

CURRICULUM CHECKLIST

TOOLS, EQUIPMENT AND MATERIALS



The below list contains the tools, equipment, and materials required to demonstrate and practice the hands-on skills included within the I-CAR Academy curriculum.

PARTS AND MATERIALS

- ☐ Low-density foam
- ☐ Replacement fasteners
- ☐ Replacement clips
- ☐ Small and large resealable bags (tackle boxes also work for hardware storage)
- ☐ Masking tape – various widths
- ☐ Waterproof tape
- ☐ Two-part plastic adhesive
- ☐ Flexible polyester filler
- ☐ Adhesive remover
- ☐ Wetting solution for decal application
- ☐ Blind rivets
- ☐ Adhesive transfer tape (3M 8069 or equivalent)
- ☐ Electrical tape
- ☐ Touch-up paint
- ☐ Staples for hot stapler (V, S, W, Z)
- ☐ Mesh reinforcement for plastic repair
- ☐ Welding rods
- ☐ Aluminum tape (for bumper repair)
- ☐ Plastic sheeting (masking)
- ☐ Aperture tape
- ☐ Lifting tape
- ☐ Etching primer in spray can
- ☐ Primer-surfacer
- ☐ Clay bars
- ☐ Spray bottles
- ☐ Aluminum silicon alloy studs
- ☐ Weld-on studs (steel)
- ☐ Screw-on loops
- ☐ Epoxy primer/corrosion protection
- ☐ Polyester body filler
- ☐ Hardener for body filler
- ☐ 2K putty
- ☐ Guide coat (dry and aerosol)

LAB PROPS

- ☐ 12"–18" of electrical wire (14 or 18 gauge)
- ☐ Metal block with pre-drilled holes for practicing threaded fastener repair
- ☐ Plastic parts (thermoplastic) for single-sided and double-sided plastic repairs or a 10" x 10" piece of plastic
- ☐ Deformed plastic panel (thermoplastic)
- ☐ Plastic parts with ISO code
- ☐ Panel that is soiled (soda and coffee residue will work)
- ☐ Scratched panel (hood, fender, or bumper)
- ☐ Repaired panel that is properly cleaned and masked
- ☐ Glass with overspray
- ☐ Dented steel panels (multiple)
- ☐ Dented aluminum panels (multiple)
- ☐ Complete door assembly with interior and exterior trim and glass
- ☐ Metal coupons
- ☐ Vehicles
 - ☐ Vehicle with tire and wheel assembly
 - ☐ Vehicle with plastic bumper cover
 - ☐ Vehicle with taillamps and headlamps
 - ☐ Vehicle with hood and decklid
 - ☐ Vehicles with door mirrors and handles
 - ☐ Vehicles with front and rear seat assemblies
 - ☐ Vehicles with stationary bolt-on panels

HEATING EQUIPMENT

- ☐ Heat gun
- ☐ Fuel torch with igniter (if needed) for wire repair Cutoff wheel
- ☐ Heat lamp
- ☐ Noncontact thermometer

CURRICULUM CHECKLIST

TOOLS, EQUIPMENT AND MATERIALS



HAND TOOLS

- ☐ Wire strippers
- ☐ Tap and die set – standard and metric
- ☐ Extractor tools such as left-hand drill bits, screw extractors
- ☐ Ratchet and socket sets – metric and SAE
- ☐ Vise grips (locking pliers)
- ☐ Needle nose pliers
- ☐ Slip joint/adjustable joint pliers
- ☐ Aviation snips
- ☐ Torque wrench
- ☐ Plastic trim removal tool kit
- ☐ Flat-bladed trim tool
- ☐ Gap gauge
- ☐ Pick tools
- ☐ Plastic razor blades
- ☐ Measuring tape
- ☐ Plastic squeegee
- ☐ Fishing line with handles
- ☐ Ball peen hammer
- ☐ Center punch
- ☐ Blind rivet installation tool
- ☐ Various sized wrenches
- ☐ Side cutters
- ☐ Various dollies shapes and sizes (separate set for aluminum and steel)
- ☐ Rollers (plastic repair)
- ☐ Hot stapler
- ☐ Clamps
- ☐ Applicator gun for plastic adhesive
- ☐ PDR picks (assortment)
- ☐ PDR Lights
- ☐ Hook and ring attachment for PDR
- ☐ Variety of body hammers – for steel
- ☐ Variety of body hammers – for aluminum
- ☐ Slapping file
- ☐ Plastic, wood, or rubber blunt tool (aluminum dent removal)
- ☐ Body filler mixing board (mixing paper allowed)
- ☐ Plastic spreader
- ☐ Sanding blocks (variety of curved, flat, flexible, long, and short blocks)
- ☐ Screw driver set
- ☐ Torx driver set
- ☐ Extension assortment for ratchets
- ☐ Torx bit sockets
- ☐ Allen sockets
- ☐ E torx sockets
- ☐ Magnetic retriever tool
- ☐ Utility knife

POWER HAND TOOLS AND EQUIPMENT

- ☐ Angle grinder with backing plate, pin or wrench
- ☐ Die grinder
- ☐ Straight line grinder, abrasive bit, wrench
- ☐ File belt sander
- ☐ Cut-off tool, open-end wrench, Allen wrench, pin
- ☐ Wire wheel, wire or rubber wheel, Allen wrench
- ☐ Eraser wheel
- ☐ Impact wrench
- ☐ DA sander
- ☐ Airless plastic welder
- ☐ Hot air plastic welder
- ☐ Nitrogen plastic welder
- ☐ Weld-on dent removal tool
- ☐ Weld-on pulling tool
- ☐ Leverage bar for use with weld-on dent removal tools
- ☐ Finger puller bridge for use with weld-on dent removal tools
- ☐ OSHA-approved blow gun

CURRICULUM CHECKLIST

TOOLS, EQUIPMENT AND MATERIALS



SAFETY

- ☐ Eyewash station
- ☐ Fire extinguisher specific to shop hazards (A/B/C/D)
- ☐ Supplied-air respirator
- ☐ Cartridge respirator
- ☐ Mechanics gloves
- ☐ Latex/nitrile gloves
- ☐ Safety shoes
- ☐ Face shield
- ☐ Safety glasses, including over-glasses safety glasses
- ☐ Paint suit
- ☐ Hearing protection
- ☐ First aid kit
- ☐ Welding blanket
- ☐ Protective covering or blanket (for movable panel removal)
- ☐ Spark paper
- ☐ SDS and TDS for all materials

ABRASIVES

- ☐ Grinding discs
- ☐ Abrasive belts for belt sanders
- ☐ Cutoff wheel
- ☐ Wire wheel
- ☐ Variety of sandpaper grits for DA sander (P80–P800), 3” and 6” discs, wet and dry, continuous, sheets, self-stick
- ☐ Bristle disc sander for die grinder

CLEANING

- ☐ Car soap
- ☐ Water-based cleaner
- ☐ Wax and grease remover
- ☐ Bucket with dirt separator
- ☐ Glass cleaner
- ☐ Shop towels
- ☐ Microfiber towels or chamois
- ☐ Water blade
- ☐ Vacuum cleaner
- ☐ Wash mitt
- ☐ Plastic cleaner

REFINISHING TOOLS AND EQUIPMENT

- ☐ Air filter/dryer system
- ☐ Paint mixing room (OSHA/NFPA approved)
- ☐ Mixing cups
- ☐ Paint filter/strainers
- ☐ Stir sticks
- ☐ Primer gun
- ☐ Spray gun needles and nozzles (assortment)
- ☐ Mil thickness gauge (digital)
- ☐ Air pressure regulator
- ☐ Spray gun cleaning equipment

CAPITAL EQUIPMENT

- ☐ Spraybooth or prep deck
- ☐ Automotive lift
- ☐ Air compressor with air hoses and fittings

MISCELLANEOUS

- | | | |
|---|---|--|
| <input type="checkbox"/> Automatic 12-volt battery charger | <input type="checkbox"/> Folding work stands | <input type="checkbox"/> Container/organizer for fasteners and small parts |
| <input type="checkbox"/> Hydraulic jack | <input type="checkbox"/> Support bar for bumper removal | <input type="checkbox"/> Masking machine |
| <input type="checkbox"/> Jack stands rated above vehicle weight | <input type="checkbox"/> Portable light source | <input type="checkbox"/> Digital scale |
| | <input type="checkbox"/> Parts stands | |
| | <input type="checkbox"/> Door stand | |