

## FFA AGRICULTURAL TOOLS AND MATERIALS CAREER DEVELOPMENT EVENT

<u>Name</u>	<u>Proper Use of Tools, Equipment or Materials</u>
45° pipe elbow	Making a 45 degree turn with pipe
90° pipe elbow	Making a 90 degree turn with pipe
90° street elbow	Making a 90-degree turn with galvanized pipe when threads are inside on one end and outside on the other
Adjustable wrench	Turning various size nuts and bolts
Allen wrench	Turning hex head socket screws
Aviation snips	Cutting sheet metal
Ball pain hammer	Hammering metal
Bar clamp	Clamping large sections of wood together
Bolt cutters	Cutting bolts and steel rods
Bolt die	Cutting threads on bolts and rods
Bolt die stock	Holder for bolt die
Bolt tap	Cutting inside threads
Box end wrench	Turning hex head nuts and bolts
Brick jointer	Smoothing and designing masonry joints
Brick trowel	Placing and spreading mortar
Bulb planter	Planting and transplanting bulbs
Bush axe	Cutting bushes and under growth
Butt hinge	Hinge for narrow fencing
C clamp	Clamping two or more pieces <i>of</i> metal together
Carriage bolt	Used for bolting wood to wood or wood to metal
Castrator	Tool for sterilizing small animals
Center punch	Starting holes in metal
Chain saw file	Sharpening chain saw chain
Chalk line reel	Marking straight lines
Chipping hammer	Removing slag from welds
Circuit breaker	Protection from overload in electrical circuits
Circular carbide saw blade	Blade for use on a portable electric saw
Cold chisel	Cutting metal
Combination square	Determining 45° and 90° angles
Combination wrench	Turning hex and square nuts and bolts
Common nail	For nailing boards together where holding power is desired
Compass saw	Cutting wood in close places
Concrete finishing trowel	Smoothing concrete

Concrete float	Leveling concrete
Coping saw	Cutting curves and irregular cuts
Cordless drill	Drilling holes with a tool that uses a battery pack
Countersink	Flaring top of hole for recessing head for flathead screw or bolt
Cutting torch	Cutting metal with heat
Deep socket	Turning nuts and bolts in depressed areas
Dehorner	Removing horns from cattle
Drift punch	Aligning holes
Drill press vise	Holding stock while drilling
Duplex receptacle	Used to plug in electrical units
Ear tagger	Labels individual animals for identification
Electrical multimeter	Performs various tests on electrical circuits
End cutting nippers	Cutting ends of wire, nails and small bolts
Expansion shield	anchoring a lag screw into concrete, brick or block
Extension	Extends reach of socket
Eye bolt	Bolt used to attach wire onto
Fence pliers	Building and repair of wire fences
Fence staple	For nailing up fencing
Finishing nail	Nailing boards where head will not be noticed
Flathead stove bolt	for fastening wood or metal to metal with a wrench and leaving a flat surface
Flathead wood screw	for fastening wood to wood where a flat surface is required
Framing square	Squaring cut corners and laying out stairs & rafters
Fuse puller	Removing cartridge fuses
Gate valve	For cutting off water supply on a main line
Glass cutter	Cutting glass
Grafting tool	Preparing woody parts for grafting
Grease gun	Lubricating through grease fitting
Groove joint pliers	Gripping when greater pressure is needed
Hack saw	Sawing metal
Half hatchet	Cutting and fitting wood
Half round file	Curve and flat filing
Hammer drill	For power drilling in concrete, brick or block
Hand screw clamp	Clamping wood together
Hedge shears	Trimming and shaping hedge
Hinge handle	Socket handle to be used when flexibility is needed
Hose bib	Valve for attaching a water hose and turning water supply on and off

Implant gun	Injects growth hormones in animals
Impulse sprinkler	For overhead irrigation of plants where rotation is water driven
Increment borer	Checking growth rate of trees
Lag screw	Screw used where great pressure to turn is required
Level	Leveling and plumbing
Line level	Leveling between long distance points
Long nose pliers	Reaching into recessed areas
Lopping shears	Cutting large branches when pruning shrubbery
Machine bolt	For fastening metal to metal with a wrench
Machinist's vise	Holding metal firm while working
Mason hammer	Chipping and shaping masonry material
Mason level	Leveling and plumbing masonry materials
Masonry bit	Boring a hole in concrete, brick or block
Masonry nail	Nailing in concrete, brick or block
Mill file	Filing metal
Miter box	Cutting angles
Nail hammer	Driving nails
Nail set	Countersinking nail heads
Nailing gun	Rapid nailing using air, gas or electricity
Nut driver	Socket permanently attached to a handle for turning small nuts and bolts
Obstruction wrench	Reaching nuts & bolts around obstructions
Open end wrench	Turning square head nuts & bolts
Phillips screwdriver	Turning Phillips head screws
Pin punch	Driving out metal pins
Pipe bushing	Reducing pipe size
Pipe cap	Closing the end of a pipe by going over the pipe end
Pipe coupling	Joining two pieces of pipe
Pipe nipple	Adding length to a piece of pipe
Pipe plug	Closing the end of a pipe, threads on outside
Pipe reducer	Reducing pipe size
Pipe stop & waste	For turning off water and draining the line
Pipe tee	For joining pipe at 90° angles
Pipe union	Joining two pieces of pipe where neither side can be turned
Pipe wrench	Turning and holding metal pipe
Piston ring compressor	Compressing ring for inserting into cylinder
Planting bar	Setting out tree seedlings

Plumb bob	Vertical plumbing to locate points
Portable circular saw	Sawing wood in construction projects
Portable electric drill	Drilling holes with an external source of electricity
Portable jig saw	Making irregular cuts
Portable electric sander	Smooths surface with an external source of electricity
Pruning saw	Sawing limbs from shrubbery and trees
Pruning shears	Cutting and shaping shrubbery
Putty knife	Applying and smoothing putty
PVC cutter	Cutting non-metallic pipe
Regular socket	General purpose socket for turning nuts & bolts
Reversible ratchet	Reverse rotation of socket turning
Roofing nail	For nailing tin, aluminum, fiberglass or asphalt roofing
Round file	Filing inside holes
Roundhead stove bolt	For fastening wood or metal to metal with a screwdriver and wrench
Roundhead wood screw	For fastening wood to wood
Router	Makes edges or designs in wooden surfaces
Rubber mallet	Hammering to avoid marring surface
Safety goggles	To protect eyes from liquids and vapors
Screw extractor	Removing broken bolts, studs & screws
Screwmate	Drills & countersinks flat head wood screw holes
Sheet metal screw	Joining two pieces of sheet metal
Side cutting pliers	Holding and/or cutting wire
Sledge hammer	Heavy hammering
Slip joint pliers	Adjust for holding various size materials
Slotted screwdriver	Turning slotted screws
Solderless wire nut	Joining two or more electrical wires
Soil auger	Boring into soil to get samples
Soil thermometer	Determining soil temperature
Soil tube	Obtaining soil for testing
Soldering gun	Melting solder
Spark plug gauge	Gauge and set spark plug gap
Spark plug socket	Install and remove spark plugs
Speed bore bit	Wood-boring bit for electric drill
Speed handle	Rapid turning of socket
Strap hinge	Hinge used where major strength or support is required
Switch box	Used to install toggle switches or duplex receptacles

T-hinge	Used where strength is required but one facing is narrow
Tape rule	Straight or curved measuring
Thickness gauge	Determining gaps
Timing light	Timing ignition
Tip cleaners	Cleaning welding and cutting tips
Tire chuck	To inflate tires
Tire gauge	Checking tire air pressure
Toggle bolt	Anchoring into a hollow space
Toggle switch	Turning current on and off
Toggle switch plate	Cover for toggle switch
Torch lighter	Light acetylene and propane
Torque wrench	Measure amount of torque
Tree diameter tape	Measure circumference of trees
Try square	90° squaring
Tube cutter	Cutting soft tubing
Universal joint	Holding socket for angle turning
Universal socket	Socket of angle turning
Valve spring compressor	Compressing valve spring for removal and insertion
Vise grip pliers	For extra firm gripping
Vise grip welding clamp	For extra firm gripping of welding materials
Water breaker	Reduces the impact of water pressure on soil and plants
Welding gloves	Protects welders hands
Welding goggles	Protects welders eyes
Welding helmet	Protects face and eyes from welding flash
Welding torch	Heats and fuses metal
Wheel puller	Remove wheel from axle
Wire scratch brush	Cleaning metal
Wood chisel	Dressing and shaping wood
Wood mallet	Driving non-metallic objects
Wood rasp	Coarse filing of wood
Wrecking bar	Ripping and prying