

Standards Correlations

Auto Body I (8676)

Task	SOL Correlations
Demonstrating Personal Qualities and Abilities	
Demonstrate creativity and innovation.	English: 6.1, 6.3, 6.4, 6.6, 6.7, 6.9, 7.1, 7.3, 7.4, 7.6, 7.7, 7.9, 8.1, 8.3, 8.4, 8.6, 8.7, 8.9, 9.1, 9.5, 9.6, 9.8, 10.1, 10.5, 10.6, 10.8, 11.1, 11.5, 11.6, 11.8, 12.1, 12.5, 12.6, 12.8 History and Social Science: CE.1, CE.4, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WG.4, WHI.1, WHII.1 Mathematics: 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.7, 6.10, 6.11, 6.12, 7.2, 7.3, 7.8, 7.9, 8.2, 8.4, 8.6, 8.7, 8.11, 8.12, 8.17, 8.18, A.9, AFDA.3, AFDA.4, AFDA.5, AFDA.6, AFDA.7, AFDA.8, AII.9, COM.1, COM.3, COM.4, COM.5, COM.8, DM.7, DM.1*, DM.10, DM.2*, DM.3*, PS.3*, PS.4*, PS.7*, PS.9*, PS.10* Science: 6.1, BIO.1, CH.1, ES.1, LS.1, PS.1
Demonstrate critical thinking and problem solving.	English: 6.1, 6.3, 6.4, 6.5, 6.6, 6.7, 6.9, 7.1, 7.3, 7.4, 7.5, 7.6, 7.7, 7.9, 8.1, 8.3, 8.4, 8.5, 8.6, 8.7, 8.9, 9.1, 9.5, 9.6, 9.8, 10.1, 10.5, 10.6, 10.8, 11.1, 11.5, 11.6, 11.8, 12.1, 12.5, 12.6, 12.8 History and Social Science: CE.1, CE.4, CE.11, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WG.4, WHI.1, WHII.1 Mathematics: 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.10, 6.11, 7.2, 7.3, 7.8, 7.12, 7.13, 8.2, 8.4, 8.8, 8.9, 8.10, 8.11, A.8, A.9, G.1, G.13, G.14, AFDA.3, AFDA.5, AFDA.8, AII.9, AII.10, AII.11, COM.1, COM.3, COM.4, COM.5, COM.8, DM.4, DM.7, DM.1*, DM.2*, DM.3*, DM.9*, PS.9*, PS.10* Science: 6.1, BIO.1, CH.1, ES.1, LS.1, PS.1
Demonstrate initiative and self-direction.	English: 6.1, 6.4, 6.6, 6.7, 6.9, 7.1, 7.4, 7.6, 7.7, 7.9, 8.1, 8.4, 8.6, 8.7, 8.9, 9.1, 9.5, 9.6, 9.8, 10.1, 10.5, 10.6, 10.8, 11.1, 11.5, 11.6, 11.8, 12.1, 12.5, 12.6, 12.8

Task	SOL Correlations
	History and Social Science: CE.1, CE.4, CE.11, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1
Demonstrate integrity.	English: 6.1, 7.1, 8.1, 9.1, 9.5, 10.1, 10.5, 11.1, 11.5, 12.1, 12.5 History and Social Science: CE.1, CE.3, CE.4, GOVT.1, GOVT.16, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1
Demonstrate work ethic.	English: 6.1, 7.1, 8.1, 9.1, 10.1, 11.1, 12.1 History and Social Science: CE.1, CE.4, CE.14, GOVT.1, GOVT.16, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Science: CH.1
Demonstrating Interpersonal Skills	
Demonstrate conflict-resolution skills.	English: 6.1, 6.2, 6.4, 6.6, 6.7, 6.9, 7.1, 7.2, 7.4, 7.6, 7.7, 7.9, 8.1, 8.2, 8.4, 8.6, 8.7, 8.9, 9.1, 10.1, 11.1, 12.1 History and Social Science: CE.1, CE.4, GOVT.1, USI.1, VUS.1
Demonstrate listening and speaking skills.	English: 6.1, 6.2, 6.4, 6.6, 7.1, 7.2, 7.4, 7.6, 8.1, 8.2, 8.4, 8.6, 9.1, 10.1, 11.1, 12.1 History and Social Science: CE.1, CE.4, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1
Demonstrate respect for diversity.	English: 6.1, 7.1, 8.1, 9.1, 10.1, 11.1, 12.1 History and Social Science: CE.1, CE.3, CE.4, GOVT.1, GOVT.16, USI.1, USII.1, USII.9, VUS.1, VUS.13, WG.1, WHI.1, WHII.1
Demonstrate customer service skills.	English: 6.1, 6.4, 6.7, 7.1, 7.4, 7.7, 8.1, 8.4, 8.7, 9.1, 9.5, 9.6, 10.1, 10.5, 10.6, 11.1, 11.5, 11.6, 12.1, 12.5, 12.6 History and Social Science: CE.1, CE.4, GOVT.1, GOVT.16, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1
Collaborate with team members	English: 6.1, 7.1, 8.1, 9.1, 10.1, 11.1, 12.1 History and Social Science: CE.1, CE.3, CE.4, GOVT.1, GOVT.16, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1
Demonstrating Professional Competencies	
Demonstrate big-picture thinking.	English: 6.1, 6.4, 7.1, 7.4, 8.1, 8.4, 9.1, 9.5, 10.1, 10.5, 11.1, 11.5, 12.1, 12.5

Task	SOL Correlations
	History and Social Science: CE.1, CE.4, CE.12, GOVT.1, GOVT.15, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1
Demonstrate career- and life-management skills.	English: 6.1, 6.7, 7.1, 7.7, 8.1, 8.7, 9.1, 9.6, 10.1, 10.6, 11.1, 11.6, 12.1, 12.6 History and Social Science: CE.1, CE.4, CE.12, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Mathematics: 8.4
Demonstrate continuous learning and adaptability.	English: 6.1, 6.4, 6.7, 6.9, 7.1, 7.4, 7.7, 7.9, 8.1, 8.4, 8.7, 8.9, 9.1, 9.5, 9.6, 9.8, 10.1, 10.5, 10.6, 10.8, 11.1, 11.5, 11.6, 11.8, 12.1, 12.5, 12.6, 12.8 History and Social Science: CE.1, CE.3, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Science: BIO.1, CH.1, LS.1, PH.1, PH.4, PS.1
Manage time and resources.	English: 6.1, 6.2, 6.4, 6.7, 6.9, 7.1, 7.2, 7.4, 7.7, 7.9, 8.1, 8.2, 8.4, 8.7, 8.9, 9.1, 9.5, 9.6, 9.8, 10.1, 10.5, 10.6, 10.8, 11.2, 11.5, 11.6, 11.8, 12.2, 12.5, 12.6, 12.8 History and Social Science: CE.1, CE.4, CE.11, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Mathematics: 6.10, 6.11, 6.12, 7.2, 7.3, 7.8, 7.9, 7.10, 7.11, 7.12, 7.13, 8.4, 8.11, 8.12, 8.13, 8.14, 8.17, 8.18, A.4, A.5, A.8, A.9, AFDA.3, AFDA.4, AFDA.5, AFDA.6, AFDA.7, AFDA.8, COM.1, COM.3, COM.5, COM.8
Demonstrate information-literacy skills.	English: 6.1, 6.2, 6.4, 6.6, 6.7, 6.9, 7.1, 7.2, 7.3, 7.4, 7.6, 7.7, 7.9, 8.1, 8.2, 8.3, 8.4, 8.6, 8.7, 8.9, 9.2, 9.5, 9.6, 9.8, 10.2, 10.5, 10.6, 10.8, 11.2, 11.5, 11.6, 11.8, 12.2, 12.5, 12.6, 12.8 History and Social Science: CE.1, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Mathematics: 6.10, 6.11, 7.8, 7.9, 8.11, 8.12, A.8, A.9, AFDA.3, AFDA.4, AFDA.6, AFDA.7, AFDA.8, DM.8, PS.1*, PS.2*, PS.3*, PS.4*, PS.7*, PS.8*, PS.9*, PS.10* Science: 6.1, BIO.1, CH.1, ES.1, LS.1, PH.1, PS.1
Demonstrate an understanding of information security.	English: 6.1, 6.2, 6.3, 6.4, 6.6, 6.7, 6.8, 6.9, 7.1, 7.2, 7.3, 7.4, 7.6, 7.7, 7.8, 7.9, 8.1, 8.2, 8.3, 8.4, 8.6, 8.7, 8.8, 8.9, 9.1, 9.2, 9.5, 9.6, 9.8, 10.1, 10.2, 10.5, 10.6, 10.8, 11.1, 11.2, 11.5, 11.6, 11.8, 12.1, 12.2, 12.5, 12.6, 12.8

Task	SOL Correlations
	History and Social Science: CE.1, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Mathematics: COM.10
Maintain working knowledge of current information-technology (IT) systems.	English: 6.1, 6.3, 6.4, 6.6, 6.9, 7.1, 7.3, 7.4, 7.6, 7.9, 8.1, 8.3, 8.4, 8.6, 8.9 History and Social Science: CE.1, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Mathematics: 7.8, COM.1, COM.2, COM.7, COM.9, COM.10, COM.11, COM.16, COM.18, PS.17 Science: BIO.1, CH.1, ES.1, PH.1
Demonstrate proficiency with technologies, tools, and machines common to a specific occupation.	History and Social Science: CE.1, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Mathematics: 6.10, 6.11, 7.9, 8.4, A.7, A.8, A.9, AFDA.1, AFDA.3, AFDA.5, AII.4, AII.7, AII.9, COM.1, COM.7, COM.10, COM.11, COM.12, COM.16 Science: CH.1, ES.1, LS.1, PH.1, PS.1
Apply mathematical skills to job-specific tasks.	English: 6.4, 6.6, 6.7, 7.4, 7.6, 7.7, 8.4, 8.6, 8.7, 9.5, 9.6, 10.5, 10.6, 11.5, 11.6, 12.5, 12.6 History and Social Science: CE.1, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Mathematics: 6.1, 6.2, 6.5, 6.6, 6.12, 6.13, 6.14, 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.8, 7.9, 7.11, 7.12, 7.13, 8.4, 8.5, 8.6, 8.8, 8.9, 8.10, 8.11, 8.12, 8.13, 8.14, 8.15, 8.16, 8.17, 8.18, A.1, A.3, A.4, A.5, A.7, A.8, A.9, AFDA.1, AFDA.3, AFDA.5, AFDA.8, AII.3, AII.7, AII.9, AII.10, COM.1, COM.7 Science: 6.1, BIO.1, CH.1, ES.1, LS.1, PH.1, PS.1
Demonstrate professionalism.	English: 6.1, 7.1, 8.1, 9.1, 10.1, 11.1, 12.1 History and Social Science: CE.1, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1
Demonstrate reading and writing skills.	English: 6.1, 6.6, 6.7, 7.1, 7.6, 7.7, 8.1, 8.6, 8.7, 9.1, 9.5, 9.6, 9.7, 10.1, 10.5, 10.6, 10.7, 11.1, 11.5, 11.6, 11.7, 12.1, 12.5, 12.6, 12.7 History and Social Science: CE.1, CE.4, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1

Task	SOL Correlations
	Science: 6.1, PH.1, PS.1
Demonstrate workplace safety.	English: 6.4, 7.4, 8.4, 9.5, 10.5, 11.5, 12.5 History and Social Science: CE.1, CE.4, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Science: CH.1
Examining All Aspects of an Industry	
Examine aspects of planning within an industry/organization.	History and Social Science: GOVT.16
Examine aspects of management within an industry/organization.	
Examine aspects of financial responsibility within an industry/organization.	
Examine technical and production skills required of workers within an industry/organization.	
Examine principles of technology that underlie an industry/organization.	
Examine labor issues related to an industry/organization.	History and Social Science: GOVT.16
Examine community issues related to an industry/organization.	History and Social Science: GOVT.16
Examine health, safety, and environmental issues related to an industry/organization.	History and Social Science: GOVT.16
Addressing Elements of Student Life	

Task	SOL Correlations
Identify the purposes and goals of the student organization.	
Explain the benefits and responsibilities of membership in the student organization as a student and in professional/civic organizations as an adult.	
Demonstrate leadership skills through participation in student organization activities, such as meetings, programs, and projects.	
Identify Internet safety issues and procedures for complying with acceptable use standards.	
Exploring Work-Based Learning	
Identify the types of work-based learning (WBL) opportunities.	
Reflect on lessons learned during the WBL experience.	
Explore career opportunities related to the WBL experience.	
Participate in a WBL experience, when appropriate.	
Safety Precaution	
Use personal protective equipment (PPE) taking necessary precautions with hazardous operations and materials in	English: 10.5, 11.5 Science: CH.1, PH.1

Task	SOL Correlations
accordance with federal, state, and local regulations.	
Identify procedures and precautions that may apply to the vehicle being repaired.	English: 10.5, 11.5
Identify vehicle system hazard types, locations, and recommended procedures before inspecting or replacing components.	English: 10.5, 11.5
Use a National Institute for Occupational Safety and Health (NIOSH)-approved air purifying respirator.	English: 10.5, 11.5
Pass an industry-specific safety exam.	English: 10.5, 11.5
Preparing for Non-Structural Analysis and Damage Repair	
Identify the basic construction of the auto body.	English: 10.5, 11.5
Review a damage report to determine appropriate methods for overall repair.	English: 10.5, 11.5
Create a written estimate of repairs.	English: 10.5, 10.6, 10.7, 11.1, 11.5, 11.6, 11.7, 12.1
Inspect, remove, label, store, and reinstall exterior trim, moldings, and hardware.	English: 10.5, 11.5
Inspect, remove, label, store, and reinstall interior trim and components.	English: 10.5, 11.5

Task	SOL Correlations
Inspect, remove, label, store, and reinstall body panels and components that may interfere with or be damaged during repair.	
Inspect, remove, protect, label, store, and reinstall vehicle mechanical and electrical components that may interfere with or be damaged during repair.	
Protect panels, glass, interior parts, and other vehicles adjacent to the repair area.	English: 10.5, 11.5
Soap and wash the entire vehicle.	
Prepare the damaged area using water-based and solvent-based cleaners.	English: 10.5, 11.5
Remove corrosion protection, undercoating, sealers, and other protective coatings, as necessary, to perform repairs.	English: 10.5, 11.5
Inspect, remove, and reinstall repairable plastics and other components for off-vehicle repair.	English: 10.5, 11.5
Demonstrate the safe use and operation of tools common to the collision repair industry.	English: 10.5, 11.5
Demonstrate the safe use and operation of equipment.	English: 10.5, 11.5

Task	SOL Correlations
Explain vehicle parts, assemblies, and fasteners used in the collision repair industry.	English: 10.5, 11.5
Repairing the Outer Body Panel	
Inspect for direct or indirect damage and determine the direction of impact.	
Inspect, remove, and replace a mechanically fastened, welded, steel panel or panel assemblies.	English: 10.5, 11.5
Identify different types of substrates.	English: 10.5, 11.5
Determine the extent of damage to aluminum substrate.	English: 10.5, 11.5
Inspect, remove, replace, and align hood, hood hinges, and hood latch.	English: 10.5, 11.5
Inspect, remove, replace, and align deck lid, lid hinges, lid latch, tailgate, and liftgate.	English: 10.5, 11.5
Inspect, remove, replace, and align doors, latches, hinges, and related hardware.	English: 10.5, 11.5
Inspect, remove, replace, and align bumpers, covers, reinforcements, guards, impact absorbers, and mounting hardware.	English: 10.5, 11.5
Inspect, remove, replace, and align fenders and related panels.	English: 10.5, 11.5

Task	SOL Correlations
Straighten damaged panels for body filling or metal finishing.	English: 10.5, 11.5
Restore corrosion protection during and after the repair.	English: 10.5, 11.5
Replace door skins.	English: 10.5, 11.5
Restore sound deadeners and foam materials.	
Perform panel bonding and weld bonding.	English: 10.5, 11.5
Diagnose and repair water leaks, dust leaks, and wind noise.	English: 10.5, 11.5
Identify one-time-use fasteners.	English: 10.5, 11.5
Weld damaged or torn steel body panels; repair broken welds.	
Applying Metal Finishing and Body Filling	
Prepare a panel for body filler by abrading or removing the coatings; featheredge, refine scratches, and clean the surface before the application of body filler.	English: 10.5, 11.5
Locate and repair surface irregularities on a damaged body panel using power tools, hand tools, and weld-on pulling attachments.	English: 10.5, 11.5
Demonstrate hammer and dolly techniques.	

Task	SOL Correlations
Heat-shrink stretched panel areas to proper contour.	English: 10.5, 11.5
Cold-shrink stretched panel areas to proper contour.	English: 10.5, 11.5
Identify body filler defects; correct the cause and condition.	English: 10.5, 11.5
Identify types of body fillers.	
Shape body filler to contour; finish sanding.	English: 10.5, 11.5
Perform proper metal finishing techniques for aluminum.	English: 10.5, 11.5
Apply body filler to aluminum.	
Straighten contours of damaged aluminum panels to a suitable condition for body fillings or metal finishing, using power tools, hand tools, and weld-on pulling attachments.	English: 10.5, 11.5
Repairing Moveable Glass and Hardware	
Inspect, adjust, repair, or replace window regulators, run channels, glass, power mechanisms, and related controls.	English: 10.5, 11.5
Inspect, adjust, repair, remove, reinstall, or replace weather-stripping.	English: 10.5, 11.5

Task	SOL Correlations
Inspect, repair or replace, and adjust removable power-operated roof panel and hinges, latches, guides, handles, retainer, and controls of sunroofs.	English: 10.5, 11.5
Inspect, remove, reinstall, and align a convertible top and related mechanisms.	
Practicing Metal Welding, Cutting, and Joining	
Identify methods of attaching structural components.	
Explain procedures for welding high-strength steel and other steels.	English: 10.5, 11.5
Explain the procedures for welding aluminum.	English: 10.5, 11.5
Determine the correct gas metal arc welding (GMAW) welder type.	
Set up and attach a work clamp (i.e., ground), and adjust the GMAW welder to tune for proper electrode stickout, voltage, polarity, flow rate, and wire-feed speed required for the substrate being welded.	English: 10.5, 11.5
Store, handle, and install high-pressure gas cylinders; test for leaks.	

Task	SOL Correlations
Determine the proper angle of the gun to the joint and direction of gun travel for the type of weld being made.	
Protect adjacent panels, glass, and vehicle interior from welding and cutting operations.	English: 10.5, 11.5
Protect computers and other electronics and wires during welding procedures.	English: 10.5, 11.5
Clean and prepare the metal to be welded, assure good metal fit-up, apply weld-through primer if necessary, and clamp or tack, as required.	English: 10.5, 11.5
Determine the joint type for the weld being made.	
Determine the type of weld for each specific welding operation.	English: 10.5, 11.5
Perform welds in the flat, horizontal, vertical, and overhead positions.	English: 10.5, 11.5
Perform a visual evaluation and destructive test on each weld type.	
Identify the causes of various welding defects; make necessary adjustments.	
Identify the cause of contact, tip burn-back, and failure of the wire to feed; make necessary adjustments.	English: 10.5, 11.5

Task	SOL Correlations
Identify the cutting process for different substrates and locations; perform the cutting operation.	English: 10.5, 11.5
Identify different methods of attaching structural components.	
Working with Plastics and Adhesives	
Identify the types of plastics and their potential for repair.	
Identify the types of plastic repair procedures.	English: 10.5, 11.5
Replace or repair rigid, semi-rigid, and flexible plastic panels.	English: 10.5, 11.5
Remove or repair damaged areas from rigid exterior composite panels.	
Replace bonded rigid exterior composite body panels; straighten or align panel supports.	English: 10.5, 11.5
Preparing for a Career in Auto Body Repair	
Research opportunities in the auto body repair field.	English: 10.5, 10.8, 11.5, 11.8
Prepare a portfolio of current skills.	English: 10.6, 10.7, 11.6, 11.7