Collision Repair Evaluation Tool

2020 Curricular Materials Review

Idaho CTE Trades and Industry (T&I) Collision Repair Program Standards[[1]](#footnote-1)

**Publisher information**

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* Title:
* Grade Level:
* ISBN #:
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# Instructions:

Complete the Publisher Standards Alignment Report below. Please provide written justification as to how the material meets the standard along with location references. If a justification requires additional space, please submit response on an additional document.

# Publisher STANDARDS ALIGNMENT Report:

## Standard COLL.1.0: Identify and Utilize Safety Procedures and Proper Tools

### Performance Standard COLL.1.1 General Lab Safety Rules and Procedures

| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| --- | --- |
| CTE COLL.1.1.1 Describe general shop safety rules and procedures (i.e., safety test). |  |
| CTE COLL.1.1.2 Utilize safe procedures for handling of tools and equipment. |  |
| CTE COLL.1.1.3 Identify and use proper placement of floor jacks and jack stands. |  |
| CTE COLL.1.1.4 Identify and use proper procedures for safe vehicle lift operation. |  |
| CTE COLL.1.1.5 Utilize proper ventilation procedures for working within the lab/shop area. |  |
| CTE COLL.1.1.6 Identify marked safety areas. |  |
| CTE COLL.1.1.7 Identify the location and the types of fire extinguishers and other fire safety equipment. |  |
| CTE COLL.1.1.8 Demonstrate knowledge of the procedures for using fire extinguishers and other fire safety equipment. |  |
| CTE COLL.1.1.9 Identify the location and use of eye wash stations.  |  |
| CTE COLL.1.1.10 Identify the location of the posted evacuation routes. |  |
| CTE COLL.1.1.11 Comply with the required use of PPE during lab/shop activities. |  |
| CTE COLL.1.1.12 Identify and wear appropriate clothing for lab/shop activities. |  |
| CTE COLL.1.1.13 Secure hair and jewelry for lab/shop activities. |  |
| CTE COLL.1.1.14 Research safety aspects of supplemental restraint systems (SRS), electronic brake control systems, and hybrid vehicle high voltage circuits. |  |
| CTE COLL.1.1.15 Research safety aspects of high voltage circuits (such as high intensity discharge (HID) lamps, ignition systems, injection systems, etc.) |  |
| CTE COLL.1.1.16 Locate and interpret safety data sheets (SDS). |  |

### Performance Standard COLL.1.2 Identify and Utilize Proper Tools

| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| --- | --- |
| CTE COLL.1.2.1 Identify tools and their usage in automotive applications. |  |
| CTE COLL.1.2.2 Identify standard and metric designation. |  |
| CTE COLL.1.2.3 Demonstrate safe handling and use of appropriate tools. |  |
| CTE COLL.1.2.4 Demonstrate proper cleaning, storage, and maintenance of tools and equipment. |  |
| CTE COLL.1.2.5 Demonstrate proper use of precision measuring tools (e.g., tram gauges, mil thickness gauge). |  |

## Standard COLL.2.0: Investigate Industry Careers

### Performance Standard COLL.2.1 Explore Careers

| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| --- | --- |
| CTE COLL.2.1.1 Research the different career opportunities in the transportation career path. |  |
| CTE COLL.2.1.2 Investigate new and emerging vehicle technologies and trends. |  |

## Standard COLL.3.0: Demonstrate Damage Analysis, Estimating, and Customer Service Skills

### Performance Standard COLL.3.1 Identify Vehicle Construction and Parts

| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| --- | --- |
| CTE COLL.3.1.1 Identify type of vehicle construction (space frame, auto body, body-over-frame). |  |
| CTE COLL.3.1.2 Recognize the different damage characteristics of space frame, uni-body, and body-over-frame vehicles. |  |
| CTE COLL.3.1.3 Identify impact energy absorbing components. |  |
| CTE COLL.3.1.4 Identify steel types; determine reparability. |  |
| CTE COLL.3.1.5 Identify aluminum/magnesium components; determine reparability. |  |
| CTE COLL.3.1.6 Identify plastic/composite components; determine reparability. |  |
| CTE COLL.3.1.7 Identify vehicle glass components and repair/replacement procedures. |  |
| CTE COLL.3.1.8 Identify add-on accessories. |  |

### Performance Standard COLL.3.2 Perform Damage Analysis

| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| --- | --- |
| CTE COLL.3.2.1 Position the vehicle for inspection. |  |
| CTE COLL.3.2.2 Prepare vehicle for inspection by providing access to damaged areas. |  |
| CTE COLL.3.2.3 Analyze damage to determine appropriate methods for overall repairs. |  |
| CTE COLL.3.2.4 Determine the direction, point(s) of impact, and extent of direct, indirect, and inertia damage. |  |
| CTE COLL.3.2.5 Gather details of the incident/accident necessary to determine the full extent of vehicle damage. |  |
| CTE COLL.3.2.6 Identify and record pre-existing damage. |  |
| CTE COLL.3.2.7 Identify and record prior repairs. |  |
| CTE COLL.3.2.8 Perform visual inspection of structural components and members. |  |
| CTE COLL.3.2.9 Identify structural damage using measuring tools and equipment. |  |
| CTE COLL.3.2.10 Perform visual inspection of non-structural components and members. |  |
| CTE COLL.3.2.11 Determine parts, components, material type(s) and procedures necessary for a proper repair. |  |
| CTE COLL.3.2.12 Identify type and condition of finish; determine if refinishing is required. |  |
| CTE COLL.3.2.13 Identify suspension, electrical, and mechanical component physical damage. |  |
| CTE COLL.3.2.14 Identify safety systems physical damage. |  |
| CTE COLL.3.2.15 Identify interior component damage. |  |
| CTE COLL.3.2.16 Identify damage to add-on accessories and modifications. |  |
| CTE COLL.3.2.17 Identify single (one time) use components. |  |

### Performance Standard COLL.3.3 Demonstrate Estimating Procedures

| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| --- | --- |
| CTE COLL.3.3.1 Determine and record customer/vehicle owner information. |  |
| CTE COLL.3.3.2 Identify and record vehicle identification number (VIN) information, including nation of origin, make, model, restraint system, body type, production date, engine type, and assembly plant. |  |
| CTE COLL.3.3.3 Identify and record vehicle options, including trim level, paint code, transmission, accessories, and modifications. |  |
| CTE COLL.3.3.4 Identify safety systems; determine replacement items. |  |
| CTE COLL.3.3.5 Apply appropriate estimating and parts nomenclature (terminology). |  |
| CTE COLL.3.3.6 Determine and apply appropriate estimating sequence. |  |
| CTE COLL.3.3.7 Utilize estimating guide procedure pages. |  |
| CTE COLL.3.3.8 Apply estimating guide footnotes and headnotes as needed. |  |
| CTE COLL.3.3.9 Estimate labor value for operations requiring judgment. |  |
| CTE COLL.3.3.10 Select appropriate labor value for each operation (structural, non-structural, mechanical, and refinish). |  |
| CTE COLL.3.3.11 Select and price OEM parts; verify availability, compatibility, and condition. |  |
| CTE COLL.3.3.12 Select and price alternative/optional OEM parts; verify availability, compatibility, and condition. |  |
| CTE COLL.3.3.13 Select and price aftermarket parts; verify availability, compatibility, and condition. |  |
| CTE COLL.3.3.14 Select and price recyclable/used parts; verify availability, compatibility, and condition. |  |
| CTE COLL.3.3.15 Select and price remanufactured, rebuilt, and reconditioned parts; verify availability, compatibility, and condition. |  |
| CTE COLL.3.3.16 Determine price and source of necessary sublet operations. |  |
| CTE COLL.3.3.17 Determine labor value, prices, charges, allowances, or fees for non-included operations and miscellaneous items. |  |
| CTE COLL.3.3.18 Recognize and apply overlap deductions, included operations, and additions. |  |
| CTE COLL.3.3.19 Determine additional material and charges. |  |
| CTE COLL.3.3.20 Determine refinishing material and charges. |  |
| CTE COLL.3.3.21 Apply math skills to establish charges and totals. |  |
| CTE COLL.3.3.22 Interpret computer-assisted and manually written estimates; verify the information is current. |  |
| CTE COLL.3.3.23 Identify procedural differences between computer-assisted systems and manually written estimates. |  |
| CTE COLL.3.3.24 Identify procedures to restore corrosion protection; establish labor values, and material charges. |  |
| CTE COLL.3.3.25 Determine the cost effectiveness of the repair and determine the approximate vehicle retail, and repair value. |  |
| CTE COLL.3.3.26 Recognize the differences in estimation procedures when using different information provider systems. |  |
| CTE COLL.3.3.27 Verify accuracy of estimate compared to the actual repair and replacement operations. |  |
| CTE COLL.3.3.28 Demonstrate ability to access OEM repair information. |  |

### Performance Standard COLL.3.4 Demonstrate customer relations and sales skills

| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| --- | --- |
| CTE COLL.3.4.1 Acknowledge and/or greet customer/client. |  |
| CTE COLL.3.4.2 Listen to customer/client; collect information and identify customers/client's concerns, needs and expectations. |  |
| CTE COLL.3.4.3 Establish cooperative attitude with customer/client. |  |
| CTE COLL.3.4.4 Identify yourself to customer/client; offer assistance. |  |
| CTE COLL.3.4.5 Resolve customer/client conflicts. |  |
| CTE COLL.3.4.6 Identify customer/client preferred communication method; follow up to keep customer/client informed about parts and the repair process. |  |
| CTE COLL.3.4.7 Recognize basic claims handling procedures; explain to customer/client. |  |
| CTE COLL.3.4.8 Project positive attitude and professional appearance. |  |
| CTE COLL.3.4.9 Provide and review warranty information. |  |
| CTE COLL.3.4.10 Estimate and explain duration of out-of-service time. |  |
| CTE COLL.3.4.11 Apply negotiation skills to obtain a mutual agreement. |  |
| CTE COLL.3.4.12 Interpret and explain manual or computer-assisted estimate to customer/client. |  |

## Standard COLL.4.0: Perform Non-Structural Analysis and Damage Repair (Body Components)

### Performance Standard COLL.4.1 Demonstrate Inspection and Preparation Techniques

| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| --- | --- |
| CTE COLL.4.1.1 Review damage report and analyze damage to determine appropriate methods for overall repair; develop and document a repair plan. |  |
| CTE COLL.4.1.2 Inspect, remove, label, store, and reinstall exterior trim and moldings. |  |
| CTE COLL.4.1.3 Inspect, remove, label, store, and reinstall interior trim and components. |  |
| CTE COLL.4.1.4 Inspect, remove, label, store, and reinstall body panels and components that may interfere with or be damaged during repair. |  |
| CTE COLL.4.1.5 Inspect, remove, label, store, and reinstall vehicle mechanical and electrical components that may interfere with or be damaged during repair. |  |
| CTE COLL.4.1.6 Protect panels, glass, interior parts, and other vehicles adjacent to the repair area. |  |
| CTE COLL.4.1.7 Soap and water wash entire vehicle; complete pre-repair inspection checklist. |  |
| CTE COLL.4.1.8 Prepare damaged area using water-based and solvent-based cleaners. |  |
| CTE COLL.4.1.9 Remove corrosion protection, undercoatings, sealers, and other protective coatings as necessary to perform repairs. |  |
| CTE COLL.4.1.10 Inspect, remove, and reinstall repairable plastics and other components for off-vehicle repair. |  |
| CTE COLL.4.1.11 Inspect, remove, and replace seatbelt and shoulder harness assembly and components. |  |
| CTE COLL.4.1.12 Inspect restraint system mounting areas for damage; repair as needed. |  |
| CTE COLL.4.1.13 Verify proper operation of seatbelt. |  |

### Performance Standard COLL.4.2 Perform Outer Body Panel Repair, Replacement, and Adjustments

| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| --- | --- |
| CTE COLL.4.2.1 Review damage report and analyze damage to determine appropriate methods for overall repair; develop and document a repair plan. |  |
| CTE COLL.4.2.2 Inspect, remove, label, store, and reinstall exterior trim and moldings. |  |
| CTE COLL.4.2.3 Inspect, remove, label, store, and reinstall interior trim and components. |  |
| CTE COLL.4.2.4 Inspect, remove, label, store, and reinstall body panels and components that may interfere with or be damaged during repair. |  |
| CTE COLL.4.2.5 Inspect, remove, label, store, and reinstall vehicle mechanical and electrical components that may interfere with or be damaged during repair. |  |
| CTE COLL.4.2.6 Protect panels, glass, interior parts, and other vehicles adjacent to the repair area. |  |
| CTE COLL.4.2.7 Soap and water wash entire vehicle; complete pre-repair inspection checklist. |  |
| CTE COLL.4.2.8 Prepare damaged area using water-based and solvent-based cleaners. |  |
| CTE COLL.4.2.9 Remove corrosion protection, undercoatings, sealers, and other protective coatings as necessary to perform repairs. |  |
| CTE COLL.4.2.10 Inspect, remove, and reinstall repairable plastics and other components for off-vehicle repair. |  |
| CTE COLL.4.2.11 Inspect, remove, and replace seatbelt and shoulder harness assembly and components. |  |
| CTE COLL.4.2.12 Inspect restraint system mounting areas for damage; repair as needed. |  |
| CTE COLL.4.2.13 Verify proper operation of seatbelt. |  |
| CTE COLL.4.2.14 Identify one-time use fasteners. |  |
| CTE COLL.4.2.15 Clean, inspect, and prepare reusable fasteners. |  |

### Performance Standard COLL.4.3 Apply Metal Finishing and Body Filling Techniques

| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| --- | --- |
| CTE COLL.4.3.1 Remove paint from the damaged area of a body panel. |  |
| CTE COLL.4.3.2 Locate and repair surface irregularities on a damaged body panel. |  |
| CTE COLL.4.3.3 Demonstrate hammer and dolly techniques. |  |
| CTE COLL.4.3.4 Heat shrink stretched panel areas to proper contour. |  |
| CTE COLL.4.3.5 Cold shrink stretched panel areas to proper contour. |  |
| CTE COLL.4.3.6 Prepare and apply body filler. |  |
| CTE COLL.4.3.7 Identify different types of body fillers. |  |
| CTE COLL.4.3.8 Rough sand body filler to contour; finish sand. |  |

### Performance Standard COLL.4.4 Inspect moveable glass and hardware components

| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| --- | --- |
| CTE COLL.4.4.1 Inspect, adjust, repair or replace window regulators, run channels, glass, power mechanisms, and related controls. |  |
| CTE COLL.4.4.2 Inspect, adjust, repair, remove, reinstall or replace weather-stripping. |  |
| CTE COLL.4.4.3 Cycle electrical components as needed. |  |

### Performance Standard COLL.4.5 Perform Metal Welding and Cutting Techniques

| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| --- | --- |
| CTE COLL.4.5.1 Identify weldable and non-weldable substrates used in vehicle construction. |  |
| CTE COLL.4.5.2 Weld and cut high-strength steel and other steels (plasma, oxy fuel). |  |
| CTE COLL.4.5.3 Determine the correct GMAW (MIG) welder type, electrode/wire type, diameter, and gas to be used in a specific welding situation. |  |
| CTE COLL.4.5.4 Set up and adjust the GMAW (MIG) welder to "tune" for proper electrode stickout, voltage, polarity, flow rate, and wire-feed speed required for the substrate being welded. |  |
| CTE COLL.4.5.5 Store, handle, and install high-pressure gas cylinders. |  |
| CTE COLL.4.5.6 Determine work clamp (ground) location and attach. |  |
| CTE COLL.4.5.7 Use the proper angle of the gun to the joint and direction of gun travel for the type of weld being made in the flat, horizontal, vertical, and overhead positions. |  |
| CTE COLL.4.5.8 Protect adjacent panels, glass, vehicle interior, etc. from welding and cutting operations. |  |
| CTE COLL.4.5.9 Protect computers and other electronic control modules during welding procedures. |  |
| CTE COLL.4.5.10 Clean and prepare the metal to be welded, assure good metal fit-up, apply weld-through primer if recommended, clamp or tack as required. |  |
| CTE COLL.4.5.11 Determine the joint type (butt weld with backing, lap, etc.) for weld being made. |  |
| CTE COLL.4.5.12 Determine the type of weld (continuous, stitch weld, plug, etc.) for each specific welding operation. |  |
| CTE COLL.4.5.13 Perform the following welds: continuous, plug, butt weld with and without backing, fillet, etc. |  |
| CTE COLL.4.5.14 Perform visual and destructive tests on each weld type. |  |
| CTE COLL.4.5.15 Identify the causes of various welding defects; make necessary adjustments. |  |
| CTE COLL.4.5.16 Identify cause of contact tip burn-back and failure of wire to feed; make necessary adjustments. |  |
| CTE COLL.4.5.17 Identify different methods of attaching non-structural components squeeze type resistant spot welds (STRSW), riveting, non-structural adhesive, silicon bronze, etc. |  |

### Performance Standard COLL.4.6 Utilize Plastic and Adhesives

| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| --- | --- |
| CTE COLL.4.6.1 Identify the types of plastics; determine reparability. |  |
| CTE COLL.4.6.2 Clean and prepare the surface of plastic parts; identify the types of plastic repair procedures. |  |
| CTE COLL.4.6.3 Demonstrate one-sided, two-sided, and tab repair. |  |
| CTE COLL.4.6.4 Repair rigid, semi-rigid, or flexible plastic panels. |  |
| CTE COLL.4.6.5 Remove or repair damaged areas from rigid exterior composite panels. |  |
| CTE COLL.4.6.6 Replace bonded rigid exterior composite body panels; straighten or align panel supports. |  |
| CTE COLL.4.6.7 Demonstrate the proper cleanup procedures for specific adhesives. |  |

## Standard COLL.5.0: Perform Structural Analysis and Damage Repair

### Performance Standard COLL.5.1 Demonstrate Inspection and Repair Techniques

| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| --- | --- |
| CTE COLL.5.1.1 Measure and diagnose structural damage using a tram gauge. |  |
| CTE COLL.5.1.2 Attach vehicle to anchoring devices. |  |
| CTE COLL.5.1.3 Determine the extent of the direct and indirect damage and the direction of impact; document the methods and sequence of repair. |  |
| CTE COLL.5.1.4 Analyze and identify crush/collapse zones. |  |
| CTE COLL.5.1.5 Restore mounting and anchoring locations. |  |
| CTE COLL.5.1.6 Check for water leaks, dust leaks, and wind noise.  |  |
| CTE COLL.5.1.7 Perform visual inspection and measuring checks to identify steering and suspension collision damage. |  |
| CTE COLL.5.1.8 Reinstall wheels and torque lug nuts. |  |

## Standard COLL.6.0: Demonstrate Painting and Refinishing Techniques

### Performance Standard COLL.6.1 Apply Safety Precautions

| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| --- | --- |
| CTE COLL.6.1.1 Identify and take necessary precautions with hazardous operations and materials according to federal, state, and local regulations. |  |
| CTE COLL.6.1.2 Identify safety and personal health hazards according to OSHA guidelines and the “Right to Know Law.” |  |
| CTE COLL.6.1.3 Inspect spray environment and equipment to ensure compliance with federal, state and local regulations, and for safety and cleanliness hazards. |  |
| CTE COLL.6.1.4 Select and use a NIOSH approved air purifying respirator. Inspect condition and ensure fit and operation. Perform proper maintenance in accordance with OSHA Regulation 1910.134 and applicable state and local regulation. |  |
| CTE COLL.6.1.5 Select and use a NIOSH approved supplied air (Fresh Air Make-up) respirator system. Perform proper maintenance in accordance with OSHA Regulation 1910.134 and applicable state and local regulation. |  |
| CTE COLL.6.1.6 Select and use appropriate PPE. |  |

### Performance Standard COLL.6.2 Utilize Surface Preparation Techniques

| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| --- | --- |
| CTE COLL.6.2.1 Inspect, remove, store, and replace exterior trim and components necessary for proper surface preparation. |  |
| CTE COLL.6.2.2 Soap and water wash entire vehicle; use appropriate cleaner to remove contaminants. |  |
| CTE COLL.6.2.3 Inspect and identify type of finish, surface condition, and film thickness; develop and document a plan for refinishing using a total product system. |  |
| CTE COLL.6.2.4 Strip paint to bare substrate (paint removal). |  |
| CTE COLL.6.2.5 Dry or wet sand areas to be refinished. |  |
| CTE COLL.6.2.6 Featheredge areas to be refinished. |  |
| CTE COLL.6.2.7 Apply suitable metal treatment or primer in accordance with total product systems. |  |
| CTE COLL.6.2.8 Mask and protect other areas that will not be refinished. |  |
| CTE COLL.6.2.9 Mix primer, primer-surface or primer-sealer. |  |
| CTE COLL.6.2.10 Identify a complimentary color or shade of undercoat to improve coverage. |  |
| CTE COLL.6.2.11 Apply primer onto surface of repaired area. |  |
| CTE COLL.6.2.12 Apply two-component finishing filler to minor surface imperfections. |  |
| CTE COLL.6.2.13 Block sand area to which primer-surface has been applied. |  |
| CTE COLL.6.2.14 Dry sand area to which finishing filler has been applied. |  |
| CTE COLL.6.2.15 Remove dust from area to be refinished, including cracks or moldings of adjacent areas. |  |
| CTE COLL.6.2.16 Clean area to be refinished using a final cleaning solution. |  |
| CTE COLL.6.2.17 Remove, with a tack rag, any dust or lint particles from the area to be refinished. |  |
| CTE COLL.6.2.18 Apply suitable sealer to the area being refinished. |  |
| CTE COLL.6.2.19 Scuff sand to remove nibs or imperfections from a sealer. |  |
| CTE COLL.6.2.20 Apply stone chip resistant coating. |  |
| CTE COLL.6.2.21 Restore caulking and seam sealers to repaired areas. |  |
| CTE COLL.6.2.22 Prepare adjacent panels for blending. |  |
| CTE COLL.6.2.23 Identify the types of rigid, semi-rigid or flexible plastic parts to be refinished; determine the materials needed, preparation, and refinishing procedures. |  |
| CTE COLL.6.2.24 Identify metal parts to be refinished; determine the materials needed, preparation, and refinishing procedures. |  |

### Performance Standard COLL.6.3 Perform Spray Gun and Related Equipment Operations

| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| --- | --- |
| CTE COLL.6.3.1 Inspect, clean, and determine condition of spray guns and related equipment (air hoses, regulators, air lines, air source, and spray environment). |  |
| CTE COLL.6.3.2 Select spray gun and setup (fluid needle, nozzle, and cap) for product being applied. |  |
| CTE COLL.6.3.3 Test and adjust spray gun using fluid, air, and pattern control valves. |  |
| CTE COLL.6.3.4 Demonstrate an understanding of the operation of spray equipment. |  |

### Performance Standard COLL.6.4 Utilize Paint Mixing, Matching, and Application

| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| --- | --- |
| CTE COLL.6.4.1 Identify color code by manufacturer’s vehicle information label. |  |
| CTE COLL.6.4.2 Shake, stir, reduce, catalyze/activate, and strain refinish materials. |  |
| CTE COLL.6.4.3 Apply finish using appropriate spray techniques (gun arc, angle, distance, travel speed, and spray pattern overlap) for the finish being applied. |  |
| CTE COLL.6.4.4 Demonstrate a let-down panel; check for color match. |  |
| CTE COLL.6.4.5 Apply single stage topcoat. |  |
| CTE COLL.6.4.6 Apply basecoat/clear coat for panel blending and panel refinishing. |  |
| CTE COLL.6.4.7 Apply basecoat/clear coat for overall refinishing. |  |
| CTE COLL.6.4.8 Remove nibs or imperfections from basecoat. |  |
| CTE COLL.6.4.9 Refinish rigid or semi-rigid plastic parts. |  |
| CTE COLL.6.4.10 Refinish flexible plastic parts. |  |
| CTE COLL.6.4.11 Demonstrate knowledge of multi-stage coats for panel blending and overall refinishing. |  |
| CTE COLL.6.4.12 Identify and mix paint using a formula. |  |
| CTE COLL.6.4.13 Identify poor hiding colors; determine necessary action. |  |
| CTE COLL.6.4.14 Tint color using formula to achieve a bendable match. |  |
| CTE COLL.6.4.15 Identify alternative color formula to achieve a bendable match. |  |
| CTE COLL.6.4.16 Identify the materials equipment, and preparation differences between solvent and waterborne technologies. |  |

### Performance Standard COLL.6.5 Identify Paint Defects – Causes and Cures

| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| --- | --- |
| CTE COLL.6.5.1 Identify blistering (raising of the paint surface, air entrapment); determine the cause(s) and correct the condition. |  |
| CTE COLL.6.5.2 Identify a dry spray appearance in the paint surface; determine the cause(s) and correct the condition. |  |
| CTE COLL.6.5.3 Identify the presence of fish-eyes (crater-like openings) in the finish; determine the cause(s) and correct the condition. |  |
| CTE COLL.6.5.4 Identify lifting; determine the cause(s) and correct the condition. |  |
| CTE COLL.6.5.5 Identify clouding (mottling and streaking in metallic finishes); determine the cause(s) and correct the condition. |  |
| CTE COLL.6.5.6 Identify orange peel; determine the cause(s) and correct the condition. |  |
| CTE COLL.6.5.7 Identify overspray; determine the cause(s) and correct the condition. |  |
| CTE COLL.6.5.8 Identify solvent popping in freshly painted surface; determine the cause(s) and correct the condition. |  |
| CTE COLL.6.5.9 Identify sags and runs in paint surface; determine the cause(s) and correct the condition. |  |
| CTE COLL.6.5.10 Identify sanding marks or sand scratch swelling; determine the cause(s) and correct the condition. |  |
| CTE COLL.6.5.11 Identify contour mapping/edge mapping while finish is drying; determine the cause(s) and correct the condition. |  |
| CTE COLL.6.5.12 Identify color difference (off-shade); determine the cause(s) and correct the condition. |  |
| CTE COLL.6.5.13 Identify tape tracking; determine the cause(s) and correct the condition. |  |
| CTE COLL.6.5.14 Identify low gloss condition; determine the cause(s) and correct the condition. |  |
| CTE COLL.6.5.15 Identify poor adhesion; determine the cause(s) and correct the condition. |  |
| CTE COLL.6.5.16 Identify paint cracking (shrinking, splitting, crow’s feet or line-checking, micro-checking, etc.); determine the cause(s) and correct the condition. |  |
| CTE COLL.6.5.17 Identify corrosion; determine the cause(s) and correct the condition. |  |
| CTE COLL.6.5.18 Identify dirt or dust in the paint surface; determine the cause(s) and correct the condition. |  |
| CTE COLL.6.5.19 Identify water spotting; determine the cause(s) and correct the condition. |  |
| CTE COLL.6.5.20 Identify finish damage caused by bird droppings, tree sap, and other natural causes; correct the condition. |  |
| CTE COLL.6.5.21 Identify finish damage caused by airborne contaminants (acids, soot, rail dust, and other industrial-related causes); correct the condition. |  |
| CTE COLL.6.5.22 Identify die-back conditions (dulling of the paint film showing haziness); determine the cause(s) and correct the condition. |  |
| CTE COLL.6.5.23 Identify chalking (oxidation); determine the cause(s) and correct the condition. |  |
| CTE COLL.6.5.24 Identify bleed-through (staining); determine the cause(s) and correct the condition. |  |
| CTE COLL.6.5.25 Identify pin-holing; determine the cause(s) and correct the condition. |  |
| CTE COLL.6.5.26 Identify buffing-related imperfections (swirl marks, wheel burns); correct the condition. |  |
| CTE COLL.6.5.27 Identify pigment flotation (color change through film build); determine the cause(s) and correct the condition. |  |

### Performance Standard COLL.6.6 Perform Detail Procedures

| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| --- | --- |
| CTE COLL.6.6.1 Apply decals, transfers, tapes, pinstripes (painted and taped), etc. |  |
| CTE COLL.6.6.2 Sand, buff and polish fresh or existing finish to remove defects as required. |  |
| CTE COLL.6.6.3 Clean interior, exterior, and glass. |  |
| CTE COLL.6.6.4 Clean body openings (door jambs and edges, etc.) |  |
| CTE COLL.6.6.5 Remove overspray. |  |
| CTE COLL.6.6.6 Perform vehicle clean-up; complete quality control using a checklist. |  |

# Indicators of quality Rubric:

Standards aligned and Integrated Curriculum:

| Standards | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| --- | --- |
| 1. The curriculum is based on industry-validated technical standards and competencies.
 |  |
| 1. The curriculum is aligned with relevant content and standards for core subjects, such as reading, math and science, including federal, state and/or local standards, as appropriate.
 |  |
| 1. The curriculum incorporates employability skill standards that help students succeed in the workplace, such as problem solving, critical thinking, teamwork, communications and workplace etiquette.
 |  |
| 1. The curriculum allows for student application of integrated knowledge and skills in authentic scenarios.
 |  |
| 1. Materials used reflect current workplace, industry and/or occupational practices and requirements.
 |  |

Access and Equity:

| Standards | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| --- | --- |
| 1. Materials are provided in a way that ensures all students have the opportunity to achieve success in the program of study, including by meeting Title IX, Americans with Disabilities Act and other accessibility requirements.
 |  |
| 1. Materials and assessments are free from bias, inclusive and non-discriminatory, and offered in a way that ensures all students have the opportunity to achieve success in the program of study.
 |  |
| 1. Contains guidance to support differentiated and culturally responsive (i.e., purposefully represents diverse cultures, linguistic backgrounds, learning styles and interests) instruction in the classroom so that every student’s need are addressed by including:
	1. Suggestions for how to promote equitable instruction by making connections to culture, home, neighborhood, and community as appropriate.
	2. Appropriate scaffolding, interventions, and supports, including integrated and appropriate reading, writing, listening, and speaking alternatives (e.g., translations, picture support, graphic organizers) that neither sacrifice content nor avoid language development for English language learners, special needs, or below grade level readers.
	3. Digital and print resources that provide various levels of readability.
	4. Modifications and extensions for all students, including those performing above their grade level, to deepen understanding of the content.
	5. Materials in multiple language formats.
 |  |

Student Focus:

| Standards | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| --- | --- |
| 1. The material supports the sequential and cumulative development of foundational skills and progresses in specificity to build students’ depth of knowledge and skills. Those skills are necessary for a student’s independent comprehension of grade-level complex texts and mastery of tasks called for by the standards.
 |  |
| 1. Content and standards within the program of study are non-duplicative and vertically aligned to prepare students to transition seamlessly to the next level of education.
 |  |
| 1. The material provides many and varied opportunities for students to work with each standard within the grade level.
 |  |
| 1. The material cross-refers and integrates other content areas.
 |  |
| 1. The material has a balance of text types and lengths that encourage close, in-depth reading and rereading, analysis, comparison, and synthesis of texts.
 |  |
| 1. The material includes sufficient supplementary activities or assignments that are appropriately integrated into the text.
 |  |
| 1. The material has activities and assignments that develop problem-solving skills and foster synthesis and inquiry at both an individual and group level.
 |  |
| 1. The material has activities and assignments that reflect varied learning styles of students.
 |  |
| 1. The material includes appropriate instructional strategies.
 |  |
| 1. Project-based learning and related instructional approaches, such as problem-based, inquiry-based and challenge-based learning, are fully integrated into the material.
 |  |

Pedagogical Approach:

| Standards | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| --- | --- |
| 1. Provides guidance for teachers throughout for how learning experiences build on each other to support students in developing a deep understanding of the content.
 |  |
| 1. Provides scaffolded supports for teachers to facilitate learning of the content so that students are increasingly responsible for making sense of the content.
 |  |
| 1. The material provides opportunities for supporting English language learners to regularly and actively participate with grade-level text.
 |  |
| 1. The material gives clear and concise instruction to teachers and students. It is easy to navigate and understand.
 |  |
| 1. Includes appropriate academic and content-specific vocabulary in the context of the learning experience that is accessible, introduced, reinforced, reviewed, and augmented with visual representations when appropriate.
 |  |
| 1. Allows teachers to access, revise, and print form digital resources (e.g., readings, labs, assessments, rubrics).
 |  |
| 1. Uses varied modes (selected, constructed, project-based, extended response, and performance tasks) of instruction-embedded pre-, formative, summative, peer, and, self-assessment measures of learning.
 |  |
| 1. Includes editable and aligned rubrics, scoring guidelines, and exemplars that provide guidance for assessing student performance and to support teachers in planning instruction and providing ongoing feedback to students.
 |  |
| 1. Provides multiple opportunities for students to demonstrate and receive feedback on performance of practices connected with their understanding of concepts.
 |  |

Presentation and Design:

| Standards | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| --- | --- |
| 1. The material has an aesthetically appealing appearance.
 |  |
| 1. Digital and print materials are consistently formatted, visually focused, and uncluttered for efficient use.
 |  |
| 1. The material has a reasonable and appropriate balance between text and illustration. The material has grade-appropriate font size.
 |  |
| 1. The illustrations clearly cross-reference the text, are directly relevant to the content (not simply decorative), and promote thinking, discussion, and problem solving.
 |  |
| 1. Non-text content (performance clips, images, maps, globes, graphs, pictures, charts, databases, and models) are accurate and well integrated into the text.
 |  |

Technology:

| Standards | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| --- | --- |
| 1. Technology and digital media support, extend, and enhance learning experiences.
 |  |
| 1. The material has “platform neutral” technology (i.e., cloud based) and availability for networking.
 |  |
| 1. The material has a user-friendly and interactive interface allowing the user to control (shift among activities).
 |  |

For Questions Contact

Content & Curriculum

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1. [Idaho T&I Collision Repair Program Standards](https://cte.idaho.gov/wp-content/uploads/2018/07/Collision-Repair-Program-Standards1.pdf) [↑](#footnote-ref-1)