

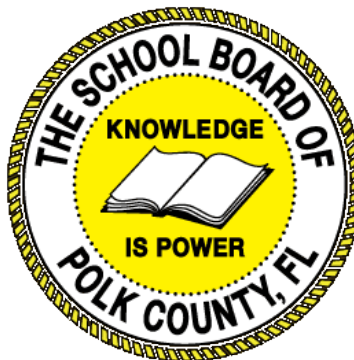
# Individual Test Item Specifications

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8709020- Automotive Collision  
Repair & Refinishing 2

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2015



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## **Table of Contents**

I. Guide to the Individual Benchmark Specifications .....	1
Benchmark Classification System .....	1
Definitions of Benchmark Specifications .....	3
II. Individual Benchmark Specifications .....	4

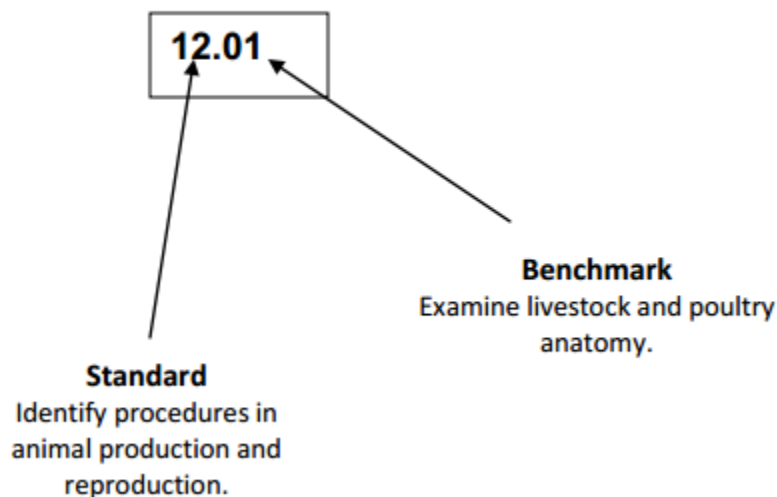
## I. Guide to the Individual Benchmark Specifications

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.

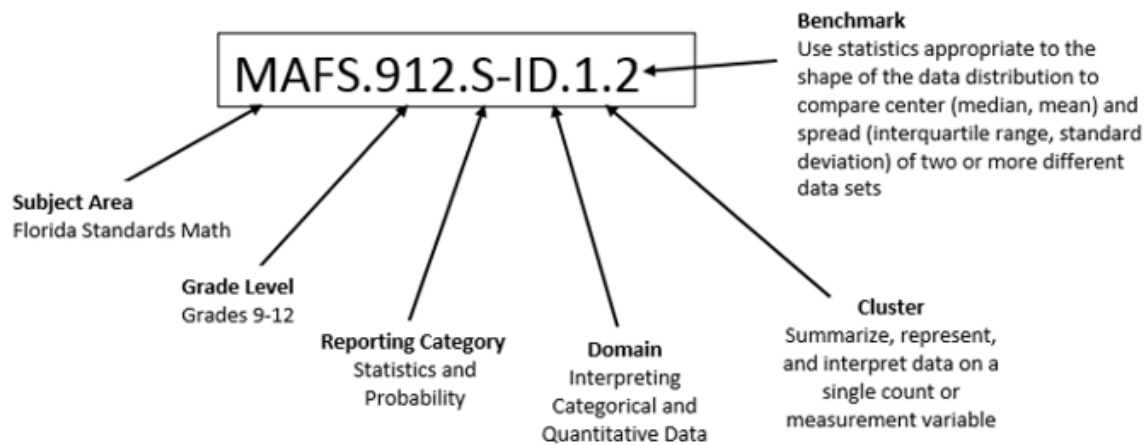
An example, from Agritechnology 1:



*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>	06.0 Creatively repair, replace and adjust outer body panels--The student will be able to:
<b>Benchmark</b>	6.01 Remove, replace and adjust a bolted panel or panel assembly.
<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>	L,H
<b>Benchmark Clarification</b>	The student will remove, replace, and adjust a bolted panel or panel assembly.
<b>Content Focus</b>	Fender, hood, deck lid, alignment
<b>Content Limits</b>	Items should be limited to passenger vehicle and light duty trucks.
<b>Stimulus Attributes</b>	None Specified
<b>Response Attributes</b>	None Specified
<b>Sample Item</b>	The vehicle in the stall needs the left front fender installed. Demonstrate to the instructor how to install the fender and ensure proper alignment.

<b>Standard</b>	o6.o Creatively repair, replace and adjust outer body panels--The student will be able to:
<b>Benchmark</b>	6.02 Remove, replace and align hoods, hood hinges and hood latches.
<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>	L,H
<b>Benchmark Clarification</b>	The student will remove, replace, and align hoods, hood hinges, and hood latches.
<b>Content Focus</b>	Hood, hinge, latch
<b>Content Limits</b>	Items should be limited to passenger vehicle and light duty trucks.
<b>Stimulus Attributes</b>	None Specified
<b>Response Attributes</b>	None Specified
<b>Sample Item</b>	The hood will not close properly due to the hood latch. Inspect the latch assembly. Determine why the hood won't close and make the necessary adjustments.

<b>Standard</b>	o6.o Creatively repair, replace and adjust outer body panels--The student will be able to:
<b>Benchmark</b>	6.03 Remove, replace and align deck lids, lid hinges and lid latches.
<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>	L,H
<b>Benchmark Clarification</b>	The student will remove, replace, and align deck lids, lid hinges, and lid latches.
<b>Content Focus</b>	Deck lid, hinge, latch
<b>Content Limits</b>	Items should be limited to passenger vehicle and light duty trucks.
<b>Stimulus Attributes</b>	None Specified
<b>Response Attributes</b>	None Specified
<b>Sample Item</b>	The deck lid is not properly aligned on the vehicle in the stall. Loosen the hinges and adjust and align the deck lid. Demonstrate the repair to your instructor.



<b>Standard</b>	06.0 Creatively repair, replace and adjust outer body panels--The student will be able to:
<b>Benchmark</b>	6.04 Remove, replace and align doors, tailgates, hatches, lift gates and hinges.
<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>	L,H
<b>Benchmark Clarification</b>	The student will remove, replace, and align doors, tailgates, hatches, lift gates, and hinges.
<b>Content Focus</b>	Tailgate, hatches, lift gate
<b>Content Limits</b>	Items should be limited to passenger vehicle and light duty trucks.
<b>Stimulus Attributes</b>	None Specified
<b>Response Attributes</b>	None Specified
<b>Sample Item</b>	On the pickup truck in the service bay, remove the tailgate for inspection. If it is reusable, reinstall the tailgate. Document your findings and turn it in to your instructor.

<b>Standard</b>	06.0 Creatively repair, replace and adjust outer body panels--The student will be able to:
<b>Benchmark</b>	6.05 Remove and replace bumpers, reinforcements, guards, isolators, and mounting hardware (release pressure from gas- and oil-filled energy-absorbing-type bumper isolators that are being discarded).
<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>	L,H
<b>Benchmark Clarification</b>	The student will remove and replace bumpers and associated components, making sure to release pressure from energy absorbing type bumper isolators.
<b>Content Focus</b>	Bumpers, bumper isolator
<b>Content Limits</b>	Items should be limited to passenger vehicle and light duty trucks
<b>Stimulus Attributes</b>	None Specified
<b>Response Attributes</b>	None Specified
<b>Sample Item</b>	The front bumper needs to be reworked and painted. Remove the bumper and show it to your instructor. Then, reinstall the bumper simulating what is done after the bumper has been repaired.

<b>Standard</b>	o6.o Creatively repair, replace and adjust outer body panels--The student will be able to:
<b>Benchmark</b>	6.06 Check door hinge condition, replace hinge pins and bushings as needed, check door frames, check and adjust door clearances (where adjustable) along quarter panels, doors, rocker panels, fenders and tops.
<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>	L,H
<b>Benchmark Clarification</b>	The student will check door hinges, pins, and bushings and check door clearance and adjust where necessary.
<b>Content Focus</b>	Alignment, door hinge, bushings
<b>Content Limits</b>	Items should be limited to passenger vehicle and light duty trucks.
<b>Stimulus Attributes</b>	None Specified
<b>Response Attributes</b>	None Specified
<b>Sample Item</b>	The vehicle in the bay has just had major frame damage which has been repaired. Check the door clearances and body lines to make sure they are straight and even. Document your findings. If any doors are out of alignment, make the necessary adjustment and demonstrate the adjustment to your instructor.

<b>Standard</b>	o6.o Creatively repair, replace and adjust outer body panels--The student will be able to:
<b>Benchmark</b>	6.o7 Check and adjust latch assemblies on all hinged components.
<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>	L,H
<b>Benchmark Clarification</b>	The student will check and adjust latch assemblies on all hinged components.
<b>Content Focus</b>	Hinge, latch
<b>Content Limits</b>	Items should be limited to passenger vehicle and light duty trucks.
<b>Stimulus Attributes</b>	None Specified
<b>Response Attributes</b>	None Specified
<b>Sample Item</b>	The vehicle in the bay has just had major frame damage which has been repaired. Check all of the latches and hinges on the vehicle. Make sure all hinged components latch properly. Document your findings. If any doors are out of alignment, make the necessary adjustment and demonstrate the adjustment to your instructor.

<b>Standard</b>	07.0 Perform welding operations that apply creativity and interpretation -- The student will be able to:
<b>Benchmark</b>	7.01 Apply welding safety procedures. LAFS.910.RI.1.2; 2.4; 3.7 LAFS.910.L.3.4, 6 LAFS.910.W.3.7, 9 LAFS.910.SL.1.1
<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>	L,H
<b>Benchmark Clarification</b>	The student will apply welding safety procedures.
<b>Content Focus</b>	Welding, welding rod, welding helmet, welding jacket, MIG welder, TIG welder, oxy acetylene torch
<b>Content Limits</b>	Items may include welding safety procedures.
<b>Stimulus Attributes</b>	None Specified
<b>Response Attributes</b>	None Specified
<b>Sample Item</b>	Which of the following personal protective equipment is not necessary when welding? A. helmet B. leather gloves C. leather jacket D. steel toe shoes Answer D. steel toe shoes

<b>Standard</b>	o8.o Evaluate and prepare surfaces for refinishing--The student will be able to:
<b>Benchmark</b>	8.01 Inspect and identify types of finishes and surface conditions and develop a plan for refinishing using one paint system from start to finish in conformance with paint system manufacturer specifications.
<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>	M,H
<b>Benchmark Clarification</b>	The student will inspect and identify types of finishes and surface conditions and develop a plan for refinishing using one paint system from start to finish in conformance with paint system manufacturer specifications.
<b>Content Focus</b>	Urethane, metallic, acrylic, waterborne, single stage, base coat, clear coat,
<b>Content Limits</b>	Items may include finishes, surface conditions, and paint system plans related to passenger vehicles and light duty trucks in accordance with manufacturer's specifications.
<b>Stimulus Attributes</b>	None Specified
<b>Response Attributes</b>	None Specified
<b>Sample Item</b>	What are the pros and cons of a metallic finish? Sample response: Metallic paint is flashy and appealing. However, metallic paint is hard to match and makes repair work difficult.

<b>Standard</b>	o8.0 Evaluate and prepare surfaces for refinishing--The student will be able to:
<b>Benchmark</b>	8.02 Gain access to, remove and store trim and molding.
<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>	L,H
<b>Benchmark Clarification</b>	The student will gain access to remove and store trim and molding.
<b>Content Focus</b>	Trim, moldings
<b>Content Limits</b>	Items should be limited to passenger vehicles and light duty trucks.
<b>Stimulus Attributes</b>	None Specified
<b>Response Attributes</b>	None Specified
<b>Sample Item</b>	Using the vehicle provided in the service bay, demonstrate to your instructor how to remove and store the interior A pillar trim molding.

<b>Standard</b>	o8.0 Evaluate and prepare surfaces for refinishing--The student will be able to:
<b>Benchmark</b>	8.03 Remove dirt, wax and road grime from areas to be refinished and adjacent surfaces including complete washing of the vehicle.
<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>	M,H
<b>Benchmark Clarification</b>	The student will remove dirt, wax and road grime from areas to be refinished and adjacent surfaces including washing of the vehicle.
<b>Content Focus</b>	None Specified
<b>Content Limits</b>	Items may include surface preparation and should be in accordance with manufacturer's specifications.
<b>Stimulus Attributes</b>	None Specified
<b>Response Attributes</b>	None Specified
<b>Sample Item</b>	Demonstrate to your instructor how to strip wax from the surface of a vehicle in order to prepare it for refinishing.



<b>Standard</b>	o8.0 Evaluate and prepare surfaces for refinishing--The student will be able to:
<b>Benchmark</b>	8.04 Mask and protect other areas that will not be refinished.
<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>	L,H
<b>Benchmark Clarification</b>	The student will mask and protect other areas that will not be refinished.
<b>Content Focus</b>	None Specified
<b>Content Limits</b>	Items should be limited to passenger vehicles and light duty trucks.
<b>Stimulus Attributes</b>	None Specified
<b>Response Attributes</b>	None Specified
<b>Sample Item</b>	On the vehicle provided by your instructor, tape off the windows to protect them from being painted.

<b>Standard</b>	o8.0 Evaluate and prepare surfaces for refinishing--The student will be able to:
<b>Benchmark</b>	8.05 Mix primer, primer surfacer or primer sealer and spray onto the surface of repaired areas including two components and self-etching primers. MAFS.912.G-MG.1.3 MAFS.912.N-Q.1.1, 2, 3; SC.912.P.8.2 SC.912.P.12.12
<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>	L,H
<b>Benchmark Clarification</b>	The student will mix primer, primer surfacer, or primer sealer, and spray onto the surface of repaired areas including two components and self-etching primers.
<b>Content Focus</b>	Primer
<b>Content Limits</b>	Items may include industrial primers related to auto body refinishing.
<b>Stimulus Attributes</b>	None Specified
<b>Response Attributes</b>	None Specified
<b>Sample Item</b>	Using a body panel provided by your instructor, prepare and prime the body panel for refinishing.

<b>Standard</b>	o8.o Evaluate and prepare surfaces for refinishing--The student will be able to:
<b>Benchmark</b>	8.o6 Apply glazing putty to minor surface imperfections.
<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>	L,H
<b>Benchmark Clarification</b>	The student will apply glazing putty to minor surface imperfections.
<b>Content Focus</b>	Putty, Bondo
<b>Content Limits</b>	Items may include glazing putty related to auto body refinishing.
<b>Stimulus Attributes</b>	None Specified
<b>Response Attributes</b>	None Specified
<b>Sample Item</b>	Repair the dent in a body panel using a putty (Bondo). Demonstrate the process to your instructor and present it to your instructor for inspection.

<b>Standard</b>	o8.0 Evaluate and prepare surfaces for refinishing--The student will be able to:
<b>Benchmark</b>	8.07 Select proper abrasives and dry or wet sand area to which primer-surfacer and glazing putty have been applied.
<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>	L,H
<b>Benchmark Clarification</b>	The student will select proper abrasives and dry or wet sand area to which primer-surfacer and glazing putty have been applied.
<b>Content Focus</b>	Putty, Bondo, wet sand
<b>Content Limits</b>	Items may include sand and/or wet sand primed and puttied surfaces relating to auto body refinishing.
<b>Stimulus Attributes</b>	None Specified
<b>Response Attributes</b>	None Specified
<b>Sample Item</b>	The panel presented by your instructor has been repaired using putty (Bondo). Demonstrate to your instructor how to prepare the panel for painting by sanding it smooth and level.

<b>Standard</b>	o8.o Evaluate and prepare surfaces for refinishing--The student will be able to:
<b>Benchmark</b>	8.o8 Compound around the edges of repaired areas to be refinished.
<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>	L,H
<b>Benchmark Clarification</b>	The student will compound around the edges of repaired areas to be refinished.
<b>Content Focus</b>	Compound, buff
<b>Content Limits</b>	Items may include compounding limited to auto body refinishing.
<b>Stimulus Attributes</b>	None Specified
<b>Response Attributes</b>	None Specified
<b>Sample Item</b>	The vehicle has just been wet sanded. Demonstrate to your instructor how to use a compound to bring out the finish.

<b>Standard</b>	o8.o Evaluate and prepare surfaces for refinishing--The student will be able to:
<b>Benchmark</b>	8.09 Remove dust from areas to be refinished including cracks or moldings of adjacent areas.
<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>	L,H
<b>Benchmark Clarification</b>	The student will remove dust from areas to be refinished including cracks or moldings or adjacent areas.
<b>Content Focus</b>	Blower
<b>Content Limits</b>	Items should be limited to passenger vehicles and light duty truck.
<b>Stimulus Attributes</b>	None Specified
<b>Response Attributes</b>	None Specified
<b>Sample Item</b>	The vehicle in the stall has just been sanded and now needs to be primed. Demonstrate to your instructor how to remove the dust to prepare the vehicle for refinishing.

<b>Standard</b>	o8.o Evaluate and prepare surfaces for refinishing--The student will be able to:
<b>Benchmark</b>	8.10 Clean area to be refinished with a proper solution.
<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>	L,H
<b>Benchmark Clarification</b>	The student will clean area to be refinished with a proper solution.
<b>Content Focus</b>	Solvent, thinner
<b>Content Limits</b>	Items should be limited to passenger vehicles and light duty truck.
<b>Stimulus Attributes</b>	None Specified
<b>Response Attributes</b>	None Specified
<b>Sample Item</b>	The body panel in the service bay has been stripped to the metal to treat corrosion. Select the proper solution to prepare the surface for refinishing. Demonstrate to the instructor how to prepare the panel.

<b>Standard</b>	o8.o Evaluate and prepare surfaces for refinishing--The student will be able to:
<b>Benchmark</b>	8.11 Remove, with a tack rag, any dust or lint particles from the areas to be refinished. SC.912.P.12.12
<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>	L,H
<b>Benchmark Clarification</b>	The student will remove with a tack rag, any dust or lint particles from the areas to be refinished.
<b>Content Focus</b>	None Specified
<b>Content Limits</b>	Items should be limited to auto body refinishing.
<b>Stimulus Attributes</b>	None Specified
<b>Response Attributes</b>	None Specified
<b>Sample Item</b>	The vehicle in the stall needs to be free of any dust or lint. Demonstrate to your instructor how to remove any debris from the vehicle using a tack rag.