

Current Standard:

Economics and Business

Introduction to Technology - Primary

A student shall use appropriate computer technology to access information and to produce products by:

- A. gathering information from electronic sources; and
- B. producing products and selecting language, format, and graphics appropriate for the purpose and audience by using word processing.

Economics, Technology & Systems Management

Introduction to Technology - Primary

Purpose: Exposure to the basic concepts of the technological world

A. A student shall demonstrate an understanding of:

1. Technological World

- a. a definition of technology;
- b. the application of a variety of technologies, in for example, buildings, bicycles, or telephones;
- c. differences between natural and human-made worlds;
- d. how needs and wants encourage the development of technology;
- e. how technology can supply more than one solution to a problem;
- f. the interrelationship between basic technological systems and the interdependence of primary parts within a single system, for example, a bicycle is part of a transportation system and is made up of several subsystems such as steering, braking, and power; and

2. Computer Applications

- a. appropriate computer technology to access information and produce products.

B. A student shall demonstrate the ability to:

1. Technological World

- a. document positive and negative effects of the use of a technology from a social and environmental perspective;
- b. develop designs or invent solutions to address human needs and wants;
- c. construct a model of a solution using a design process;
- d. use tools, materials and equipment to explore medical technologies, agricultural and related biotechnologies, energy and power technologies, information and communication technologies, transportation technologies, manufacturing technologies or construction technologies;
- e. explore and demonstrate how the parts of a specific technological system work; and

2. Computer Applications

- a. identify and use the basic parts of a computer system;
- b. gather information from electronic sources; and
- c. use software applications to produce products including text and graphics appropriate for the purpose and audience.

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Current Standard:

Economics and Business

Technology Skills - Intermediate

A student shall use appropriate computer technology to access, evaluate, and organize information and to complete products by:

- A. gathering and evaluating information from electronic sources;
- B. completing products and selecting language, format, and graphics appropriate for the purpose and audience by using word processing, graphics, and multimedia presentation; and
- C. recognizing and using appropriate keys and techniques for entering data, keying written work, or both, at an age-appropriate level of speed and accuracy.

Economics, Technology & Systems Management

Technology Skills - Intermediate

Purpose: Explore and apply technologies

- A. A student shall demonstrate an understanding of:
 - 1. Technological World
 - a. core technology concepts, including systems, resources, requirements, and processes;
 - b. the interrelationship between systems and subsystems in technology, for example, a television as part of a communication system;
 - c. parameters including costs, materials, safety, and size constraints that must be considered in design;
 - d. the design process, including needs identification, task definition, information-seeking strategies, use of information, synthesis and evaluation; and
 - 2. Computer Applications
 - a. appropriate computer technology to access, evaluate, and organize information to complete products.

- B. A student shall demonstrate the ability to:
 - 1. Technological World
 - a. investigate and explain how technology has altered people's perceptions of the world;
 - b. identify connections between human wants and needs and technological developments;
 - c. troubleshoot in order to determine why something does not work;
 - d. follow step-by-step directions to safely assemble or create a product;
 - e. correctly select and use tools;
 - f. analyze a technical device in order to identify the system and subsystems;
 - g. apply the design process to model, test, evaluate and modify a design solution;
 - h. use multiple technologies to design a solution to a problem in a technology cluster including medical technologies, agricultural and

related biotechnologies, energy and power technologies, information and communication technologies, transportation technologies, manufacturing technologies or construction technologies; and

2. Computer Applications

- a. gather, evaluate, and organize information from electronic sources;
- b. use software applications and peripheral devices to complete a project by selecting language, format and graphics, appropriate for the purpose and audience;
- c. select and appropriately use input devices/sources, for example, keyboard, voice recognition software, or electronic tablets to enter data; and
- d. select and appropriately use output devices, for example, monitors, printers, audio out and projectors to communicate information to an audience.

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Current Standard:

Economics and Business

Group Resources - Middle

A student shall demonstrate in a team the ability to manage personal resources to produce a product or service by:

- 1) knowing background information about the product or service to be produced, basic principles of teamwork, and basic material and processing options;
- 2) identifying and describing a product or service to be produced by creating a model, prototype, or plan;
- 3) identifying the resources of the team members involved;
- 4) listing the other human and non human resources required;
- 5) comparing available resources with needs;
- 6) determining how to get needed resources to revise the plan;
- 7) assigning work roles to each member of the team;
- 8) creating a flow chart or schedule describing how the task will be structured and the specific work assigned to each member of the team;
- 9) creating the product or service as a group; and evaluating effectiveness of how the team managed resources.

Economics, Technology & Systems Management

Group Resources - Middle

Purpose: Manage resources as a team to produce a product or service

- A. A student shall demonstrate an understanding of:
 1. basic principles of teamwork including, communication skills, conflict resolution, and problem-solving;
 2. background information concerning the product or service to be produced;
 3. basic design principles, technologies, materials and processing of materials; and
 4. how to manage resources as a team to produce a product or service including human, material and environmental.

- B. A student shall demonstrate the ability to:
 1. identify a product or service to be produced as a team;
 2. recognize and utilize each team member's skills and strengths;
 3. create a plan for the design of the product or service, determine the resources and technologies needed to execute, review and revise the plan based on available resources;
 4. produce a model of a proposed product or service;
 5. conduct a market survey of a proposed product or service;
 6. evaluate and test a proposed product or service to determine the viability of the product, for example, cost effectiveness of producing the product or service;
 7. produce the product or service using appropriate technology; and
 8. evaluate the effectiveness of team in managing human and non-human resources.

Current Standard:

Economics and Business

Technology Applications - Middle

A student shall use appropriate computer technology to access, evaluate, and organize information and to produce products by:

- A. gathering and evaluating information from electronic sources;
- B. applying appropriate technology processes to an identified need or problem;
- C. producing products and selecting language, format, and graphics appropriate for the purpose and audience by using word processing, graphics, multimedia, spread sheets, and databases; and maintaining, using, or creating a technological system.

Economics, Technology & Systems Management

Technology Applications - Middle

Purpose: Participate in the development or creation of a technological product

- A. A student shall demonstrate understanding of:
 - 1. Technological World
 - a. the usefulness of technology in everyday situations;
 - b. core concepts of technology including systems, resources, requirements, optimization and trade-offs, processes and controls;
 - c. the positive and negative impact of technology on society and the impact society has on the development of technology;
 - d. the positive and negative impact that technological development has on the environment and the impact the environment has on the development of technology;
 - e. the role of design in developing useful products and systems;
 - f. how technology has changed the designed world including medical technologies, agricultural and related biotechnologies, energy and power technologies, information and communication technologies, transportation technologies, manufacturing technologies or construction technologies; and
 - 2. Computer Applications
 - a. identify the types of application software and explain their purpose or use.
- B. A student shall demonstrate the ability to:
 - 1. Technological World
 - a. create or adapt a design for a useful product or system;
 - b. prepare a design model for testing, evaluation and modification of a product or system;
 - c. identify the criteria, constraints and resources necessary to produce a product or system;
 - d. develop the procedures for producing a product or system including automation, tooling, safety and quality controls;

- e. produce a product or system using appropriate technologies;
 - f. evaluate the impact of the designed product or system on society and the environment;
 - g. identify the interrelationship of the designed product or system to other systems or subsystems;
2. Computer Applications
- a. select application software types appropriate for specific tasks;
 - b. select and apply the feature of software products, for example, galleries, templates, and macros; and
 - c. use software applications including word processing, multimedia, spreadsheets and databases to produce products by selecting language, format and graphics, appropriate for the purpose and audience.

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**Current Standard:
Economics and Business**

Personal Resources – Middle

A student shall demonstrate the ability to manage personal resources to meet a goal or solve a problem effectively by:

- 1) identifying a problem, issue, or situation;
- 2) identifying personal resources relevant to the situation, including time, money, energy, and skills;
- 3) examining the problem, issue, or situation in light of personal goals;
- 4) generating options or solutions;
- 5) identifying the consequences of proposed solutions in a variety of areas;
- 6) creating and implementing an action plan; and
- 7) evaluating the effectiveness, impact, or both of the use of personal resources in a variety of areas.

**Current Standard:
Informed Consumerism – Middle**

A student shall demonstrate understanding of the impact of purchases in a household, business, community, and environment by know consumer rights and responsibilities; factors that affect consumer decisions; the impact of consumer decisions in a global context; and how to access information about consumer products by:

- 1) describing a variety of personal or household purchases over a period of time;
- 2) comparing wants, needs, and available resources;
- 3) using information to compare and contrast potential purchases;
- 4) evaluating the quality of products or services;
- 5) evaluating the impact of the total purchases on the total household budget;
- 6) evaluating how consumer choices affect the community; and evaluating the effect of the purchases on the environment.

Economics, Technology & Systems Management

Personal and Consumer Literacy - Middle

Purpose: Understand the impact of various purchases and effectively manage personal and financial resources

- A. A student shall demonstrate an understanding of:
 1. the relationship between managing personal and financial resources and meeting goals or solving problems;
 2. personal financial and non-financial resources including, time, money, energy and skills;
 3. factors that affect consumer decisions including consumer rights and responsibilities, external influences and the impact of purchases on household and local communities; and
 4. the community and global impact of consumer decisions.

- B. A student shall demonstrate the ability to:
 1. implement a decision-making process in authentic personal and consumer situations to reach a goal or solve a problem, process including but not limited to:
 - a. identifying an issue;
 - b. identifying financial and non-financial resources relevant to the goal or problem;
 - c. generating options or solutions;

- d. identifying consequences of each option or solution;
 - e. creating an action plan;
 - f. evaluating the plan;
2. examine personal and household spending habits over a period of time;
 3. differentiate between wants and needs as they relate to available financial and non-financial resources and the impact they have on a total household budget;
 4. access information concerning consumer products;
 5. evaluate the quality of products or services;
 6. describe how purchases affect the environment and local community, including waste disposal, recycling and limited resources;
 7. modify and implement the action plan; and
 8. evaluate the effectiveness of the plan.

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Current Standard:

Economics and Business

Natural and Managed Systems – High School

A student shall develop and communicate a resource management plan involving natural and managed systems by:

- A. demonstrating understanding of the interaction and interdependence of natural and managed systems, including natural ecosystems, and human-managed systems;
- B. describing the biological, physical, and human characteristics of the systems;
- C. gathering data using appropriate techniques;
- D. identifying the nature of the interactive and interdependent relationships;
- E. using appropriate environmental impact criteria;
- F. analyzing economic and environmental costs and benefits;
- G. presenting and defending a cost and benefit risk analysis to a jury of peers; and modifying the plan based on feedback.

Economics, Technology & Systems Management

Natural and Managed Systems – High School

Purpose: Investigate the interaction and interdependence of natural and managed systems

- A. A student shall demonstrate an understanding of:
 1. natural systems including, human impact on the ecosystems and environmental changes;
 2. human managed systems including, micro and macro systems as they relate to bioengineering;
 3. resource utilization within a system including, land, capital and human resources;
 4. economic value of local system as it relates to the surrounding systems; and
 5. environmental impact of a system as it relates to the local ecosystems.
- B. A student shall demonstrate the ability to:
 1. identify and explain the nature and scope of a natural and managed system;
 2. develop a resource management plan involving natural and managed systems;
 3. gather and synthesize the data necessary to properly:
 - a. evaluate the environmental impact of a human managed system;
 - b. identify the interactive and interdependent relationship between natural and managed systems;
 - c. prepare an environmental impact statement;
 - d. analyze economic impact of a plan;
 - e. identify alternative actions and relevant historical perspectives;
 4. evaluate the interaction and interdependence of natural ecosystems and human managed systems detailing important system characteristic including biological, physical and human characteristics; and
 5. communicate the resource management plan involving natural and managed systems to a jury of peers by simulating a public hearing and defending an evaluation of the proposed system.

Current Standard:

Economics and Business

Personal and Family Resource Management – High School

A student shall apply principles of personal and family resource management and informed decision making by:

- A. demonstrating understanding of sound buying principles, issues involved in renting or buying a home, personal finance terminology, insurance options, and implications of non financial resources;
- B. creating plans for major purchases;
- C. evaluating personal banking services and cash or credit options;
- D. analyzing a household budget
- E. preparing personal income tax statements;
- F. analyzing and selecting investment options; and
analyzing how to manage household resources considering broader economic and environmental systems

Economics, Technology & Systems Management

Personal and Family Financial Management and Investment – High School

Purpose: Apply principles of personal and family resource management through informed decision-making and use of appropriate technology

- A. A student shall demonstrate an understanding of:
 1. how consumer knowledge of the product, product standards, evaluation, and comparisons are combined to create informed consumer buying practices;
 2. options, issues and requirements related to meeting individual and family housing needs;
 3. terminology used in private and public agencies including, but not limited to, banking, investing, insurance, taxes, employment and unemployment;
 4. how financial and non-financial resources are managed by an individual or family unit including, budgeting, spending, saving, insurance and investing;
 5. how consumer decisions are affected by external influences, for example media, peers and technology; and
 6. how individuals and families make informed financial decisions and the impact of those decisions on the local, national and global economy and environment.

- B. A student shall demonstrate the ability to:
 1. create a plan to make a major purchase, by using consumer knowledge, product standards, and comparisons;
 2. create and analyze a household budget and explain the how financial decisions affect the budget;
 3. prepare and explain personal federal and state income tax forms;
 4. simulate and explain the process of acquiring housing;
 5. apply a decision making process to compare, contrast, and analyze options for banking, credit, insurance and investing;

 6. determine and apply appropriate technology, for example, financial software, spreadsheets, web shopping, electronic banking, and internet tools

for investments, to personal and family financial and investment situations;
and

7. explain and analyze the interrelated effect of the environmental and economic outcomes that are associated with consumer purchases.

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Current Standard:

Economics and Business

Business Management – High School

A student shall use fundamentals of informed decision making and business management, including personnel management procedures; customer, employee, and management practices; use of banking services; forms of business organization; and current work-related laws and how the laws affect employment by;

- A. maintaining finances of the business;
- B. analyzing business expenses and organizational and environmental costs;
- C. applying personnel management procedures;
- D. applying human relations strategies;
- E. applying marketing strategies; and
- F. organizing work time around long-term priorities and immediate needs.

Economics, Technology & Systems Management

Business Management – High School

Purpose: Apply the fundamentals of business management through informed decision making

- A. A student shall demonstrate an understanding of:
 1. business management fundamentals including: planning, organizing, leading/directing, evaluating/controlling, human resources and communication;
 2. management theories, and procedures and their applications in the business environment including, banking services and forms of business organization; and
 3. financial data in order to make short-term and long-term decisions including, interpreting the data shown on financial statements, risk management, short-term and long-term financing.
- B. A student shall demonstrate the ability to:
 1. apply personal management skills, for example, resource management, stress management, professional growth and development, communication skills or relationship building, to function effectively and efficiently in a business environment;
 2. evaluate a business code of ethics and identify the source of regulations that have resulted from unethical business practices;
 3. analyze human resource functions, for example, recruitment and selection, employee development, employee evaluation, compensation, promotion benefits and incentives, separation and transition, labor relations or work related laws and their importance to an organization's successful operation;
 4. utilize information and technology tools to conduct business effectively and efficiently, for example, select appropriate technology tools for specific business applications, information management, marketing, organizational or environmental costs and analyzing the impact of e-business on profitability; and
 5. use service strategies to address customer needs.

Current Standard:

Economics and Business

Financial Systems – High School

A student shall use financial systems and information and basic accounting principles to;

- A. prepare accounts, ledgers, journals, financial statements, and payroll data;
- B. conduct financial analysis using mathematical techniques, including ratio analysis, comparative statements analysis, cost analysis, and trend analysis; and
- C. create a report based on information obtained from data analysis, including describing and displaying data, analyzing effectiveness of past financial actions, and recommending future courses of action based on conclusions of data analysis.

Economics, Technology & Systems Management

Financial Systems – High School

Purpose: Analyze and apply financial systems, information, and basic accounting principles

- A. A student shall demonstrate an understanding of:
 1. basic accounting principles related to the accounting cycle;
 2. the accounting process including assets, liabilities and owner's equity;
 3. financial systems related to accounting including finance, investment, and real estate; and
 4. decision-making related to financial systems.
- B. A student shall demonstrate the ability to:
 1. apply generally accepted accounting principles to determine the value of assets, liabilities and owner's equity;
 2. prepare, interpret, and analyze financial statements using manual and computerized systems including ratio analysis, comparative statements analysis, cost analysis and trend analysis;
 3. apply appropriate accounting principles to payroll, income taxation, managerial systems and various forms of ownership;
 4. create a report based on information obtained from data analysis including selecting, interpreting and displaying data and analyzing the effectiveness of past financial actions; and
 5. recommend course of action based on conclusions of data analysis using data to drive decision making strategies.

Current Standard:

Economics and Business

Technical Systems – High School

A student shall apply knowledge, skills, and tools of technological systems by;

- A. investigating and analyzing the scientific principles and elements (inputs, processes, outputs, feedback) of a specific technological system in relation to a macrosystem;
- B. using basic skills and tools related to operating a specific system;
- C. creating, modifying, analyzing, or troubleshooting a technological system;
- D. transferring knowledge of a specific system to create or modify a plan for a macrosystem; and
- E. examining short-term impact on the environment and long-term sustainability.

Economics, Technology & Systems Management

Technical Systems – High School

Purpose: Develop expertise in the design, diagnosis and operation of technical systems to solve problems and extend human capabilities

- A. A student shall demonstrate an understanding of:
 1. the nature of technical systems including the characteristics, scope, and core concepts of technology and the role technology plays within other fields;
 2. social, cultural, environmental, economic and political effects on technology;
 3. the impacts of technology on society, culture, environment, economics and politics;
 4. design principles, invention, and innovation; and
 5. the engineering systems model, including inputs, processes, outputs, and feedback.
- B. A student shall demonstrate the ability to:
 1. select a specific technology cluster including medical technologies, agricultural and related biotechnologies, energy and power technologies, information and communication technologies, transportation technologies, manufacturing technologies or construction technologies and apply the engineering design process to:
 - a. propose a new or modified technological product, service, or system;
 - b. build, test, and evaluate a prototype or model of the technological product, service or system;
 - c. identify the resources, requirements, optimizations, and trade-offs, processes and controls of the chosen technological system;
 - d. investigate and analyze the inputs, processes, outputs and feedback of the specific technological system;
 - e. evaluate the relationship between the technological system and the environment and analyze other positive and negative effects of the system; and
 2. analyze the relationship of macro and micro technological systems.

Current Standard:

Economic Systems-High School

Through the use of the fundamental concepts of economics, a student shall demonstrate understanding of the interactive nature of global, national, and local economic systems, how government decisions impact those systems, and how individuals, households, businesses, and governments use scarce resources to satisfy unlimited wants and needs by:

- A. analyzing a public issue in terms of production, distribution, and consumption;
- B. analyzing how change in the economy affects individuals, households, business, government, and the environment;
- C. explaining how scarcity of productive resources impacts decisions concerning the production and distribution of goods and services;
- D. examining how domestic and global economic systems interact; and
- E. comparing the rules and procedures of different economic systems by examining the effect on supply, demand, capital, prices, role of institutions, and natural resources.

Economics, Technology & Systems Management

Economic Systems —High School

Purpose: Understand how individuals, households, businesses, and governments use scarce resources to satisfy unlimited wants and needs

- A. A student shall demonstrate an understanding of:
 - 1. the fundamental concepts of economics, including scarcity, opportunity cost, supply and demand, markets, economic growth, fiscal policy, monetary policy, and trade;
 - 2. how individuals, households, businesses, and governments allocate scarce resources to satisfy unlimited wants and needs;
 - 3. global, national, and local economic systems and how they interact; and
 - 4. the impact of government decisions on economic systems.

- B. A student shall demonstrate the ability to:
 - 1. apply economic concepts to a public issue;
 - 2. analyze how changes in the economy affect individuals, households, business, government, and the environment; and
 - 3. compare how decisions are made in different economics systems regarding what will be produced, how it will be produced, and for whom it will be produced.