# Facility Safety Checklist

These are some quick and easy checklists to evaluate your lab, shop and/or farm. Checklists can be used for periodic inspections by the teacher or as part of a classroom exercise (often called a “Hazard Hunt”).

Teachers are encouraged to adapt these to suit their own needs. Common changes would be to combine parts of two or more checklists, remove sections that don’t apply, or add sections for specific situations such as a farm feed mill or a harvester.

##

## Shop Safety Annual Checklist[[1]](#footnote-1)

Shop: By: Date:

|  | **Pass** | **Fail** | **N/A** |
| --- | --- | --- | --- |
| General Shop |  |  |  |
| Aisles are properly indicated, and aisles, passageways and corridors are free of obstructions. |  |  |  |
| Safety lanes are provided around power and non-powered stationary tools- |  |  |  |
| Safety areas are marked around stationary tools. |  |  |  |
| Condition of floors maintained in a clean and dry condition (no water or oil) and free from obstructions and debris. |  |  |  |
| Extension cords and air hoses are stored when not in use. (No trip hazard.) |  |  |  |
| Ventilation is proper and adequate for the lab.  |  |  |  |
| Illumination is adequate. Good shadow-free lighting is required -- 30 foot-candles (fc) general area, 50 fc on work areas, 100 fc for delicate repair work. |  |  |  |
| Battery charging area will provide facilities for flushing and neutralizing electrolyte. |  |  |  |
| Every opening, floor or platform 4 ft. or more above ground level has a standard guard rail 42" high with an intermediate rail and a toe board of at least 4 in. above the floor. Rail must withstand 200# thrust.  |  |  |  |
| All stairways having more than four (4) risers have a standard hand railing 30" – 34” high.  |  |  |  |
| Personal Protective Equipment (PPE) |  |  |  |
| Safety glasses are required (warnings posted). |  |  |  |
| Bump hats or hard hats are available for appropriate applications. |  |  |  |
| Toe guards are available for appropriate applications. |  |  |  |
| Hearing protection is provided for use of tools exceeding 85 db. |  |  |  |
| Respirators (dust masks) are provided in dusty areas. |  |  |  |
| Face shields are provided at every power tool.  |  |  |  |
| Fire and Exits |  |  |  |
| Exit signs are visible and directional exit signs provided. Exit signs have letters 6" high, 3/4" strip and 5 candlepower illumination. |  |  |  |
| Exit doors and access to exits are not locked from exit side.  |  |  |  |
| Non-exit doors are clearly identified "not an exit" or otherwise labeled for use.  |  |  |  |
| A fire alarm is provided. |  |  |  |
| Fire extinguishers of proper types, adequate1y located and maintained (tested yearly). Maximum height 5', if under 40#, 3 1/2' if over 40#. |  |  |  |
| * Class A fire - wood, paper, cloth and rubber-foam and dry chemical recommended
 |  |  |  |
| * Class B fire - flammable liquid, gas, and grease - dry chemical, CO2 and foam recommended
 |  |  |  |
| * Class C fire - energized electrical – dry chemical & CO2 recommended
 |  |  |  |
| * Class D fire - combustible metals specific for the chemical
 |  |  |  |
| General Machinery and Tools |  |  |  |
| All stationary tools are anchored to the floor.  |  |  |  |
| Stationary machines are arranged so that individuals are protected from hazards of other machines.  |  |  |  |
| Non-skid surfaces provided at power tools on smooth floors. |  |  |  |
| Tools are stored neatly when not in use.  |  |  |  |
| Tools are kept sharp, clean, and in good working order. |  |  |  |
| Drill presses are equipped with clamps or vises. |  |  |  |
| Bench brushes are provided to remove chips from drill presses. |  |  |  |
| Shears are shielded. |  |  |  |
| All gears, moving belts, chains, and shafts, etc., are protected by permanent guards.  |  |  |  |
| Chop saws are properly guarded, clamp is working, and sparks are directed away from other students. |  |  |  |
| First Aid, Safety Equipment, and Sanitation |  |  |  |
| A trained person (or persons) is available to render first aid.  |  |  |  |
| First aid supplies approved by the health department. |  |  |  |
| First aid supplies are well stocked and readily available. |  |  |  |
| Fire blankets are readily available. |  |  |  |
| Eye wash station is provided.  |  |  |  |
| Washing facilities are provided and properly maintained. |  |  |  |
| Restroom and dressing facilities are provided.  |  |  |  |
| Materials Storage |  |  |  |
| Pressure safety cans are used for flammable or combustible liquids.  |  |  |  |
| Combustible wastes are kept in approved self-closing covered metal containers.  |  |  |  |
| A fire resistive cabinet is used to store flammable liquids.  |  |  |  |
| Stored wood stacked safely and solidly so it will not fall.  |  |  |  |
| Stored metal stored in racks safely and solidly so it will not fall.  |  |  |  |
| SDS sheets are available and clearly marked for all materials found in the shop. (For example, welding gas, fuel, welding rod.)  |  |  |  |
| Ladders |  |  |  |
| All ladders are in good repair and stored properly. Ladders not exposed to elements, heat and dampness, hung horizontally,  |  |  |  |
| All portable ladders have safety feet.  |  |  |  |
| All fixed ladders meet design specifications. Rung to back clearance - 7 in., max. rung spacing - 12 in., caged if more than 20 ft. to a max. of 30 ft.  |  |  |  |
| Electrical |  |  |  |
| A keyed master disconnect switch for all power tools. |  |  |  |
| Electrical cabinets and power room is accessible only to authorized personnel. |  |  |  |
| Circuit breakers and disconnects are clearly labeled. |  |  |  |
| All electrical receptacles, junction boxes and switch boxes are properly covered.  |  |  |  |
| All electrical outlets and fixtures are grounded.  |  |  |  |
| All stationary power tools and equipment are grounded.  |  |  |  |
| All extension cords are grounded. Cords of J wire grounding type.  |  |  |  |
| Portable power tools are grounded or tools are double insulated. .  |  |  |  |
| All electrical disconnects are identified (circuit breakers, fuse boxes, etc.) in boxes.  |  |  |  |
| The signal units for heating, ventilating and air-conditioning are operational. |  |  |  |
| Overcurrent devices are provided on all electrical loads.  |  |  |  |
| Hoists |  |  |  |
| Safety hooks are used on all chains and lifting devices.  |  |  |  |
| Rated load plainly marked on the side of lifting equipment.  |  |  |  |
| Stands are provided to block raised equipment.  |  |  |  |
| Compressed Air |  |  |  |
| Compressed air plumbing is steel or copper (L or M) not PVC. |  |  |  |
| Hoses are in good condition. |  |  |  |
| Air used for cleaning is regulated to not more than 30 psi and chip guarded. |  |  |  |
| Safety valve in the air line is in good working order.  |  |  |  |
| There are pressure gauges on the air lines.  |  |  |  |
| Air compressor is drained frequently. |  |  |  |
| Air compressor fans and flywheels within 7 ft. of the floor are guarded with a guard having holes not greater than 1/2 in. in width. Compressor is placarded as “automatic equipment”. |  |  |  |
| Battery Powered Equipment |  |  |  |
| Batteries are in good condition (no damage). |  |  |  |
| Batteries are marked with a purchase date. |  |  |  |
| Batteries are stored safely. |  |  |  |
| Charging stations are neat and well ventilated (cooling).  |  |  |  |
| Woodworking Equipment |  |  |  |
| Saw blades and cutterheads are sharp and in good condition. |  |  |  |
| Push sticks or push blocks are available. |  |  |  |
| The table saw is equipped with a guard, anti-kickback and spreader. |  |  |  |
| The band saw has an adjustable guard above the blade rolls and the blade wheels are covered.  |  |  |  |
| The jointer has a working automatic guard covering all sections of the cutting head. |  |  |  |
| Power miter saw is in good working condition. Guards work smoothly. Saw is secured to a bench or stand.  |  |  |  |
| The radial arm saw is equipped with hood guard, anti-kickback, rotation sign, automatic return, and table extension or stop.  |  |  |  |
| All saws have roller units or stands to assist moving material to the saw and removal after cutting. |  |  |  |
| Dust control/collection system is operational and used.  |  |  |  |
| Grinders |  |  |  |
| The grinder has a safety guard at the point of operation. |  |  |  |
| The grinder has guards to cover the spindle ends, nuts and flanges.  |  |  |  |
| The work rests are adjusted to within 1/8 inch of the grinding wheel. |  |  |  |
| The adjustable tongue guard or spark deflector on grinder is adjusted to within 1/4" of the grinder wheel. |  |  |  |
| Maximum periphery exposure for a stationary grinder is 65 degrees. (Exposed distance between tool rest and tongue guard or spark deflector.) |  |  |  |
| Grinding wheel of the right type and in good condition with no cracks, wheel diameter over half -of original size. |  |  |  |
| Cooling container nearby and filled. |  |  |  |
| Wheel dresser available. |  |  |  |
| All portable grinders and saws have proper shielding in position. Power cords in good condition. |  |  |  |
| The forge or small furnace is adequately vented.  |  |  |  |
| Arc Welding |  |  |  |
| Adequate ventilation is provided for the dissipation of exhaust gases and welding fumes.  |  |  |  |
| Arc welder cables are not worn or damaged. |  |  |  |
| Electrode holders are in proper condition to avoid exposure to electrical connections. |  |  |  |
| Electrode holders are hung up and so placed and fastened securely to the cable that they do not make electrical contact. |  |  |  |
| Arc welding helmets with tempered safety glass of the proper shade are in good condition.  |  |  |  |
| * Shielded metal-arc welding (SMAW)1/16 - 5/32 electrodes No.10
 |  |  |  |
| * TGAW 1/16 - 5/32 electrodes No. 11-12
 |  |  |  |
| * Gas-shielded ferrous arc welding (GMAW) 1/16 -5/32 No. 12
 |  |  |  |
| * Carbon arc. No. 14
 |  |  |  |
| Fire resistant curtains or shields are used around arc welding areas or booths. |  |  |  |
| The floor in the welding area is kept dry and free of combustible materials. |  |  |  |
| Protective gloves are provided and are in good condition. |  |  |  |
| Protective clothing such as jackets, sleeves, or capes are provided for out of position welding. |  |  |  |
| Shade 3-5 goggle or face shields are provided for plasma cutting. |  |  |  |
| Gas cylinders are secured.  |  |  |  |
| Gas cylinders valves are closed when not in use. |  |  |  |
| Compressed Gas Storage |  |  |  |
| Compressed gas cylinders are chained or secured in place.  |  |  |  |
| The protective cap is in place on all stored cylinders. |  |  |  |
| Combustible compressed gas and oxygen cylinders are separated by at least 20 ft. or a 5 ft. high wall of 1/2 hr. heat barrier. |  |  |  |
| Empty and full cylinders are labeled. |  |  |  |
| Gas Welding |  |  |  |
| Portable gas welding equipment has the cylinder valves turned off when not in use.  |  |  |  |
| Portable gas welding equipment cylinders are secured.  |  |  |  |
| Gas welding goggles with tempered safety glass of the proper shade are in good condition.  |  |  |  |
| * Torch brazing No.3 or 4
 |  |  |  |
| * Light cutting to 1 in. No.3 or 4
 |  |  |  |
| * Gas welding (light) up to 1/8 in. No.4 or 5
 |  |  |  |
| * Gas welding (med.) 1/8 - 1/2 in. No.5
 |  |  |  |
| Oxyacetylene manifold welding systems have been installed according to the N.F.P.A. Shut off valves are working.  |  |  |  |
| Anti-flashback systems are in place and operational.  |  |  |  |
| Paint |  |  |  |
| Paint spray booth has adequate ventilation.  |  |  |  |
| Paint spray booth has proper lighting. |  |  |  |
| Explosion proof wiring within 20 feet of spray paint booth.  |  |  |  |
| No open flames within 20 feet of opening of spray paint booth. |  |  |  |
| Spray paint area not littered with combustible materials.  |  |  |  |
| Dress |  |  |  |
| Rings and other jewelry are removed when working in the shop. |  |  |  |
| All clothing worn is free from loose sleeves, flopping ties, loose coats. etc. |  |  |  |
| Long hair is tied back.  |  |  |  |
| Shoes cover feet (closed toe). Leather is required for welding. |  |  |  |

# Shop Safety Monthly Checklist

Shop: By: Date:

|  | **Pass** | **Fail** | **N/A** |
| --- | --- | --- | --- |
| **General Shop** |  |  |  |
| Aisles are properly indicated, and aisles, passageways and corridors are free of obstructions. |  |  |  |
| Condition of floors maintained in a clean and dry condition (no water or oil) and free from obstructions and debris. |  |  |  |
| Extension cords and air hoses are stored when not in use. (No trip hazard.) |  |  |  |
| **Personal Protective Equipment (PPE)** |  |  |  |
| Safety glasses are required (warnings posted). |  |  |  |
| Face shields are provided at every power tool. |  |  |  |
| **General Machinery and Tools** |  |  |  |
| Tools are stored neatly when not in use. |  |  |  |
| Tools are kept sharp, clean, and in good working order. |  |  |  |
| Bench brushes are provided to remove chips from drill presses. |  |  |  |
| Chop saws are properly guarded, clamp is working, and sparks are directed away from other students. |  |  |  |
| First aid supplies are well stocked and readily available. |  |  |  |
| **Materials Storage** |  |  |  |
| Pressure safety cans are used for flammable or combustible liquids. |  |  |  |
| Stored wood stacked safely and solidly so it will not fall. |  |  |  |
| Stored metal stored in racks safely and solidly so it will not fall. |  |  |  |
| **Compressed Air** |  |  |  |
| Hoses are in good condition. |  |  |  |
| Air used for cleaning is regulated to not more than 30 psi and chip guarded. |  |  |  |
| Air compressor is drained frequently. |  |  |  |
| **Battery Powered Equipment** |  |  |  |
| Batteries are in good condition (no damage). |  |  |  |
| Batteries are stored safely. |  |  |  |
| **Woodworking Equipment** |  |  |  |
| Saw blades and cutterheads are sharp and in good condition. |  |  |  |
| Push sticks or push blocks are available. |  |  |  |
| **Grinders** |  |  |  |
| The grinder has guards to cover the spindle ends, nuts and flanges. |  |  |  |
| The work rests are adjusted to within 1/8 inch of the grinding wheel. |  |  |  |
| The adjustable tongue guard or spark deflector on grinder is adjusted to within 1/4" of the grinder wheel. |  |  |  |
| Grinding wheel of the right type and in good condition with no cracks, wheel diameter over half -of original size. |  |  |  |
| Cooling container nearby and filled. |  |  |  |
| All portable grinders and saws have proper shielding in position. Power cords in good condition. |  |  |  |
| **Arc Welding** |  |  |  |
| Arc welding helmets with tempered safety glass of the proper shade are in good condition. |  |  |  |
| The floor in the welding area is kept dry and free of combustible materials. |  |  |  |
| Protective gloves are provided and are in good condition. |  |  |  |
| Protective clothing such as jackets, sleeves, or capes are provided for out of position welding. |  |  |  |
| Shade 3-5 goggle or face shields are provided for plasma cutting. |  |  |  |
| Gas cylinders are secured. |  |  |  |
| Gas cylinders valves are closed when not in use. |  |  |  |
| **Compressed Gas Storage** |  |  |  |
| Compressed gas cylinders are chained or secured in place. |  |  |  |
| The protective cap is in place on all stored cylinders. |  |  |  |
| Empty and full cylinders are labeled. |  |  |  |
| **Gas Welding** |  |  |  |
| Portable gas welding equipment has the cylinder valves turned off when not in use. |  |  |  |
| Portable gas welding equipment cylinders are secured. |  |  |  |
| Gas welding goggles with tempered safety glass of the proper shade are in good condition. |  |  |  |
| **Dress (if class is in session)** |  |  |  |
| Safety Glasses are worn at all times. |  |  |  |
| Rings and other jewelry are removed when working in the shop. |  |  |  |
| All clothing worn is free from loose sleeves, flopping ties, loose coats. etc. |  |  |  |
| Long hair is tied back. |  |  |  |
| Shoes cover feet (closed toe). Leather is required for welding. |  |  |  |

##

## Machinery (Tractor) Checklist

|  |  |
| --- | --- |
| Make | Model |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Pass | Fail | N/A | Comments |
| **Mechanical Inspection** |
| Engine Oil |  |  |  |  |
| Transmission/Hydraulic Oil |  |  |  |  |
| Brake Oil (if separate from hydraulic oil) |  |  |  |  |
| Oil Leaks |  |  |  |  |
| Coolant Level |  |  |  |  |
| Fuel level, Filler Cap |  |  |  |  |
| Air Cleaner valve and pre-cleaner clear |  |  |  |  |
| Radiator screen clear |  |  |  |  |
| Tire inflation and condition |  |  |  |  |
| Left and Right brakes have same travel |  |  |  |  |
| Three point hitch and sway chains. |  |  |  |  |
| Drawbar (firmly attached, fixed for road travel, free for field operations) |  |  |  |  |
| Hitch pins secured by safety (Lynch) pins |  |  |  |  |
| Deck free of oil and debris |  |  |  |  |
| Electrical wiring properly insulated and tied down |  |  |  |  |
| Steering connections tight |  |  |  |  |
| **Safety Equipment** |
| Seat belt installed and useable if ROPS equipped |  |  |  |  |
| PTO shields in place |  |  |  |  |
| SMV sign attached  |  |  |  |  |
| Head lights operational |  |  |  |  |
| Turn Signal/Hazard lights working (if equipped) |  |  |  |  |
| Turn/hazard lights operational |  |  |  |  |

Other Hazards (list):

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Inspected by: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_

1. Adapted from Planning, Organizing, and Teaching Agricultural Mechanics. Bear and Hoerner, Hobar Publications. 1986 [↑](#footnote-ref-1)