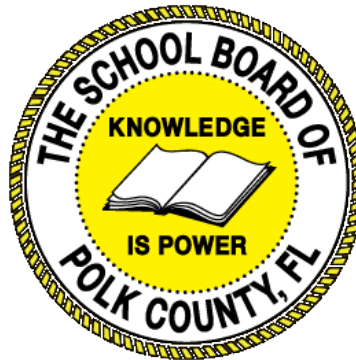


Individual Test Item Specifications

8100120- Introduction to Agriscience

2015



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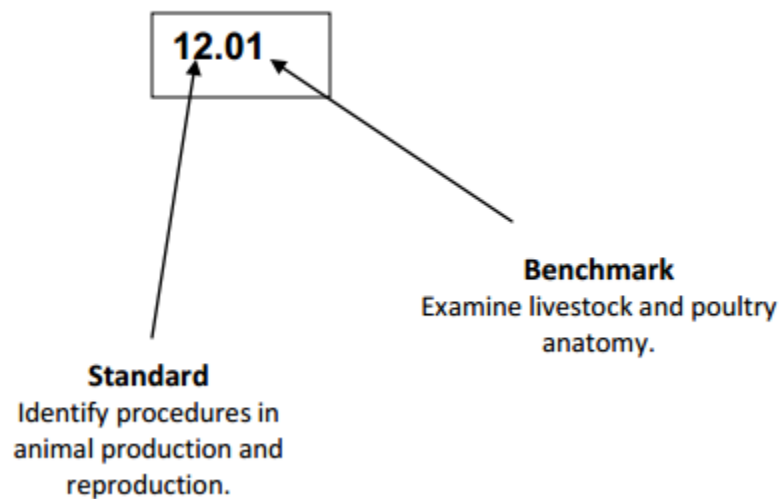
I. Guide to the Individual Benchmark Specifications

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.

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| Reporting Category | is a grouping of related benchmarks that can be used to summarize and report achievement. |
| Standard | refers to the standard statement presented in the Florida Standards. |
| Benchmark | 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. |
| Item Types | are used to assess the benchmark or group of benchmark. |
| Cognitive Complexity | ideal level at which item should be assessed. |
| Benchmark Clarifications | 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. |
| Content Limits | define the range of content knowledge and that should be assessed in the items for the benchmark. |
| Stimulus Attributes | 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. |
| Response Attributes | define the characteristics of the answers that a student must choose or provide. |
| Content Focus | addresses the broad content and skills associated with the examples found in the standards, benchmarks, or benchmark clarifications. |
| Sample Items | are provided for each type of question assessed. The correct answer for all sample items is provided. |

II. Individual Benchmark Specifications

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| Standard | 01.0 Identify the importance of agriculture. |
| Benchmark | 01.01 Define agriculture and explain its diversity and scope. |
| Item Types (MC)-Multiple Choice (SA)-Short Answer (P)-Performance (ER)-Extended Response | (MC)=X (SA)=X (P)= (ER)= |
| Cognitive Complexity Level | L,M |
| Benchmark Clarification | The student will have an understanding of the agriculture industry and its industrial and production components. |
| Content Focus | The focus should be on the scope and diversity of the agriculture industry. |
| Content Limits | The content is limited to the definition of the agriculture industry as a whole. |
| Stimulus Attributes | The stimulus may use diagrams, pictures, or charts. |
| Response Attributes | The response may include terms, phrases, sentences, images, diagrams, or charts. |
| Sample Item | Which of the following products is not an agriculture product? A. beef B. cinnamon C. glass D. wood Answer: C |

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| Standard | 01.0 Identify the importance of agriculture. |
| Benchmark | 01.05 Trace the evolution of agriculture from its beginnings to current applications. |
| Item Types (MC)-Multiple Choice (SA)-Short Answer (P)-Performance (ER)-Extended Response | (MC)=X (SA)= (P)= (ER)=X |
| Cognitive Complexity Level | L,M |
| Benchmark Clarification | The student will have an understanding of the history that has impacted the advances in the agriculture industry in the past as well as how technology and new practices have impacted the industry today. |
| Content Focus | The focus should be on the historical highlights of advancements made in agriculture and the impacts history has made on our industry today. |
| Content Limits | The content is limited to the evolution of common gardening and production tools and equipment. As well as the way the industry has changed due to technological advances. |
| Stimulus Attributes | The stimulus may use diagrams, pictures, or charts. |
| Response Attributes | The response may include terms, phrases, sentences, images, diagrams, or charts. |
| Sample Item | Who is known to have invented the steel plow? A. Eli Whitney B. Jethro Tull C. John Deere D. Thomas Edison Answer: C |

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| Standard | 01.0 Identify the importance of agriculture. |
| Benchmark | 01.07 Identify the major agricultural production areas of the United States and of Florida. |
| Item Types (MC)-Multiple Choice (SA)-Short Answer (P)-Performance (ER)-Extended Response | (MC)=X (SA)= (P)= (ER)=X |
| Cognitive Complexity Level | L,M |
| Benchmark Clarification | The student will have an understanding of the major production facets of agriculture and have an idea of the area known for being the major producer. They should also be aware of the main products produced in Florida and the areas that produce the products. |
| Content Focus | The focus should be on the following industries: beef, poultry, swine, forestry, fruit and vegetable. Main areas of production should be focused on. |
| Content Limits | The content is limited to items produced in the beef, poultry, swine, forestry, fruit and vegetable industries. |
| Stimulus Attributes | The stimulus may use diagrams, pictures, or charts. |
| Response Attributes | The response may include terms, phrases, sentences, images, diagrams, or charts. |
| Sample Item | Which state is the largest beef producer? A. Florida B. North Carolina C. Texas D. Virginia Answer : C |

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| Standard | 02.0 Integrate the use of science, mathematics, reading, geography, history, writing and communication in agriscience and technology. |
| Benchmark | 02.01 Apply basic mathematics operations to solve agricultural problems. |
| Item Types (MC)-Multiple Choice (SA)-Short Answer (P)-Performance (ER)-Extended Response | (MC)=X (SA)= (P)=X (ER)= |
| Cognitive Complexity Level | L,M |
| Benchmark Clarification | The student will use mathematical strategies to solve an agriculture related problem / question. |
| Content Focus | The focus should be on common agriculture related problems and the math strategies used to solve them |
| Content Limits | The content is limited to veterinary problems (calculating vaccine dosage), fertilizer or chemical problems and calculating livestock feed rations. |
| Stimulus Attributes | The stimulus may use diagrams, pictures, or charts. |
| Response Attributes | The response may include terms, phrases, sentences, images, diagrams, or charts. |
| Sample Item | John needs to apply a medication to his cattle. The medication label says to administer 1 mL per 200 pounds. His cow weighs 850 pounds. How many mL does he need to administer in the vaccine? A. 3 mL B. 3.5 mL C. 4 mL D. 4.5 mL Answer: D |

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| Standard | 02.01 Integrate the use of science, mathematics, reading, geography, history, writing and communication in agriscience and technology. |
| Benchmark | 02.06 Describe the historical evolution of agriculture in Florida. |
| Item Types (MC)-Multiple Choice (SA)-Short Answer (P)-Performance (ER)-Extended Response | (MC)=X (SA)= (P)= (ER)=X |
| Cognitive Complexity Level | L,M |
| Benchmark Clarification | The student will know and understand the major agricultural industries with the state of Florida as well as know the history that has led to the evolution of the industries we know today. |
| Content Focus | The focus should be on the different industries in Florida and the steps they have taken to evolve through the years. |
| Content Limits | The content is limited to the evolution of common agriculture industries in Florida. |
| Stimulus Attributes | The stimulus may use diagrams, pictures, or charts. |
| Response Attributes | The response may include terms, phrases, sentences, images, diagrams, or charts. |
| Sample Item | Which people were known to be the first to import cattle to Florida? A. American B. Chinese C. German D. Spanish Answer: D |

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| Standard | 03.0 Describe chains between producer and consumer for agriculture products. |
| Benchmark | 03.01 Identify the agriculture source of consumer products. |
| Item Types (MC)-Multiple Choice (SA)-Short Answer (P)-Performance (ER)-Extended Response | (MC)=X (SA)= (P)= (ER)=X |
| Cognitive Complexity Level | L,M |
| Benchmark Clarification | The student will know and understand where agriculture products derive and originate. |
| Content Focus | The focus should be on common agriculture products produced in Florida. |
| Content Limits | The content is limited to common agriculture products produced in Florida. |
| Stimulus Attributes | The stimulus may use diagrams, pictures, or charts. |
| Response Attributes | The response may include terms, phrases, sentences, images, diagrams, or charts. |
| Sample Item | Which livestock species would provide consumers with mutton? A. bovine B. equine C. ovine D. porcine Answer: C |

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| Standard | 03.0 Describe chains between producer and consumer for agriculture products. |
| Benchmark | 03.02 Trace the development of an agriculture product from the producer to the consumer. |
| Item Types (MC)-Multiple Choice (SA)-Short Answer (P)-Performance (ER)-Extended Response | (MC)=X (SA)= (P)= (ER)=X |
| Cognitive Complexity Level | M,H |
| Benchmark Clarification | The student will understand the steps agriculture products go through to get from the animal to the consumer. |
| Content Focus | The focus should be on common consumable products and the processing steps they go through. |
| Content Limits | The content is limited to the development of beef, pork, poultry, fruit and vegetable products. |
| Stimulus Attributes | The stimulus may use diagrams, pictures, or charts. |
| Response Attributes | The response may include terms, phrases, sentences, images, diagrams, or charts. |
| Sample Item | Which agriculture product would go through a process of being fortified? A. fruit B. meat C. milk D. vegetables Answer: C |

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| Standard | 03.0 Describe chains between producer and consumer for agriculture products. |
| Benchmark | 03.03 Evaluate proper health and nutrition for livestock animals. |
| Item Types (MC)-Multiple Choice (SA)-Short Answer (P)-Performance (ER)-Extended Response | (MC)=X (SA)= (P)= (ER)=X |
| Cognitive Complexity Level | M,H |
| Benchmark Clarification | The student will understand the necessary procedures in providing the proper health and nutrition for livestock animals. |
| Content Focus | The focus on the health and nutritional requirements of livestock animals. |
| Content Limits | The content is limited to the health and nutritional requirements of cattle, swine, horses and poultry. |
| Stimulus Attributes | The stimulus may use diagrams, pictures, or charts. |
| Response Attributes | The response may include terms, phrases, sentences, images, diagrams, or charts. |
| Sample Item | What is the recommended length of time in between visits for a farrier to trim a horse's hooves? A. 2 weeks B. 4 weeks C. 6 weeks D. 8 weeks Answer: C |

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| Standard | 04.0 Use selected techniques to produce finished products from agriculture materials. |
| Benchmark | 04.02 Prepare and process an agriculture product. |
| Item Types (MC)-Multiple Choice (SA)-Short Answer (P)-Performance (ER)-Extended Response | (MC)=X (SA)= (P)=x (ER)=The student should understand the process of propagation and understand how to complete the task or propagating. |
| Cognitive Complexity Level | L,M |
| Benchmark Clarification | The student will understand the necessary processes in producing an agriculture product. The student should know the processes that accompany processing a product, including but not limited to cleaning and sanitation, marketing and packaging. |
| Content Focus | The focus should be on the steps and procedures in processing or preparing an agriculture product. |
| Content Limits | The content is limited to consumable livestock and horticultural crops. |
| Stimulus Attributes | The stimulus may use diagrams, pictures, or charts. |
| Response Attributes | The response may include terms, phrases, sentences, images, diagrams, or charts. |
| Sample Item | The average calf being raised for beef will spend how much time in a feedlot before processing? A. 1 - 3 months B. 4 - 6 months C. 7 - 9 months D. 10 - 12 months Answer: B |

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| Standard | 04.0 Use selected techniques to produce finished products from agriculture materials |
| Benchmark | 04.03 Propagate horticulture plants. |
| Item Types (MC)-Multiple Choice (SA)-Short Answer (P)-Performance (ER)-Extended Response | (MC)=x (SA)= (P)=x (ER)= |
| Cognitive Complexity Level | M,H |
| Benchmark Clarification | The student will identify and apply techniques to propagate horticulture plants. |
| Content Focus | The focus on propagating plants and the correct techniques in accomplishing the task. |
| Content Limits | The content is limited to the following propagation techniques: cutting, layering, grafting, and division. |
| Stimulus Attributes | The stimulus may use diagrams, pictures, or charts. |
| Response Attributes | The response may include terms, phrases, sentences, images, diagrams, or charts. |
| Sample Item | Performance Task: With the plant provided, propagate the plant via the cutting method. Rubric: 4 points: Response includes a strong understanding of the propagation method of cuttings. Demonstration includes a logical process for completing the task. T |

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| Standard | 05.0 Describe the importance of plants and animals in agriculture. |
| Benchmark | 05.01 Identify plants important to agriculture. |
| Item Types (MC)-Multiple Choice (SA)-Short Answer (P)-Performance (ER)-Extended Response | (MC)=X (SA)=X (P)= (ER)= |
| Cognitive Complexity Level | L,M |
| Benchmark Clarification | The student will be aware of the different plants that produce products necessary for human consumption. The student should be able to identify the plants as well as know the products they produce. |
| Content Focus | The focus on identification of the plants and matching the plant with the product they produce. |
| Content Limits | The content is limited to fruit, vegetable, and forestry related plants |
| Stimulus Attributes | The stimulus may use diagrams, pictures, or charts. |
| Response Attributes | The response may include terms, phrases, sentences, images, diagrams, or charts. |
| Sample Item | Which of the following crops will grow on a bush? A. apple B. blueberry C. squash D. tomato Answer: B |

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| Standard | 05.0 Describe the importance of plants and animals in agriculture. |
| Benchmark | 05.02 Identify animals important to agriculture. |
| Item Types (MC)-Multiple Choice (SA)-Short Answer (P)-Performance (ER)-Extended Response | (MC)=X (SA)=X (P)= (ER)= |
| Cognitive Complexity Level | L,M |
| Benchmark Clarification | The student will be aware of the different products that we retrieve from animals. The student should also be able to know what products are produced by the correct species of livestock. |
| Content Focus | The focus on the identification of livestock animals and knowing what product is produced by the appropriate animals. |
| Content Limits | The content is limited to the following livestock animals: beef, dairy, poultry, sheep and swine. |
| Stimulus Attributes | The stimulus may use diagrams, pictures, or charts. |
| Response Attributes | The response may include terms, phrases, sentences, images, diagrams, or charts. |
| Sample Item | Which poultry breed is known as the most efficient egg-laying breed? A. Ancona B. Leghorn C. Pekin D. Silkie Answer: B |

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| Standard | 05.0 Describe the importance of plants and animals in agriculture. |
| Benchmark | 05.04 Describe animal rights and animal welfare. |
| Item Types (MC)-Multiple Choice (SA)-Short Answer (P)-Performance (ER)-Extended Response | (MC)=X (SA)=X (P)= (ER)= |
| Cognitive Complexity Level | L,M |
| Benchmark Clarification | The student will be able to distinguish the difference in animal welfare and animal rights. |
| Content Focus | The focus on the different issues that lie within animal rights and animal welfare. |
| Content Limits | The content is limited to the common definitions and issues that surround the topics of animal welfare and animal rights. |
| Stimulus Attributes | The stimulus may use diagrams, pictures, or charts. |
| Response Attributes | The response may include terms, phrases, sentences, images, diagrams, or charts. |
| Sample Item | Which phrase is best described as the act of providing animals with surroundings that meet their needs while under human control? A. Animal Ethics B. Animal Rights C. Animal Treatment D. Animal Welfare Answer: D |

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| Standard | o6.o Describe leadership and communication skills. |
| Benchmark | o6.o1 Describe the aims and purposes of the FFA organization. |
| Item Types (MC)-Multiple Choice (SA)-Short Answer (P)-Performance (ER)-Extended Response | (MC)=X (SA)=X (P)= (ER)= |
| Cognitive Complexity Level | L,M |
| Benchmark Clarification | The student will know and understand the purpose of the FFA and the aims or the organization |
| Content Focus | The focus on the FFA mission statement and what it demonstrates to the National FFA Organization. |
| Content Limits | The content is limited to the FFA mission statement, FFA creed, and FFA motto. |
| Stimulus Attributes | The stimulus may use diagrams, pictures, or charts. |
| Response Attributes | The response may include terms, phrases, sentences, images, diagrams, or charts. |
| Sample Item | What is the second line of the FFA Motto? A. Doing to Learn B. Earning to Live C. Learning to Do D. Living to Serve Answer: A |

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| Standard | o6.o Describe leadership and communication skills. |
| Benchmark | o6.o2 Identify opportunities available to FFA members. |
| Item Types (MC)-Multiple Choice (SA)-Short Answer (P)-Performance (ER)-Extended Response | (MC)=X (SA)=X (P)= (ER)= |
| Cognitive Complexity Level | L,M |
| Benchmark Clarification | The student will know and understand the different opportunities that are available as a member of the National FFA Organization. |
| Content Focus | None specified. |
| Content Limits | The content is limited to supervised agriculture experience possibilities, career development events, scholarship opportunities and career success within the National FFA Organization. |
| Stimulus Attributes | The stimulus may use diagrams, pictures, or charts. |
| Response Attributes | The response may include terms, phrases, sentences, images, diagrams, or charts. |
| Sample Item | What does CDE stand for? A. Career Development Event B. Citrus Development Event C. Coping Development Exercise D. Counseling Different Events Answer: A |