted diseases
• identify methods of preventing pregnancy and sexually transmitted diseases and their degrees of effectiveness or lack thereof
• list the parts of the male and female reproductive systems and describe their functions
8th Grade Connections-Career and Technical Education

B - Health *(continued)*

- identify the parts and function of the cardiorespiratory, endocrine, and digestive systems

C - Physical Education

- demonstrate progress toward or meet health-related fitness standards as defined by research
- participate in health-enhancing fitness activities
- apply basic training principles to improve cardiovascular fitness
- demonstrate how to work cooperatively and productively in a group to accomplish a set goal in both cooperative and competitive settings
8th Grade Connections-Career and Technical Education

Law and Public Safety 8

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - The Georgia Public Safety System
   • demonstrate basic knowledge of the Georgia Public Safety System and the roles of
     the various agencies

C - Law and Fire Service Communications Centers
   • synthesize the operations and career options in communications centers for law
     enforcement and Fire and Emergency Management Services

D - History of American Law Enforcement
   • explore the history of American law enforcement including researching local, state,
     and federal police agencies

E - Conflict Resolution
   • create strategies for resolving conflict in a diverse, multicultural setting

F - Arrest and Processing
   • explain the role of law enforcement in making an arrest all the way through to the
     booking process

G - Crime Scene Investigation
   • describe and illustrate the many parts to a crime scene investigation

H - Student Organizations
   • explore how related student organizations are integral parts of career and
     technology education courses through leadership development, school and
     community service projects, entrepreneurship development, and competitive
     events
Peer Leadership

A - Introduction to Peer Leadership
   • describe the role, functions, and characteristics of a peer leader
   • adhere to established ground rules and the National Peer Helping Association ethical guidelines

B - Relationships
   • explore and apply the fundamental characteristics of facilitative relationships and communication skills
   • identify and demonstrate interpersonal skills necessary to maintain positive peer relationships

C - Problem-Solving
   • demonstrate an understanding of problem-solving and/or mediation techniques
   • identify methods of conflict/anger management

D - Impact of Biases
   • explore the concepts of prejudice and discrimination and their impact on peer relationships

E - Group Dynamics
   • identify elements of group interaction
   • utilize elements of successful group interactions by participating in a variety of roles within group settings
   • participate in assigned targeted groups within the school community

F - Peer Pressure
   • define positive and negative aspects of peer pressure
   • indicate a variety of alternatives to negative peer pressure

G - Personal Goals
   • explore how personal responsibility relates to long- and short-range life and career goals

H - Peer Tutoring
   • establish roles, responsibilities, and procedures related to peer tutoring including effective study habits, test-taking skills, and time management

I - Intervention Strategies
   • demonstrate knowledge and skills of peer leadership intervention strategies in a variety of settings
J - Projects

- utilize knowledge and understanding gained through individual and/or group projects
Study Skills

A - Interpersonal Skills
- describe and demonstrate the attitudes and habits necessary for school success
- demonstrate appropriate and effective study methods

B - Goal Setting
- set and work towards appropriate goals

C - Communication
- read for the purposes of gathering information and/or following directions
- learn appropriate listening skills

D - Organization and Time Management
- demonstrate efficient organization and management of time
- demonstrate efficient organization and management of materials and space

E - Problem Solving
- select and demonstrate appropriate problem-solving strategies (e.g., math word problems, brain teasers, personal problem-solving, and study methods)

F - Graphic Aids
- use graphic aids found in textbooks and other sources of information (e.g., maps, graphs, charts, and tables)

G - Test Strategies
- identify appropriate test-taking strategies
High School Career and Technical Education

3-D Modeling

A - Employability
   • demonstrate employability skills required by business and industry

B - Disciplines of Engineering Graphics Professions
   • identify the disciplines related to engineering graphics and engineering professions

C - Math for Business and Industry
   • analyze applied math required by business and industry for engineering graphics

D - Fasteners
   • demonstrate an understanding for fasteners and the correct application in engineering graphics and product design

E - Artifact Drawing
   • produce a working drawing artifact that conveys all of the information needed to manufacture and assemble a design

F - Assembly Drawings
   • evaluate and develop assembly drawings

G - Model Construction
   • construct a 3-D assembly model showing criteria, constraints, design, and quality of a final product by creating a presentation or capstone final project

H - Career Relationships
   • students explore how related career and technology student organizations are integral parts of career and technology education courses students will develop leadership, interpersonal, and problem-solving skills through participation in co-curricular activities associated with the technology student association
High School Career and Technical Education

AC Theory, Electric Motors, and Hydraulic Systems

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Implementing Industrial Safety Procedures
   • implement industrial, and laboratory safety, procedures and practices

C - Understanding AC Wave Generation
   • demonstrate an understanding of AC Wave Generation

D - Basic operation of AC Test Equipment
   • explain and demonstrate the basic operation of AC Test equipment

E - Applications of Inductance and Capacitance
   • understand the applications of inductance and capacitance

F - Basic Transformer Application
   • explain and understand the Basic Transformer Application

G - Operating Principles of Motors
   • examine motor theory and operating principles of motors

H - Principles of Motor Controls
   • investigate the principles of motor controls

I - Control Devices Used in Automation
   • explain how control devices are used in automation

J - Symbols of Schematic Diagrams
   • use symbols appropriately when working with schematic diagrams

K - Wiring Magnetic Starters and Braking
   • show proper wiring for magnetic starters and braking

L - Preventative Maintenance
   • demonstrate preventative maintenance and troubleshooting for motors

M - Hydraulic System Principles
   • explain hydraulic system principles

N - Operation of Hydraulic System
   • demonstrate proper operation of hydraulic system components
High School Career and Technical Education

Advanced AC and DC Circuits

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Engineering Fields
   • analyze fields of engineering and electronic specializations (e.g., aeronautical, automotive, chemical, civil, industrial, and mechanical, computer software, electrical, and biomedical) and identify associated career tracks

C - Safety in STEM
   • describe and follow safety, health, and environmental standards related to Science, Technology, Engineering, and Mathematics (STEM) workplaces

D - History of Circuits
   • investigate the history and development of analog circuits

E - Amplifiers
   • research and present operational characteristics and applications of amplifiers

F - Oscillator Characteristics
   • research and define oscillator characteristics and applications

G - Communication Circuits Characteristics
   • research and define operating characteristics and applications of communication circuits

H - Integrated Circuits Characteristics
   • research and present characteristics and construction of integrated circuits

I - Electronic Operational Characteristics
   • research and present operational characteristics of electronic control devices and circuits

J - Culminating Digital Project
   • create a digital project that displays mastery of the standards involved with electronics
High School Career and Technical Education

Advanced Animation Game and APP Design

A - Employability Skills
• demonstrate employability skills required by business and industry

B - Safety
• demonstrate following safety procedures when working with computer and television equipment

C - History
• demonstrate an understanding of the history of animation and the evolution of 2-D to 3-D animation

D - Terminology
• demonstrate applying trade terminology in an appropriate manner

E - Communication
• demonstrate the use of effective professional communication skills (e.g., oral, written, and digital) and practices that enable positive customer relationships

F - Design
• demonstrate using formal qualities of art (elements and principles) to create unified composition and communicate meaning

G - Computations
• demonstrate using computational thinking procedures to analyze and solve problems

H - Production
• demonstrate applying media, techniques, and processes in color painting
• demonstrate the ability to specify color materials properly
• demonstrate applying media, techniques, and processes in three-dimensional art
• demonstrate construction of 2-D modeling
• develop an independent production setting the direction of specialization for news, film, and graphics by effectively using tools for media production, development, and project management

I - Software
• distinguish the basic functions of media design software, such as key frame animation, two-dimensional design, and three-dimensional design

J - Composition
• demonstrate applying the principles of Character Rigging, Cut-Out Animation, Inverse Kinematics, and Paths and Motion
High School Career and Technical Education

K - Animation
• create a basic character head and lip syncing animation that focuses on two dimensional sketches, preparation, and design of a digitally-created project and includes a short clip with audio

L - Imaging
• create a video to illustrate finding, recording, editing, and producing a portion of an animatic/animation into a digital production and demonstrate rendering/exporting media into a standalone file format (.mov/.m4v/.wmv/.avi) position
• create mechanical, optical and computer generated illusions for movies, television shows and computer games using software graphics programs that apply concepts in Digital Media

M - Portfolio Development
• create a portfolio or e-portfolio, using a website that demonstrate skills, experience, and showcases work that would help obtain a job

N - Collaboration
• apply concepts of collaborating effectively in group media production

O - Legal Issues
• identify logistical, ethical, and legal issues related to digital media and apply concepts to use of text, graphics, animation, sound, video, and digital images in digital products

P - Student Organizations
• examine how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, and competitive events
Advanced Cybersecurity

A - Employability Skills
• demonstrate employability skills required by business and industry

B - Legal Issues
• explore concepts of cybersecurity related to legal and ethical decisions

C - Malware
• investigate concepts of malware threats

D - Threats and Attacks
• demonstrate how to analyze and react to various threats and vulnerabilities

E - Cryptology
• apply advanced principles of cryptology

F - Wireless
• apply advanced communications and wireless security techniques

G - Security
• implement organizational security techniques

H - Response and Recovery
• implement contingency planning (incident response and disaster recovery) techniques

I - Testing
• perform security analysis, as well as testing and evaluation

J - Risk Management
• implement risk management techniques for personal computer and network systems
• demonstrate how to work with advanced methods of cybersecurity

K - Student Organizations
• explore how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, entrepreneurship development, and competitive events
Advanced Fashion, Merchandising, and Retailing

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Evolution of Fashion
  • review the evolution and movement of fashion

C - Marketing Centers
  • differentiate various market centers and relate their importance to merchandising decisions

D - Impact of Laws on Marketing
  • identify major laws that regulate and/or impact the fashion/retail industry

E - Fashion industry Economics
  • analyze economics in the fashion industry

F - Merchandising Plans
  • determine factors to consider when developing a merchandise plan and budget for a business

G - Business Decision Making
  • understand the concepts, systems, and tools needed to gather, access, synthesize, evaluate, and disseminate information for use in making business decisions

H - Inventory Management
  • implement an inventory management plan and compute product pricing utilizing cost control methods

I - Product Selection
  • describe the product selection process for fashion/retailing buying

J - Business Communication
  • understand the concepts and actions needed to determine client needs and wants and respond through planned, personalized communication that influences purchase decisions and enhances future business opportunities

K - Effects of Promotion
  • evaluate and explain the effects of promotion in the fashion/retail industry by developing visual merchandising presentations and promotional plans

L - Distribution Systems
  • analyze the importance of utilizing an efficient distribution system

M - Careers in the Fashion Industry
  • explore career interest within the fashion industry
High School Career and Technical Education

Advanced Graphic Design

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Proper Use of Equipment
  • demonstrate proper equipment operation and following procedures in a safe manner, and
    achieve 100% on a written or demonstration safety test

C - Portfolio
  • demonstrate the development of a professional portfolio and self-branding

D - Business Ethics and Guidelines
  • research professional business ethics guidelines and copyright laws utilized throughout the
    graphic design industry

E - Careers in Graphic Design
  • determine requirements for selected career(s)

F - Project Development
  • explore the process of print and electronic projects

G - Project Production
  • explore the process of project production

H - Vector Illustrations
  • explore vector illustration techniques per assignments

I - Digital Imaging
  • explore raster digital imaging and multimedia

J - SkillsUSA
  • examine how related student organizations are integral parts of career and technology education
    courses through leadership development, school and community service projects, and
    competitive events
High School Career and Technical Education

**Advanced Graphic Output Processes**

A - **Employability Skills**
- demonstrate employability skills required by business and industry

B - **Proper Equipment Procedures**
- demonstrate proper equipment operation and follow procedures in a safe manner, and achieve 100% on a written or demonstration safety test

C - **Entrepreneurship**
- investigate entrepreneurship as it relates to economic development

D - **Portfolio**
- develop a portfolio for a graphics-related career plan

E - **Job Production Processes**
- implement optimal job production processes

F - **Project Cost Analysis**
- accurately analyze project costs

G - **Customer Service**
- practice customer service skills, as well as, follow ethical guidelines and copyright laws

H - **File Preparation**
- plan, create, and prepare files for print and electronic production

I - **Output Device Control**
- identify and describe the major components and operating controls of output devices

J - **Ink Types**
- identify the various types of inks and/or toners used in the graphics and printing industry

K - **Paper Substrate Applications**
- explain the various applications and characteristics of paper substrates

L - **Knowledge of Ink Toners**
- demonstrate knowledge of inks, toners, and substrates for commercial output

M - **Output Processes**
- demonstrate the ability to use an output process to create a quality product
High School Career and Technical Education

N - Safe and Proper Cutting Techniques
  • identify, demonstrate, and practice safe and proper paper cutting techniques on various class projects

O - Multi-page Publications
  • plan and impose the binding and finishing workflow of a multiple-page publication

P - Binding and Finishing Processes
  • identify and describe binding and finishing processes

Q - Multi-page Publication Workflow
  • plan and impose the finishing and binding workflow of a multiple-page publication

R - Binding Processes
  • identify and describe binding processes as well as demonstrate the ability to bind a printed product

S - Finishing Processes
  • identify and describe finishing processes as well as demonstrate the ability to add finishes to a printed product

T - Effective Project Preparation
  • exercise effective project preparation following proper customer service and quality control principles

U - SkillsUSA
  • examine how related student organizations are integral parts of career and technology education courses, through leadership development, school and community service projects, and competitive events
Advanced Recording and Post-Production Techniques

A - Advanced Recording Techniques
- utilize recording techniques including musical equalization, compression, and limiting during the recording session
- demonstrate effective usage of various special effects processors in the mixing process
- demonstrate various microphone types and setups for different musical styles
- demonstrate and explain various microphone pre-amps to illustrate different sonic characteristics to capture while recording

B - Digital Audio Workstation
- briefly explain the history of digital audio workstations
- describe different forms of digital audio workstations
- define relevant digital audio workstation terms
- apply basic operation inputting and outputting audio with a digital audio workstation
- apply basic editing features such as cut, copy, and paste
- apply advanced editing features such as phase reversal, time and pitch shifting, looping, cross-fading, digital delay, normalization, and waveform drawing
- apply various mixing tools such as aux sends/returns, reverberation, limiting, equalization, and fading within the digital audio workstation
- create a music recording utilizing a digital audio workstation

C - Synchronization for Post Production
- apply SMPTE Time code to an audio track
- apply synchronization for an audio track to a video track
- synchronize midi tracks and multi-channel digital audio to a video via TC
- embed mixed audio into a video track
- apply remote control via RS422, RS232
- use time sync in the post production process
- explain time code and its various types (e.g., 25fps, 29fps, 30fps, non-drop frame, drop frame, and MIDI)

D - Core Skills
- communicate in a clear, concise, and courteous manner
High School Career and Technical Education

D - Core Skills  (continued)

• identify problems, analyze alternative solutions, and develop a plan of action
• use effective learning techniques to acquire and apply new knowledge and skills
• set goals and monitor progress toward meeting goals
• participate and interact as a team member and leader
• work to satisfy customer/client expectations
• acquire, store, allocate, and use materials and space efficiently
• apply mathematical concepts and calculations and solve problems using appropriate mathematical techniques
• use and create text and multimedia documents in a variety of formats and be able to troubleshoot problems with technical or electronic equipment
• identify the scope of a business, its organization, and activities, and the interrelationship of its parts
• discuss factors that impact career decisions and formulate appropriate plans to reach career goals
• maintain safety, health, and environmental standards, and address ergonomic concerns

E - Literacy Standards

• cite specific textual evidence to support analysis of technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account
• determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms
• follow precisely a complex multistep procedure when performing technical tasks; analyze the specific results based on explanations in the text
• determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific technical context relevant to grade level texts and topics
• analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas
• analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved
• integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem
• evaluate the hypotheses, data, analysis, and conclusions in technical texts, verifying the data when possible and corroborating or challenging conclusions with other sources of information
• synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible
High School Career and Technical Education

E - Literacy Standards  (continued)

• read and comprehend technical texts in the text complexity band independently and proficiently

• write arguments focused on discipline-specific content

• write informative/explanatory texts, including the narration of historical events or technical processes

• produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience

• develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience

• use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information

• conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation

• gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation

• draw evidence from informational texts to support analysis, reflection, and research

• write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences
Advanced Sports and Entertainment Marketing

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Significance of Marketing
   • evaluate the significance and components of sports and entertainment marketing as a viable industry service

C - Importance of Planning
   • analyze the importance of planning, organizing, implementing, and controlling sports and entertainment events

D - Strategic Management Plans
   • construct a strategic management plan

E - Operations Management
   • examine operations management and control as they apply to sports and entertainment marketing

F - Staffing and Organizational Plans
   • describe the importance of organizing and staffing for sports and entertainment events

G - Decision Making Process
   • dissect the decision making process and analyze several forms of decision making

H - Legal and Ethical Behaviors
   • interpret legal and ethical behaviors as they relate to the sports and entertainment marketing field

I - Management Functions
   • evaluate the management functions necessary for college, amateur, and professional sports

J - Sales Promotion
   • examine the role of sales promotion and advertising as promotional tools in sports and entertainment marketing

K - Public Relations
   • examine the role of public relations and publicity as a promotional tool in sports and entertainment marketing

L - Collection of Data
   • implement strategies needed to collect, organize process, transmit and communicate research information
High School Career and Technical Education

M - Elements of Risk in Marketing
• examine the elements of risk associated with the industry of sports and entertainment marketing
High School Career and Technical Education

Allied Health and Medicine

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Respiratory Care
  • research advanced technical skills in respiratory care Respiratory Services (500 minutes)

C - Imaging Services
  • analyze advanced technical skills within the imaging services field Imaging Services (450 minutes)

D - Surgical Services
  • research advanced technical skills in the surgical services field to include nutrition and fluid intake, elimination, and ostomy and wound care Surgical services (1,350 minutes)

E - Rehabilitation Services
  • perform advanced technical skills within rehabilitation services Rehabilitation Services (900 minutes)

F - Pharmacy Services
  • perform advanced technical skills within pharmaceuticals Pharmacy Services (500 minutes)

G - Dietary Services
  • perform advanced technical skills within dietary services Dietary Services (450 minutes)

H - Alternative Medicine
  • research the field of Complementary and Alternative Medicine (CAM) to include, but not limited to, such practices as chiropractic care, acupuncture, reflexology, massage therapy, homeopathic medicine, aromatherapy, and stress reduction techniques Complementary and Alternative Medicine (450 minutes)

I - Mental Health Services
  • perform advanced technical skills within mental health services Mental Health Services (450 minutes)

J - Epidemiology
  • research public health services and epidemiology, utilizing www.cdc.gov as the primary source Public Health and Epidemiology

K - Medical Office Services
  • perform advanced technical skills within medical office services Medical Office Assistant (2,250 minutes)

L - Advanced Medical Services
  • perform advanced technical skills within medical laboratory services using simulated equipment based on school, county, and facility protocol Medical Laboratory Services (900 minutes)
High School Career and Technical Education

M - Cardiology Services
- perform advanced technical skills within cardiology services Cardiology Services (450 minutes)

N - Emergency Services
- perform advanced technical skills within emergency services Emergency Services (2,250 minutes)

O - Dentistry Services
- perform advanced technical skills within dentistry services Dentistry (900 minutes)
High School Career and Technical Education

Animal Science Technology and Biotechnology

A - Employability Skills
• demonstrate employability skills required by business and industry

B - Agriculture Lab Work
• demonstrate safety practices through participation in FFA and in the classroom

C - Agricultural Animal Research and Production
• apply scientific methods in agricultural research and production

D - Economics of Large Animal Industry
• describe the various phases, segments, trends, consumption, and economic scope of the large animal industry

E - Economics of the Poultry Industry
• describe the various phases, segments, trends, consumption, and economic scope of the poultry industry

F - Economics of the Dairy Industry
• describe the various phases, segments, trends, consumption and economic scope of the dairy industry

G - Aquaculture Industry and Scientific Principles
• evaluate trends in the aquaculture industry and the scientific principles involved in the production of aquatic animals

H - Economics of Alternative and Laboratory Animals
• describe the various phases, segments, trends, demand, consumption and economic scope of the alternative and laboratory animals

I - Classification of Agriculture Animals
• classify animals using scientific binomial nomenclature as well as classify agriculture animals by breed and use

J - Food Safety and Environmental Concerns
• explain and addresses the general public's food safety and environmental concerns

K - Animal Welfare
• compare and contrast crucial animal welfare issues and explain the benefits of treating animals in a humane manner and providing for the needs of animals

L - Natural Behavior of Animals
• observe and interpret the natural behavior of agricultural animals and relate these behaviors to production practices yielding more content, healthier, and productive animals
High School Career and Technical Education

M - Genetic Principles
  • research genetic principles to animal selection, breeding and production

N - Scientific Methods of Animal Selection
  • research scientific methods of animal selection

O - Reproduction of Agricultural Animals
  • discuss the reproductive anatomy and biological processes involved in the reproduction of agricultural animals

P - Prenatal and Postnatal Growth of Animals
  • describe the physiological processes involved in prenatal and postnatal growth and development of agricultural animals

Q - Nutrient Sources and Functions
  • explain nutrient sources and functions as they relate to monogastric and ruminant agricultural animals

R - Physiological and Chemical Properties of Meat Products and Preservation
  • investigate the physiological and chemical properties of meat products and preservation

S - Effects, Development, and Control of Parasites in Agricultural Animals
  • describe the effects, development, and control of parasites in agricultural animals

T - Animal Disease, Immune Systems, and Disease Prevention and Control
  • describe animal diseases, animal immune systems, and disease prevention and control programs
Applications of Biotechnology

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Characteristics of Living Organisms
   • describe how characteristics of living organisms are integrated with advanced biotechnology
techniques to lead to discovery or production

C - Advanced Techniques
   • demonstrate how advanced techniques in biotechnology contribute to our quality of life

D - Statistical Analysis
   • utilize statistical analyses to evaluate molecular separations and manipulations

E - Safety
   • incorporate required safety practices and procedures in performing tasks encountered in the
   laboratory setting

F - Current Trends, Ethical, and Regulatory Issues
   • assess current trends, ethical, legal, and regulatory issues related to the development of
   biotechnology products
High School Career and Technical Education

Applications of Firefighting

A - Employability Skills
• demonstrate employability skills required by business and industry

B - Organizational Structure
• evaluate the organizational structure and principles, purpose, and general operational procedures of the fire service

C - Safety Guidelines
• follow and apply safety guidelines specific to firefighter safety and health issues

D - Fire Chemistry
• analyze fire chemistry including physical and chemical changes and reactions that occur with fire and the factors involved in fire development

E - Building Construction
• research the various components of basic building construction, understand the effects of fire on common building materials, and identify the indications of imminent building collapse and construction hazards

F - Protective Clothing
• utilize and maintain various articles of protective clothing and self-contained breathing apparatus (SCBA)

G - Portable Fire Extinguishers
• operate portable fire extinguishers effectively and safely

H - Care for Ropes and Knots
• utilize and care for the appropriate and most common types of ropes and knots used in the fire service

I - Team Safety Guidelines
• operate as a member of a team following safety guidelines to enter a burning building for search and rescue operations while being prepared to perform basic victim removal

J - Forcible Entry
• utilize forcible entry techniques through various types of doors, windows, padlocks, and walls to accomplish quick access to a structure in a safe manner

K - Fire Service Ladders
• utilize various fire service ladders and perform ladder inspections, and maintenance

L - Types of Ventilation
• utilize types of ventilation within a structure considering various situations
High School Career and Technical Education

M - Types of Fire Hydrants
  • identify different types of fire hydrants, make fire hydrant connections, and set up a static water source

N - Fire Hose Maintenance
  • utilize, care for, and perform maintenance on fire hose, couplings, hose appliances, and tools and perform various hose loads and finishes following the policies and procedures set forth by the authority having jurisdiction (AHJ)

O - Fire Streams
  • demonstrate operating fire streams to reduce the heat from a fire and providing protection to firefighters and exposures using a solid, fog, and broken stream nozzle

P - Attack Methods
  • attack various types of fires, using effective attack tactics, and proper hose line selection that will lead to successful fire control while keeping property damage to a minimum (This procedure should be simulated students must be 18 to participate in live fire activities)

Q - Fire Detection Systems
  • operate various fire detection, alarm, and suppression systems and function at fires in protected properties

R - Loss Control Operations
  • perform loss control operations, in a manner that will minimize damage to property using basic principles of salvage cover deployment and safe overhaul operations

S - Indicators of Incendiary Fire
  • identify indicators of an incendiary fire and protect and preserve evidence after a fire of suspicious nature

T - Communication
  • perform communication responsibilities

U - Medical Care
  • provide basic pre-hospital emergency medical care when necessary
High School Career and Technical Education

Applications of Health Information Technology

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Mobile Application and Utilization in a Medical Setting
  • design a mobile application and demonstrate utilization in a medical setting

C - IT Services in Hospitals
  • examine the information technology services in hospitals and the major functional categories

D - HIT Applications in Hospitals
  • demonstrate the three main groups of HIT applications in hospitals including the clinical functions of HIT in a simulated format

E - Functionality and Role of Electronic Health Records
  • research the functionality and role of the Electronic Health Record system.

F - Health Information Flow in Varying Systems
  • evaluate health information flow and differentiate open systems interoperability and closed isolated systems

G - Patient Privacy, Security and Confidentiality
  • adhere to patient privacy, security, and confidentiality regulations

H - Implementation of Health Information Exchange, CCDs, and CCRs
  • evaluate the challenges associated with implementation of the Health Information Exchange, CCDs, Continuity of Care Documents, and CCRs, Continuity of Care Record

I - HIT Project Life Cycle and Project Management
  • assess the HIT project life cycle and the role of HIT project management

J - Telemedicine Program
  • evaluate the effectiveness and success of a successful telemedicine program

K - Technical Skills for Electronic Health Records
  • demonstrate technical skills necessary for working with electronic health records

L - Health Analytics
  • evaluate the value of health analytics
Applications of Public Health

A - Employability Skills
- demonstrate employability skills required by business and industry

B - Quality of Life
- describe the context and scope of public health on improving health and quality of life in personal, community (including local, state, and federal health department), and the global population based on the ten essentials of public health

C - Epidemiology
- explain how epidemiology is the basic science of public health and describe how it is used to study, prevent, and control disease

D - Infectious Disease
- differentiate the means of transmission as they relate to the biomedical basis of disease for infectious, chronic, and genetic diseases

E - Psychosocial Factors
- identify how psychosocial factors affect health behavior

F - Health Disorders
- discuss the significance that obesity, substance abuse (including tobacco usage), and mental health disorders have with relation to the development of illness

G - Maternal Health
- investigate the reasons child and maternal health is a high priority in public health

H - Injury Assessment
- assess that injuries are not accidents, are a major public health issue, and dependent on people's behavior and environment

I - Environmental Impact
- summarize the relationship between role of environmental and occupational health with the prevention of injury and illnesses

J - Medical Care
- investigate the relationship between medical care and public health

K - Health Service Research
- describe the fundamental concepts and applications of health services research as they intersect public health practice with medical care, institutions of higher learning, and governmental agencies at the local, state, and federal level
High School Career and Technical Education

L - Elderly Population Trends
  • research the health needs of the elderly population and how changing trends, medical costs, and existing programs can result in a positive health outcome

M - Emergency Preparedness
  • describe the role that public health has with emergency preparedness planning
High School Career and Technical Education

Applications of the Law

A - Employability Skills
• demonstrate employability skills required by business and industry

B - Criminal Law Application
• apply criminal laws used frequently in the criminal justice system

C - Law of Torts
• apply the law of torts

D - Contractual Relationships
• recognize contractual relationships and the application of contract law

E - The Law of Real Property
• apply the law of real property

F - Family Law
• apply family law

G - Citizenship and Immigration Law
• apply the law of citizenship and immigration

H - Legal Research Skills
• demonstrate legal research, critical thinking and decision-making skills

I - Diverse Cultures and Law
• analyze how the influence of diverse cultures, customs and economic status impact applications of law

J - CTSO Organizations
• explore how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, entrepreneurship development, and competitive events
High School Career and Technical Education

Appropriate and Alternative Energy

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Analyze Current and Potential Careers in Energy
   • analyze current and potential careers in engineering

C - Nonrenewable and Renewable Energy Sources
   • understand the differences between renewable and nonrenewable types of energy sources and how each affects their world

D - Alternative Energy
   • define alternative energy and list several alternative resources and discuss the regional implications of each, including, but not limited to economic, environmental, and sustainability issues

E - Nuclear Power
   • define nuclear power and discuss it in terms of its positive and negative impacts and explain its relevancy to various situations in today's society

F - Future Trends of Energy and Power
   • discuss and provide research support for the future trends of energy and power and their impact on modes of transportation in developed and underdeveloped economies

G - Energy Generation
   • create a culminating project that demonstrates an understanding of alternative energy systems by incorporating a unique, as well as appropriate, approach to energy generation
High School Career and Technical Education

Architectural Drawing and Design I

A - Employability
  • demonstrate employability skills required by business and industry

B - Design Process
  • identify components related to the architectural design process

C - Drafting Skills
  • demonstrate architectural drafting skills

D - Floor Plans
  • prepare residential floor plans

E - Roof Systems
  • research roof systems, styles and terminology

F - Elevations
  • prepare elevations for residential drawings

G - Schedules
  • demonstrate preparing schedules

H - Foundation Plans
  • demonstrate preparing foundation plans

I - Portfolio
  • maintain a course portfolio

J - TSA
  • students explore how related career and technology student organizations are integral parts of career and technology education courses Students will develop leadership, interpersonal, and problem-solving skills through participation in co-curricular activities associated with the Technology Student Association
Architectural Drawing and Design II

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Site Plans
  • demonstrate and explain the preparation of site plans

C - Electrical Plans
  • demonstrate and describe the preparation of electrical plans

D - Plumbing Plans
  • read and interpret plumbing plans

E - Section and Detail Drawings
  • demonstrate preparing sections and details

F - Project Presentations
  • create a project presentation for a building

G - Portfolios
  • maintain a course portfolio

H - SkillsUSA
  • examine how SkillsUSA is a co-curricular part of career and technical education through leadership development, school and community service projects, and competitive events
High School Career and Technical Education

Audio Video Technology and Film I

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Safety
   • identify and follow safety procedures when working with production and computer equipment

C - Industry Terminology
   • utilize trade terminology related to audio, video, technology and film

D - Production Equipment
   • demonstrate proper set-up and use of basic production equipment

E - Script
   • identify and create various types of scripts

F - Studio Broadcasting
   • demonstrate proper use and operation of studio equipment and production techniques while working as part of a production team during a studio broadcast

G - Live Production
   • demonstrate teamwork and proper use of equipment while participating in a live field production which may include electronic news gathering, film work and/or streaming live events

H - Recording and Post-Production Applications
   • demonstrate the use of technology in recording and post-production applications

I - Careers in Audio and Video, Technology and Film
   • describe the principle fields of specializations and identify associated career opportunities
   • analyze the relationship between leadership development, school and community service projects with a career in the audio, video, and film industry

J - Literacy
   • demonstrate appropriate use of literacy skills
High School Career and Technical Education

Audio Video Technology and Film II

A - Employability
  • demonstrate employability skills required by business and industry

B - Program Formats
  • demonstrate use of multiple types and formats of programs and productions

C - Operational/Maintenance Procedures
  • identify and demonstrate specified set up, operations and maintenance procedures

D - Editing Operations
  • perform advanced editing operations

E - Studio Productions
  • demonstrate organization, teamwork and proper use of equipment

F - Lighting
  • demonstrate correct operations for studio and field lighting

G - Graphics
  • create production graphics

H - Careers
  • identify and research related career opportunities

I - SkillsUSA
  • examine how SkillsUSA is a co-curricular part of career and technical education through leadership development, school and community service projects, and competitive events
High School Career and Technical Education

Audio Video Technology and Film III

A - Employability
• demonstrate employability skills required by business and industry

B - Independent Production
• select and develop the direction of specialization for news, film, and graphics in an independent production setting

C - Portfolios
• create portfolios to include résumé, letter of recommendations, references, list of skill sets, and demo reel highlighting of the student’s skill sets

D - Collaboration
• demonstrate collaborating effectively in group media production

E - Media Law
• describe and apply the principles of media law

I - SkillsUSA
• examine how SkillsUSA is a co-curricular part of career and technical education through leadership development, school and community service projects, and competitive events
High School Career and Technical Education

Automobile Service Technology Eight

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Safety
   • identify and utilize safety procedures and proper tools

C - Tools and Equipment
   • identify and utilize proper tools and equipment

D - Service
   • identify and utilize vehicle service information

E - Skills
   • demonstrate general engine service techniques

F - Transmission
   • perform general automatic transmission and manual transaxle and different service

G - Suspension and Steering
   • prepare vehicle for general suspension and steering systems service

H - Brakes
   • perform hydraulic brake system service and repairs

I - Electrical Systems
   • perform general electrical systems service

J - Air Conditioning
   • demonstrate knowledge of A/C systems

K - Engine Performance
   • analyze engine performance
A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Safety
   • identify and utilize safety procedures and proper tools
   • identify and utilize proper tools and equipment

C - Service
   • identify and utilize vehicle service information
   • demonstrate general engine service techniques

D - Brakes
   • perform hydraulic brake system service and repairs

E - Electrical
   • perform general electrical systems service
High School Career and Technical Education

Automotive Service Technology Internship I

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Integrate Work-based and School-based Learning
   • demonstrate relevancy of academic and technical skills needed on the job, integrating work-based and school-based learning

C - Student Organizations
   • examine how SkillsUSA is a co-curricular part of career and technical education through leadership development, school and community service projects, and competitive events

D - Technical Standard One - General Service
   • demonstrate and explain general engine service techniques relating to general engine diagnosis

E - Technical Standard Two - Automatic Transmission
   • perform general automatic transmission and differential service

   • perform general manual transaxle service

G - Technical Standard Four - Suspension and Steering
   • prepare vehicle for general suspension and steering systems service, including wheel alignment

H - Technical Standard Five - Brakes
   • perform hydraulic brake system service and repairs

I - Technical Standard Six - Electrical
   • perform general electrical systems service and diagnose and repair the charging system, horn and wiper/washer, and automobile accessories

J - Technical Standard Seven - Heating and Air
   • apply concepts related to general service, diagnosis, and repair of the heating and air conditioning

K - Technical Standard Eight - Engine
   • analyze engine performance to diagnose and repair issues related to the engine, ignition system, and fuel, air induction, and exhaust systems
High School Career and Technical Education

Automotive Service Technology Internship II

A - Employability Skills
  •  demonstrate employability skills required by business and industry

B - Integrate Work-based and School-based Learning
  •  demonstrate relevancy of academic and technical skills needed on the job, integrating work-based, and school-based learning

C - Student Organizations
  •  examine how SkillsUSA is a co-curricular part of career and technical education through leadership development, school and community service projects, and competitive events

D - Technical Standard One - General Service
  •  assess and formulate general engine service techniques and procedures relating to general engine

E - Technical Standard Two - Automatic Transmission
  •  compare general automatic transmission/transaxle and differential operations

  •  compare general manual transmission/transaxle and differential operations

G - Technical Standard Four - Suspension and Steering
  •  apply concepts of vehicle general suspension and steering systems service, including wheel alignment diagnosis, adjustment and repair

H - Technical Standard Five - Brakes
  •  analyze hydraulic brake system procedures and repairs

I - Technical Standard Six - Electrical
  •  analyze general electrical systems, diagnose and repair the charging system, horn and wiper/washer, and automobile accessories

J - Technical Standard Seven - Heating and Air
  •  compare procedures related to general service, diagnosis, and repair of the heating and air

K - Technical Standard Eight - Engine
  •  assess engine performance to identify and repair issues related to the engine, ignition system, and fuel, air induction, and exhaust systems
High School Career and Technical Education

Automotive Service Technology Internship III

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Integrate Work-based and School-based Learning
  • demonstrate relevancy of academic and technical skills needed on the job, integrating work-based and school-based learning

C - Student Organizations
  • examine how SkillsUSA is a co-curricular part of career and technical education through leadership development, school and community service projects, and competitive events

D - Technical Standard One - General Service
  • analyze general engine service techniques and procedures relating to general engine service

E - Technical Standard Two - Automatic Transmission
  • apply concepts of general automatic transmission/transaxle and differential service

  • apply concepts of general manual transmission/transaxle and differential service

G - Technical Standard Four - Suspension and Steering
  • analyze vehicle general suspension and steering systems, including wheel alignment diagnosis

H - Technical Standard Five - Brakes
  • apply concepts of hydraulic brake system service procedures and repairs

I - Technical Standard Six - Electrical
  • create test equipment for general electrical diagnosis

J - Technical Standard Seven - Heating and Air
  • analyze procedures related to general service, diagnosis, and repair of the heating and air

K - Technical Standard Eight - Engine
  • apply concepts of diagnosis to identify and repair issues related to the engine, ignition system, and fuel, air induction, and exhaust systems
Automotive Technologies 1

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Safety Procedures
   • identify and use safety procedures and proper tools

C - Tools and Equipment
   • demonstrate and utilize proper tools and equipment

D - Vehicle Service Information
   • identify and utilize vehicle service information

E - Careers
   • develop an understanding of automotive careers, describing the principal fields of specializations and identifying associated career opportunities

F - Student Organizations
   • examine how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, and competitive events

G - Technical Standard One - Engine Repair
   • general engine repair
   • lubrication and cooling systems

H - Technical Standard Two - Automatic Transmission/Transaxle
   • automatic transmission and transaxle
   • off vehicle transmission and transaxle

I - Technical Standard Three - Manual Drive Train & Axles
   • clutch
   • differential case assembly
   • manual drivetrain and axles

J - Technical Standard Four - Suspension & Steering
   • suspension and steering
   • related suspension and steering service
   • wheels and tires
High School Career and Technical Education

J - Technical Standard Four - Suspension & Steering  (continued)
   • wheel alignment, diagnosis, adjustment, and repair

K - Technical Standard Five - Brakes
   • general brakes
   • hydraulic system
   • drum brakes
   • disc brakes
   • power-assist units
   • related systems (i.e., wheel bearings, parking brakes, electrical)

L - Technical Standard Six - Electrical/Electronic Systems
   • battery service
   • charging system
   • electrical/electronic systems

M - Technical Standard Seven - Heating & Air Conditioning
   • heating, ventilation, and air conditioning (HVAC)

N - Technical Standard Eight - Engine Performance
   • engine performance
   • fuel, air induction, and exhaust systems
High School Career and Technical Education

Automotive Technologies 2

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Safety Procedures
  • identify and utilize safety procedures and proper tools

C - Tools and Equipment
  • research and utilize proper tools and equipment

D - Vehicle Service Information
  • research and utilize vehicle service information

E - Careers
  • understand automotive careers, principal fields, and areas of specialization

F - Student Organizations
  • examine how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, and competitive events

G - Technical Standard One - Engine Repair
  • general engine repair
  • diagnose and adjust cylinder heads and valves
  • lubrication and cooling systems

H - Technical Standard Two - Automatic Transmission/Transaxle
  • general transmission and transaxle maintenance
  • inspect, adjust or repair in-vehicle transmission or transaxle
  • inspect, adjust or repair off-vehicle transmission or transaxle

I - Technical Standard Three - Manual Drive Train & Axles
  • service and maintain drivetrain and axles
  • service and maintain clutch
  • maintain drive assemblies
  • maintain drive shaft, half shaft, and associated joints
  • inspect and maintain differential case
High School Career and Technical Education

**J - Technical Standard Four - Suspension & Steering**
- maintain suspension and steering systems
- suspension systems diagnosis and repair
- maintain wheels and tires
- wheel alignment, diagnosis, adjustment, and repair
- maintain systems related to suspension and steering

**K - Technical Standard Five - Brakes**
- assess, maintain, and repair brake systems
- maintain hydraulic systems
- assess and maintain drum brakes
- inspect, maintain, and repair disc brakes
- assess and maintain power assist units
- maintain systems related to brakes such as: wheel bearings, parking brakes, and electrical

**L - Technical Standard Six - Electrical/Electronic Systems**
- assess and repair electrical systems
- maintain batteries and related systems
- assess and maintain charging systems
- diagnose and maintain lighting, instrument cluster, and body electrical systems
- body electrical systems diagnosis and repair

**M - Technical Standard Seven - Heating & Air Conditioning**
- perform general service on heating, ventilation, and air conditioning
- inspect engine cooling and heater systems hoses and pipes; determine necessary action
- maintain air system operating controls

**N - Technical Standard Eight - Engine Performance**
- perform general engine diagnosis
- computerized controls
- maintain fuel, air induction, and exhaust systems
Automotive Technologies 3

A - Employability Skills
• demonstrate employability skills required by business and industry

B - Safety Procedures
• identify and utilize safety procedures and proper tools

C - Tools and Equipment
• research and utilize proper tools and equipment

D - Vehicle Service Information
• research and utilize vehicle service information

E - Careers
• develop an understanding of automotive careers, describing the principal fields of specializations and identifying associated career opportunities

F - Student Organizations
• examine how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, and competitive events

G - Technical Standard One- Engine Repair
• general engine repair
• cylinder head and valve train
• inspect and service lubricant and cooling systems

H - Technical Standard Two- Automatic Transmission/Transaxle
• inspect and service transmission and transaxle
• inspect, adjust, or repair in-vehicle transmission
• inspect, adjust, or repair off-vehicle transmission

I - Technical Standard Three - Manual Drive Train & Axles
• inspect and repair manual drivetrain and axles
• check and adjust clutch master cylinder fluid level, use proper fluid type per manufacturer specification
• transmission and transaxle diagnosis and repair
• inspect and repair drive shaft, half shaft, and universal joints
High School Career and Technical Education

I - Technical Standard Three - Manual Drive Train & Axles  (continued)
• inspect and repair vehicle differential and drive axle
• inspect, adjust, and repair manual drive train and axle

J - Technical Standard Four - Suspension & Steering
• suspension and steering systems
• suspension and steering service
• diagnose and repair suspension
• inspect, diagnose, and repair wheels and tires
• diagnose, adjust, and repair wheel alignment

K - Technical Standard Five - Brakes
• diagnose braking systems and problems
• diagnose and repair hydraulic systems
• diagnose and repair drum brakes
• diagnose and repair disc brakes
• diagnose and repair power assist units
• diagnose and repair brake related systems including wheel bearings, parking brake, and electrical
• diagnose and repair electronic brake control systems

L - Technical Standard Six - Electrical/Electronic Systems
• inspect, diagnose, and repair electrical and electronic systems
• assess, test, and maintain battery
• diagnose, test, and repair starting system
• inspect, diagnose, and repair charging system
• inspect and verify operation of lighting and other electrical systems
• diagnose and repair body electrical systems

M - Technical Standard Seven - Heating & Air Conditioning
• diagnose and repair air conditioning
• inspect, diagnose and repair heat and ventilation

N - Technical Standard Eight - Engine Performance
• perform engine diagnosis
High School Career and Technical Education

N - Technical Standard Eight - Engine Performance  (continued)

- access and test computerized controls
- inspect and service fuel, air induction, and exhaust systems
High School Career and Technical Education

Automotive Technologies 4

A - Employability Skills
• demonstrate employability skills required by business and industry

B - Safety Procedures
• identify and utilize safety procedures and proper tools

C - Tools and Equipment
• research and utilize proper tools and equipment

D - Vehicle Service Information
• research and utilize vehicle service information

E - Careers
• develop an understanding of automotive careers, describing the principal fields of specializations and identifying associated career opportunities

F - Student Organizations
• examine how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, and competitive events

G - Technical Standard One - Engine Repair
• engine diagnosis, removal and reinstallation
• lubrication and cooling systems diagnosis and repair

H - Technical Standard Two - Automatic Transmission/Transaxle
• in-vehicle transmission/transaxle maintenance and repair
• automatic transmission and transaxle

I - Technical Standard Three - Manual Drive Train & Axles
• clutch diagnosis and repair
• transmission/transaxle diagnosis and repair
• drive axle diagnosis and repair
• limited slip differential

J - Technical Standard Four - Suspension & Steering
• steering systems diagnosis and repair
• suspension systems diagnosis and repair
High School Career and Technical Education

K - Technical Standard Five - Brakes
  • brakes

L - Technical Standard Six - Electrical/ Electronic Systems
  • body electrical systems diagnosis and repair

M - Technical Standard Seven - Heating & Air Conditioning
  • A/C system diagnosis and repair
  • refrigeration system component diagnosis and repair
  • heating, ventilation, and engine cooling systems diagnosis and repair
  • operating systems and related controls diagnosis and repair
  • refrigerant recovery, recycling, and handling

N - Technical Standard Eight - Engine Performance
  • engine diagnostics
High School Career and Technical Education

Automotive Technologies 5

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Safety Procedures
  • identify and utilize safety procedures and proper tools

C - Tools and Equipment
  • research and utilize proper tools and equipment

D - Vehicle Service Information
  • research and utilize vehicle service information

E - Careers
  • develop an understanding of automotive careers, describing the principal fields of specializations and identifying associated career opportunities

F - Student Organizations
  • examine how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, and competitive events

G - Technical Standard One - Engine Repair
  • engine diagnosis, removal and reinstallation
  • cylinder head and valve train diagnosis and repair
  • engine block assembly diagnosis and repair

H - Technical Standard Five - Brakes
  • brakes

I - Technical Standard Six - Electrical
  • electrical and electronic systems

J - Technical Standard Seven - Engine Performance
  • fuel, air induction, and exhaust systems diagnosis and repair
High School Career and Technical Education

Automotive Technologies 6

A - Employability Skills
    • demonstrate employability skills required by business and industry

B - Safety Procedures
    • identify and utilize safety procedures and proper tools

C - Tools and Equipment
    • research and utilize proper tools and equipment

D - Vehicle Service Information
    • research and utilize vehicle service information

E - Careers
    • develop an understanding of automotive careers, describing the principal fields of specializations
      and identifying associated career opportunities

F - Student Organizations
    • examine how related student organizations are integral parts of career and technology education
      courses through leadership development, school and community service projects, and
      competitive events

G - Technical Standard One - Engine Repair
    • general: engine diagnosis; removal and reinstallation

H - Technical Standard Two - Automatic Transmission/Transaxle
    • automatic transmission and transaxle

I - Technical Standard Three - Manual Drive Train & Axles
    • transmission, transaxle diagnosis and repair

J - Technical Standard Four - Electrical/Electronic Systems
    • body electrical systems diagnosis and repair

K - Technical Standard Five - Engine Performance
    • diagnose oil leaks, emissions, and driveability concerns caused by the positive crankcase
      ventilation (PCV) system; determine needed action
A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Banking Concepts
  • demonstrate an understanding of basic banking concepts, terminology and operating procedures

C - Negotiable Instruments
  • compare and contrast various types of negotiable instruments and describe the effects of e-commerce on banking

D - Interpret Financial Performance
  • interpret and measure financial performance of banking institutions

E - Investment Principles
  • demonstrate an understanding of basic investment principles, including the importance of investment planning and establishing financial goals

F - Investment Instruments
  • investment Instruments

G - International Finance
  • predict future investment trends and explain the role of international finance in the investing process

H - Risk Management
  • demonstrate an understanding of risk management basics and personal insurance coverage

I - Insurance
  • identify risks present in business and the insurance needed to protect a business

J - Ethics and Fraud
  • evaluate the ethical needs of the financial services industry and examine the effects of fraud upon the industry

K - Careers
  • identify and evaluate careers in the financial services industry

L - Professional Organizations
  • explore how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, entrepreneurship development, and competitive events
High School Career and Technical Education

Broadcast Video Production Applications

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Production
  • demonstrate a mastery proficiency level of production equipment used in broadcasting and video production in various workplace setting
  • produce a variety of programming that emulates professional productions
  • produce samples to enhance or replace existing portfolio artifacts
High School Career and Technical Education

Business and Technology

A - Demonstrate Employability Skills
- demonstrate employability skills required by business and industry

B - Create, Edit, and Publish Industry Appropriate Documents
- create, edit, and publish industry appropriate documents using technology as a tool to increase productivity

C - Develop Organizational Communication Skills
- develop organizational communication skills through professional leadership, personal ethics, and customer/business relationships

D - Manage Data in Spreadsheet Software
- manage data in spreadsheet software for effective use in a business environment

E - Organize and Share Data from a Spreadsheet
- master use of spreadsheet software to analyze, organize and share data from a spreadsheet while presenting the data visually in a business environment

F - Develop Creditable Research Skills
- develop creditable research skills to use information from a variety of sources

G - Acquire Database Skills
- acquire database skills to manage data in a business environment

H - Develop Personal Leadership Skills
- develop personal leadership skills to work on teams, teach others, serve customers, lead, negotiate, and work effectively and efficiently in a business environment

I - FBLA
- explore how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, entrepreneurship development, and competitive events
High School Career and Technical Education

Business Communication

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Grammatically Correct and Professional Business Correspondence
  • examine and practice grammar, mechanics, and process of composing professionally written business communications

C - Verbal and Nonverbal Communication
  • apply effective oral communication in various situations by communicating in a clear, courteous, concise, and professional manner

D - Listening Skills
  • listen discriminately and respond appropriately to oral communication

E - Word Processing
  • master word processing software at an expert level to create, edit, and publish professional-appearing business documents

F - Integration of Communication in the Workplace
  • integrate multiple forms of communication in the successful pursuit of a career/employment

G - Skills and Strategies for Effective Presentations
  • apply skills and strategies for the delivery of effective oral communication and presentations

H - Digital Technology, Networking Tools and Social Networking
  • use digital technologies (e.g., computers, PDAs, media players, GPS, etc.), communication/networking tools, and social networks appropriately to access, manage, integrate, evaluate, and create information to successfully function in professional settings

I - Presentation Software
  • master presentation software to create, edit, publish, and deliver professional-appearing business presentations

J - Student Organizations
  • explore how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, entrepreneurship development, and competitive events
High School Career and Technical Education

Carpentry I

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Architectural and Construction Estimation
   • read, interpret, apply information, and estimate costs from a variety of architectural and
     construction working drawings

C - Concrete Materials, Processes, and Safety
   • demonstrate an understanding of the materials, processes, and safety related to all cement and
     concrete products

D - Materials and Practice of Basic Site Layout and Footings
   • demonstrate an understanding of the concepts, materials, and practices of basic site layout and
     footings

E - Floor and Wall Systems Construction
   • demonstrate knowledge of proper and necessary carpentry tasks and materials that enable a
     team to construct floor and wall systems

F - Ceiling and Roof Systems Construction
   • demonstrate an understanding of proper and necessary carpentry tasks that enable a team to
     construct ceiling and roof systems

G - Installation of Doors, Windows, and Stairs
   • demonstrate an understanding of the proper and necessary carpentry tasks that enable a team
     to install doors, windows, and stairs

H - Installation and Application Procedures for Exterior Finishes
   • demonstrate an understanding of installation and application procedures for exterior finishes

I - SkillsUSA
   • examine how SkillsUSA is a co-curricular part of career and technical education through
     leadership development, school, and community service projects, and competitive events
High School Career and Technical Education

Clinical Lab I

A - Employability Skills
• demonstrate employability skills required by business and industry

B - Careers
• explore options in the clinical lab industry including medical lab assistant and the organizational structure

C - Safety
• abide by regulations governing workplace safety, infection control, operational standards, patient confidentiality, and facility protocol

D - Quality Control
• maintain quality control measures within the medical/lab facility to prevent medical errors and provide appropriate patient care

E - Clinical Laboratory
• utilize appropriate laboratory and medical terminology, medical lab equipment and apply the use of the metric system
• discuss and evaluate clinical techniques in the identifications of microbes in a simulated classroom setting

F - Clinical Techniques
• discuss and evaluate basic clinical chemistry techniques in a simulated classroom lab setting

G - Logistics
• ensure proper specimen collection and test management

H - Health Informatics
• maintain appropriate reports and patient data inventory and supplies and billing procedures for laboratory tests

I - Communication
• discuss proper communication techniques with medical personnel, patients, and families regarding laboratory testing and special requirements for lab tests
High School Career and Technical Education

Clinical Lab II

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Hematology
   • discuss and evaluate hematology procedures to understand normal results and disease processes in a simulated classroom lab setting

C - Lab Processes
   • obtain label preserve and process urine specimens for lab analysis in a simulated classroom lab setting

D - Chemistry
   • research antigen/antibody response and determine steps performed in serology and immunology testing in the lab

E - Specimen Practices
   • demonstrate the process of obtaining blood specimens through venipuncture and capillary puncture

F - Health Informatics
   • maintain appropriate reports and patient data inventory and supplies and billing procedures for hematology, urinalysis, blood bank, and immunology testing

G - Communication
   • observe medical personnel communication with other medical personnel, patients, and families regarding laboratory testing and special requirements for hematology, urinalysis, blood bank and immunology testing

H - Forensics
   • analyze the use of forensic medicine in criminal science
High School Career and Technical Education

**Computer Science Principles**

A - **Employability Skills**
- demonstrate employability skills required by business and industry

B - **Digital Artifacts**
- create digital artifacts that foster creative expression including programs, digital music, videos, images, documents, and combinations of these such as infographics, presentations, and web pages

C - **Abstraction**
- apply abstraction in digital data to explain how bits are grouped to represent higher-level abstractions, such as numbers and characters

D - **Design Computer Programs**
- design and create computer programs to process and extract information to gain insight and knowledge

E - **Algorithms**
- develop, express, implement, and analyze algorithms analytically and empirically

F - **Create Programs**
- create programs that translate human intention into computational artifacts including music, images, visualizations, and more while exploring the concepts, techniques and development used in writing programs

G - **Internet**
- gain insight into the operation of the Internet, study characteristics of the Internet and systems built upon it, and analyze important concerns, such as cybersecurity

H - **Innovation**
- develop a logical argument from the many ways in which computing enables innovation and our methods for communicating, collaborating, problem solving, and doing business, and analyze the potential benefits and harmful effects of computing in a the way people think, work, live, and play and testing

I - **Student Organizations**
- explore how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, entrepreneurship development, and competitive events
High School Career and Technical Education

Contemporary Issues in Education

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Career Paths
  • analyze career paths in the area of education

C - Humanities and Social Sciences
  • apply disciplinary knowledge from the humanities and social sciences to interpret the meanings of education and schooling in diverse and contemporary contexts

D - Cultural Influences
  • analyze the inevitable presence of societal and cultural influences in contemporary educational thought and practice

E - Educational Perspectives
  • apply critical perspectives on education and schooling

F - Moral Principles
  • differentiate how moral principles related to democratic institution can inform and direct schooling practice, leadership, and governance

G - Significance of Diversity
  • draw conclusions on the full significance of diversity in a democratic society and how that society influences instruction, school leadership, and governance

H - Ethics in Education
  • critique how ethical, philosophical and moral commitments affect the process of evaluation at all levels of schooling practice, leadership, and governance

I - School System Enhancement
  • synthesize individual and organizational efforts that maintain and enhance United States schools as institutions in a democratic society

J - Issues Affecting Education
  • evaluate how issues such as justice, social inequality, concentrations of power, class difference, race and ethnic relation, disabilities, and family and community organization affect teaching and schooling

K - Philosophical Assumptions
  • research and discuss moral and philosophical assumptions underlying an assessment and evaluation process
High School Career and Technical Education

**Cosmetology Services II**

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Hair and Scalp Analysis and Application of Treatment
   • investigate basic histology of the hair and skin, related diseases and disorders, corrective treatments and provided services based on hair and scalp analysis and applying safety precautions for scalp and hair treatments

C - Shampoo and Condition Application and Chemistry
   • differentiate chemistry of shampoos and conditioners for a variety of hair types and perform shampoo and conditioning applications

D - Hair Design Principles Related to Elements, Facial Shapes, and Types
   • create hairstyles to demonstrate the proper use of design principles, design elements, facials shapes, and hair types, as needed, for hair design

E - Fundamental Theory and Skills for Hairstyling Techniques
   • examine the fundamental theory and skills needed for wet hairstyling allowing students to perform various hairstyling techniques, including wet hairstyling, comb-outs, braiding and blow-dry styling

F - Thermal Hairstyling Services
   • demonstrate thermal hairstyling services, including the use of curling irons, hair pressing comb, hot rollers, etc., applying safety precautions for thermal tools

G - Wave Sectioning, Blocking, and Wrapping
   • explain the purpose of a scalp and hair analysis in relation to the permanent wave service and demonstrate (on a mannequin) sectioning, blocking, and wrapping a permanent wave

H - Skills in the Cosmetology Industry
   • explore and demonstrate skills used in the cosmetology industry

I - Safety and Accident Prevention
   • maintain a safe work environment and accident prevention by using safety precautions and/or practices including adherence to hazardous labeling requirements and compliance with safety signs, symbols, and labels

J - Integration of Student Organizations
   • explore how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, entrepreneurship development, and competitive events
Cosmetology Services III

A - Employability Skills
- demonstrate employability skills required by business and industry

B - Safety In Haircutting Services
- demonstrate proper methods of infection control, storage of products, draping clients, stylist protection, proper use of haircutting implements and safety used during haircutting services

C - Reference Points, Design Elements, and Facial Shape Analysis
- explain the importance of reference points on the head, design elements, and principle needed for haircutting services, including analysis of client's facial shape, features, and profile

D - Fundamentals of Haircutting
- demonstrate the fundamentals of haircutting including, angles, elevations, guidelines, face shapes, hair analysis, implements used, proper body position, and safety used in haircutting services

E - Client Consultations
- introduce proper client consultations for haircutting services, including greeting techniques, client needs and desires, proper maintenance needed for client, reflective listening and recommendations perform various haircutting techniques and ability to check a completed haircut

F - Hair Color Services
- demonstrate the ability to perform different hair color services, using in-depth hair analysis, consultations, release forms and record cards, identifying natural hair levels, color theory, types of hair color, developers, understanding the law of color, types of hair color, color formulations, patch test, hair color applications, preliminary strand test, and gray coverage

G - Chemistry of Relaxing Hair
- analyze and explain how the chemistry of relaxing hair is achieved for various hair types compare and contrast the different type of relaxers and the application procedures follow all safety guidelines when performing all chemical relaxing services

- explore and demonstrate various advanced skills, industry trends, equipment, technology, standards, practices, and career options in the cosmetology industry

I - Integration of Student Organizations
- explore how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, entrepreneurship development, and competitive events
Criminal Investigations

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Roles and Responsibilities of Criminal Investigators
   • explore the roles and responsibilities of criminal investigators

C - Elements of Preliminary Investigation
   • recognize the fundamental elements of a preliminary investigation and the role it plays in the criminal trial

D - Legal Complexities in Criminal Investigation
   • analyze the legal complexities related to a criminal investigation and search of a crime scene

E - Methods of Fingerprint Development
   • demonstrate methods of fingerprint development

F - Impressions and Tool Mark Evidence
   • distinguish how impressions and tool mark evidence are used in a criminal investigation

G - Trace Evidence
   • analyze the significance of trace evidence in a criminal investigation

H - Investigative Reports
   • document concise investigative reports

I - Crime Lab in Criminal Investigation
   • summarize the role of the crime lab in a criminal investigation and subsequent trial

J - Homicide Investigation
   • analyze the complex nature of a homicide investigation

K - Investigation Techniques in Major Crime Scenes
   • compare the varied investigative techniques utilized when investigating major crime scenes

L - Investigations in Criminal Trials
   • critique various issues concerning the investigation that arise during the criminal trial
High School Career and Technical Education

Criminal Justice Essentials

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Design a Career Plan
  • design a personal education and career plan

C - Origins of U.S. Criminal Justice System
  • synthesize the various origins and historical influences that created the current structure of the United States Criminal Justice System

D - Court System and Process of Criminal Trial
  • describe the court system and process of a criminal trial

E - Law Enforcement Scenarios
  • analyze scenarios related to law enforcement and apply relevant federal, state and local law

F - Constitutional Standards and Proper Criminal Procedure
  • cite constitutional standards as applied to the proper criminal procedure of criminal cases from initial response through trial

G - Application of Law Enforcement Skills
  • demonstrate proper and ethical application of law enforcement skills

H - Patrol Operations Techniques
  • demonstrate techniques used in patrol operations

I - Police Interaction Techniques with Community
  • formulate ways police can interact with the community to reduce crime and improve the community

J - Criminal Trial Processes
  • explore the steps of the criminal trial process

K - Establish Purposes and Types of Sentences
  • explain the various purposes and different types of sentences

L - Researching American Corrections Systems
  • research the American corrections systems
High School Career and Technical Education

Culinary Arts I

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Food Sanitation and Safety
   • examine and apply the principles of food sanitation and safety in foodservice operations and kitchen environments to achieve a nationally recognized food safety certificate

C - Using and Maintaining Professional Equipment
   • acquire and apply basic knowledge of using and maintaining professional kitchen equipment

D - Business and Culinary Math
   • demonstrate basic knowledge in business and culinary math skills

E - Cooking
   • identify and demonstrate the principles and processes of cooking in a professional kitchen

F - Cooking Methods and Techniques
   • perform various cooking methods, techniques and preparations in a commercial kitchen

G - Fundamentals of Baking
   • identify and apply fundamentals of baking

H - Nutritional Concepts
   • examine the nutritional concepts that affect the food service industry today with emphasis on a healthy diets, allergies, and obesity issues

I - Fundamentals of Human Relations
   • apply fundamentals of human relations and management skills

J - Menu Planning Fundamentals
   • identify and apply menu planning fundamentals

K - Commercial Purchasing Procedures
   • analyze purchasing procedures in a commercial kitchen
High School Career and Technical Education

Culinary Arts II

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Careers in Food Service
  • identify skills, certifications, and experience required for careers in the hospitality, tourism and food service industries

C - Commercial Food Preparation
  • demonstrate competency in the commercial food preparation of all menu categories to produce a variety of food products

D - Garde Manger
  • discuss and practice Garde Manger

E - Commercial Baking
  • demonstrate and master the commercial preparation of all fundamental bakery categories to produce a variety of products

F - Dining Room Operations
  • identify and apply dining room operations

G - Food Service Operations
  • create a conceptual food-service operation and identify the requirements needed for successful operation's management

H - Student Organizations
  • examine how related student organizations are integral parts of career and technology education courses through leadership development, school, and community service projects and competitive events
High School Career and Technical Education

Dental Science II

A - Employability Skills
   •  demonstrate employability skills required by business and industry

B - Anatomy and Physiology
   •  identify and explain the human body including planes, regions, and organs

C - Anatomy and Physiology
   •  explain head and neck anatomy, physiology, and pathophysiology

D - Oral and Facial Anatomy
   •  investigate oral embryology and tooth morphology

E - Dental Charting
   •  perform appropriate dental charting including symbols and abbreviations

F - Office Management
   •  utilize office management skills necessary to maintain a dental office

G - Chair Side Assistance
   •  perform chairside assisting skills

H - Student Organizations
   •  demonstrate leadership and knowledge within a student organization
High School Career and Technical Education

Diagnostics Phlebotomy

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Careers
   • explore options in the clinical lab industry including phlebotomy and the organizational structure

C - Terminology
   • utilize appropriate laboratory/medical terminology and venipuncture equipment

D - Regulations
   • abide by regulations governing workplace safety, infection control, operational standards, patient confidentiality, and facility protocol

E - Quality Control
   • maintain quality control measures within the medical facility to prevent medical errors and provide appropriate patient care

F - Skills
   • follow steps and guidelines necessary to prepare patients for blood collection procedures
   • perform venipuncture and capillary blood collection utilizing appropriate equipment and techniques
   • observe specialized laboratory tests that may involve specific techniques for patient preparation, timing of sample collection, other blood collection techniques, and sample handling
   • identify site specific anatomy related to venipuncture

G - Specimen practices
   • comply with facility procedures and protocol when documenting and reporting and when handling and transporting specimens
High School Career and Technical Education

Digital Design

A - Employability
  • demonstrate employability skills required by business and industry

B - Web Functions and Emerging Trends
  • research, explain, and summarize current state of the web, functions of the web, and future trends emerging of the web

C - Legal Issues Associated with Media
  • identify logistical, ethical, and legal issues related to digital media and apply concepts to use of text graphics, animation, sound, video, and digital images in digital products

D - Web Development
  • develop a plan to create, design, and market a web site with digital content to a specific target market

E - Writing for Digital Media
  • explore and write using the various writing styles used on web sites and in digital content to get the intended message across

F - Design Principles for Digital Media
  • identify and develop model digital products that reveal a professional layout and look by applying design principles to produce professional quality digital products

G - Create and Edit Images
  • create and edit images and graphics

H - Digital Audio
  • plan, produce, edit, and publish digital audio

I - Multimedia-rich Video
  • plan, edit, produce, and post a multimedia-rich video project

J - Animations
  • plan, produce, edit, and publish animations

K - FBLA
  • explore how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, entrepreneurship development and competitive events
High School Career and Technical Education

Digital Electronics

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Engineering Fields
  • analyze fields of engineering and electronic specializations (e.g., aeronautical, automotive, chemical, civil, industrial, and mechanical, computer software, electrical, and biomedical) and identify associated career tracks

C - Safety
  • describe and follow safety, health and environmental standards related to Science, Technology, Engineering and Math (STEM) workplaces

D - Digital and Analog Systems
  • analyze characteristics of digital and analog systems

E - Logic Gates
  • demonstrate knowledge of logic gates (e.g., IF, Then, Else)

F - Digital Coding Conversion
  • compare and contrast the use of several commonly used digital codes, including the differences between conversion of decimal numbers and letters to code

G - Operation and Outputs
  • use truth tables and interpret waveforms to determine flip-flop modes of operation and outputs

H - Analyzing Outputs
  • analyze the output for a variety of counters based on a series of inputs

I - Block-Style Logic Diagrams
  • analyze block-style logic diagrams

J - Memory and Storage
  • investigate common memory and storage devices used in a microcomputer system

K - Digital Projects
  • create a digital project that displays mastery of the standards involved with electronics
High School Career and Technical Education

Early Childhood Education I

A - Employability Skills
- demonstrate employability skills required by business and industry
- analyze the relationship between leadership development, school and community service projects with a career in the early childhood education industry

B - Career Opportunities
- analyze career paths within early childhood education and care

C - Professionalism
- identify the role of professionalism in early childhood care and guidance

D - Theories of Human Development
- examine the theories of human development

E - Growth and Development
- explore prenatal development and the growth, development, and care of the infant
- survey the growth and development of the school age child, 6-12 years of age
- explore the growth, development, and care of the toddler
- explore the growth, development, and care of the preschool child

F - Positive Relationships
- identify techniques for positive collaborative relationships with children

G - Learning Environments
- examine program management and curriculum in early childhood education and care
- determine components of a well-organized, developmentally appropriate learning environment

H - Diversity
- connect the importance of diversity within early childhood education

I - Literacy Skills
- demonstrate appropriate use of literacy skills
High School Career and Technical Education

**Early Childhood Education II**

**A - Employability Skills**
- demonstrate employability skills required by business and industry

**B - Evolution of Early Childcare**
- describe the evolution of the roles and expectations of American early childhood educators and the children they teach

**C - Techniques for Observing**
- analyze techniques for observing intellectual, physical, and behavioral development of children

**D - Accommodations for Exceptional Needs**
- recognize, identify, and explore accommodations for children with exceptional needs

**E - Nutrition and Food Safety**
- identify nutrition and food-safety principles for optimal child wellness

**F - Safety**
- demonstrate a safe environment for children

**G - Healthy Environments**
- demonstrate a healthy environment for children

**H - Communicable Illnesses**
- identify the component elements of the communicable illness process

**I - Child Abuse**
- identify types and characteristics of child abuse and neglect

**J - Safety Certifications**
- research and obtain industry required safety certifications

**K - Licensing and Accreditation**
- analyze licensing and accreditation standards in Georgia and the United States
High School Career and Technical Education

Early Childhood Education III

A - Employability Skills
• demonstrate employability skills required by business and industry

B - Child-Directed Play
• explore the benefits of child-directed play

C - Early Childhood Communication
• determine activities necessary to support early childhood communication and language development

D - Guidance Methods
• research and apply appropriate guidance methods to promote positive behavior

E - Current Trends
• examine current trends affecting children and caregivers

F - Family Dynamics
• explore the changing dynamics in family culture and diversity

G - Stress on Children
• examine the causes and effects of stress on young children

H - Appropriate Technology
• explore appropriate technology integration for the young child

I - Better Brains for Babies
• formulate concepts using Georgia's Better Brains for Babies training materials as background information to study the importance of early brain development

J - Nutritional Needs for Infants
• discover and analyze an infant's nutritional needs
High School Career and Technical Education

**Early Childhood Education Practicum**

A - Employability

- demonstrate employability skills required by business and industry

B - Confidentiality

- demonstrate and practice confidentiality in upholding the privacy of teachers, children, and their families in all matters

C - Professional Organizations

- research the professional organizations related to teaching at all age levels for liability insurance provided at the different levels of supervision: student intern, paraprofessional, teacher and administrator and document findings

D - Resume

- create a resume detailing all work experience in a pre-K setting

E - Personal Philosophy

- write a personal philosophy of education including beliefs about education, teaching, schools, students and other educational aspects

F - Safety

- demonstrate knowledge of basic safety procedures required at the candidate's internship work site

G - Management

- research and evaluate various management techniques utilized with children

H - Child Behavior Plan

- design a child guidance and behavior plan that includes consequences and rewards

I - Assessment Methods

- investigate a variety of assessment methods to observe and interpret a child's growth and development

J - Exceptionalities

- identify the types of exceptionalities that are served in the candidate's work site and give a brief description of each exceptionality

K - Teacher Work Sample

- develop a Teacher Work Sample using Georgia Early Learning and Development Standards (GELDS) to include learning goals, assessment plans, instruction to meet learning goals, and a reflection of the lesson

L - Personal Performance

- analyze personal performance in the internship and write a reflective summary
High School Career and Technical Education

Electrical I

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Proper Tool Usage
   • use tools, instruments, and equipment in a professional and safe manner

C - Material Handling and Storage
   • demonstrate an understanding of the selection, handling, storage, and proper use of electrical materials

D - Circuits and Conduits
   • demonstrate an understanding of electrical circuitry including raceways, boxes, and conduits

E - Electric Codes
   • demonstrate knowledge of the current National Electrical Code (NEC), National Electrical Manufacturers Association Code (NEMA), National Fire Protection Association Code (NFPA), and Underwriters Laboratories (UL) Standards

F - Conductors
   • demonstrate an understanding of the identification and installation of conductors according to National Electrical Code (NEC)

G - Fixtures
   • demonstrate an understanding of installing a variety of fixtures

H - Voltage, Resistance, and Current
   • demonstrate an understanding of voltage, resistance, and current and how they relate

I - Student Organizations
   • examine how SkillsUSA is a co-curricular part of career and technical education through leadership development, school and community service projects, and competitive events
High School Career and Technical Education

E-Marketing

A - Employability Skills
• demonstrate employability skills required by business and industry

B - E-Marketing
• evaluate e-marketing websites for user
• analyze how the Internet has influenced modern day business and industry
• students will explore the nature of e-marketing

C - Legal and Ethical Concepts
• evaluate the legal and ethical issues affecting e-marketing

D - Marketing Mix
• analyze the role of e-marketing in the marketing mix

E - Research
• explore how market research is conducted in e-marketing

F - Web Site Development
• create an online ad campaign for a website launch

G - Distribution
• analyze distribution methods for e-marketing

H - Design
• explore professional design and website development from a marketing perspective

I - Revenue Generation
• analyze revenue generation in e-marketing

J - Globalization
• evaluate the impact globalization has on e-marketing

K - Careers
• explore e-marketing careers
Embedded Computing

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Terminology
  • explain Embedded Computing (EC) and the Internet of Things (IoT)

C - Protocols
  • demonstrate a working knowledge of basic networking protocols for industry, homes, and the internet including speed, power requirements, and popularity in industry and personal devices

D - Circuits
  • develop and investigate interfacing circuits

E - Sensors
  • classify and categorize multiple kinds of sensors

F - Motors
  • manipulate, connect, and examine performance aspects of motors

G - Programming
  • investigate and draw connections within the context of programming as it relates to Embedded Computing/Internet of Things

H - Debugging
  • interpret debugging techniques in hardware and software

I - Cloud Computing
  • compare, contrast, and utilize Cloud Service features

J - Application Design
  • design an embedded computing application that solves a current problem (e.g., robotics, artbotics, visual and kinetic art)

K - Student Organizations
  • examine how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, and competitive events
High School Career and Technical Education

Emergency Medical Responder

A - Employability Skills
  • demonstrate employability skills required by business and industry

AA - Patient Safety
  • analyze techniques used by appropriate personnel to ensure EMS personnel and patient safety during extrication operations

B - Emergency Medical Services
  • examine the Emergency Medical Services (EMS) system and the role of Emergency Medical Responders within the system

BB - Clinical Management
  • evaluate clinical management of the patient exposed to hazardous materials

C - Scene Safety
  • evaluate the necessity of scene safety, emotional and physical well-being, and stress management of the Emergency Medical Services provider

CC - Evaluate Clinical Management
  • evaluate and observe clinical management of the patients exposed to a terrorist event or involved in a disaster

D - Appropriate Protocol
  • follow appropriate protocol and regulations to document findings and data regarding patients

DD - EMR Evaluations
  • prepare for the NREMT EMR Evaluation

E - Legal and Ethical Issues
  • analyze the legal and ethical issues of Emergency Medical Services providers including Emergency Medical Responders and all levels of Emergency Medical Technicians, and the medical and legal issues at the scene of an emergency, while awaiting a higher level of care

F - Body Systems
  • demonstrate the anatomy and function of the upper airway, heart, vessels, blood, lungs, skin, muscles, and bones as the foundation of emergency care. Illustrate the different systems of the body and how they relate to patient care

G - Medical Terminology
  • utilize appropriate medical and anatomical terminology

H - Respiratory Life Threats
  • respond to life threats using knowledge of shock and respiratory compromise
High School Career and Technical Education

I - Local Public Health Resources
• recognize local public health resources and the role EMS personnel play in public health emergencies

J - Emergency Medications
• demonstrate the medications that EMR may self-administer or administer to a peer in an emergency

K - Emergency Preparedness
• demonstrate fundamental depth and foundational breadth of anatomy and physiology to assure a patent airway, adequate mechanical ventilation, and respiration while awaiting EMS response for patients of all ages

L - Managing Immediate Life Threats
• identify and manage immediate life threats and injuries using scene information and simple patient assessment findings, within the scope of practice of the EMR

M - Primary Assessment of Patients
• describe the primary assessment for all patient situations including the following: general impression, level of consciousness, ABCs, identifying life threats, and assessing vital functions

N - Subjective and Objective Observations
• demonstrate utilizing subjective and objective observations and age-appropriate interview techniques to identify and manage immediate life threats and injuries within the scope of practice of the EMR

O - Various Assessment Techniques
• demonstrate performing various assessment techniques to identify and manage immediate life threats and injuries within the scope of practice of the EMR

P - Manage Life Threats
• recognize and manage life threats based on assessment findings of a patient with a medical emergency while awaiting additional emergency response

Q - Recognizing Shock
• use assessment information to recognize shock, respiratory failure or arrest, and cardiac arrest based on assessment findings and manage the emergency while awaiting additional emergency response

R - Acute Injuries
• recognize and manage life threats based on assessment findings for an acutely injured patient while awaiting additional emergency medical response

S - Pregnancy Emergency
• recognize and manage life threats based on assessment findings for a pregnant patient while awaiting additional emergency response
High School Career and Technical Education

T - Neonatal Life Threats
  • recognize and manage life threats based on simple assessment findings for a neonatal patient while awaiting additional emergency response

U - Infant Emergencies
  • identify, assess, and treat infants and children with medical, traumatic, and environmental emergencies and recognize and manage life threats based on assessment findings for a pediatric patient while awaiting additional emergency response

V - Geriatric Emergencies
  • recognize and manage life threats based on assessment findings for a geriatric patient while awaiting additional emergency response

W - EMS Responsibilities
  • identify and describe the operational roles and responsibilities of the EMS to ensure patient, public, and EMS personnel safety

X - Incident Management System
  • establish and work within the Incident Management System

Y - Multiple Casualty Incident Plan
  • perform necessary procedures during a multiple-casualty incident when a multiple-casualty incident plan is activated within EMR scope of practice

Z - EMS Techniques
  • perform duties of EMR within scope of practice safely in and around a landing zone during air medical operations and transport
High School Career and Technical Education

Emergency Medical Technician

A - Employability Skills
  • demonstrate employability skills required by business and industry

AA - Skin and Soft Tissue Injuries
  • understand the types of open and closed soft-tissue injuries, how to care for soft-tissue injuries, including the use of dressings and bandages; assessment and care of different types of burns, including thermal, chemical, and electrical burns

B - Role of the Emergency Medical Technician
  • examine EMS and EMT roles; apply fundamental knowledge of the EMS system including ethical issues

BB - Head and Spine Trauma
  • understand how to manage trauma related issues with the head, face, and neck

C - Safety, Stress Management, and Wellness
  • evaluate incident scene and responder safety, recognize hazards, address physical and emotional care issues for responders and patients

CC - Traumatic Brain Injuries
  • learn how to recognize life threats associated with traumatic brain injuries (TBI) as well as the need for immediate spinal stabilization and, potentially, airway and breathing support

D - Legal and Ethical Implications
  • describe elements of patient care and consent, confidentiality, refusal of care, organ donation, and end of life issues

DD - Chest Trauma
  • understand how to manage a patient with chest trauma; discuss age related issues in regards to pediatric and geriatric chest trauma

E - Effective Communication
  • describe unique communication challenges for pediatric and geriatric patients; identify specific reporting requirements for special emergency situations

EE - Abdominal and Genitourinary Injuries
  • understand detailed anatomy and physiology of the abdominal and genitourinary systems as well as the pathophysiology, complications, assessment, and management of abdominal and genitourinary injuries

F - Medical Terminology
  • identify and apply specific medical terminology including acronyms; list and define common patient movement and positional terms
High School Career and Technical Education

FF - Musculoskeletal Injuries
• know general and specific types of musculoskeletal injuries including fractures, sprains, and dislocations, with associated signs, symptoms, and emergency treatment including the use of splints, PASG, and traction splints

G - Anatomy and Pathophysiology
• identify and describe patient assessment and management including body planes, anatomy, and functions of each body system

GG - Environmental Injuries
• learn the proper assessment and management of general and specific types of environmental emergencies including hypothermia, local cold injuries such as frostbite, and heat exposure illnesses such as heat stroke; learn the associated signs and symptoms and emergency treatment of drowning emergencies, diving emergencies, high-altitude sickness, lightning strikes, and bites and envenomations from spiders, hymenoptera (e.g., bees, yellow jackets, wasps, and ants), snakes, scorpions, ticks, and marine life

H - Stages of Human Development
• identify and describe phases of human development and their impact on the provision of care

HH - Pregnancy and Neonatal Care
• understand the anatomy and physiology of the female reproductive system as it relates to pregnancy; learn the assessment and emergency treatment for childbirth including stages of labor, normal delivery, complications of pregnancy, and neonatal evaluations and resuscitation

I - Patient Transport
• identify and demonstrate aspects of safe patient movement/transfer; demonstrate team transfer techniques and describe transfer equipment

II - Pediatric Emergency Care
• describe the appropriate assessment and care for the types of illness and injury affecting children of all ages, injury patterns based on size, and special body system injuries; identify and describe the indicators of abuse and neglect, and the medical and legal responsibilities of an EMT

J - Patient Assessment
• apply scene information and scope and sequence of patient assessment, including scene size-up, primary assessment, history taking, secondary assessment, and reassessment

JJ - Geriatric Care
• identify the physiologic and psychological changes that occur with the aging process; learn and understand the types of illness and injuries common to the geriatric population

K - Airway Management
• assess patient airway, apply principles of airway management including usage of specialized medical equipment
High School Career and Technical Education

KK - Caring for the Impaired Patient
   • identify and describe the special needs of patients with developmental, sensory, and physical disabilities

L - Pharmacology
   • understand the significance and characteristics of general pharmacology and be able to identify, describe, and demonstrate the steps for assisting/administering medications carried by the EMT

LL - Emergency Transport
   • describe and apply effective preparation for transport, safe emergency vehicle operations, appropriate transport decisions, safe patient transfer techniques, and a responsible approach to patient care during transport

M - Management of Shock, Respiratory Failure, and Cardiac Failure
   • apply knowledge of the causes, pathophysiology, and management of shock, respiratory failure or arrest, cardiac failure or arrest, and post-resuscitation management

MM - EMS Rescue Operations
   • identify operational roles and responsibilities to ensure patient, public, and personnel safety during various EMS rescue operations to include vehicle extrication, trench rescue, and high-angle rescue

N - BLS Review
   • review the basic life support (BLS) procedures for adults, infants, and children

NN - Incident Command
   • describe and apply, in context, the National Incident Management System (NIMS) to include describing command and general staff roles

O - Assessment Techniques
   • describe the need for proper assessment techniques when called for a complaint of a medical nature

OO - Disaster Management
   • identify and explain operational roles and responsibilities to ensure patient, public, and personnel safety during various disaster management situations

P - Respiratory Emergencies
   • demonstrate comprehension of respiratory anatomy and physiology including various respiratory etiologies

PP - Health Care: A Team Approach
   • explain the significance and characteristics of a team approach to health care and the impact of this approach on positive patient outcomes

Q - Pathophysiology of Respiration and Perfusion
   • apply fundamental knowledge of the pathophysiology of respiration and perfusion to patient assessment and management
High School Career and Technical Education

QQ - NREMT Preparation
  • prepare for the NREMT Evaluation

R - Neurological Emergencies
  • apply fundamental knowledge to provide basic emergency care and transportation based on assessment findings for a neurological emergency

RR - Student Organizations
  • explore the benefits of CTSO's, such as leadership development, school and community service projects, entrepreneurship development, and competitive events

S - Gastrointestinal/Genitourinary Emergencies
  • apply fundamental knowledge to provide basic emergency care and transportation based on assessment findings in a gastrointestinal or genitourinary emergency

T - Diabetic and Hematologic Emergencies
  • understand the significance and characteristics of type one and type two diabetes, including diabetic emergencies; identify and describe blood related ailments including sickle cell disease and clotting disorders, as well as the management of hematologic emergencies

U - Hypersensitivity Disorders and Anaphylactic Reactions
  • acquire the knowledge and skills to recognize and manage hypersensitivity disorders and anaphylactic reactions

V - Toxicological Emergencies
  • identify the classes of compounds involved in substance abuse and poisonings, the routes by which poisons enter the body, and the signs, symptoms, assessment, and treatment for various poisoning emergencies

W - Psychiatric Emergencies
  • recognize behaviors that pose a risk to the EMT, patient, or others and the basic principles of the mental health system; assess and manage patients suffering from a psychiatric emergency within the legal parameters of their scope of practice

X - Women’s Health
  • understand the anatomy and physiology, including the developmental changes during puberty and menopause, of the female reproductive system and identify and describe assessment and treatment for gynecologic emergencies

Y - Trauma Patients
  • understand the general injury patterns associated with different types of impacts, falls, and penetrating trauma, and the basic application of laws of physics on the assessment of trauma patients; understand common injury patterns to major body systems
High School Career and Technical Education

Z - Internal and External Bleeding

- understand the structure and function of the circulatory system, the significance and characteristics of bleeding, the importance of personal protective equipment when treating a bleeding patient, the characteristics of external and internal bleeding, how to conduct a patient assessment, and methodologies for controlling bleeding
A - Employability
  • demonstrate employability skills required by business and industry

B - Energy, Work, Power, and Force
  • investigate energy, work, power, and force and analyze the relations of each

C - Simple Machines
  • identify the six simple machines and explain how each is able to change the value for force and distance in the work relation

D - Power Systems
  • differentiate between electrical and mechanical power systems and apply the various scientific laws that govern each

E - Circuits
  • differentiate between AC and DC circuits and apply Ohm's Law to series, parallel, and series/parallel circuits as well as state Kirchhoff's Laws

F - Engines
  • describe the basic components of a small engine and explain the difference between a 4-cycle and 2-cycle engine

G - Safety Practices
  • demonstrate the importance of following safety practices for energy and power
High School Career and Technical Education

Energy and Power: Generation, Transmission, and Distribution

A - Electric Power Generation Equipment
   • identify electric power generation equipment and systems

B - Electric Power Generation
   • explain the conventional electric power generation systems and process (coal, gas, hydroelectric, and nuclear)

C - Nuclear Power
   • define nuclear power and discuss in terms of positive and negative impacts, as well as relevance to various situations in today’s society

D - Generation of Nuclear Power
   • explain how nuclear power is generated

E - Alternative Energy
   • identify alternative sources for generation of electric power (e.g., solar, wind, geothermal, biomass, and ocean/tidal motion) and describe the advantages and disadvantages of their use for the consumer, industry, and the environment

F - Electric Power Distribution
   • explain the conditions necessary to build a functional electric power distribution and transmission grid

G - Natural Gas
   • explain the transmission and distribution of natural gas

H - Energy Conservation
   • explain the different processes used to conserve energy resources and increase efficient distribution and use

I - Transmission and Distribution
   • explain the ownership of the transmission and distribution systems

J - Safety Practices
   • understand and be able to implement safety practices, and procedures within the energy industry

K - Safety Practices for Utility Workers
   • demonstrate the importance of following safety practices for utility workers
Energy Systems Applications

A - Energy Relationships
   • determine and analyze the relationships between energy, work, power, and force

B - Simple Machines
   • identify the six simple machines and explain how each machine changes the value for force and distance during work

C - Fluid Power Systems
   • differentiate between fluid power systems and apply the laws that govern

D - AC and DC Circuits
   • differentiate between AC and DC circuits and apply Ohm's Law to Series, Parallel, and Series/Parallel circuits as well as discuss Kirchhoff's Laws

E - Small Engines
   • describe and demonstrate the basic components of a small engine and explain the difference between a four-stroke and two-stroke engine
High School Career and Technical Education

Engineering Applications

A - Employability
  • demonstrate employability skills required by business and industry

B - Safety
  • demonstrate and follow safety, health, and environmental standards related to the STEM workplace and apply specific engineering tools, machines, materials and processes in a safe and orderly manner to formulate, analyze, and verify engineering practices and solutions

C - Engineering Careers
  • identify and explore career opportunities in one or more engineering career pathways to build an understanding of the opportunities available in the STEM workplace

D - Engineering Design
  • apply knowledge of the engineering design process to solve engineering/technological problems in the STEM workplace

E - Time Management
  • employ planning and time management skills and tools to enhance results and complete work tasks

F - Communication
  • apply oral, written, and visual communication skills to obtain, interpret, and present information to and from intended audiences

G - Develop Detailed Solutions
  • develop and apply detailed plans to solutions for design problems using mathematical and scientific concepts

H - Develop Appropriate Models
  • develop appropriate models

I - Construct Prototype
  • design and construct a testable prototype

J - Engineering Impact
  • understand engineering impacts of social, economic, design and environmental issues

K - Engineering Business and Marketing
  • explain the impact of business and marketing on engineering design
High School Career and Technical Education

L - Technology Student Association

- explore how related career and technology student organizations are integral parts of career and technology education courses. Students will develop leadership, interpersonal, and problem-solving skills through participation in co-curricular activities associated with the Technology Student Association (TSA).
High School Career and Technical Education

Engineering Concepts

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Safety
   • demonstrate and follow safety, health, and environmental standards related to the Science, Technology, Engineering, and Math (STEM) workplaces

C - Characteristics of Engineering Disciplines
   • describe the characteristics of engineering disciplines and engineered products

D - Post-Secondary Career Opportunities
   • demonstrate the knowledge and skills required to pursue the full range of engineering post-secondary education and career opportunities

E - Design Process
   • explain a whole systems approach to the engineering design process to solve a technical problem

F - Critical Thinking
   • employ critical thinking skills and teamwork skills when working in groups to solve problems, to make decisions, achieve group goals and use team members' talents effectively

G - Engineering Solutions
   • summarize and apply engineering solutions through the audience appropriate application of engineering graphics and technical writing

H - Data Collection
   • apply basic engineering tools and resources to aid in data collection and problem solution sets

I - Troubleshooting
   • cite evidence for the role of troubleshooting, research and development, inventions, and innovations in problem solving

J - 21st Technologies
   • explore the use of social media and other 21st century technologies and their impact(s) on the fields of engineering and technology

K - Critique and Synthesize
   • critique and synthesize how related career and technology student organizations are integral parts of career and technology education courses Students will develop leadership, interpersonal, and problem-solving skills through participation in co-curricular activities associated with the Technology Student Association (TSA)
Entrepreneurship

A - Employability Skills
- demonstrate employability skills required by business and industry

B - Entrepreneurial Success
- understand and relate concepts and processes associated with entrepreneurial success and the personal traits and behaviors associated with successful entrepreneurial performance

C - Concepts, Strategies, and Systems
- use and model concepts, strategies, systems, and techniques needed to interact and present effectively to others

D - Business Concepts
- apply fundamental business concepts that affect business decision-making

E - Impact of Government
- explain and detail legal form of business ownership and the impact of government's role on business

F - Economic Principles Fundamental to Entrepreneurship
- understand and apply the basic economic principles and concepts fundamental to entrepreneurship

G - Marketing Plan
- develop a marketing plan to identify, reach, and retain customers in a specific target market using all forms of media

H - Financial Issues
- analyze financial issues relating to successful business ownership

I - Manage and Operate a Business
- manage and operate a business, or simulate the management and operation, through daily tasks and activities of a small business

J - Business Plan
- research, develop, and present a business plan

K - Human Resources
- understand the concepts, systems, and strategies needed to acquire, motivate, develop, and terminate employees

L - Student Organizations
- explore how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, entrepreneurship development, and competitive events
High School Career and Technical Education

Essentials of Biotechnology

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Laboratory and Classroom Safety Practice and Procedures
  • research required safety practices and procedures in the classroom and laboratory environment

C - Biotechnology Products and Their Affects
  • identify the basis for biotechnology products and how such products affect the quality of life

D - Careers in Biotechnology
  • analyze careers in research and development, human health and diagnostics, bio manufacturing, environmental applications, and agriculture that utilize biotechnology

E - Physical Science in Biochemical Applications and Techniques
  • demonstrate how concepts of physical science connect to biochemical applications and techniques

F - Organisms in Product and Procedure Development
  • compare and contrast common organisms used in biotechnology and relate the manipulation of living organisms to product and procedure development

G - Economic, Social, Ethical, and Legal Issues in Biotechnology
  • analyze economic, social, ethical, and legal issues related to the use of biotechnology
High School Career and Technical Education

Essentials of Dental Science

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Dental Careers
  • research careers and opportunities in the dental field and how dentistry has evolved over the years

C - Regulations and Ethics
  • investigate the laws, regulations, and ethical considerations in the dental fields

D - Pathogens and Microorganisms
  • classify pathogenic and non-pathogenic microorganisms, the various modes of transmission, and procedures to prevent transmission in the dental setting

E - Infection Control Measures
  • adhere to appropriate infection control guidelines and regulations and demonstrate infection control procedures including the use of Personal Protective Equipment (PPE)

F - First Aid
  • respond to life threatening and non-life threatening medical and dental emergencies and perform appropriate first aid according to level of training

G - Vital Sign Procedures
  • demonstrate appropriate procedures for taking vital signs, recording vital signs, and recognizing abnormalities in findings

H - Equipment Maintenance
  • maintain equipment and instruments used in dental procedures

I - Terminology
  • utilize medical terminology as it relates to the oral cavity and dental procedures

J - Student Organizations
  • research the qualities of a leader and the skills needed to function as a team member and team leader
High School Career and Technical Education

Essentials of Fire and Emergency Services

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Distinguish Fire and Emergency Agencies Roles and Functions
   • distinguish between the various fire and emergency agencies and the functions, roles and responsibilities of those agencies within the federal, state and local public safety systems

C - History
   • create a timeline of the history of fire and emergency services and identify the events that have had an impact on current codes, rules, and laws

D - Utilize Equipment and Applications to Facilitate Management Situations
   • utilize up-to-date technology equipment and applications, as well as other appropriate equipment necessary to facilitate the management of fire and emergency management situations

E - Execute Safety Procedures and Protocols
   • execute safety procedures and protocols associated with local, state, and federal regulations

F - Evaluate and Compare Different Career Fields
   • compare and contrast the different career fields, the organizational structure, and the rules and regulations in fire and emergency services

G - Demonstrate Professional Communication
   • demonstrate professional communication skills utilized in fire and emergency scenarios

H - Implement an Appropriate Incident Command System
   • implement an appropriate Incident command system to effectively manage an incident scene

I - Community and School Prevention/Preparedness Plans
   • recommend improvements to community and school prevention and preparedness plans

J - Analyze Chemistry of Fire
   • analyze the chemistry of fire

K - Access Rescue Operations
   • access rescue operations in fire and emergency situations

L - Evaluate Use of Fire Equipment
   • evaluate the use of fire hoses, nozzles, portable lighting, appliances, and ladders
High School Career and Technical Education

Essentials of Health Information Technology

A - Employability Skills
• demonstrate employability skills required by business and industry

B - Information Technology in the U.S.
• evaluate the overall state of healthcare in the United States and the role technology and information technology plays

C - Health IT Opportunities
• evaluate career opportunities in Health IT, and the education and training required

D - ARRA
• research the ARRA (American Recovery and Reinvestment Act), the HITECH Act (Health Information Technology Act), and other current legislation and the impact on healthcare

E - Electronic Health Records
• assess the benefits and challenges of Electronic Health Records (EHR) implementation and the interoperability and coordination of care

F - Evolution of Health IT
• discuss key factors, developments, and influences on the evolution of Health IT beginning with the 1950s

G - Implementation of Electronic Health Records
• examine the guidelines and rules that govern the implementation and usage of Electronic Health Records

H - Organizational Structure of Healthcare
• evaluate the organizational structure of healthcare and the continuum of care relating to medical records and pay structure for services

I - Healthcare Terminology
• demonstrate the usage of terminologies and classification in healthcare

J - IT Services in Hospitals
• examine and explain IT services in hospitals and the major functional categories

K - Mobile Technology in Healthcare
• research the use of mobile technology and other medical devices in healthcare (mhealth) and the benefits to patients and healthcare providers

L - Benefits of Telemedicine
• explore the benefits and applications of telemedicine and telehealth
High School Career and Technical Education

Essentials of Healthcare

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Structure and Functional Organization of the Body
   • classify the basic structural and functional organization of the human body and identify body planes, cavities, regions, directional terms, tissues, organs and parts of the cell

C - Integumentary System
   • analyze the anatomy, physiology and basic pathophysiology of the integumentary system, and evaluate and monitor body temperature

D - Cardiovascular System
   • investigate the anatomy, physiology, and basic pathophysiology of the cardiovascular system, and evaluate and monitor blood pressure and pulse

E - Respiratory System
   • examine the anatomy, physiology and basic pathophysiology of the respiratory system, and evaluate and monitor respirations

F - Muscular and Skeletal Systems
   • evaluate the anatomy, physiology, and basic pathophysiology of the muscular and skeletal systems, and perform technical skills related to the systems

G - Urinary System
   • analyze the anatomy, physiology, and basic pathophysiology of the urinary system, and apply knowledge in performance of technical skills related to the system

H - Reproductive System
   • analyze the anatomy, physiology, and basic pathophysiology of the reproductive system, and perform technical skills related to the system

I - Nervous System
   • examine the anatomy, physiology, and basic pathophysiology of the nervous system and special senses, and perform technical skills related to these systems

J - Endocrine System
   • evaluate the anatomy, physiology, and basic pathophysiology of the endocrine system, and perform technical skills related to the system

K - Digestive System
   • investigate the anatomy, physiology, and basic pathophysiology of the digestive system, and perform technical skills related to the system
High School Career and Technical Education

L - Lymphatic System

- analyze the anatomy, physiology, and pathophysiology of the lymphatic system, and perform technical skills related to the system
High School Career and Technical Education

Essentials of Legal Services

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Explore Different Career Fields
   • explore the different careers available in legal services

C - Explore History of the American Court System
   • explain the history and characteristics of the structure of the American court system

D - Identify Various Roles in the Courtroom
   • identify and explain the various roles of courtroom participants, including ethical and legal duties

E - Demonstrate Knowledge of Constitutional Protections
   • demonstrate knowledge of the basic protections guaranteed by the United States Constitution

F - Explore Roles of Pretrial Criminal Process
   • explore the roles of each participant in the pretrial criminal process

G - Demonstrate Knowledge of Criminal Trial Process
   • explain and demonstrate the criminal trial process

H - Examine the Post-Trial Process
   • examine the post-trial process

I - Describe Civil Law
   • describe civil law and cite examples of the primary areas of civil law

J - Roles of Pretrial Civil Process
   • explore the roles of each participant in the pretrial civil process

K - Civil Trial Process
   • explain the civil trial process including all parties involved

L - Analyze Different cultures and the Effect on Legal Services
   • analyze how the influence of diverse cultures, customs and economic status impact the field of legal services

M - CTSO Organizations
   • explore how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, entrepreneurship development, and competitive events
High School Career and Technical Education

Examining the Teaching Profession

A - Employability Skills
  • demonstrate employability skills required by business and industry
  • analyze the relationship between leadership development, school and community service projects with a career in the teaching profession

B - Careers in Education
  • analyze career paths in the field of education

C - Introduction to Public Education
  • evaluate the historical perspective and purpose of U.S. public education

D - Professional Standards
  • summarize the professional practices and standards related to working in the field of education

E - Effective Use of Technology
  • examine and apply technologies that are integrated in effective teaching methods

F - Learning Environments
  • construct and evaluate effective learning environments

G - Instruction and Planning
  • explain the rationale and process for instructional planning
  • create instructional opportunities adapted to language and multicultural diverse learners
  • analyze procedures and strategies to provide differentiated learning opportunities for all students

H - Assessment
  • analyze the role of assessment as part of the learning process and the teaching process

I - Parent and Community Involvement
  • identify practices to promote active parental / community involvement in the school setting

J - Literacy Skills
  • demonstrate appropriate use of literacy skills
High School Career and Technical Education

Fashion, Merchandising, and Retailing Essentials

A - Employability Skills
- demonstrate employability skills required by business and industry

B - Fashion Industry
- explore the fashion industry, including types of businesses, history, current trends, and the creation of fashion, utilizing the elements and principles of design

C - Marketing Concepts
- understand the marketing concepts used in fashion merchandising

D - Impacts of Technology
- explore the impact of technology on the fashion industry and merchandising

E - Economic Principles
- understand the economic principles and concepts fundamental to business operations and global trade's impact on business decision making

F - Marketing Information Management
- analyze the impact of marketing information management as it relates to the fashion industry

G - Pricing Strategies with Merchandising
- utilize pricing strategies to maximize return on merchandising efforts and meet customers' perception of value

H - Product Mix and Market Opportunities
- understand the concepts and processes needed to obtain, develop, maintain, and improve a product mix in response to market opportunities

I - Promotion Utilizing Promotional Mix
- develop a fashion promotion utilizing the promotional mix

J - Logistics in Fashion
- understand the concepts and processes needed to move, store, locate, and/or transfer ownership of goods in the fashion industry

K - Fashion Career Opportunities
- identify career opportunities in the fashion industry and appropriate career path credentials
High School Career and Technical Education

Financial Literacy

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Forms of Income
   • identify various forms of income, and analyze and evaluate factors that affect income as a part of
     the career decision-making process

C - Taxes in the United States
   • analyze taxes in the United States and evaluate the effect on personal income

D - Savings Plans
   • develop and evaluate a spending and savings plan while applying rational decision making to
     personal spending and saving choices

E - Checking Accounts and Banking Services
   • analyze checking accounts and other banking services and explain how financial institutions
     channel funds from savers to investors

F - Credit Systems
   • analyze factors that affect the choice of credit, the cost of credit, and the legal aspects of using
     credit

G - Savings and Investments
   • evaluate savings and investment options to meet short- and long-term goals

H - Consumer Protection
   • analyze laws and options available to consumers for protection from deceptive or unfair business
     practices

I - Identity Theft
   • evaluate how to help deter, detect, and defend against identity theft

J - Consumer Loan Options
   • evaluate various consumer loan options and analyze factors that affect lending decisions

K - Risk Management and Insurance
   • explain the principles of risk management and insurance as a strategy to protect against financial
     loss

L - CTSO
   • explore how related student organizations are integral parts of career and technology education
     courses through leadership development, school and community service projects, entrepreneurship
     development, and competitive events
High School Career and Technical Education

**Flight Operations I**

A - Employability Skills
- demonstrate employability skills required by business and industry

B - Meteorology
- identify and explain climate and seasonal changes of earth's atmosphere
- demonstrate understanding of the relationship between air pressure, temperature, and density

C - Aircraft
- demonstrate knowledge of the airplane systems and components

D - Weather
- operate and employ weather technology and terminology
- demonstrate an understanding of mid latitude weather patterns and systems
- identify and describe aviation weather hazards

E - Airspace
- demonstrate an understanding of the structure of the national airspace system

F - Air Traffic Control
- demonstrate an understanding of the various roles of air traffic control in the airspace system

G - Communication
- demonstrate an understanding of basic aeronautical charts and their application to flight planning
- demonstrate usage of standard aviation vocabulary, phraseology, and acronyms for communications

H - Airports
- demonstrate and describe knowledge of airports

I - Systems
- identify instruments and develop an understanding of their functions
- explain the operation of aircraft power plant and related systems and flight instruments and identify the components of the aircraft system
High School Career and Technical Education

Flight Operations II

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Information
   • demonstrate and apply knowledge of sources of flight information
   • apply sources of weather information to flight planning

C - Performance
   • demonstrate an understanding of aircraft performance and design

D - Communication
   • demonstrate competency in communication and flight information

E - Weather
   • demonstrate an understanding of aviation weather codes and terminology

F - Navigation
   • identify tools of basic, radio, and advanced navigation

G - Calculations
   • demonstrate an understanding of appropriate aviation measurements and calculations

H - Flight Planning
   • incorporate current weather information when creating a flight plan
   • incorporate navigation and communication tools to create a flight plan
   • apply techniques to analyze and forecast weather data
   • apply atmospheric dynamics to aeronautical components
Food for Life

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Function of the Digestive System
   • outline the function of the digestive system and absorption process during the lifespan

C - Nutrition
   • design a nutritious diet plan

D - Maternal and Fetal Nutrition
   • identify and discuss the requirements of maternal and fetal nutrition during pregnancy

E - Newborn Nutrition
   • investigate the proper feeding of newborns

F - Infant Nutrition
   • develop a nutritionally balanced diet for infants

G - Early Stages of Childhood Nutrition
   • develop a nutritionally balanced diet for children in the different stages of childhood

H - Adolescent Nutrition
   • develop a nutritionally balanced diet for an adolescent

I - Middle Adult Nutrition
   • develop a nutritionally balanced diet for the middle adult years

J - Elderly Nutrition
   • develop a nutritionally balanced diet for the elderly

K - Careers in Food and Nutrition
   • research careers in foods and nutrition
High School Career and Technical Education

Food Science

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Food Science and Careers
  • define food science and explore careers in food science

C - Scientific Evaluation of Food
  • investigate how and why scientific evaluation of foods is conducted

D - Chemistry Concepts of Food
  • explore the basic chemistry concepts of food science

E - Energy in Food Preparation and Preservation
  • observe and explain how energy works in food preparation and preservation

F - Water and Acidity in Food Preparation and Preservation
  • examine why water and acidity are important factors in food preparation and preservation

G - Importance of Carbohydrates
  • summarize why carbohydrates are important in food preparation, preservation, and the nutritional impact on diets

H - Importance of Lipids
  • summarize why lipids are important in food preparation and preservation and the nutritional impact they have on diet

I - Importance of Proteins
  • summarize why proteins are important in food preparation and preservation and the nutritional impact they have on diet

J - Food Formulation, Preparation, and Preservation
  • investigate the sources, and impact of food formulations, preparation and preservation on food constituents important to health

K - Food Additives and Analogs
  • investigate the reasons for the use of food additives and food analogs in food preparation and in processed products

L - Principles of Fermentation
  • analyze the principles of fermentation

M - Sanitary Food Production
  • investigate measures used to produce safe and wholesome food under sanitary conditions
High School Career and Technical Education

N - Food Preservation Methods
   • compare and contrast different food preservation methods and the resultant quality of preserved food
High School Career and Technical Education

Food, Nutrition and Wellness

A - Employability Skills
- demonstrate employability skills required by business and industry
- analyze the relationship between leadership development, school and community service projects with a career in the food, nutrition, and wellness industry

B - Food Influences
- analyze factors that influence food choices and quality of diet

C - Nutrition for Individuals and Families
- evaluate nutritional information in relation to wellness for individuals and families

D - Food Behaviors
- analyze the effects of food eating behaviors on wellness

E - Special Dietary Considerations
- investigate the health and nutrition requirements of individuals and families with special needs

F - Food Safety and Sanitation
- analyze food safety and sanitation practices from production to consumption

G - Foodborne Illness
- compare the causes and foods at risk for illnesses

H - Food Science
- evaluate scientific and technical advances in food processing, storage, product development and distribution for nutrition and wellness

I - Food Preparation
- design and demonstrate ability to select, store, prepare and serve nutritious, safe and appealing foods

J - Careers in the Food, Nutrition, and Wellness Industries
- research careers related to food, nutrition and wellness

K - Literacy Skills
- demonstrate appropriate use of literacy skills
High School Career and Technical Education

Forensic Science and Criminal Investigations

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Methodologies of the Characteristics of Science
  • utilize the methodologies of the "characteristics of science"

C - Concepts of Forensic Science
  • research and explain basic concepts of forensic science

D - Medico-Legal Investigations of Death
  • differentiate the methods of medico-legal investigations of death

E - Concepts of Physics in Criminal Investigation
  • apply the concepts of physics to a criminal investigation

F - Principles of Chemistry in Criminal Investigation
  • connect principles of chemistry to criminal investigations

G - Investigating with Microscopes
  • compare the various types of evidence investigated using a microscope

H - Biological Science Applications
  • assess applications from biological science to criminal investigations

I - Forensic Science in the Courtroom
  • explain how forensic science is used in the courtroom

J - Crime Scene Investigation Skills
  • demonstrate the skills needed to investigate a crime scene including preventing contamination when evidence is gathered
High School Career and Technical Education

Foundations of Electronics

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Careers
  • develop an understanding of engineering and electronics and describe the principle fields of engineering and electronic specializations (ex. aeronautical, automotive, chemical, civil, industrial, and mechanical, computer software, electrical, and biomedical) and identify associated career tracks

C - Safety
  • describe and follow safety, health and environmental standards related to Science, Technology, Engineering, and Math (STEM) workplaces

D - Tools and Machines
  • demonstrate techniques, skills, tools, and understanding related to energy and power, bio-related, communication, transportation, manufacturing, and construction technologies
  • identify criteria of usage, care, and maintenance for tools and machines

E - Electron Theory
  • introduce the history and development of electron theory
  • identify electronic theories applicable to electronic processes

F - Electrical Systems and Components
  • understand the various measuring apparatuses appropriate to electronics systems
  • introduce electronic components that comprise an electronic system
  • introduce the techniques and processes in electronics systems

G - Data
  • use appropriate technology to collect, record, manipulate, analyze, and report data

H - Math and Science in Engineering
  • design a solution to an engineering and electronics problem applying math and science principles

I - Electronic Devices
  • construct an electronic device as a culminating experience

J - Technological Systems
  • recognize the systems, components, and processes of a technological system
High School Career and Technical Education

K - Impacts of Engineering

- identify the impact of engineering and technology within global, economic, environmental, and societal contexts
- design technological problem solutions using scientific investigation, analysis and interpretation of data, innovation, invention, and fabrication while considering economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability constraints.
- apply principles of science, technology, engineering, mathematics, interpersonal communication, and teamwork to the solution of technological problems

L - Leadership Development

- analyze the relationship between leadership development, school and community service projects with a career in the electronics industry

M - Literacy

- demonstrate appropriate use of literacy skills
- enhance reading by developing vocabulary and comprehension skills associated with text materials, problem descriptions, and laboratory activities associated with engineering and technology education
Foundations of Energy and Power Technologies

A - History of the Energy Industry
   • describe the history of the energy industry

B - Energy Generation and Distribution
   • analyze the differing processes of generation and distribution of power and energy

C - Types of Energy
   • explain the differences between nonrenewable, renewable, and inexhaustible types of energy sources and their impact regionally and globally

D - Alternative Energy
   • research an alternative energy system that demonstrates understanding of a unique, as well as an appropriate, approach to energy and power generation
   • define alternative power and energy and list several alternative sources as well as discuss the regional implications of each, including, but not limited to, economic, environmental, and sustainability issues

E - Trends in Energy
   • discuss the future trends of power and energy

F - Technological Systems
   • design technological problem solutions using scientific investigation, analysis and interpretation of data, innovation, invention, and fabrication while considering economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability constraints.
   • recognize the systems, components, and processes of a technological system

G - Impacts of Engineering
   • identify the impact of engineering and technology within global, economic, environmental, and societal contexts

H - Applications of Engineering
   • apply principles of science, technology, engineering, mathematics, interpersonal communication, and teamwork to the solution of technological problems

I - Tools and Machines
   • demonstrate techniques, skills, tools, and understanding related to energy and power, bio-related, communication, transportation, manufacturing, and construction technologies

J - Leadership Development
   • analyze the relationship between leadership development, school and community service projects with a career in the energy technology professions
High School Career and Technical Education

K - Employability Skills

• demonstrate employability skills required by business and industry

L - Literacy

• demonstrate appropriate use of literacy skills

• enhance reading by developing vocabulary and comprehension skills associated with text materials, problem descriptions, and laboratory activities associated with engineering and technology education
High School Career and Technical Education

Foundations of Engineering and Technology

A - Employability Skills
• demonstrate employability skills required by business and industry

B - Engineering Careers
• students explore how related career and technology student organizations are integral parts of career and technology education courses; students will develop leadership, interpersonal, and problem-solving skills through participation in co-curricular activities associated with the Technology Student Association
• describe the principle fields of engineering specialization and identify associated career tracks

C - Impact of Engineering
• identify the impact of engineering and technology within global, economic, environmental, and societal contexts
• identify the history of technology and engineering and describe the impact on society in the past, present, and future

D - Safety
• demonstrate and follow safety, health, and environmental standards related to the Science, Technology, Engineering, and Math (STEM) workplaces

E - Using Tools and Machines
• describe and apply appropriate use and care for equipment and supplies
• demonstrate techniques, skills, tools, and understanding related to energy and power, bio-related, communication, transportation, manufacturing, and construction technologies

F - Engineering Design Process
• students design a solution to an engineering problem applying math and science principles
• apply fundamental principles of the engineering design process
• use appropriate technology to collect, record, manipulate, analyze, and report data

G - Engineering Applications
• demonstrate the application of STEM in the real world
• apply principles of science, technology, engineering, mathematics, interpersonal communication, and teamwork to the solution of technological problems

H - Technological Systems
• design technological problem solutions using scientific investigation, analysis and interpretation of data, innovation, invention, and fabrication while considering economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability constraints
High School Career and Technical Education

H - Technological Systems  (continued)
   • recognize the systems, components, and processes of a technological system

I - Leadership Development
   • analyze the relationship between leadership development, school and community service projects with a career in the energy technology industry

J - Computer Aided Drafting (CAD)
   • demonstrate the application of Engineering Design Graphic Techniques and Computer Aided Drafting and Design to communicate design specifications and annotations according to industry standards

K - Literacy
   • demonstrate appropriate use of literacy skills
   • enhance reading by developing vocabulary and comprehension skills associated with text materials, problem descriptions, and laboratory activities associated with engineering and technology education
High School Career and Technical Education

Foundations of Interior Design

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Careers
  • explore and identify career options at various levels/types within the field of interior design

C - Professional Practice
  • examine the designer-client relationship
  • describe issues of professional practice

D - Design
  • explain the principles and elements of design
  • explore floor plans and importance in interior design
  • evaluate the relationship of human factors in interior design projects
  • discuss space planning and traffic patterns
  • synthesize programming concepts that pertain to commercial design
  • synthesize programming concepts that pertain to residential design

E - Technology
  • apply the current use of technology as related to the study of Interior Design
  • examine how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, and competitive events
High School Career and Technical Education

Foundations of Manufacturing and Materials Science

A - Employability Skills
- demonstrate employability skills required by business and industry

B - Impact of Manufacturing
- students will explain the societal impact of manufacturing

C - History
- students will describe the history of manufacturing and discuss the preparation for the future of manufacturing

D - Universal Systems
- students will explain the universal systems model (such as ISO, LEAN, etc.) as it relates to manufacturing

E - Safety
- students will explain and apply safe work practices while performing tasks

F - Materials and Resources
- students will identify materials and resources used in manufacturing

G - Systems and Processes
- students will describe the essential systems and processes involved in manufacturing

H - Skills
- demonstrate knowledge of correct safety procedures, appropriate use of materials, and processing operations by completing a project

I - Communication
- students will use visual and verbal communication to present employment and career opportunities in manufacturing

J - Technology
- students will recognize the systems, components, and processes of a technological system

K - Impact of Engineering
- identify the impact of engineering and technology within global, economic, environmental, and societal contexts

L - Design
- design technological problem solutions using scientific investigation, analysis and interpretation of data, innovation, invention, and fabrication while considering economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability constraints
High School Career and Technical Education

L - Design  (continued)
- design technological problem solutions using scientific investigation, analysis and interpretation of data, innovation, invention, and fabrication while considering economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability constraints
- design technological problem solutions using scientific investigation, analysis and interpretation of data, innovation, invention, and fabrication while considering economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability constraints
- design technological problem solutions using scientific investigation, analysis and interpretation of data, innovation, invention, and fabrication while considering economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability constraints

M - Student Organizations
- develop leadership and interpersonal problem-solving skills through participation in co-curricular activities associated with a Career and Technical Student Organization (CTSO)
High School Career and Technical Education

Foundations of Marine Engine Technology

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Professionalism
   • demonstrate professionalism and work ethics as required by business and industry

C - Marine Shop Operation
   • apply basic concepts and practices necessary for effective marine shop operation

D - Applications of Fasteners
   • demonstrate knowledge of various fasteners and their applications

E - Shop Management
   • describe shop management systems and procedures

F - Technical Documents
   • apply information from literature sources to concepts from the marine engine technology industry

G - Leadership Development
   • analyze the relationship between leadership development, school and community service projects with a career in the marine engine technologies industry

H - Literacy
   • demonstrate appropriate use of literacy skills
Foundations of Sound and Recording

A - The Physics of Sound
- define amplitude, frequency and time in reference to sound waves and waveforms
- measure sound levels and frequency content with a sound pressure meter, white noise, pink noise, and a Real Time Analyzer (RTA)
- illustrate several items/musical instruments within the range of human hearing (voice, piano, cymbals)
- define different types of sound waves and waveforms
- demonstrate relationship between sound waves and waveforms by plotting a waveform on a graph
- demonstrate waveforms with an oscillator and an oscilloscope
- define the sound range of human hearing

B - Acoustics
- define acoustics, space, delay, and reverb
- define absorption, reflection, and diffusion
- explain how absorption, reflection, and diffusion affect sound waves
- demonstrate how various objects/materials and their properties affect sound waves in different rooms and space
- explain and demonstrate the basic operation of microphone placement and how acoustic space plays an important role in recording

C - Recording Systems
- explain different types of analog and digital recording mediums and media
- describe the differences of modern day direct to two-track, direct to disk, and multi-track recording processes
- explain the process of tracking, overdubbing, and mixing in multi-track recording
- illustrate the process of mastering recordings
- explain the process of CD/DVD/tape replication
- summarize the history of recording

D - The Components of Recording Sound
- identify the signal path (flowchart) of recording sound from initial source-microphone-mixing console components-recording device-playback/monitoring system
High School Career and Technical Education

D - The Components of Recording Sound  *(continued)*  
- explain the various connectivity types and wiring (patch bays, cables (1/48/phono. RCA/cinch, TT/TinyTelephone, XLR, DSUB, ELCO, balanced, unbalanced, +4, -10, AES/EBU, SPDIF, optical, TOSLINK, TDIF, fire wire, and USB)
- categorize the different types of microphones and their uses (dynamic, condenser, ribbon, and pressure zone)
- explain the function of microphone preamps
- describe the importance of gain staging (levels)
- explain routing and switching of audio
- discuss the function of compressors/limiters
- describe the function(s) of various effects processors
- discuss the functions of and operate a mixing console
- describe the function and use of playback/monitoring systems
- summarize the assembly of all components into a mixing console
- demonstrate the basic operation of a mixing console
- create a simple recording by utilizing the recording components

E - Recording Session
- create a CD Master
- establish the roles and responsibilities of the engineer, assistant engineer, and producer
- illustrate how and why music stands, lighting, line of sight, and chart notation are important
- set up a recording session using microphones, direct boxes, direct lines, microphone stands, cables, music stands, and cues system
- create a recording utilizing appropriate devices and equipment
- demonstrate the overdubbing process
- create a final mix for production

F - Core Skills
- maintain safety, health, and environmental standards, and address ergonomic concerns
- communicate in a clear, concise, and courteous manner
- identify problems, analyze alternative solutions, and develop a plan of action
- use effective learning techniques to acquire and apply new knowledge and skills
High School Career and Technical Education

F - Core Skills  (continued)

• set goals and monitor progress toward meeting goals
• participate and interact as a team member and leader
• work to satisfy customer/client expectations
• acquire, store, allocate, and use materials and space efficiently
• apply mathematical concepts and calculations and solve problems using appropriate mathematical techniques
• use and create text and multimedia documents in a variety of formats and be able to troubleshoot problems with technical or electronic equipment
• identify the scope of a business, its organization, and activities, and the interrelationship of its parts
• discuss factors that impact career decisions and formulate appropriate plans to reach career goals

G - Literacy Standards

• cite specific textual evidence to support analysis of technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account
• determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms
• follow precisely a complex multistep procedure when performing technical tasks; analyze the specific results based on explanations in the text
• determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific technical context relevant to grade level texts and topics
• analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas
• analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved
• integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem
• evaluate the hypotheses, data, analysis, and conclusions in technical texts, verifying the data when possible and corroborating or challenging conclusions with other sources of information
• synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible
• read and comprehend technical texts in the text complexity band independently and proficiently
• write arguments focused on discipline-specific content
• write informative/explanatory texts, including the narration of historical events or technical processes
G - Literacy Standards  (continued)

• develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience

• use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information

• conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation

• gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation

• draw evidence from informational texts to support analysis, reflection, and research

• write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences

• produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience
High School Career and Technical Education

**Fundamentals of Aerospace**

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Aviation History and Regulations
   • explain aspects of aviation history and interpret aviation regulations

C - Aerospace Flight Principles
   • examine the aerospace principles regarding flight

D - Careers in Aerospace
   • explore careers in the aerospace industry

E - Human Impacts in Aerospace
   • analyze the human factors that affect the aerospace industry and work environments

F - Aerospace Technology
   • explore the major aerospace technology areas

G - Aviation Meteorology
   • describe basic aviation meteorology concepts

H - Leadership Development
   • analyze the relationship between leadership development, school and community service projects with a career in the aerospace industry

I - Literacy
   • demonstrate appropriate use of literacy skills
High School Career and Technical Education

Fundamentals of Exercise Physiology

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Fundamentals of Human Movement Science
   • identify and compare the structures and functions of the major anatomical systems of the human body

C - Exercise Physiology
   • identify the functions of exercise physiology within the systems of the body

D - Human Kinesiology
   • explain and compare the principles of human kinesiology

E - Assessments Associated with Personal Fitness Training
   • explain and perform the assessments associated with personal fitness training

F - Exercise Technique and Training Instruction
   • explain the concepts associated with exercise techniques and training instruction

G - Program Design
   • apply the following principles of program design

H - Considerations in Nutrition
   • research the concepts related to nutrition and wellness

I - Client Relations and Behavioral Coaching
   • research the concepts related to client relations and behavioral coaching

J - Professional Development, Practice, and Responsibility
   • research the concepts and requirements associated with professional development practice and responsibility
High School Career and Technical Education

Fundamentals of Fashion

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - History of Fashion and Fashion Industry
  • analyze the history of fashion and the fashion industry

C - Basic Fashion Terminology
  • define basic fashion terminology

D - Fashion Cycle
  • summarize the basics of the Fashion Cycle

E - Clothing Styles and Parts
  • differentiate basic clothing styles and parts

F - Principles of Design
  • investigate the elements and principles of design relating to clothing

G - Design and Production Process
  • explore the basics of the design and production process

H - Business Ownership and Economic Concepts
  • distinguish the types of business ownership and connect basic economic concepts

I - Consumer Skills and Fashion Purchases
  • investigate beneficial consumer skills necessary to make informed fashion purchases

J - Marketing and Merchandising
  • summarize the concepts of marketing and merchandising

L - Careers
  • research career pathways within the fashion industry
High School Career and Technical Education

Game Design: Animation and Simulation

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Game Design
  • demonstrate conceptual understanding of the game design process

C - Programming
  • apply complex and abstract thinking to programming and scripting

D - Mathematics
  • analyze and synthesize the relationship of mathematics to game design

E - Physics
  • construct two-dimensional models using concepts of physics

F - Modeling
  • develop three-dimensional models, backgrounds, and scenes

G - Characters
  • analyze 2-D/3-D character animation and character controls

H - Augmented Reality
  • design an augmented reality experience into a location-based game
  • explain how to create an Augmented Reality experience

I - Game Development
  • design and develop a game in teams
  • deploy a student-team created game for beta testing

J - Student Organizations
  • examine how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, and competitive events
Global Awareness and Cultural Competency

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Career Opportunities
   • classify and describe career opportunities in international business and connect results to personality traits

C - International Market Entry
   • research and model the process for businesses to determine international market entry

D - International Marketing Strategies
   • utilize knowledge of basic marketing principles and cultural diversity in order to analyze international marketing strategies

E - Financial Investments
   • cite evidence to evaluate the strategies businesses employ to use venture capital to finance investment in international markets

F - Culture and Customer Service
   • evaluate and draw conclusions about the relationship between culture and customer service in international business settings

G - Risk Management
   • analyze sources of business risk when operating internationally, and explain the effects of risk management

H - Communication Strategies
   • connect the influences of cultural and historical differences on effective communication strategies in international business settings

I - Ethical and Social Responsibility
   • evaluate ethical and socially responsible business behavior in a global business environment

J - Student Organizations
   • explore how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, entrepreneurship development, and competitive events
High School Career and Technical Education

Government and Public Administration: Local and State Issues

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Strategic Planning and Budgeting
   • research and analyze agency needs to develop long-range strategic planning and budgeting to
     establish benchmark 5, 10, and 20 years out using demographic analysis and indicators to plan
     for population segment growth and needs to maximize the potential of a department or agency
     to meet its policy analysis, vision, mission and goals

C - Fiscal Management and Allocation
   • analyze and utilize fiscal management skills to manage budget and allocation processes to ensure
     that resources are applied across a government or public administration department or agency

D - Facilitation of Communication
   • facilitate the flow of ideas and information to keep a local or state government department or
     agency and its constituency informed of policies and operations

E - Ethical Procurement Procedures
   • describe ethical and fiscally responsible procurement systems and procedures used to meet
     local, state, or federal government department or agency needs

F - Labor Relations and the Effect on Government
   • differentiate labor relations and effect on a local or state government and public administration
     department or agency

G - Evaluation of Government
   • evaluate the basic tenets of education, healthcare, criminal justice, environmental and tax policy
     debates

H - Budgeting and Accounting in Government Agencies
   • differentiate and comprehend the basic budget cycle and accounting principles for a government
     agency or department
A - Employability Skills
• demonstrate employability skills required by business and industry

B - Sectors of Government and Public Administration
• apply and extend previous understandings of the various sectors of government/public administration (e.g. federal, state, regional, county and municipal)

C - Funding and Budgetary Expectations
• analyze and summarize the systemic relationships of government and public administration funding, and budgetary expectations

D - Personal Safety and Security
• analyze the cause and effect between personal safety and health as related to public health threats, computer safety, and personal safety and security

E - Release of Information
• analyze and synthesize agency communication policies relating to the release of information to government and non-government agencies

F - Appropriate Research Skills
• develop appropriate research skills to identify, evaluate, and analyze data for government and public administration agencies for specified purposes

G - Employee Job Levels
• identify and evaluate the services and job levels of employees found in firefighting, public safety, public health, and criminal justice system

H - Professional Employee Job Levels
• identify and evaluate the services and job levels of employees found in civil engineering, transportation services, and land, air quality, and water technology

I - Educational Employee Job Levels
• identify and evaluate the services and job levels of employees found in educational services, social services, and regulatory and records services

J - Employee Loyalty
• demonstrate behaviors extending employee loyalty toward employers

K - Safe and Healthful Working Conditions
• maintain safe and healthful working conditions and environment in order to promote well-being in governmental and public administrative workplaces

L - Workplace Ethics
• understand the impact and priority for maintaining appropriate ethics when analyzing data and its sources
High School Career and Technical Education

Graphic Design and Production

A - Employability Skills
- demonstrate employability skills required by business and industry

B - Proper Equipment Operations
- build upon previous knowledge and demonstrate proper equipment operation and follow procedures in a safe manner, and achieve 100% on a written or demonstration safety test

C - Career Opportunities
- examine and prepare for career opportunities in the design profession

D - Design Elements
- understand and demonstrate the fundamental basic elements and principles of design for both print and interactive design

E - Creative Briefs
- demonstrate an understanding of the fundamental basics of a creative brief and demonstrate the proper usage

F - Color Exploration
- explore color and the variety of methods in which it can be applied; interpret and apply color models through graphic manipulations; and identify the output issues involving color and demonstrate the proper usage

G - Typography
- explore different outlets for text composition (e.g., paragraphs, columns, pages, gutters, etc.) for typography and define their role in design

H - Communication Skills
- develop professional written, verbal and non-verbal communication skills, and follow ethical guidelines and copyright laws

I - Illustrations
- identify and demonstrate a working knowledge of illustration as it pertains to the design field

J - File Management
- demonstrate knowledge of file management and file formats and digital file preparation for print and interactive projects

K - Measurement
- demonstrate proper usage of measuring units and devices
High School Career and Technical Education

L - SkillsUSA

• examine how related student organizations are integral parts of career and technology education courses, through leadership development, school and community service projects, and competitive events
High School Career and Technical Education

Health Information Management Medical Office

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Healthcare Delivery
   • evaluate the organization of healthcare delivery in the United States

C - Health Information Management
   • investigate the role of the health information management (HIM) in healthcare facilities

D - Medical Terminology
   • utilize appropriate medical terminology necessary for working in a medical office or other healthcare facilities

E - Technology in HIM
   • perform advanced technical skills within medical office services and HIM utilizing appropriate technology

F - Healthcare Data Management
   • analyze the components of Healthcare Data Management

G - Health Data Structure, Content and Standards
   • evaluate health data structure, content and standards

H - Data Storage and Retrieval
   • investigate the usage and monitoring of data storage and retrieval

I - Principles of Liability
   • evaluate the principles of liability as it relates to the management of care

J - Patient Health Information
   • identify patient record requirements and access to health information

K - Consent and Confidentiality Laws
   • adhere to laws governing confidentiality and informed consent

L - Consent and Confidentiality Laws
   • evaluate risk management and quality assurance

M - Electronic Health Records
   • assess the implementation of electronic health records and the need for security and risk prevention
High School Career and Technical Education

N - Clinical Classification Systems
  • apply, evaluate and validate clinical classification systems

O - Reimbursement Methodologies
  • analyze various reimbursement methodologies

P - Procedure Codes
  • apply principles of procedure codes utilizing current regulations and guidelines
High School Career and Technical Education

Healthcare Support Services

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Safety
  • apply the safety concepts needed to maintain a secure work environment and to prevent accidents by using safety precautions and/or practices

C - Healthcare Roles
  • analyze the roles/services performed in healthcare delivery systems to ensure the delivery of quality health care

D - Communication
  • apply the concepts of communication and appropriate customer service skills

E - Legal and Ethical Issues
  • apply legal and ethical responsibilities of the healthcare profession develop a personal code of ethics and adhere to professional standards/code of conduct

F - Skills
  • review and perform the guidelines required for proficiency as a central supply/materials manager
  • research and perform the guidelines required for proficiency as a dietary aide
  • review and perform the guidelines required for proficiency as an environmental service worker
  • research and perform the guidelines required for proficiency as a patient transporter per facility protocols (facilities may only allow the patient transporter to transport via wheelchair or stretcher not transferring into these devices)
High School Career and Technical Education

Heating, Ventilation, Air-Conditioning, and Refrigeration

A - Employability Skills
• demonstrate employability skills required by business and industry

B - Mathematical Concepts
• apply mathematical concepts related to HVAC

C - Power Tool Usage
• demonstrate using hand and power tools associated with the HVACR trade in a professional and safe manner

D - HVACR Pipe and Tubing Knowledge
• demonstrate the proper selection, handling, and methods of joining, installing and supporting of HVACR pipe and tubing

E - Understanding HVACR Cooling system conditions
• describe how an HVACR system conditions and cools the air within a specified space

F - Understanding HVACR Heating system conditions
• describe how an HVACR system conditions and heats the air within a specified space

G - Compressor Operation
• describe how compressors operate

H - Equipment Operation
• demonstrate how to operate the equipment used in the HVAC field

I - Ductwork Assembly
• demonstrate proper assembly of ductwork

J - SkillsUSA
• examine how SkillsUSA is a co-curricular part of career and technical education through leadership development, school and community service projects, and competitive events
Hospitality, Recreation, and Tourism Essentials

A - Employability
  • demonstrate employability skills required by business and industry

B - History of Tourism
  • analyze the hospitality, recreation, and tourism industry in relationship to historical developments/changes, broad segments of the markets and various motivations for travel

C - Varied Aspects of Tourism
  • assess the varied aspects of tourism by determining the impact on the local, state, national, and international economies, the importance of successful positioning in the target consumers' minds and the competitive nature of the industry

D - World Geography
  • develop a basic knowledge of world geography and be able to discuss the relationship of geography to climates, major destinations, travel issues and concerns, and upcoming trends in destination hotspots

E - Marketing for Tourism
  • explore the application of marketing and business fundamentals as they apply to the hospitality, recreation, and tourism industry

F - Lodging Industry
  • examine the lodging industry and determine how companies use marketing to achieve the goals and objectives of the facility

G - Food and Beverage
  • examine food and beverage operations in the hospitality, recreation, and tourism industry

H - Worldwide Transportation
  • analyze the transportation options (i.e., cruise and ferry, air, rail and ground transportation) available to various destinations in the U.S. and abroad

I - Human Relations
  • assess the importance of human relations, communications, and ethical conduct in relation to the hospitality, recreation and tourism industry

J - Meeting Plans
  • determine the importance of group, convention and meeting planning as a vital segment of the HRT industry

K - Recreation Industry
  • explore the recreation industry segment and the role played in the overall HRT market
High School Career and Technical Education

L - HRT Initiatives

• analyze HRT initiatives related to conducting business in global and sustainable environment
Hospitality, Recreation, and Tourism Management

A - Employability
  • demonstrate employability skills required by business and industry

B - Social, Environmental, Economic and Consumer Factors
  • draw conclusions about the social, environmental, economic, and consumer factors that impact the hospitality, recreation, and tourism industry and its development

C - Leadership and Management Skills
  • develop the leadership and management skills needed by upwardly mobile employees in successful hospitality, recreation, and tourism facilities

D - Food and Beverage Operations and Control Systems
  • analyze the operations and control systems used in the food and beverage division of the hospitality, recreation, and tourism industry

E - Human Resources in Hospitality
  • explore the essential functions of human resources in the hospitality industry

F - Management Structure in the Service Industry
  • analyze hospitality, recreation, and tourism services in relation to management structures, service levels, and current issues

G - Management and Sales Operations
  • interpret the overall importance of sales, operations, and management of sales activities in the hospitality, recreation, and tourism industry

H - Legal and Liability Issues
  • demonstrate knowledge of legal and liability issues in the hospitality, recreation, and tourism industry and determine appropriate responses

I - Trends in the Hospitality Industry
  • determine current and emerging trends in the hospitality, recreation, and tourism industry

J - Guest Services
  • develop customer service skills and an overall understanding of the importance of guest services in the hospitality, recreation, and tourism industry

K - Cost Effective Operations
  • determine the importance of cost effective operations in the hospitality, recreation, and tourism industry

L - Technology in Hospitality, Recreation and Tourism
  • examine the elements of technology used in the hospitality, recreation, and tourism industry
High School Career and Technical Education

Human Resources Principles

A - Employability Skills

• demonstrate employability skills required by business and industry

B - Basic Human Resources Principles

• apply the basic human resources principles as they relate to managing an effective and efficient organization

C - Employment Laws and Ethics

• examine employment law and ethics as they refer to contemporary issues in Human Resources Management

D - Selection of Employees

• apply and model the concepts of recruitment, interview, and selection of employees in the current labor market

E - Training Plan

• develop a training plan for employees after investigating methods of employee training and development

F - Job Description Analysis

• analyze the data and respond to results of job description analysis, development, and design

G - Performance Evaluation Process

• assess the performance evaluation process and its relationship to promotions and demotions

H - Employee Benefits

• review, develop, and compare employee compensation and company-sponsored benefits

I - Employee Disciplinary Action and Rights

• investigate causes for and consequences of employee disciplinary action and relative employee rights

J - CTSO Integration

• explore how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, entrepreneurship development, and competitive events
Industry Fundamentals and Occupational Safety

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Construction Safety
   • apply appropriate construction safety practices

C - Math in Construction
   • apply mathematical concepts as related to the field of construction

D - Tool Usage and Safety
   • utilize basic hand and power tools in a professional and safe manner

E - Construction Drawings, Terms, Components and Symbols
   • demonstrate knowledge of construction drawings terms, components, and symbols

F - Rigging
   • explain and implement safe rigging procedures

G - Materials and Handling
   • explain hazards associated with materials handling

H - Communication
   • demonstrate knowledge of the different forms of communication used in the construction industry

I - Careers and Constructions
   • describe the principle fields of specializations related to the construction industry and identify associated career opportunities

J - Leadership Development
   • analyze the relationship between leadership development, school and community service projects with a career in the construction industry

K - Literacy
   • demonstrate appropriate use of literacy skills
Information Technology Essentials

A - Employability Skills
- demonstrate employability skills required by business and industry

B - Operate an Effective Workplace
- work safely with a variety of workplace technologies to solve problems and operate an efficient workplace

C - Fundamental Principles of PCs
- identify the fundamental principles of personal computers by examining the hardware components and the interactions with component

D - Upgrade PC Components
- install, configure, optimize, and upgrade personal computer components

E - Troubleshooting Techniques PC Components
- use tools, diagnostic procedures and troubleshooting techniques for personal computer components

F - Preventive Maintenance PC Components
- perform preventive maintenance on personal computer components

G - Upgrade Laptops and Portable Devices
- install, configure, optimize, and upgrade laptops and portable devices

H - Troubleshoot Laptops and Portable Devices
- using tools and basic diagnostic procedures troubleshoot laptops and portable devices

I - Upgrade Operating Systems
- install, configure, optimize, and upgrade operating systems

J - Troubleshooting Techniques Operating System
- identify tools, diagnostic procedures, and troubleshooting techniques for operating systems

K - Troubleshooting Printers and Scanners
- identify the fundamental principles of using, operating, and troubleshooting printers and scanners

L - CTSO Integration
- explore how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, entrepreneurship development, and competitive events
High School Career and Technical Education

Information Technology Support

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Printers and Scanners
  • apply knowledge and skills to install, configure, optimize, and upgrade printers and scanners

C - Networks
  • apply knowledge and skills of networks to install, configure, optimize, and upgrade networks

D - Fundamentals of Security
  • identify the fundamentals and principles of security

E - Security
  • apply knowledge and skills to install, configure, upgrade, and optimize security

F - Safety and Environmental Issues
  • describe the aspects and importance of safety and environmental issues with computer support and services

G - Laptops and Portable Devices Maintenance
  • perform maintenance procedures on laptops and portable devices

H - Professional Behavior
  • use job-related professional behavior in language, interaction and communication including notation of privacy, confidentiality, and respect for the customer property

I - CTSO Integration
  • explore how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, entrepreneurship development, and competitive events
High School Career and Technical Education

International Business Concepts

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Building Effective Teams
   • research and evaluate the characteristics involved in building an effective team and explain how businesses utilize teams

C - Targeted Global Centers
   • research and critique the decisions companies make in order to enter a targeted global center

D - Risk Analysis
   • perform a risk analysis for a business operating in a targeted global center

E - Start-Up Business Plan
   • develop a team with the purpose to effectively research, develop, and present a startup business plan

F - Marketing Plan and Branding
   • develop a marketing plan including specific business branding to identify, reach, and retain customers in the targeted global center

G - Student Organizations
   • explore how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, entrepreneurship development, and competitive events
High School Career and Technical Education

Introduction to Business and Technology

A - Employability Skills
• demonstrate employability skills required by business and industry

B - Applications of Productivity Tools
• apply technology as a tool to increase productivity to create, edit, and publish industry-appropriate documents

C - Word Processing
• demonstrate proficiency in word processing through creating, editing, and publishing professional-appearing business documents

D - Business Leadership
• analyze and integrate leadership skills and management functions within the business environment

E - Marketing
• demonstrate understanding of the concept of marketing and its importance to business ownership

F - Communication Skills
• use professional oral, written, and digital communication skills to create, express, and interpret information and ideas

G - Entrepreneurship
• demonstrate an understanding of entrepreneurship through recognizing a business opportunity, how to start a business based on the recognized opportunity, and basics of how to operate and maintain that business

H - Accounting
• understand, interpret, and use accounting principles to make financial decisions

I - Financial Literacy
• develop effective money management strategies and understand the role and functions of financial institutions

J - Business Risk
• research and interpret the various risks involved in operating a business while determining the role of insurance for a business

K - Human Resources
• examine basic human resources and the legal aspects of a business while incorporating the methods into business practices
High School Career and Technical Education

L - Leadership Development

• analyze the relationship between leadership development, school and community service projects with a career in the business and technology industry

M - Literacy

• demonstrate appropriate use of literacy skills
High School Career and Technical Education

Introduction to Collision Repair

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Safety
   • comply with personal and environmental safety practices associated with collision repair

C - Industry Standards and Practices
   • explore different aspects of the collision repair industry and apply best practices and industry standards

D - Tools and Machines
   • identify and utilize power tools and hand tools used in collision repair

E - Metals and Repair
   • distinguish between different basic metal repair techniques

F - Plastics and Repairs
   • identify the most common types of plastic used in automotive construction and perform simple repairs using these materials

G - Vehicle Construction
   • differentiate between types of vehicle construction

H - Automotive Refinishing
   • identify and explain the differences in the types of material used in the automotive refinish industry, as well as demonstrate basic spray techniques

I - Repair Estimates
   • interpret different forms of repair estimates

J - Leadership Development
   • analyze the relationship between leadership development, school and community service projects with a career in the collision repair industry

K - Literacy
   • demonstrate appropriate use of literacy skills
High School Career and Technical Education

Introduction to Construction

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - History and Tradition of Building Trades
   • demonstrate and explain knowledge of the history and traditions of the building trades

C - General Construction and OSHA and EPA Safety
   • demonstrate knowledge and application of general construction and specific OSHA and EPA safety concepts and practices

D - Professional and Safe Use of Basic Tools
   • demonstrate the professional and safe use of basic tools used in the building trades

E - Building Trades' Plans and Specifications
   • differentiate between the different building trades' plans and specifications

F - SkillsUSA
   • examine how SkillsUSA is a co-curricular part of career and technical education through leadership development, school and community service projects, and competitive events
High School Career and Technical Education

Introduction to Consumer Relations

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Leadership Development
  • analyze the relationship between leadership development, school and community service projects with a career in the consumer relations industry

C - Consumer Relations Philosophy
  • analyze components of a quality consumer relations philosophy

D - Consumers and Their Needs
  • describe consumers and identify their varying needs

E - Consumer Satisfaction and Service
  • identify concepts of quality service to assure consumer satisfaction

F - Professionalism
  • explain the effects of professionalism and a positive image

G - Communication Skills and Customer Relations
  • demonstrate the importance of communication skills in consumer relations

H - Conflict Prevention and Management
  • evaluate effective conflict prevention and management techniques

I - Customer Support
  • evaluate effective strategies for ongoing consumer support

J - Careers in Consumer Relations
  • research careers in the consumer relations industry

K - Literacy
  • demonstrate appropriate use of literacy skills
High School Career and Technical Education

Introduction to Culinary Arts

A - Employability Skills
  • demonstrate employability skills required by business and industry
  • examine how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, and competitive events

B - History of the Food Service Industry
  • summarize the history and philosophy of the food service industry

C - Sanitation in Food Service
  • demonstrate and practice correct sanitation as it relates to healthy living and the modern commercial kitchen and bake shop

D - Kitchen Equipment and Small Wares
  • identify and describes fixed equipment and small wares associated with the commercial kitchen and bake shop

E - Safety Skills in the Commercial Kitchen
  • analyze and examine fundamental safety skills and practices related to the commercial kitchen

F - Standardized Recipes
  • examine and identify standardized recipes and their role in a commercial kitchen while practicing culinary math skills through recipe conversion and measurements

G - Knife Skills
  • examine and perform all aspects of kitchen knife use and classic knife skills

H - Nutrition
  • describe and apply the principles of nutrition

I - Safe Food Handling Procedures
  • identify various food products used in a commercial foodservice operation and list the proper handling and storage procedures for each

J - Professionalism
  • discuss and practice sound human relations and professionalism concepts for a career pathway in Culinary Arts employment

K - Front of the House
  • identify and apply front of the house techniques and methods of operation used in restaurants and catering services
High School Career and Technical Education

L - Sustainability
   • identify and practice skills related to sustainability of resources

M - Cooking Methods and Techniques
   • examine and practice cooking methods, techniques, and preparations such as dry heat and moist heat methods

N - Careers in Culinary Arts
   • analyze the relationship between leadership development, school and community service projects with a career in the culinary arts industry

O - Literacy Skills
   • demonstrate appropriate use of literacy skills
High School Career and Technical Education

Introduction to Cybersecurity

A - Employability Skills
• demonstrate employability skills required by business and industry

B - Basic Concepts
• demonstrate an understanding of cybersecurity concepts and research

C - Fundamental Principles
• identify the fundamental principles of networking (wired and wireless), local area networks (elements, perimeter networks, IP addressing, access methods and topologies), client-server and peer-to-peer networking models, and wide area networks
• identify the fundamental principles of the Open Systems Interconnection Model, Internet Protocol IPv4 and IPv6, and common networking services to include Name Resolution Techniques

D - Commands
• demonstrate how to work with the basic and advanced command prompts

E - Infrastructures
• explore and research network infrastructures and network security

F - Basic Skills
• demonstrate how to work with fundamental components of cybersecurity

G - Security
• demonstrate how to implement proper security administration
• demonstrate how to employ host system and application security

H - Controls
• demonstrate how to implement proper access controls and identity management

I - Cryptology
• research and explore basic principles of cryptology

J - Student Organizations
• explore how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, entrepreneurship development, and competitive events
Introduction to Digital Media

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Safety
   • understand and follow safety procedures when working with computers and audio-video equipment

C - History
   • develop an understanding of the history of animation and the evolution of 2-D to 3-D animation

D - Terminology
   • understand and utilize trade terminology in an appropriate manner

E - Communication
   • demonstrate effective professional communication skills

F - Critical Thinking
   • find and solve problems of the production process through open-ended inquiry, the consideration of multiple options, weighing consequences, and assessing results

G - Drawing
   • understand and apply media, techniques, and processes in drawing

H - Painting
   • understand and apply media, techniques, and processes in color painting

I - Color
   • demonstrate the ability to specify color materials properly

J - Texture
   • demonstrate the ability to create various surface materials

K - Writing
   • identify and create various types of scripts

L - Focus Development
   • demonstrate design skills needed to formally document project goals in order to focus development efforts
   • analyze the origins of one's own ideas in relation to community, culture, and world that inform art
High School Career and Technical Education

M - Framing
  • demonstrate knowledge of manipulating stop motion frames and direction

N - Software
  • demonstrate knowledge of animation software user-interface and general features

O - File Management
  • acquire knowledge of file management and apply accordingly

P - Ethical and Legal Issues
  • describe, analyze, develop, and follow policies for managing ethical and legal issues in the business world and in a technology based society

Q - Portfolio Development
  • create and organize portfolios through the use of a variety of web design tools

R - Student Organizations
  • examine how related student organizations are integral parts of career and technology education courses through leadership development school and community service projects and competitive events
High School Career and Technical Education

Introduction to Digital Technology

A - Employability Skills
• demonstrate employability skills required by business and industry

B - Careers in Information Technology
• explore, research, and present findings on positions and career paths in technology and the impact of technology on chosen career area

C - Communication Skills
• demonstrate effective professional communication skills (oral, written, and digital) and practices that enable positive customer relationships

D - Types of Technology
• identify, describe, evaluate, select and use appropriate technology

E - Introduction to the Digital World
• apply concepts needed to understand, communicate, and adapt to a digital world

F - Computer Networks
• explore and explain the basic components of computer networks

G - Problem Solving
• use computational thinking procedures to analyze and solve problems

H - Web Design
• create and organize webpages through the use of a variety of web programming design tools

I - Programming
• design, develop, test and implement programs using visual programming

J - Ethical and Legal Issues
• describe, analyze, develop and follow policies for managing ethical and legal issues in the business world and in a technology-based society

K - Professional Growth and Development
• analyze the relationship between leadership development, school and community service projects with a career in the digital technology industry

L - Literacy Skills
• demonstrate appropriate use of literacy skills
High School Career and Technical Education

Introduction to Drafting and Design

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Careers in Architecture and Engineering
  • identify the disciplines related to architectural and engineering professions

C - Lab Usage and Safety
  • demonstrate the knowledge and skills to properly use the tools and equipment safely in the drafting lab

D - Tool Usage and Safety
  • demonstrate the correct use and management of all drafting tools and supplies

E - Technical Freehand Sketching
  • create technical freehand sketches

F - Lettering Techniques
  • demonstrate proper lettering techniques

G - Line Types
  • demonstrate the use of proper line types

H - Scales
  • demonstrate the ability to read and draw using the proper scale

I - Computer Operations
  • demonstrate the knowledge and skills of computer operations

J - Single View Drawings
  • create and add dimension to single view drawings while applying geometric construction

K - Multi-View Drawings
  • utilize orthographic projection to create and add dimension to multi-view drawings manually and using CADD

L - Leadership Development
  • analyze the relationship between leadership development, school and community service projects with a career in drafting and design industry

M - Literacy
  • demonstrate appropriate use of literacy skills
High School Career and Technical Education

Introduction to Government and Public Administration

A - Employability Skills
• demonstrate employability skills required by business and industry

B - Communication
• select appropriate communication formats to facilitate the flow of ideas and information among government, public administration, the business community, and the general public

C - Government and Public Administration
• analyze and summarize the systemic relationships of government and public administration agencies
• execute work-related tasks and processes using emerging and specialized technologies to achieve common objectives specific to government and public administration

D - Goals of Government
• utilize negotiation skills to achieve the goals of government

E - Technology and Communication
• identify, evaluate, select, and use appropriate technology for specific tasks found in government and public administration agencies

F - Policymaking
• apply democratic principles in the process of government and administrative policymaking to achieve the public will

G - Health and Safety in the Workplace
• maintain safe and healthful working conditions and environment in order to promote wellbeing in governmental and public administrative workplaces

H - Vision and Strategic Plan
• develop an organizational vision and strategic plan to inform stakeholders of the goals of a government or public administration agency

I - Legal and Ethical Requirements
• adopt and apply a standard of practices sufficient to meet legal and ethical requirements and meet the public’s expectations for government and public administration

J - Careers in Government and Public Administration
• analyze the relationship between leadership development, school and community service projects with a career in the government and public administration

K - Literacy Skills
• demonstrate appropriate use of literacy skills
High School Career and Technical Education

Introduction to Graphics and Design

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Careers in Graphic Communications and Design
   • explore careers available in the field of graphic communications and the design industry

C - History of Graphics and Design Industry
   • discuss developments and individuals relating to the history of the graphics and design industry
     and explore emerging trends and technologies

D - Professional and Ethical Issues
   • examine the professional and ethical issues involved in the visual communications and design
     industries

E - Business Cycle
   • examine and describe the business cycle elements

F - Equipment Operation and Safety
   • explain and demonstrate how to operate equipment in a safe manner

G - Lab Safety and Procedures
   • identify safety and health procedures utilized in the classroom/lab environment

H - Measurement
   • demonstrate proper usage of measuring units and devices

I - Paper Types and Outputs
   • recognize and utilize basic paper types and sizes for output

J - Graphic Imaging
   • generate and manipulate various graphic imaging processes

K - Output Operations
   • analyze pre-press, pre-flight, and output operations

L - Design Layout
   • understand and demonstrate how to design a page layout

M - Elements of Design
   • identify and define the five elements incorporated in basic graphic designs and understand the
     application of effective color usage
High School Career and Technical Education

N - File Formats
• identify and produce files utilizing different digital formats

O - Page Layout
• identify and demonstrate page layout terminology and tools
• distinguish and demonstrate the difference between page layout, raster-based photo manipulation, and vector-based graphic software applications

P - Letterforms
• discuss the origins of type by examining the evolution of letterforms

Q - Typeface
• evaluate the function of typeface design in supporting legibility in a variety of media applications

R - Printing
• distinguish between the different print/output processes

S - Electronic Imaging
• explore the different electronic imaging processes

T - Leadership Development
• analyze the relationship between leadership development, school and community service projects with a career in the graphics and design industry

U - Literacy
• demonstrate appropriate use of literacy skills
High School Career and Technical Education

Introduction to Healthcare Science

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Health and Safety Policy and Procedure
   • demonstrate standard safety practices for all classroom, laboratory and field experience; understand the existing and potential hazards to clients, co-workers, and self, and prevent injury or illness through safe work practices by following current health and safety policies and procedures

C - Healthcare Systems and Performance
   • describe how various healthcare roles fit into the office/department, the organization and the overall healthcare environment and identify how key systems affect services performed and quality of care

D - Develop a Career Plan
   • develop a Career Plan

E - Diversity and Ethics in Healthcare Delivery
   • evaluate the impact of diversity and ethics on healthcare delivery

F - Regulation, Policy, and Law
   • demonstrate an understanding of the legal responsibilities, limitations, and implications of their actions within the healthcare delivery setting; evaluate the importance of their duties according to regulations, policies, laws and legislated rights of clients

G - Providing and Obtaining Information
   • identify and demonstrate the various methods of providing and obtaining information from patients, family members, other agencies, and other members of the healthcare team

H - Preventive Health
   • practice preventive health behaviors personally and professionally

I - Microorganisms and Infection
   • analyze different types of microorganisms and their defining characteristics to reduce the risk of infection or illness. Demonstrate physicochemical methods and the use of PPE in preventing and controlling the spread of microbial growth

J - Demonstrating CPR, First Aid and AED
   • demonstrate CPR, First Aid, and the AED utilizing current standards

K - Stages of Human Development
   • describe the stages of development from birth to adulthood (e.g., neonatal period, infancy, childhood, adolescence and puberty, adulthood, and geriatrics)
High School Career and Technical Education

L - Information Technology Applications
• utilize information technology applications required within all career specialties and demonstrate use as appropriate to healthcare applications

M - Applying Mathematical Computation
• apply mathematical computations related to healthcare procedures
Introduction to HVACR Systems

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Electrical Concepts and Laws
   • demonstrate a thorough understanding of electrical concepts, theories, laws, and simple circuits

C - HVACR Electrical Circuitry
   • identify and describe electrical circuitry associated with the HVACR trade

D - Schematic Symbols
   • compare components to schematic symbols

E - Alternating Current
   • describe and illustrate alternating current

F - Electrical Component Testing
   • demonstrate the ability to test various electrical components in a HVAC system

G - Thermostat Testing
   • demonstrate installing and troubleshooting thermostats

H - SkillsUSA
   • examine how SkillsUSA is a co-curricular part of career and technical education through leadership development, school and community service projects, and competitive events
High School Career and Technical Education

Introduction to International Business

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Personal Trait Assessments
  • summarize personal strengths, weaknesses, and personality traits through the completion of different types of assessments

C - International Business Concepts
  • collect and compare fundamental business concepts that affect business and international business decision making

D - Management Styles
  • summarize from multiple sources the essential management styles, outcomes, vision statements, and needed personality traits used in international business settings

E - Diversity
  • make observations about the interrelatedness and diversity of geographic, social, cultural, political, and legal factors and how those factors shape the international business environment

F - Communication Strategies
  • apply communication strategies necessary and appropriate for effective and profitable international business relations

G - Ethical Business Behavior
  • recognize the need for ethical business behavior in a global business environment

H - Economic Concepts
  • compare and contrast economic concepts as they relate to international business

I - Student Organizations
  • explore how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, entrepreneurship development, and competitive events
Introduction to Law, Public Safety, Corrections and Security

A - Employability Skills
• demonstrate employability skills required by business and industry

B - Careers in Law, Public Safety, Corrections and Security
• explore and evaluate careers in Law, Public Safety, Corrections and Security

C - Cultural Impacts and Conflict Resolution
• apply conflict resolution to effectively resolve issues in Law, Public Safety, Corrections, and Security
• analyze how cultural differences impact the fields of Law, Public Safety, Corrections, and Security

D - Structures of the Legal System
• describe the structure and interaction between law and public safety agencies at a local, state, and federal level

E - Policy and Management in the Legal System
• demonstrate understanding of the missions, strategies, policies and management styles utilized by Law, Public Safety, Corrections, and Security agencies

F - Constitutional Law
• evaluate constitutional law as it affects Law, Public Safety, Corrections, and Security personnel and issues and incidents they face in their careers

G - Reports and Documents
• demonstrate the ability to accurately complete various Law, Public Safety, Corrections, and Security reports and documents

H - Ethical and Legal Responsibilities
• investigate ethical and legal responsibilities associated with Law, Public Safety, Corrections, and Security professions

I - Disaster Preparedness and Emergency Management
• discuss disaster preparedness/emergency management agencies, including but not limited to: Department of Homeland Security, Federal Emergency Management Agency, Citizens Corps, and Georgia Emergency Management Agency

J - Life Support and First Aid
• demonstrate the steps of Basic Life Support (BLS) and First Aid

K - Hazards
• identify the types of hazards likely to affect homes and communities and describe steps to prepare for emergencies
High School Career and Technical Education

L - Fire
• describe the various origins of fires, classes of fires, and the correct means to extinguish each type of fire

M - Search and Rescue
• analyze the components of search and rescue operations

N - Intrapersonal Crisis Management
• evaluate techniques for managing intrapersonal reactions to crisis situations

O - Terrorism
• examine common targets of terroristic attacks and the appropriate action following an attack

P - Leadership Development
• analyze the relationship between leadership development, school and community service projects with a career in the law, public safety, and corrections industry

Q - Literacy
• demonstrate appropriate use of literacy skills
High School Career and Technical Education

Introduction to Mechatronics

A - Employability Skills
- demonstrate employability skills required by business and industry

B - Safety
- define safe laboratory procedures and OSHA Regulations for the manufacturing lab

C - Electrical Laws and Principles
- demonstrate and understanding of electrical laws and principles

D - Magnetism
- demonstrate an understanding of magnetism and applications in manufacturing

E - Batteries
- demonstrate an understanding of batteries and uses in manufacturing

F - Circuits
- compute and apply series, parallel, and simple combination circuits
- explain and demonstrate the basic operation of DC test equipment

G - Pneumatic Systems
- demonstrate proper operation of pneumatic system components
- explain pneumatic system principles

H - Programmable Logic Controller
- demonstrate correct Programmable Logic Controller (PLC) installation, configuration, and setup
- understand the terms, operations, and values for Programmable Logic Controller (PLC) Programming Basics
- demonstrate the uses of Programmable Logic Controller (PLC) hardware and software
- demonstrate an understanding of Programmable Logic Controller (PLC) safety procedures

I - Relay Logic
- understand Relay Logic instructions and uses in automation and controls

J - Timers and Counters
- demonstrate the proper uses of timers and counters

K - Careers in Mechatronics
- analyze the relationship between leadership development, school and community service projects with a career in the mechatronics industry
High School Career and Technical Education

L - Literacy Skills
  • demonstrate appropriate use of literacy skills
High School Career and Technical Education

**Introduction to Metals**

**A - Employability Skills**
- demonstrate employability skills required by business and industry

**B - History of Machining, Welding and Sheet-Metal Trade**
- explore the history of the machining, welding, and sheet-metal trade

**C - Metals Safety**
- demonstrate knowledge and practice of metals safety

**D - Using Tools**
- demonstrate proficiency in the use of hand and power tools specific to the trade

**E - Measurement and Tools**
- demonstrate the ability to use measuring instruments specific to the metals trade

**F - Welding**
- demonstrate and explain the ability to safely set up and operate basic equipment for welding and cutting specific to the metal trade

**G - Parallel Line Development**
- demonstrate the ability to perform basic layout for parallel line development

**H - Machined Projects**
- demonstrate and explain the ability to perform basic layout for machined projects

**I - SkillsUSA**
- examine how SkillsUSA is a co-curricular part of career and technical education through leadership development, school and community service projects, and competitive events
High School Career and Technical Education

Introduction to Personal Care Services

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Careers and Trends
  • explore career opportunities and economic trends in the personal care industry

C - Laws, Rules, and Regulations
  • identify and evaluate state laws, rules and regulations

D - Professionalism
  • display a professional appearance and role play appropriate interaction with clients in the personal care services

E - Safety and Sanitation
  • evaluate and apply the regulations of infection control: principles, prevention, procedures and precautions to reduce the risk of the spread of infection to clients and personal care services personnel
  • demonstrate proper safety procedures and accident prevention in personal care services

F - Basic Chemistry
  • understand basic chemistry fundamentals and applications to the personal care services industry

G - Body Systems
  • demonstrate a working knowledge of anatomy as it relates to skills in cosmetology, barbering, esthetics and nails

H - Technical Skills
  • explore and demonstrate basic technical skills and the use of technology in cosmetology, barbering, esthetics and nails

I - Careers in Personal Care Services
  • analyze the relationship between leadership development, school and community service projects with a career in the personal care services industry

J - Literacy Skills
  • demonstrate appropriate use of literacy skills
High School Career and Technical Education

Introduction to Sports and Entertainment Marketing

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Marketing Concepts
   • interpret marketing concepts as they apply to sports and entertainment marketing

C - Marketing Information Management
   • apply concepts of marketing-information management to sports and entertainment marketing

D - Elements of Promotion
   • differentiate between the elements of promotion: sales promotion, advertising, personal selling, public relations, and publicity

E - Branding Concepts
   • interpret branding concepts as they apply to sports and entertainment marketing

F - Financial Planning
   • apply concepts of processes associated with successful financial planning in sports and entertainment marketing

G - Product Marketing
   • analyze product/service marketing as it relates to sports and entertainment marketing

H - Components of Sports Marketing
   • differentiate between the components of the sports marketing industry

I - Entertainment Industry
   • analyze the field of marketing as it relates to the elements of the entertainment industry: television, radio, music, movie, theater, and fine arts

J - Selling Processes
   • interpret the elements of the selling process as they relate to sports and entertainment marketing

K - Legal and Ethical Behaviors
   • interpret legal and ethical behaviors as they relate to the sports and entertainment marketing field

L - Communication Skills
   • incorporate communication and presentation skills into sports and entertainment activities

M - Distribution Channels
   • arrange appropriate and efficient channels of distribution for sports and entertainment events
High School Career and Technical Education

N - Career Choices
   • investigate career choices in sports and entertainment marketing

O - Marketing Plans
   • compose and create a sports and entertainment marketing plan
High School Career and Technical Education

Legal Administrative Services

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Legal Administrative Careers
  • explore and evaluate careers in legal administrative services (LaS)

C - General Legal Knowledge
  • demonstrate general legal knowledge

D - Proper Legal Correspondence
  • create proper legal correspondence

E - Format Legal Documents
  • create and format court and legal documents

F - Appropriate Mail Handling Procedures
  • demonstrate appropriate mail-handling procedures

G - Appropriate Filing Procedures
  • demonstrate appropriate filing procedures

H - Basic Accounting
  • review basic accounting terms and procedures

I - Computer Information Systems
  • demonstrate familiarity with computer information systems

J - Career Opportunities
  • explore career opportunities for certified court reporters

K - Student Organizations
  • explore how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, entrepreneurship development, and competitive events
Legal Environment of Business

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Ethics
   • compare and contrast the relationship between ethics and law for a business

C - Legal Dispute Resolution
   • explain and illustrate through simulation the process by which a legal dispute is resolved for a business and personal issue

D - Major Crimes Impact
   • investigate major crimes affecting business and the impact on a business

E - Tort Law
   • evaluate the use of tort law in a business setting

F - Contractual Relationships
   • demonstrate an understanding of contractual relationships

G - Statutory/Regulatory Schemes
   • categorize, evaluate, and assess specific statutory/regulatory schemes impact on a business

H - e-commerce and the Law
   • illustrate and defend the challenges of applying existing law to e-commerce

I - Diversity
   • research and summarize the influence of diverse cultures and customs on business practices while detailing awareness in business operations

J - Co-Curricular Organizations
   • explore how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, entrepreneurship development, and competitive events
Logistics Fundamentals

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Safety and Health Procedures
  • identify safety and health procedures utilized in the classroom/lab environment

C - Economics
  • explain the role economics plays in logistics and supply chain management

D - Logistics and Supply Chains
  • acquire an understanding of logistics and supply chain management

E - Motor Carrier Industry
  • describe the motor carrier industry's relation to logistics and supply chain management

F - Railroad Industry
  • investigate the railroad industry relating to logistics and supply chain management

G - Airline Industry
  • investigate the airline industry relating to logistics and supply chain management

H - Ocean Carrier Industry
  • research and describe the ocean carrier industry relating to logistics and supply chain management

I - Deep Water Ports
  • describe the importance of deep water ports to logistics and supply chain management

J - Warehousing Equipment
  • identify and describe types of equipment used in warehousing to move, store, and control and protect products

K - Warehousing and Material Handling Logistics
  • describe the concepts of warehousing and material handling logistics

L - Student Organizations
  • explain how related student organizations are integral parts of career and technology education courses through leadership development, school, and community service projects, and competitive events
High School Career and Technical Education

Logistics Operations

A - Employability Skills
• demonstrate employability skills required by business and industry

B - Global Supply Chain Logistics
• distinguish the essential components of global supply chain logistics and assess how these
  components affect company viability, profitability, and effectiveness

C - Global Logistics and the Environment
• investigate the global logistics environment and interpret its impact on the environment

D - Material Handling Equipment
• identify and describe equipment utilized in the material handling environment and apply
  concepts to select the correct equipment for specific jobs

E - Safety
• identify and explain principles and procedures used to maintain a safe logistics work
  environment

F - Quality Control Improvement
• analyze quality control improvement principles as they relate to global supply chain logistics and
  synthesize how control systems are implemented in global supply chain logistics

G - Communications
• examine and summarize the importance of effective communications in the logistics community

H - Teamwork
• demonstrate an understanding of the role teamwork might play in solving problems in the
  logistics environment

I - Technology in Logistics
• describe technology that you might use to improve efficiency in supply chain logistics

J - Terminology and Vocabulary
• utilize current and acceptable abbreviations and terminology related to proper communications
  within distribution, logistics, and supply chain management

K - Terminology and Vocabulary
• understand and apply terminology used in logistics and supply chain management

L - Student Organizations
• examine how related student organizations are integral parts of career and technology education
  courses through leadership development, school and community service projects, and
  competitive events
High School Career and Technical Education

Marketing and Entrepreneurship

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Successful Entrepreneur
  • understand the concepts, processes, systems, strategies and tools needed to be a successful entrepreneur / business owner / manager

C - Support of Entrepreneurs
  • understand the concepts, strategies, and systems needed to implement and obtain support for an entrepreneurial entity

D - Entrepreneurial Processes
  • understand the processes, strategies, and systems needed to guide the financial organization of an entrepreneurial entity

E - Successful Business Ventures
  • understand the concepts, processes, systems, strategies and tools needed to create a successful business venture

F - Marketing Plans
  • understand the concepts, systems, and tools needed to complete the marketing plan

G - Managing Business Ventures
  • understand the concepts, processes, systems, strategies and tools needed to be a successfully manage a business venture
Marketing Communications Essentials

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Organizational Tools
  • distinguish the tools, techniques, and systems that businesses use to create exchanges and satisfy organizational objectives

C - Day-to-Day Activity Monitoring
  • compare and contrast the processes and systems implemented to monitor, plan, and control the day-to-day activities required for continued business functioning

D - Evaluation Systems
  • describe the tools, strategies, and systems needed to access, process, maintain, evaluate, and disseminate information to assist in marketing communications decision-making in Business-to-Business (B2B), Business-to-consumer (B2C), and Business-to-government (B2G) markets

E - Marketing Decision-Making
  • investigate the tools, strategies, and systems needed to access, process, maintain, evaluate, disseminate information to assist marketing information decision-making

F - Price Adjustments
  • analyze the concepts and strategies utilized in determining and adjusting prices to maximize return and meet customers' perceptions of value

G - Product Mix
  • formulate and apply the concepts and processes needed to obtain, develop, maintain, and improve a product or service mix in response to market opportunities

H - Strategy Development
  • develop a logical argument about the concepts and strategies needed to communicate information about products, services, images, and/or ideas to achieve a desired outcome

I - Client Desires
  • summarize the concepts and actions needed to determine client needs and wants and respond through planned, personalized communication that influences purchase decisions and enhances future business opportunities

J - Marketing Communications
  • construct the concepts and strategies needed to communicate information about products, services, images, and/or ideas to achieve a desired outcome using public relations

K - Digital Marketing
  • investigate and explain the concepts and strategies needed to communicate information about products, services, images, and/or ideas to achieve a desired outcome using digital marketing communications media
High School Career and Technical Education

L - Social Media Marketing
• differentiate the concepts and strategies needed to communicate information about products, services, images, and/or ideas to achieve a desired outcome using social communications media

M - Social Media Summarization
• summarize and apply the concepts and strategies needed to communicate information about products, services, images, and/or ideas to achieve a desired outcome using social communications media

N - Promotional Sales
• apply the concepts and strategies needed to communicate information about products, services, images, and/or ideas to achieve a desired outcome using sales promotions
High School Career and Technical Education

Marketing Management

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Communication Skills
  • utilize communication skills and technology tools to facilitate information flow in marketing, sales, and service

C - Marketing Legal Considerations
  • examine marketing activities and related legal considerations to facilitate business development and growth

D - Economics in Marketing
  • apply economics skills in marketing, sales, and service to obtain understanding of customers and the economic environment in which they function

E - Business Financial Systems
  • evaluate financial systems to enhance their impact on businesses and marketing operations and systems

F - Dissemination of Marketing Information
  • gather, synthesize, evaluate, and disseminate marketing information to make business and marketing decisions

G - Pricing Strategies
  • apply pricing strategies to maximize return and meet customers' perception of value

H - Product Service
  • obtain, develop, maintain, and improve a product/service mix to respond to market opportunities

I - Sales Knowledge
  • analyze sales knowledge and skills to determine client needs and wants and to respond through planned, personalized marketing communications

J - Promotional Knowledge
  • describe promotional knowledge and skills for communication information to achieve a desired marketing outcome

K - Distribution Knowledge
  • explain distribution knowledge and skills to manage supply-chain activities

L - Effective Sales Promotion
  • analyze and apply the steps needed for an effective sales presentation
High School Career and Technical Education

Marketing Principles

A - Employability Skills
- demonstrate an understanding of concepts, strategies, techniques and systems used in communication, teamwork, human relations, problem solving, critical thinking, personal branding and career development (areas commonly referred to as "soft skills")
- demonstrate employability skills required by business and industry

B - Marketing Concepts
- acquire foundational knowledge of marketing concepts to understand the scope and impact of marketing on the economy

C - Business and Management
- implement, modify, and improve business and marketing systems to facilitate business activities

D - Customer Behaviors
- demonstrate an understanding of customer behaviors and the economic environment in which customers function

E - Marketing Decisions
- acquire foundational knowledge of marketing information and research to understand the scope on business and marketing decisions
- apply financial concepts and skills to facilitate marketing decisions

F - Pricing Strategies
- utilize pricing strategies to maximize return and meet customer's perception of value

G - Products and Services
- implement processes and techniques to develop, maintain, and improve a product/service mix to utilize market opportunities
- demonstrate processes and techniques to sell goods, services and ideas

H - Promotions
- utilize promotional knowledge and skill for communicating information to achieve a desired marketing outcome

I - Distribution
- utilize knowledge of distribution to manage supply-chain activities

J - International Business
- acquire foundational knowledge of international business and marketing concepts to understand the scope and impact on the economy
High School Career and Technical Education

K - Careers in Marketing
  • analyze the relationship between leadership development, school and community service projects with a career in the marketing industry

L - Literacy Skills
  • demonstrate appropriate use of literacy skills
High School Career and Technical Education

Materials Management

A - Employability Skills
• demonstrate employability skills required by business and industry

B - Receiving
• describe the process of receiving products

C - Storage
• identify and describe proper product storage techniques based on product life, risk of damage, hazards, and weight and size

D - Picking Processes
• describe order processing in terms of picking processes and how they impact warehouse operations

E - Packaging Materials
• develop a logical argument of various types of packaging materials best suited for different product size, weight, function and design for shipment

F - Inventory Control
• explain how inventory control affects overall materials operations

G - Hazardous Material Safety
• identify and describe the safe handling of hazardous materials, including classification, regulations, specifications, and methods of shipping and routing of dangerous goods

H - Modes of Transportation
• discuss and analyze common transportation modes used to transport goods and cargo, including air, marine, rail, pipeline, and intermodal

I - Dispatch, Routing, and Tracking
• demonstrate understanding of concepts related to dispatch, routing, and tracking operations, and basic customs terminology and documentation

J - Measurement and Conversion
• apply basic measurement and conversion techniques for handling and shipping materials

K - Terminology and Vocabulary
• utilize current and acceptable abbreviations and terminology related to proper communications within distribution, logistics, and supply chain management
• understand and apply terminology used in logistics and supply chain management
High School Career and Technical Education

L - Student Organizations

• examine how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, and competitive events
High School Career and Technical Education

Multi-Channel and Applied Digital Audio

A - Multi-Channel Audio Application

• explain the basics of surround sound encoding/decoding and their translation to various speaker arrays (consumer home audio-television broadcast)
• demonstrate encoding techniques for surround sound encoding
• demonstrate decoding techniques for surround sound decoding
• apply the finished, mixed multi-channel recording in the proper format and media
• create a music project for DVD
• employ various types of microphones for a multi-channel audio recording
• apply fundamental and differing multi-channel microphone placement techniques
• create music tracks utilizing multi-channel microphone techniques, equalization, and spatial positioning settings
• modify tracks by expanding the aural soundscape through overdubs
• apply multi-channel audio joystick positioning (panning) during the mixing process
• create a visual interface for the surround sound project

B - Core Skills

• communicate in a clear, concise, and courteous manner
• apply mathematical concepts and calculations and solve problems using appropriate mathematical techniques
• use and create text and multimedia documents in a variety of formats and be able to troubleshoot problems with technical or electronic equipment
• identify the scope of a business, its organization, and activities, and the interrelationship of its parts
• discuss factors that impact career decisions and formulate appropriate plans to reach career goals
• maintain safety, health, and environmental standards, and address ergonomic concerns
• identify problems, analyze alternative solutions, and develop a plan of action
• use effective learning techniques to acquire and apply new knowledge and skills
• set goals and monitor progress toward meeting goals
• participate and interact as a team member and leader
• work to satisfy customer/client expectations
High School Career and Technical Education

B - Core Skills  (continued)
  • acquire, store, allocate, and use materials and space efficiently

C - Literacy Standards
  • cite specific textual evidence to support analysis of technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account
  • conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation
  • gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation
  • draw evidence from informational texts to support analysis, reflection, and research
  • write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences
  • produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience
  • develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience
  • use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information
  • evaluate the hypotheses, data, analysis, and conclusions in technical texts, verifying the data when possible and corroborating or challenging conclusions with other sources of information
  • synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible
  • read and comprehend technical texts in the text complexity band independently and proficiently
  • write arguments focused on discipline-specific content
  • write informative/explanatory texts, including the narration of historical events or technical processes
  • determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms
  • follow precisely a complex multistep procedure when performing technical tasks; analyze the specific results based on explanations in the text
High School Career and Technical Education

C - Literacy Standards  (continued)

• determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific technical context relevant to grade level texts and topics

• analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas

• analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved

• integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem
High School Career and Technical Education

**Natural Resources Management**

**A - Employability Skills**
- demonstrate employability skills required by business and industry

**B - Characteristics**
- communicate the importance of natural resources management and determine demands and identify the role of government in natural resources management

**C - Ecosystems**
- discuss and identify basic components of ecosystems describe the relationship of those components to one another and identify effects of human activities on ecosystems

**D - Soil**
- describe the properties of soil and nutrient analysis determine the capability of the land and the effects of the erosion and describe soil stewardship in Georgia

**E - Water**
- determine the use of water resources describe the hydrologic cycle and properties of water and explain watersheds and their functions as well as the reasons for monitoring water quality

**F - Waste**
- identify sources of waste and describe methods and procedures for managing that minimize environmental impact

**G - Wildlife**
- define wildlife explain the importance of wildlife and wildlife management and identify the role of government and private wildlife organizations in managing wildlife resources

**H - Forestry**
- describe an awareness of interrelationships in the forest environment between plants, soil, animals, water, and man

**I - Role of Government**
- explain the importance of the governments natural resources and recreational programs

**J - Safety**
- identify safety practices in land-based activities such as hunting and four-wheeler riding and water-based activities such as fishing and boating
Networking Fundamentals

A - Employability Skills
- demonstrate employability skills required by business and industry

B - Fundamental Principles of Networking
- identify the fundamental principles of networking, local area networks (including but not limited to LAN elements, design, perimeter networks, IP addressing, and LAN types), network topologies and access methods (including topologies such as star, mesh, and ring); Ethernet architecture; and the client-server and peer-to-peer networking models

C - OSI Model and Communications Sub-Network
- identify the layers of the OSI (Open Systems Interconnection) Model and define the communications sub-network

D - Wired Networks, Media Types and Wireless Networks
- identify wired networks, media types and wireless networks

E - Internet Protocol and Emerging Protocols In Industry
- explore Internet Protocol IPv4 and IPv6 and emerging protocols in industry

F - Basic and Advanced Command Prompts
- demonstrate how to work with the basic and advanced command prompts

G - Networking Services and Name Resolution Techniques
- demonstrate how to set up common networking services and define Name Resolution Techniques

H - Wide Area Networks, Routing and WAN Technologies
- explore the concepts of Wide Area Networks, describe routing and define common WAN technologies and connections

I - Network Infrastructure and Security
- explore network infrastructures and network security

J - Student Organizations
- explore how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, entrepreneurship development, and competitive events
High School Career and Technical Education

Networking Systems and Support

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Fundamental Principles of Networking
   • identify the fundamental principles of networking demonstrating installation, configuration, optimization, and upgrades of networking

C - Interconnection of Networks
   • explore local-area network, LAN, metropolitan area network, MAN, wide-area network, WAN, and wireless local-area network, WLAN, trends and issues including the basics of telecommunications and use in the interconnection of networks

D - LAN Physical Media and Network Connectivity
   • demonstrate knowledge of LAN physical media and knowledge of network connectivity basics

E - OSI Layer and TCP/IP
   • understand through explanation and demonstration of the two standard computer network communication protocols, OSI Layer and TCP/IP, and its importance to standards-based networks

F - Sub-netting and Standards-Based Networks
   • demonstrate the concept of sub-netting and the importance to standards-based networks

G - Fundamental Principles of Network Security
   • identify the fundamental principles of network security systems for optimal network operation and administration

H - Network Troubleshooting
   • troubleshoot network problems and functions

I - Creating a Network
   • create a network using design standards, analysis, and section for networks

J - Network Operation and Management
   • explain computer network operation and management procedures including network maintenance and diagnostic testing

K - Network Architecture and Administration
   • apply network applications and knowledge of network operating systems by installing basic system architectures using current windows operating system software and perform network administration
High School Career and Technical Education

L - Student Organizations

• explore how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, entrepreneurship development, and competitive events
High School Career and Technical Education

Non-Structural Analysis and Damage Repair I

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Proper Preparation of all Components
   • demonstrate preparation by properly inspecting, removing, storing and installing components

C - Outer Body Panel Repairs and Replacements
   • demonstrate outer body panel repairs, replacements, and adjustments

D - Metal Finishing Repair
   • identify and demonstrate repairing metal finishing and body filling

E - Glass and Hardware Repair and Replacement
   • demonstrate moveable glass and hardware repair and replacement

F - Metal Welding and Cutting
   • demonstrate metal welding and cutting as it relates to vehicle repair

G - Vehicle Repairs Using Plastics
   • demonstrate vehicle repairs using plastics and adhesives

H - SkillsUSA
   • examine how SkillsUSA is a co-curricular part of career and technical education through leadership development, school and community service projects, and competitive events
A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Preparation of Components
  • demonstrate preparation by properly inspecting, removing, storing, and installing components

C - Body Repair
  • demonstrate outer body panel repairs, replacements, and adjustments

D - Metal Finishing
  • identify and demonstrate repairing metal finishing and body filling

E - Moveable Glass and Hardware
  • demonstrate moveable glass and hardware repair and replacement

F - Welding
  • demonstrate metal welding and cutting related to vehicle repair

G - Plastic Vehicle Repairs
  • demonstrate vehicle repairs using plastics and adhesives

H - SkillsUSA
  • examine how skillsUSA is a co-curricular part of career and technical education through leadership development, school and community service projects, and competitive events
High School Career and Technical Education

Painting and Refinishing I

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Safety Practices and Environmental Regulations
   • comply with personal and environmental safety practices in accordance with local, state, and environmental regulations

C - Vehicle Surface Preparations
   • examine and practice various vehicle surface preparations

D - Spray Gun Equipment Operations
   • examine and practice spray gun and related equipment operations

E - SkillsUSA
   • examine how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects and competitive events
High School Career and Technical Education

Painting and Refinishing II

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Environmental Safety Practices and Regulations
   • demonstrate compliance with personal and environmental safety practices in accordance with local, state, and environmental regulations

C - Painting Techniques
   • explore and demonstrate paint mixing, matching and applying techniques

D - Paint Defect Causes
   • determine paint defect causes

E - Paint Defect Cures and Correction Techniques
   • identify paint defect cures and practice various correction techniques

F - Detailing Procedures
   • perform final detailing procedures

G - SkillsUSA
   • examine how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects and competitive events
High School Career and Technical Education

Pathways in Marketing

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Marketing Concepts
  • define and apply foundational concepts in business, marketing and entrepreneurship

C - Hospitality, Recreation, and Tourism
  • define and apply basic concepts specific to Hospitality, Recreation and Tourism (HRT) to prepare for the high school HRT Pathway and/or careers in the industry

D - Sports and Entertainment Marketing
  • define and apply basic concepts specific to Sports & Entertainment Marketing to prepare for the High School Sports & Entertainment Marketing Pathway and/or careers in the industry

E - Fashion, Merchandising and Retail Management
  • define and apply basic concepts specific to fashion marketing to prepare for the High School Fashion, Merchandising and Retail Management Pathway and/or careers in the industry

F - Marketing, Management and Communication
  • define and apply basic concepts specific to marketing and management to prepare for the related High School Marketing and Management and Marketing Communications and Promotions Pathways and/or careers in the industry

G - Student Organizations
  • apply professional, leadership, and marketing skills resulting from participating in the local and state Marketing and Hospitality Student Organization, DECA

H - Career Portfolio
  • develop a career portfolio
Patient Care Fundamentals

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Elderly Needs and Well Being
   • examine the needs of the elderly and how those needs can impact their care and well-being

C - Employability in Patient Care
   • apply the employability skills required for proficiency working in the Patient Care field

D - Patient Privacy Guidelines
   • maintain resident/patient's rights and practice resident/patient/client's privacy, according to Omnibus Budget Reconciliation Act (OBRA) and Health Insurance Portability and Accountability Act (HIPAA) guidelines

E - Effective Communication
   • communicate effectively with residents/patients/clients' healthcare team members and resident/patient/client family or visitors using appropriate customer service skills

F - Appropriate Behaviors
   • demonstrate appropriate behaviors meeting mental health and social service needs of resident/patient/client

G - Organizational Structure
   • analyze the organizational structure of the nursing facility and adhere to policies and procedures

H - Scope of Practice for Patient Care
   • adhere to the scope of practice for patient care assistant and demonstrate appropriate actions while respecting a patient's right to privacy and proper treatment

I - Safety Measures in Patient Care
   • adhere to regulations and practice appropriate safety measures in providing resident/patient/client care

J - Infection Control Practices
   • describe and demonstrate infection control practices
A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Professionalism
   • demonstrate professional demeanor at all times both in the classroom and within the healthcare facilities
   • demonstrate an understanding of professional ethics and legal responsibilities

C - Data Collection
   • demonstrate data collection as it relates to the goals, objectives, and implementation of the treatment plan according to their scope of practice

D - Infectious Control
   • apply infection control guidelines including techniques for maintaining isolation

E - Safety
   • examine the trends, financing, and principles of healthcare economics including the importance of safety practices

F - Respiratory Therapy
   • demonstrate advanced technical skills in respiratory care

G - Wound Care
   • demonstrate advanced technical skills in wound care within their scope of practice

H - Nutrition and Fluid Management
   • demonstrate advanced technical skills in nutrition and fluid intake elimination and ostomy care

I - Phlebotomy
   • perform advanced technical skills in medical laboratory and phlebotomy through simulation

J - Cardiovascular Care
   • perform advanced technical skills in cardiovascular care
High School Career and Technical Education

Pharmacy Operations and Fundamentals

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Pharmacy Basics
   • describe the different types of pharmacies identify the team members needed and define terminology used in a pharmaceutical setting

C - Safety
   • support and explain the need for safety and proper infection control in the pharmacy and demonstrate precautions to prevent medication errors

D - Legal Considerations
   • summarize the history of government actions within the pharmaceutical industry, including pharmacy law, practice, regulations, and standards

E - Terminology and Abbreviations
   • utilize medical and pharmaceutical terms abbreviations symbols and classifications
   • interpret parts of a prescription and identify dosage forms delivery systems and the routes of drug administration

F - Mathematics
   • formulate calculate and demonstrate proper drug doses to prepare medicine for dispensing for patient use

G - Dosing Considerations
   • compare and contrast the differences when dealing with pediatric and geriatric pharmacology including administration, dosage, compliance, and complications

H - Skills
   • perform necessary skills needed to prepare medication for patient

I - IV Fluids
   • calculate and demonstrate through simulation proper IV set up and simulated administration

J - Compounding
   • calculate and demonstrate proper compounding techniques and measurements through simulation

K - Informatics
   • demonstrate appropriate documentation, reports, billing procedures and other office skills that may be utilized in a pharmacy
High School Career and Technical Education

L - Wellness
  • demonstrate necessary education of patients/caregivers to promote health and wellness and to prevent problems including patient noncompliance, drug interactions, and abuse and addiction
Principles and Concepts of Animation

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Safety
   • understand and follow safety procedures when working with computer and television equipment

C - Terminology
   • understand and utilize trade terminology in an appropriate manner

D - Customer relations
   • demonstrate effective professional communication skills and practices that enable positive customer relationships

E - History of Animation
   • develop an understanding of the history of animation and the evolution of 2-D to 3-D animation

F - Storyboarding
   • demonstrate storyboarding skills and document project goals in order to develop an animation project

G - Software
   • acquire knowledge of animation software and features

H - Trade Terminology
   • understand and use trade terminology in an appropriate manner

I - 2-D and 3-D Animations
   • demonstrate knowledge of creating 2-D and 3-D animations
   • compare and contrast methods used to modify 3-D models
   • demonstrate knowledge of the movement cycles in animation
   • demonstrate the ability to apply color to animations properly
   • apply knowledge of effective use of lights on 2-D and 3-D objects

J - Camera Skills
   • demonstrate knowledge of setting and modifying camera views

K - Legal Issues
   • identify logistical ethical and legal issues related to digital media and apply concepts to use of text, graphics, animation, sounds, video, and digital images in digital products
High School Career and Technical Education

L - Portfolio
• create and maintain a working portfolio of student projects and activities

M - Student Organizations
• examine how related student organizations are integral parts of career and technology education courses through leadership development school and community service projects and competitive events
High School Career and Technical Education

Principles of Accounting I

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Responsibilities to Society
  • analyze and evaluate the roll that accountants play in business and society

C - Accounting Careers
  • utilize career-planning concepts, tools and strategies to explore, obtain and/or consider an accounting career

D - Accounting Cycle
  • apply the steps of the accounting cycle to prepare financial statements for proprietorships and corporations

E - Accounting Process
  • apply generally accepted accounting principles (GAAP) and explain how the application of GAAP impacts the recording of financial transactions, and the preparation of financial statements

F - Financial Statements
  • demonstrate an understanding and working knowledge of the preparation of financial statements

G - Data Analysis and Decision Making
  • analyze the financial condition and operating results of a business for informed decision making

H - Internal Controls
  • evaluate and determine suitable internal accounting controls to ensure the safe guarding of assets

I - Payroll
  • summarize payroll procedures in order to calculate, record, and distribute payroll earnings and related tax liabilities

J - CTSO/FBLA
  • explore how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, entrepreneurship development, and competitive events
Principles of Accounting II

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Accounting Cycle
  • apply the various steps of the accounting cycle for various business entities and explain the purpose of each step

C - GAAP-Assets
  • apply Generally Accepted Accounting Principles (GAAP) to determine the value of assets

D - GAAP-Liabilities
  • apply Generally Accepted Accounting Principles (GAAP) to determine the value of liabilities

E - GAAP-Stockholders' Equity
  • apply Generally Accepted Accounting Principles (GAAP) to determine the value of stockholders' equity

F - GAAP-Revenues and Expenses
  • apply Generally Accepted Accounting Principles (GAAP) to determine the value of revenues and expenses

G - End-of-Cycle Activities and Financial Statements
  • create, interpret, and analyze end-of-fiscal-period activities and financial statements

H - Forms of Ownership
  • apply appropriate accounting principles to various forms of ownership

I - Income Taxation
  • apply appropriate accounting principles to income taxation

J - International Accounting
  • compare and contrast appropriate accounting principles to international accounting

K - Managerial Accounting Systems
  • apply appropriate accounting principles to managerial accounting systems

L - Organization Plan and Evaluation
  • use management accounting techniques to plan and evaluate the performance of an organization
High School Career and Technical Education

M - CTSO Integration

• explore how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, entrepreneurship development, and competitive events
High School Career and Technical Education

Production Enterprises

A - History of Manufacturing
   • explain the historical and societal impact of production

B - Manufacturing Careers
   • research careers in manufacturing

C - Safe Work Environments
   • explain how and why production enterprises value safe work environments

D - Market Research
   • conduct pre-production market research, product design, and product development

E - Design of a Production System
   • design a production system

F - Implementation of a Production System
   • implement a production system

G - Student Reflection
   • develop a reflective document on the completion of the production activity
High School Career and Technical Education

Programming, Games, Apps and Society

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Software Life Cycle
  • describe the software application life cycle and use a prototype development model to develop applications

C - Design Applications Using Objects
  • design and develop applications using objects

D - Design Interfaces
  • design, develop, and implement accessible and usable interfaces, and analyze applications for engaging the user

E - Digital Representations
  • use and implement different digital representations of media

F - Privacy, Legal and Intellectual Property
  • evaluate an application design in terms of meeting privacy needs, legal and intellectual property requirements, and security considerations

G - Incorporating Real-World Data
  • develop applications that read real-world data from sensors, interpret the data, and respond to the real-world stimuli

H - Needs for Information and Communication Technologies
  • describe the unique needs for information and communications technologies for diverse audiences

I - Student Organizations
  • explore how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, entrepreneurship development, and competitive events
High School Career and Technical Education

Promotion and Professional Sales

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Advertising and Promotion Industry
   • analyze the scope of the advertising and promotion industry

C - Competitive Economic Environment
   • critique the role of the promotional mix in a competitive economic environment

D - Market Analysis
   • apply techniques used to analyze the potential market

E - Planning Advertising Campaigns
   • distinguish and summarize the steps in planning for advertising campaigns

F - Calculating Media Costs
   • calculate media costs that affect the elements of the promotional mix

G - Advertising Techniques
   • demonstrate advertising techniques used in a promotion plan for both profit and non-profit sectors

H - Public Relations
   • design and implement a public relations media campaign

I - Visual Merchandising
   • develop visual merchandising to compliment advertising campaigns

J - Selling to the Economy
   • identify and interpret the importance of selling to the economy

K - Designing Promotional Materials
   • design sales promotion materials

L - Effective Sales Presentation
   • analyze and apply the steps need for an effective sales presentation

M - Follow-Up Techniques
   • describe the importance of utilizing follow-up techniques after the sale has been completed
High School Career and Technical Education

N - Career Opportunities

- identify potential career opportunities in the Marketing Communications and Promotion pathway with appropriate career path credentials
Robotics and Automated Systems

A - History of Manufacturing
   • explain the history of automated systems and the benefits of those systems to manufacturing in a global society

B - Major Engineering Tasks
   • identify and explain the major engineering tasks in organizing automated manufacturing

C - Automated Systems
   • discuss the systems and applications of automation, including AGV, PLC, CNC, CIM, CAD, CAM, and robotics as essential to succeeding globally in a manufacturing market

D - Utilizing Programmable Control Devices
   • outline the utilization of programmable control devices and data transfer

E - Robotics in Manufacturing
   • apply the principles of PLC, CIM, CAD, CAM, and robotics in the manufacturing of a product
A - Language Arts (Listening and Speaking)

- recognize speaker's purpose and identify verbal and nonverbal components of communication (body language, facial expressions, gestures)
- speak in a clear, understandable manner
- contribute to discussions, present prepared ideas, and use language appropriate to situation and audience
- take notes on the main and subordinate ideas in lectures and discussions and report accurately what others have said

B - Language Arts (Reading)

- read poems, short stories, essays, novels, magazines, newspapers, charts, graphs, and technical documents for pleasure and self-improvement; expect reading to make sense, answer questions, or stimulate ideas
- read critically, ask pertinent questions, recognize assumptions and implications, and evaluate ideas
- identify, comprehend, and summarize the main and subordinate ideas in a written work
- distinguish between fact and opinion
- gain insight into human behavior from the study of literature
- make and defend inferences, conclusions, and comparisons
- evaluate quality of reading material and its content based on author's purpose
- evaluate writing relative to student's own purposes for reading
- interpret author's meaning
- read two passages; answer questions about each passage and about the relationship(s) between the two passages

C - Language Arts (Vocabulary)

- use context clues to identify meaning (connotation and denotation) of unknown words while reading
- complete sentences based on context clues, meaning, and intent
- define unfamiliar words by using appropriate structural analysis skills including prefixes, suffixes, and root words
- acquire increased vocabulary through reading and listening; demonstrate progress through speaking and writing
- construct and complete word analogies
High School Career and Technical Education

D - Language Arts (Writing)
• write for many purposes, including, but not limited to, personal, social, academic, and business
• draft, revise, and edit writing to improve fluency, content, organization, and style; eliminate unnecessary wordiness
• write and support thesis statements
• develop a central idea with examples, illustrations, facts, and details
• write logical and effective transitions between ideas and paragraphs
• write using various methods of ordering: chronological, spatial, cause-to-effect, problem, cause, solution; order of importance; comparison and contrast
• edit for spelling, fragments, and run-on sentences, to clarify misplaced modifiers, to correct faulty parallelism and maintain consistent sentence structure, and to correct faulty coordination and subordination
• establish voice through tone, word choice, rhetorical devices, and literary devices
• use language appropriate to situation and audience
• use active and passive voice appropriately
• use available technology to assist in writing

E - Language Arts (Grammar, Usage, and Mechanics)
• correct subject-verb agreement: when subject follows verb, when subject and verb are separated, and when the subject seems plural
• correct problems with pronouns: pronoun in the wrong number, pronoun in the wrong case in compound noun phrases, pronoun shift, pronoun with ambiguous reference
• write Standard American English sentences with correct verb forms, punctuation, capitalization, possessives, plural forms and other mechanics, word choice, and spelling
• use the correct form of words such as accept/except, affect/effect
• correct mistakes when adjectives have been used as adverbs or adverbs have been used as adjectives
• correct double negatives
• maintain consistent number, gender, point-of-view, and verb tense

F - Mathematics (Accessing Information)
• use a variety of print and non-print resources (e.g., films, recordings, theatre, and computer databases) as parts of the study of literature
• use research process: selecting topic, formulating questions, identifying key words, choosing sources, skimming, paraphrasing, note-taking, organizing, summarizing, and presenting
High School Career and Technical Education

G - Mathematics (Basic Numbers and Operation)
- identify and compare the proper order of mathematical operations and the use of signed numbers and variables
- simplify and find fraction and decimal equivalents and how to add, subtract, multiply, and divide them
- identify, compare, and apply real, exponential, prime, composite, and irrational numbers
- recognize and apply the transitive and zero properties of multiplication
- apply the concepts of ratios
- apply concept of irrational numbers involving square roots and the Pythagorean Theorem

H - Mathematics (Algebra and Functions)
- apply the concepts of ratio and proportion
- apply factoring and pattern recognition strategies
- model, simplify, and solve algebraic expressions
- apply problem-solving strategies to traditional geometry problems and problems using algebraic equations

I - Mathematics (Geometry and Measurement)
- apply the concepts and properties of points, lines, angles, and planes
- identify, compare, and compute the areas of polygons and circles including perimeter, circumference, area, volume, and surface area
- classify and work with the angles formed by transversals and parallel lines
- identify and apply the concepts of congruency, similarity, and corresponding parts
- apply the properties of 45-45-90 and 30-60-90 triangles

J - Mathematics (Probability and Statistics)
- read and interpret data from pie, bar, and line graphs
- apply the concepts of central tendency
- apply the concepts of mean, median, and mode
- calculate and analyze probabilities of an event
- interpret data from graphs

K - Mathematics (Problem Solving and Strategies)
- apply number sense and estimation skills to understand alternative approaches to basic computation problems and word problems
High School Career and Technical Education

K - Mathematics (Problem Solving and Strategies)  (continued)

• describe and analyze patterns in non-routine problem-solving situations
• apply the strategy of pattern recognition to find patterns and relationships among numbers
• model expressions and choose appropriate values for variables
• evaluate expressions by substituting real numbers and computing the results
• apply problem-solving strategies to non-routine problems

L - Test Taking Strategies and Skills

• evaluate various resources available to help prepare for the SAT
• understand the advantages and disadvantages of guessing an answer, leaving an answer blank, or choosing an incorrect answer on the SAT
• correctly complete a SAT registration form
• state the significance of SAT scores and College Board requirements in college entrance and earning scholarships
• interpret SAT score
High School Career and Technical Education

Semiconductors, Mechanical Systems, and Pump and Piping Systems

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Safety Procedures
   • demonstrate appropriate industrial safety procedures in the manufacturing lab

C - Diode Fundamentals
   • apply the fundamentals of diodes

D - Semiconductor Fundamentals
   • demonstrate the fundamentals of semiconductors

E - Field Devices
   • connect field devices to IO cards

F - Mechanical Systems
   • explain introductory concepts of mechanical systems

G - Applied Mathematics
   • compute applied mathematics and measurements

H - Tool Maintenance
   • demonstrate proper use of maintenance tools and materials in industrial systems

I - Manufacturing Processes
   • describe various manufacturing processes

J - Power Transmission Components
   • demonstrate an understanding and identify components of power transmission systems

K - Mechanical System Components
   • examine and explain basic system principles and components for mechanical systems

L - Pump and Piping Systems
   • examine and explain pumps and piping systems

M - NEC Electric Code
   • utilize article 430 of the National Electrical Code (NEC) to calculate the installation requirements for motors and motor control systems
High School Career and Technical Education

Sheet Metal I

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Pattern and Line Development
   • demonstrate proficiency in parallel line development

C - Using Mathematical Equations
   • compute and solve mathematical problems relating to sheet metal

D - Sheet Metal Fasteners
   • demonstrate the ability to use and identify fasteners, hangers, and supports

E - Metal Materials
   • demonstrate the ability to identify and measure different types of metals used in sheet metal

F - SkillsUSA
   • examine how SkillsUSA is a co-curricular part of career and technical education through leadership development, school and community service projects, and competitive events
Sports Medicine

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Appendicular Skeleton
   • analyze anatomic positions, directional terms, movements, and postures as related to the appendicular skeleton

C - Communication Within The Physical Medicine Setting
   • utilize correct terminology, abbreviations, symbols and practices to appropriately communicate oral and written information within the physical medicine setting.

D - Injury Classification and Evaluation
   • demonstrate injury classifications and evaluations

E - Principles and Concepts of Healing
   • analyze and describe the basic principles and concepts of healing

F - Basic Life Support
   • demonstrate the steps of Basic Life Support (BLS) with Automated External Defibrillator (AED), assess and manage patients with bleeding, bony injuries, soft tissue as well as musculoskeletal injuries

G - Pathogen and Infection Control
   • identify and describe pathogens commonly encountered in physical medicine and demonstrate appropriate infection control principles

H - Structure and Treatment of Upper Extremities
   • analyze the anatomy, muscular structure, vascular structure, Range of Motion (ROM), Manual Muscle Tests (MMT) and special tests, as well as prevention and treatment, of the upper extremity

I - Structure and Treatment of Lower Extremities
   • analyze the anatomy, muscular structure, vascular structure, Range of Motion (ROM), Manual Muscle Tests (MMT) and special tests, as well as prevention and treatment, of the lower extremity

J - Head and Facial Injuries
   • analyze the anatomy, muscular structure, vascular structure, and describe the mechanisms signs and symptoms and potential complications associated with head and facial injuries

K - Spinal Treatment and Injury Prevention
   • analyze the anatomy, muscular structure, vascular structure, ROM, MMT and special tests, as well as prevention and treatment, of the spine
High School Career and Technical Education

L - Thoracic and Abdominal Treatment and Injury Prevention
• analyze the anatomy, muscular structure, vascular structure, ROM, and special tests, as well as prevention and treatment, of the thoracic and abdominal regions

M - Nutrition in Physical Medicine
• evaluate the importance of nutrition in physical medicine

N - Monitoring Client Health
• demonstrate the process for basic assessment (e.g., vital signs, height, weight, etc.), monitoring, and reporting/recording patient/client's health status

O - Principles of Rehabilitation
• analyze and describe the basic principles and concepts of rehabilitation

P - Principles of Pharmacology
• analyze and describe the principles of pharmacology

Q - Use of Therapeutic Modalities
• analyze and describe the appropriate use of therapeutic modalities
High School Career and Technical Education

Surgical Technician I

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Careers
  • explore options in the surgical industry including inpatient and outpatient surgery settings and the organizational structure

C - Regulations
  • abide by regulations governing workplace safety, infection control, operational standards, patient confidentiality, and facility protocol

D - Terminology and Abbreviations
  • utilize appropriate surgical and medical terminology

E - Infection Control
  • apply principles of asepsis and infection control in the perioperative and operative settings

F - Patient Care
  • identify the need to respond to changes in medical status of surgical patients
High School Career and Technical Education

Surgical Technician II

A - Employability Skills
- demonstrate employability skills required by business and industry

B - Healthcare Skills
- utilize fundamental surgical technician knowledge to perform as a member of an operating room team including scope of practice legal and ethical regulations HIPPA and safety and infection control
- utilizing simulation apply basic surgical technician skills in the operating room

C - Instruments and Sterilization
- perform common simulated tasks related to the role of surgical technician in the operating room

D - Anesthesia
- correlate the elements action and use of medications and anesthetic agents used by medical personnel during the perioperative experience

E - Roles and Responsibilities
- analyze the role of the circulator and how the surgery tech can assist with circulator duties
High School Career and Technical Education

Survey of Engineering Graphics

A - Employability
• demonstrate employability skills required by business and industry

B - Workplace, Tools, Safety and Standards
• demonstrate and follow safety, health, and environmental standards related to the STEM workplace and apply specific engineering tools, machines, materials and processes in a safe and orderly manner to formulate, analyze, and verify engineering practices and solutions

C - Applied Math for Engineering Graphics
• analyze applied math required by business and industry for engineering graphics

D - Sectional Views
• demonstrate purpose and correct application of sectional views

E - Auxiliary Views
• demonstrate purpose and correct application of auxiliary views

F - Pictorial Views
• demonstrate purpose and correct application of pictorial views

G - Cite Developments in Engineering Graphics and Engineering
• cite evidence of developments in engineering graphics and engineering

H - Present Appropriate Views of an Object
• present appropriate views of an object
High School Career and Technical Education

Teaching as a Profession Practicum

A - Employability
  • demonstrate employability skills required by business and industry

B - Teaching Portfolio
  • create a portfolio demonstrating knowledge, skills and experiences from the Teaching as a Profession Pathway
Textile Science

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Careers in Textile Industry
   • examine the various career opportunities within the textile industry

C - History of Textiles
   • develop a general knowledge of textiles from a historical perspective to current applications

D - Fiber Characteristics and Properties
   • investigate, describe and recognize fiber characteristics and properties

E - Fabrication and Properties of Yarn
   • examine and identify the fabrication and properties of yarns

F - Construction Methods of Textiles
   • identify textiles according to construction methods

G - Textile Finishes and Methods
   • demonstrate an understanding of textile finishes and methods

H - Maintenance of Textiles
   • analyze the characteristics and maintenance concepts of textile products

I - Appropriate use of Textiles
   • distinguish the characteristics and identify the appropriate use of textiles for apparel and/or interiors

J - New Product Development
   • investigate how trends and color forecasting are used in the development of new products

K - Technology in Textiles
   • examine the continuing use of technology in advancing textile products using innovative skills and tests

L - Legislation in the Textile Industry
   • research legislation on the federal, state and local levels that regulate the textile industry
High School Career and Technical Education

Therapeutic Services and Applied Anatomy

A - Employability Skills
  • demonstrate employability skills required by business and industry

B - Infection Control Procedures
  • explain and practice common safety and Infection control procedures found in various locations and settings

C - Careers in Therapeutic Services
  • compare and contrast the roles and responsibilities of careers in therapeutic services

D - Anatomy and Physiological of the Human Body
  • investigate an overview of the anatomy and physiological functions of the human body

E - The Integumentary System
  • distinguish and organize basic structures and function of the integumentary system

F - The Human Skeletal System
  • identify patterns and common features of the human skeletal system

G - Student Organizations
  • explore how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, entrepreneurship development, and competitive events
High School Career and Technical Education

Veterinary Science

A - Employability Skills
• demonstrate employability skills required by business and industry

B - Agriculture Lab Work
• learn to work safely in the agriculture lab and work sites, demonstrate selected competencies in leadership through the FFA and agricultural industry organizations, and develop plans for a supervised agricultural experience program (SAEP)

C - Safety Standards
• define types of hazards common in the veterinary hospital and the organization that regulates safety standards in the workplace

D - Sanitation, Disinfection, and Sterilization
• distinguish the differences between sanitation, disinfection, and sterilization, and be able to identify which cleaning method should be used in any given situation

E - Greek and Latin Language
• recognize and explain Greek and Latin prefixes, suffixes, and roots that compose the language of veterinary medicine, as well as, dissect the meaning of veterinary terms

F - Body Systems
• investigate body systems and construct a working knowledge of the function, and purpose, including the effect on diseases

G - Directional Anatomical Structure
• define vocabulary of directional anatomical terms and identify anatomical structures of animals

H - Animal Illness
• critique the various regions of an animal's body and the signs of illness that may be present

I - Veterinary Procedures
• perform several common veterinary hospital procedures

J - Internal and External Parasites
• differentiate common internal and external parasites of small and large animals and recall both the common and the scientific names

K - Animal Health and Nutrition
• analyze animal nutrition required to maintain a healthy animal

L - Animal Feed
• identify and describe the various components of an animal feed label and make an educated decision on which feed to purchase for an animal in each of the production periods
High School Career and Technical Education

M - Animal Disease
  • identify the path a disease takes and access the effects on various body systems

N - Animals in Society
  • apply concepts of the importance of animals and the contributions that animals make in society

O - Animal Breeds
  • identify and explain the purpose of the most common breeds of animal species and discuss
    specific temperament/behavior characteristics of the breed

P - Animal Behavior
  • critique animal behavior through observation and draw conclusions on the interaction with other
    animals, humans and environment
High School Career and Technical Education

Web Design

A - Employability Skills
   • demonstrate employability skills required by business and industry

B - Ethical Issues
   • plan, develop, implement, and resolve ethical issues involved in creating and publishing a web site

C - HTML
   • create and use graphics to enhance web pages using a variety of tools

D - Graphics
   • create and use graphics to enhance webpages using a variety of tools

E - Cascading Style Sheets
   • define and apply essential aspects of the Cascading Style Sheets to format elements within a website

F - GUI
   • use (Graphic User-Interface) GUI-based HTML editing software to create websites

G - e-commerce
   • develop an understanding of e-commerce practices and related technologies necessary to create a secure, useful interface to conduct business online

H - Website Publishing and Maintenance
   • test, analyze, and identify performance issues related to publishing and maintaining web sites

I - CTSOs
   • explore how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, entrepreneurship development, and competitive events
Web Development

A - Employability Skills
• demonstrate employability skills required by business and industry

B - HTML
• develop a web page using Hypertext Markup Language (HTML) and Cascading Style Sheet (CSS)

C - JavaScript
• apply concepts of JavaScript to webpage development

D - Webpage Development
• create a single functional webpage based on a design mockup and user requirements, perhaps a résumé (Client Side Languages)
• explain the components needed to develop a dynamic website (Web Development Stack)
• use a server side language to build a multi-page website incorporating a web form, at least two templates with shared portions, and data-driven home page (Server Side Languages)

E - Search Engine Optimization
• utilize on-page Search Engine Optimization (SEO) throughout a website

F - Software Development Cycle
• apply concepts involved in the software development life cycle (SDLC) as it pertains to web development

G - Regulations
• ensure websites meet all special considerations and are in compliance with industry and government regulations

H - Student Organizations
• examine how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, and competitive events
High School Career and Technical Education

Welding I

A - Employability Skills
• demonstrate employability skills required by business and industry

B - Arc Welding and Oxyfuel Safety
• demonstrate proficiency in Arc Welding and Oxyfuel Safety

C - Oxyfuel Cutting with Acetylene and Alternative Fuel
• identify and use oxyfuel cutting equipment with acetylene and alternate fuels (propane)

D - Welding Symbols and Detailed Drawings
• identify and use welding symbols and read detailed drawings

E - Welding Procedures and Testing
• identify and explain welding procedures and testing

F - Shielded Metal Arc Welding
• demonstrate knowledge of basic shielded metal arc welding, SMAW

G - Shielded Gas Metal Arc Welding
• demonstrate knowledge of basic shielded gas metal arc welding, GMAW

H - Plasma Arc Cutting
• demonstrate knowledge of plasma arc cutting

I - SkillsUSA
• examine how SkillsUSA is a co-curricular part of career and technical education through leadership development, school and community service projects, and competitive events