

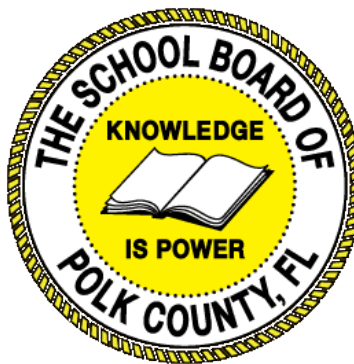
# Individual Test Item Specifications

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260300- Fundamentals of A/V  
& Print Technology

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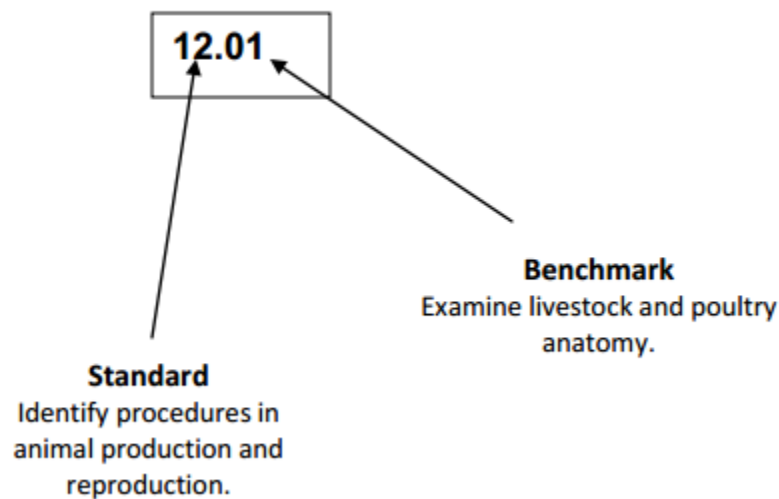
## I. Guide to the Individual Benchmark Specifications

Content specific guidelines are given in the *Individual Benchmark Specifications* for each course. The *Specifications* contains specific information about the alignment of items with the Florida Standards. It identifies the manner in which each benchmark is assessed, provides content limits and stimulus attributes for each benchmark, and gives specific information about content, item types, and response attributes.

### Benchmark Classification System

- Each Career and Technical Education course has its own set of course standards. The benchmarks are organized numerically, with two numbers separated by a decimal point. The first number is the standard number, and the second number is the benchmark number. You will see these numbers on the Item Specifications for each course.

An example, from Agritechnology 1:



*The image above describes the components of a Career and Technical Education Standard and Benchmark classification system.*

Each MAFS benchmark is labeled with a system of letters and numbers.

- The four letters in the *first position* of the label identify the **Subject**.
- The number(s) in the *second position* represents the **Grade Level**.
- The letter(s) in the *third position* represents the **Category**.
- The number in the fourth position shows the **Domain**.
- The number in the *fifth position* identifies the **Cluster**.
- The number in the last position identifies the specific **Benchmark**.



*The image above describes the components of a Florida Standard and Benchmark classification system.*

## Definitions of Benchmark Specifications

The *Individual Benchmark Specifications* provides standard-specific guidance for assessment item development for the Florida Department of Education Career and Technical Education item banks. For each benchmark assessed, the following information is provided.

<b>Reporting Category</b>	is a grouping of related benchmarks that can be used to summarize and report achievement.
<b>Standard</b>	refers to the standard statement presented in the Florida Standards.
<b>Benchmark</b>	refers to the benchmark statement presented in the Florida Standards. In some cases, two or more related benchmarks are grouped together because the assessment of one benchmark addresses another benchmark.
<b>Item Types</b>	are used to assess the benchmark or group of benchmark.
<b>Cognitive Complexity</b>	ideal level at which item should be assessed.
<b>Benchmark Clarifications</b>	explain how achievement of the benchmark will be demonstrated by students. In other words, the clarification statements explain what the student will do when responding to questions.
<b>Content Limits</b>	define the range of content knowledge and that should be assessed in the items for the benchmark.
<b>Stimulus Attributes</b>	define the types of stimulus materials that should be used in the items, including the appropriate use of graphic materials and item context or content.
<b>Response Attributes</b>	define the characteristics of the answers that a student must choose or provide.
<b>Content Focus</b>	addresses the broad key terms and concepts associated with the examples found in the standards, benchmarks, or benchmark clarifications.
<b>Sample Items</b>	are provided for each type of question assessed. The correct answer for all sample items is provided.

## II. Individual Benchmark Specifications

<b>Standard</b>	04.0 Analyze careers in the Audio and Video Technology, Film, and Printing Technology industry–The student will be able to:
<b>Benchmark</b>	04.01 Describe careers in the Audio and Video Technology, Film, and Printing Technology industry.
<b>Item Types</b> (MC)-Multiple Choice (SA)-Short Answer (P)-Performance (ER)-Extended Response	(MC)=X (SA)= (P)= (ER)=X
<b>Cognitive Complexity Level</b>	Moderate
<b>Benchmark Clarification</b>	The student will be able to identify and explain the purpose of the different careers in the audio and video technology, film, and printing technology industry.
<b>Content Focus</b>	What each industry does and the job skills needed, use of the computer along with individual creativity, film production and editing, print media, animation journalism and photography, illustration, advertising designer, special effects designer, audio-video produced, master control operator, art gallery owner/manager, computer graphic designer, motion picture produced, production specialist, Fashion Designer, Illustrator, Filmmaker, Media Director, Video Game Designer, and Fine Artist.
<b>Content Limits</b>	Items may include film production and editing, print media, animation journalism and photography, illustration, advertising designer, special effects designer, audio-video produced, master control operator, art gallery owner/manager, computer graphic designer, motion picture produced, production specialist, fashion designer, illustrator, filmmaker, media director, video game designer, and fine artist.
<b>Stimulus Attributes</b>	Worksheets, observations, hands on assignments, examples and non examples, simulations, role playing
<b>Response Attributes</b>	None Specified
<b>Sample Item</b>	Multiple Choice: A career as a graphic designer or illustrator is part of which career pathway? a. animation b. gaming c. video production d. visual communication Correct answer: d

<b>Standard</b>	04.0 Analyze careers in the Audio and Video Technology, Film, and Printing Technology industry–The student will be able to:
<b>Benchmark</b>	04.02 Classify careers from entry level to professional level.
<b>Item Types</b> (MC)-Multiple Choice (SA)-Short Answer (P)-Performance (ER)-Extended Response	(MC)=X (SA)= (P)= (ER)=X
<b>Cognitive Complexity Level</b>	Moderate
<b>Benchmark Clarification</b>	The student will be able to identify the levels of a career pathway from entry to management.
<b>Content Focus</b>	Entry level, middle management, upper management, CEO, CFO, how to advance in the different careers.
<b>Content Limits</b>	Items may include entry level, middle management, upper management, ceo, and cfo,
<b>Stimulus Attributes</b>	Worksheets, observations, hands on assignments, examples and non examples, simulations, role playing
<b>Response Attributes</b>	None Specified
<b>Sample Item</b>	<p>Short answer:  The US Post Office uses different pay grades to compensate employees. In a complete sentences explain the type of job system is this considered?  This type of compensation system is skill based. Every pay grade has different skills and therefore paid differently.</p> <p>Rubric:  2 points: Student will completely and thoroughly explain the type of job system in a complete sentences.  1 point: Student will list type of job system only.  0 points: Student did not answer correctly or did not attempt.</p>

<b>Standard</b>	04.0 Analyze careers in the Audio and Video Technology, Film, and Printing Technology industry–The student will be able to:
<b>Benchmark</b>	04.03 Explore entrepreneurship opportunities in the Audio and Video Technology, Film, and Printing Technology industry.
<b>Item Types</b> (MC)-Multiple Choice (SA)-Short Answer (P)-Performance (ER)-Extended Response	(MC)= (SA)= (P)=X (ER)=X
<b>Cognitive Complexity Level</b>	High
<b>Benchmark Clarification</b>	The student will be able to understand what opportunities are available and the responsibilities to own a business in the Audio and Video Technology, Film, and Printing Technology industry.
<b>Content Focus</b>	Entrepreneurship, business, strengths, weakness, responsibility for the different careers in the audio and video technology, film, and printing technology industry
<b>Content Limits</b>	Items may include opportunities to own a business in the different careers.
<b>Stimulus Attributes</b>	Worksheets, observations, hands on assignments, examples and non examples, simulations, role playing
<b>Response Attributes</b>	None Specified
<b>Sample Item</b>	Multiple Choice: Before starting a business, you create a written document that describes all the aspects of a business venture in a concise manner. What is this document called? a. business model b. business plan c. entrepreneur model d. entrepreneur plan Correct answer: b



<b>Standard</b>	04.0 Analyze careers in the Audio and Video Technology, Film, and Printing Technology industry–The student will be able to:
<b>Benchmark</b>	04.04 Research and present information on an Audio and Video Technology, Film, and Printing Technology career to include roles and responsibilities, employment opportunities and requirements for education and training.
<b>Item Types</b> (MC)-Multiple Choice (SA)-Short Answer (P)-Performance (ER)-Extended Response	(MC)= (SA)= (P)=X (ER)=X
<b>Cognitive Complexity Level</b>	High
<b>Benchmark Clarification</b>	The student will be able to identify and explain the skills needed, education requirements and job opportunities for careers in the audio and video technology, film, and printing technology career.
<b>Content Focus</b>	Job skills, education, job opportunities for all the different careers
<b>Content Limits</b>	Items may include job skills, education, job opportunities for all the different careers
<b>Stimulus Attributes</b>	Worksheets, observations, hands on assignments, examples and non examples, simulations, role playing
<b>Response Attributes</b>	None Specified
<b>Sample Item</b>	Multiple Choice: Where is the first place you should go to research a career to see an overview of skills, education, salary, and job outlook? a. Career Development Department b. Computerized Career Information System c. Guide to Occupational Education d. Occupational Outlook Handbook Correct answer: d

<b>Standard</b>	05.0 Select and use tools and equipment–The student will be able to:
<b>Benchmark</b>	05.01 Identify and select the appropriate tool for the assignment.
<b>Item Types</b> (MC)-Multiple Choice (SA)-Short Answer (P)-Performance (ER)-Extended Response	(MC)= (SA)= (P)=X (ER)=X
<b>Cognitive Complexity Level</b>	Moderate
<b>Benchmark Clarification</b>	The student will be able to demonstrate knowledge of tools and use them appropriately for the assigned task.
<b>Content Focus</b>	Career specific tools, appropriate uses and outcomes
<b>Content Limits</b>	Student will be able to choose the best tool for the assigned task.
<b>Stimulus Attributes</b>	Worksheets, observations, hands on assignments, examples and non examples, simulations, role playing
<b>Response Attributes</b>	None Specified
<b>Sample Item</b>	<p>Short answer: The local animal shelter has asked you to create a social networking site to advertise their upcoming fundraiser. Explain in 1-2 complete sentences how you will decide which social network is the best in this situation. To help decide which social networking to use i would get a direct purpose for the advertisement and an overview of the target marget. With this information, you can determine what method would be most effective.</p> <p>Rubric: 2 points: Student will completely and thoroughly explain the type of social media in 1-2 complete sentences. 1 point: Student will list the social media but not explain in complete sentences. 0 points: Student did not answer correctly or did not attempt.</p>

<b>Standard</b>	05.0 Select and use tools and equipment–The student will be able to:
<b>Benchmark</b>	05.02 Demonstrate the proper and safe use of tools and equipment.
<b>Item Types</b> (MC)-Multiple Choice (SA)-Short Answer (P)-Performance (ER)-Extended Response	(MC)= (SA)= (P)=X (ER)=X
<b>Cognitive Complexity Level</b>	Moderate
<b>Benchmark Clarification</b>	The student will be able to use tools safely and correctly.
<b>Content Focus</b>	Tool uses, safety rules, correct tool usage
<b>Content Limits</b>	Items may include tool uses, safety rules, and correct tool usage.
<b>Stimulus Attributes</b>	Worksheets, observations, hands on assignments, examples and non examples, simulations, role playing
<b>Response Attributes</b>	None Specified
<b>Sample Item</b>	Multiple Choice: What electrical safety precautions you should follow when working with electronic equipment? a. keep hands wet b. drag your feet along the carpet c. never touch exposed electrical contacts d. never touch insulated handles and parts Correct answer: c

<b>Standard</b>	05.0 Select and use tools and equipment–The student will be able to:
<b>Benchmark</b>	05.03 Practice care and maintenance of tools and equipment.
<b>Item Types</b> (MC)-Multiple Choice (SA)-Short Answer (P)-Performance (ER)-Extended Response	(MC)= (SA)= (P)=X (ER)=X
<b>Cognitive Complexity Level</b>	Moderate
<b>Benchmark Clarification</b>	The student will be able to use and store equipment properly and what maintenance is needed and how to perform it.
<b>Content Focus</b>	Career specific equipment, use of tools to perform maintenance, maintenance schedules
<b>Content Limits</b>	Items may include equipment found in a typical classroom, how to perform basic maintenance not repairs, when maintenance is needed, and signs that maintenance is needed.
<b>Stimulus Attributes</b>	Worksheets, observations, hands on assignments, examples and non examples, simulations, role playing
<b>Response Attributes</b>	None Specified
<b>Sample Item</b>	Multiple Choice: When moving with a fixed blade knife, how should you hold it safely? a. downward b. inward c. outward d. upward Correct answer: a

<b>Standard</b>	06.o Develop a project related to Audio and Video Technology and Film, Printing. Technology–The student will be able to:
<b>Benchmark</b>	06.01 Select materials and supplies for a fashion project.
<b>Item Types</b> (MC)-Multiple Choice (SA)-Short Answer (P)-Performance (ER)-Extended Response	(MC)=X (SA)= (P)= (ER)=X
<b>Cognitive Complexity Level</b>	Moderate
<b>Benchmark Clarification</b>	The student will be able to identify and explain what materials are needed to complete a certain fashion project . This includes the style, pattern, texture, what it's made of, amount, pros and cons of materials, accessories, etc to complete the fashion project.
<b>Content Focus</b>	Purpose, use, weather, longevity etc.
<b>Content Limits</b>	Students will know what materials and what kind of materials and accessories are needed to complete a fashion project.
<b>Stimulus Attributes</b>	Worksheets, observations, hands on assignments, examples and non examples, simulations, role playing
<b>Response Attributes</b>	None Specified
<b>Sample Item</b>	Multiple Choice: Your project includes making a circle skirt for a 50's costume. To buy the material, what unit of measurement will the fabric be sold in? a. feet b. inches c. kilogram d. yards Correct answer: d

<b>Standard</b>	06.0 Develop a project related to Audio and Video Technology and Film, Printing. Technology–The student will be able to:
<b>Benchmark</b>	06.03 Interpret written directions for constructing a fashion project.
<b>Item Types</b> (MC)-Multiple Choice (SA)-Short Answer (P)-Performance (ER)-Extended Response	(MC)= (SA)= (P)=X (ER)=X
<b>Cognitive Complexity Level</b>	High
<b>Benchmark Clarification</b>	The student will be able to know how to follow instructions such as a pattern, recipe, assembly etc.
<b>Content Focus</b>	Patterns, assemblies, technical writing, basic tools, types of materials, follow written instructions
<b>Content Limits</b>	Items may include patterns, assemblies, technical writing, basic tools, types of materials.
<b>Stimulus Attributes</b>	Worksheets, observations, hands on assignments, examples and non examples, simulations, role playing
<b>Response Attributes</b>	None Specified
<b>Sample Item</b>	Multiple Choice: When reading a pattern envelope, how do you determine the amount and type of fabrics needed? a. on the pattern b. on the back of the envelope c. on the front of the envelope d. on an insert inside of the envelope Correct answer: b

<b>Standard</b>	o6.o Develop a project related to Audio and Video Technology and Film, Printing. Technology–The student will be able to:
<b>Benchmark</b>	o6.o4 Apply math skills and construct a fashion project.
<b>Item Types</b> (MC)-Multiple Choice (SA)-Short Answer (P)-Performance (ER)-Extended Response	(MC)= (SA)= (P)=X (ER)=X
<b>Cognitive Complexity Level</b>	High
<b>Benchmark Clarification</b>	The student will be able to determine the amount of materials and supplies needed for a project based on measurements.
<b>Content Focus</b>	Basic math, formulas to convert, how materials are sold
<b>Content Limits</b>	Items may include basic math, formulas to convert, how materials are sold (yard, piece etc),
<b>Stimulus Attributes</b>	Worksheets, observations, hands on assignments, examples and non examples, simulations, role playing
<b>Response Attributes</b>	None Specified
<b>Sample Item</b>	Multiple Choice: The pattern for a tote bag requires $2 \frac{7}{8}$ yards of material. How many inches of material would you need? a. 67.5" b. 72" c. 103.5" d. 108" Correct answer: d

<b>Standard</b>	o8.o Demonstrate the skills involved in effective resource management–The student will be able to:
<b>Benchmark</b>	o8.01 Identify steps of the decision-making process.
<b>Item Types</b> (MC)-Multiple Choice (SA)-Short Answer (P)-Performance (ER)-Extended Response	(MC)=X (SA)= (P)= (ER)=X
<b>Cognitive Complexity Level</b>	Moderate
<b>Benchmark Clarification</b>	The student will be able to identify and explain what the steps are to the critical decision making process.
<b>Content Focus</b>	Decision making steps, order , steps such as Identify a problem or opportunity, gather information, analyze the situation, develop options, evaluate alternatives, act on the decision
<b>Content Limits</b>	Items may include decision making process can be applied to all projects/situations.
<b>Stimulus Attributes</b>	Worksheets, observations, hands on assignments, examples and non examples, simulations, role playing
<b>Response Attributes</b>	None Specified
<b>Sample Item</b>	Multiple Choice: Once you have created a plan, what is the next step in the decision making process? a. analyze the information b. identify the problem c. implementation d. research Correct answer: d



<b>Standard</b>	o8.o Demonstrate the skills involved in effective resource management–The student will be able to:
<b>Benchmark</b>	o8.o2 Distinguish between a need and a want.
<b>Item Types</b> (MC)-Multiple Choice (SA)-Short Answer (P)-Performance (ER)-Extended Response	(MC)=X (SA)= (P)= (ER)=X
<b>Cognitive Complexity Level</b>	Moderate
<b>Benchmark Clarification</b>	The student will be able to know what is a need and non negotiable versus a want when applied to projects and human resources.
<b>Content Focus</b>	Need, want, project parameters, purpose, objective
<b>Content Limits</b>	Items may include need, want, project parameters, purpose, objective.
<b>Stimulus Attributes</b>	Worksheets, observations, hands on assignments, examples and non examples, simulations, role playing
<b>Response Attributes</b>	None Specified
<b>Sample Item</b>	Multiple Choice: The manager of the local bike shop has requested a new computer from the owner to replace an older working computer. What kind of request is this? a. need b. purchase order c. requisition d. want Correct answer: d

<b>Standard</b>	o8.o Demonstrate the skills involved in effective resource management–The student will be able to:
<b>Benchmark</b>	o8.o3 Explain how values and goals affect decisions.
<b>Item Types</b> (MC)-Multiple Choice (SA)-Short Answer (P)-Performance (ER)-Extended Response	(MC)=X (SA)= (P)= (ER)=X
<b>Cognitive Complexity Level</b>	Moderate
<b>Benchmark Clarification</b>	The student will be able to understand how goals drive decisions and projects and how to be ethical when completing projects.
<b>Content Focus</b>	Goals, values, purpose, decision process, work ethic
<b>Content Limits</b>	Items may include goals, values, purpose, decision process, work ethic.
<b>Stimulus Attributes</b>	Worksheets, observations, hands on assignments, examples and non examples, simulations, role playing
<b>Response Attributes</b>	None Specified
<b>Sample Item</b>	<p>Short Answer:            Andy was deciding between going to school and going to the mall. Andy ultimately decided to go to school. In 1-2 complete sentences, explain what helped Andy make this decision?            Andy used both his values of what he should and should not do and also his goals. The goal might be not to get in trouble or go to college but he ultimately made his decision on his values and goals.</p> <p>Rubric:            2 points: Student will completely and thoroughly explain the pros and cons for each decision.            1 point: Student will list at least 1 reason but not explain.            0 points: Student did not answer correctly or did not attempt.</p>

<b>Standard</b>	o8.o Demonstrate the skills involved in effective resource management–The student will be able to:
<b>Benchmark</b>	o8.o4 Develop a budget and savings plan.
<b>Item Types</b> (MC)-Multiple Choice (SA)-Short Answer (P)-Performance (ER)-Extended Response	(MC)= (SA)= (P)=X (ER)=X
<b>Cognitive Complexity Level</b>	High
<b>Benchmark Clarification</b>	The student will be able to determine the cost of a project. The student will be able to create a workable budget for a given project.
<b>Content Focus</b>	Budget, parameters, cost, basic math, budget format, how to determine costs, etc.
<b>Content Limits</b>	Students will be able to determine if a project is possible using given costs and budgets. Understand project parameters, cost, basic math, budget format, how to determine costs, etc.
<b>Stimulus Attributes</b>	Worksheets, observations, hands on assignments, examples and non examples, simulations, role playing
<b>Response Attributes</b>	None Specified
<b>Sample Item</b>	Multiple Choice: What is the first step in creating a budget for a project? a. determine project needs b. determine net profit c. estimate administrative costs d. estimate indirect costs Correct answer: a

<b>Standard</b>	o8.o Demonstrate the skills involved in effective resource management–The student will be able to:
<b>Benchmark</b>	o8.o5 Analyze the relationship between resources and attainment of lifestyle goals.
<b>Item Types</b> (MC)-Multiple Choice (SA)-Short Answer (P)-Performance (ER)-Extended Response	(MC)= (SA)= (P)=X (ER)=X
<b>Cognitive Complexity Level</b>	High
<b>Benchmark Clarification</b>	The student will be able to identify and explain the concept of lifestyle goals and how their income (resources) relate to obtaining their life goal.
<b>Content Focus</b>	Resources, attainment of lifestyle, income, lifestyle, costs
<b>Content Limits</b>	Student should know how to determine basic costs of the lifestyle they desire and apply it to earned income.
<b>Stimulus Attributes</b>	Worksheets, observations, hands on assignments, examples and non examples, simulations, role playing
<b>Response Attributes</b>	None Specified
<b>Sample Item</b>	Multiple Choice: What is one tool that you can use to determine the income you need for a certain goal? a. budget b. calculator c. checking account d. savings account Correct answer: a

<b>Standard</b>	09.0 Identify components of network systems–The student will be able to:
<b>Benchmark</b>	09.01 Identify structure to access internet, including hardware and software components.
<b>Item Types</b> (MC)-Multiple Choice (SA)-Short Answer (P)-Performance (ER)-Extended Response	(MC)=X (SA)= (P)= (ER)=X
<b>Cognitive Complexity Level</b>	Moderate
<b>Benchmark Clarification</b>	The student will be able to identify and explain the specifics of how the internet works.
<b>Content Focus</b>	Servers, hosting, domain names, IP address, browser, TCP, protocol, application, cloud, ISP, LAN, processors, modem, wireless
<b>Content Limits</b>	Items may include servers, hosting, domain names, IP Address, browser, TCP, protocol, application, cloud, ISP, LAN, processors, modem, wireless.
<b>Stimulus Attributes</b>	Worksheets, observations, hands on assignments, examples and non examples, simulations, role playing
<b>Response Attributes</b>	None Specified
<b>Sample Item</b>	Multiple Choice: How do proxy servers increase the corporate network's Internet access speed? a. opens all Internet sites b. makes your IP address public c. provides a security certificate d. by caching Web sites for the entire network Correct answer: d

<b>Standard</b>	09.0 Identify components of network systems–The student will be able to:
<b>Benchmark</b>	09.02 Identify and configure user customization features in web browsers, including preferences, caching, and cookies.
<b>Item Types</b> (MC)-Multiple Choice (SA)-Short Answer (P)-Performance (ER)-Extended Response	(MC)=X (SA)= (P)=X (ER)=
<b>Cognitive Complexity Level</b>	High
<b>Benchmark Clarification</b>	The student will be able to understand the pros and cons of different browsers and know how and why to change preferences.The student will be able to identify the function of caching and cookies in different browsers.
<b>Content Focus</b>	Browsers, preferences, caching, cookies, compare features
<b>Content Limits</b>	Items may include what preferences are and how to change them and understand the difference between browsers and how to customize features.
<b>Stimulus Attributes</b>	Worksheets, observations, hands on assignments, examples and non examples, simulations, role playing
<b>Response Attributes</b>	None Specified
<b>Sample Item</b>	Multiple Choice: Derek visited a website that needs a pop up window. Derek needs to turn off the pop up blocker. What does he have to do to turn off the pop up blocker? a. file b. preferences c. view d. window Correct answer: b

<b>Standard</b>	09.0 Identify components of network systems–The student will be able to:
<b>Benchmark</b>	09.04 Define and use additional networking and internet services.
<b>Item Types</b> (MC)-Multiple Choice (SA)-Short Answer (P)-Performance (ER)-Extended Response	(MC)=X (SA)= (P)=X (ER)=
<b>Cognitive Complexity Level</b>	Moderate
<b>Benchmark Clarification</b>	The student will be able to identify and explain how intranets, LANS, WANS, cloud computing etc. work together. The student will be able to identify and explain the methods of creating internet connections such as cable, satellite, wireless etc.
<b>Content Focus</b>	Network, internet services, intranet, LANS, WANS, hotspots, cloud access and storage, cable, satellite, wireless, etc.
<b>Content Limits</b>	Items may include how to connect to the internet with different methods and for different purposes.
<b>Stimulus Attributes</b>	Worksheets, observations, hands on assignments, examples and non examples, simulations, role playing
<b>Response Attributes</b>	None Specified
<b>Sample Item</b>	Short Answer: What are the four methods that are used to connect to the Internet? The four methods are dial up, DSL, satellite and mobile. Rubric: 2 points: Student will completely and thoroughly list the 4 methods. 1 point: Student will completely and thoroughly explain at least 3 methods. 0 points: Student did not answer correctly or did not attempt.

<b>Standard</b>	10.0 Describe and use communication features of information technology– The student will be able to:
<b>Benchmark</b>	10.01 Define important internet communications protocols and their roles in delivering basic Internet services.
<b>Item Types</b> (MC)-Multiple Choice (SA)-Short Answer (P)-Performance (ER)-Extended Response	(MC)=X (SA)= (P)= (ER)=X
<b>Cognitive Complexity Level</b>	High
<b>Benchmark Clarification</b>	The student will be able to identify and explain the different methods of connecting to the internet and what they are best used for.
<b>Content Focus</b>	File transfer protocol (ftp), tcp/ip, user datagram protocol (udp), hypertext transfer protocol (http), post office protocol (pop3), internet message access protocol (imap), simple mail transfer protocol (smtp).
<b>Content Limits</b>	Student will know what protocol is compatible for different situations.
<b>Stimulus Attributes</b>	Worksheets, observations, hands on assignments, examples and non examples, simulations, role playing
<b>Response Attributes</b>	None Specified
<b>Sample Item</b>	Multiple Choice: What is a protocol that is used to retrieve e-mail from a mail server? a. FTP b. IP c. Pop3 d. TCP Correct answer: c



<b>Standard</b>	10.0 Describe and use communication features of information technology– The student will be able to:
<b>Benchmark</b>	10.02 Identify basic principles of the Domain Name System (DNS).
<b>Item Types</b> (MC)-Multiple Choice (SA)-Short Answer (P)-Performance (ER)-Extended Response	(MC)=X (SA)= (P)= (ER)=X
<b>Cognitive Complexity Level</b>	Moderate
<b>Benchmark Clarification</b>	The student will be able to identify and explain the basic hierarchy of how DNS works.
<b>Content Focus</b>	DNS, ISP, caching, TCP/IP, database, naming, network, domain
<b>Content Limits</b>	Student will know the purpose of a DNS and how it works.
<b>Stimulus Attributes</b>	Worksheets, observations, hands on assignments, examples and non examples, simulations, role playing
<b>Response Attributes</b>	None Specified
<b>Sample Item</b>	Multiple Choice: What term best describes the way the DNS name space is organized? a. domain b. hierarchical c. pyramid d. targeted Correct answer: b

<b>Standard</b>	10.0 Describe and use communication features of information technology– The student will be able to:
<b>Benchmark</b>	10.03 Identify security issues related to Internet clients.
<b>Item Types</b> (MC)-Multiple Choice (SA)-Short Answer (P)-Performance (ER)-Extended Response	(MC)=X (SA)= (P)= (ER)=X
<b>Cognitive Complexity Level</b>	Moderate
<b>Benchmark Clarification</b>	The student will be able to identify and explain the different potential risks related to using the internet.
<b>Content Focus</b>	Targeted attacks, hackers, monitoring, malware, viruses, worms hoaxes, encryption
<b>Content Limits</b>	Items may include the difference between hardware, software attacks and self induced risks such as passwords, etc.
<b>Stimulus Attributes</b>	Worksheets, observations, hands on assignments, examples and non examples, simulations, role playing
<b>Response Attributes</b>	None Specified
<b>Sample Item</b>	Multiple Choice: What are the three fundamental principles of security? a. accountability, confidentiality, and integrity b. availability, accountability, and confidentiality c. confidentiality, integrity, and availability d. integrity, availability, and authenticity Correct answer: d

<b>Standard</b>	10.0 Describe and use communication features of information technology– The student will be able to:
<b>Benchmark</b>	10.06 Explain technical issues to a non-technical audience.
<b>Item Types</b> (MC)-Multiple Choice (SA)-Short Answer (P)-Performance (ER)-Extended Response	(MC)= (SA)= (P)=X (ER)=X
<b>Cognitive Complexity Level</b>	High
<b>Benchmark Clarification</b>	Student will know how to explain technical issues to someone without using technical terms.
<b>Content Focus</b>	Complete understanding of informational technology terminology.
<b>Content Limits</b>	Items may include software, hardware, internet, connections.
<b>Stimulus Attributes</b>	Worksheets, observations, hands on assignments, examples and non examples, simulations, role playing
<b>Response Attributes</b>	None Specified
<b>Sample Item</b>	Multiple Choice: Which IT job role best describes an individual who is responsible for diagnosing and resolving users' technical hardware and software problems? a. database administrator b. help desk technician technician c. security manager d. website manager Correct answer: b