

PROJECT TITLE: WELDING

Description:

Youth will learn different methods of welding and what materials are best suited for each type of welding, acquire a working knowledge of the machines and equipment used in the trade, understand the proper care and maintenance of welding equipment and accessories, and safety procedures and practices involving the equipment used. Youth will also become familiar with the terms and conditions of welding.

Welding projects will be judged on weld consistency in weld size and length, lack of imperfections, appropriateness of welds used, overall appearance and neatness. Any welding process and mode of transfer is allowed but must be noted on the required Information/Craft Card.

State Fair Entries:

There is no state fair entry at this time.

Exhibit Guidelines:

1. Open to any 4-H member. Member may exhibit completed welding project, educational poster or both.
2. Enrolled youth must complete the previous division prior to advancing to the next division. Members with prior welding experience may appeal to the Extension Educator to exhibit at an advanced division.
3. In addition to a welding project or educational poster, each member will complete a project general record sheet.
4. Accommodations can be made for judging for items too large to be displayed at the fair. Arrangements must be made with Extension Educator prior to project check-in to make arrangements. Image of item exhibited will be taken for display at the fair.

Welding Exhibit Requirements

Division I (suggested Grades 3-5)

1. Exhibit 1 item by joining 2 pieces of metal using at least one of the following weld types: butt joint, tee joint, or lap joint
2. Attach a simple drawing with weld symbols identified on Information/Craft Card and additional pages as needed
3. Project ideas and suggestions: chipping hammer, step stool, coat rack, c clamps, boot scraper, flower pot holder, tool stand, horseshoe sign, tool box, flower trellis, shooting target, pipe whistle

Division II (suggested Grades 6-8)

1. Exhibit item of your own creation, which includes three of the four welding positions (flat, horizontal, overhead or vertical) and label each.
2. Attach a simple drawing with weld symbols identified on Information/Craft Card and additional pages as needed
3. Project ideas and suggestions: tool stand/rack, milking stand, steel post driver, coffee table, tool base, work/car ramps, rolling work stool, portable welder base, hay rack/feeder, hand cart, corner welding fixture with clamps

Division III (suggested Grades 9-12)

1. Exhibit one or more items of your own creation, which includes three of the four welding positions (flat, horizontal, overhead, or vertical) and label each.
2. Attach a simple drawing with weld symbols identified on Information/Craft Card and additional pages as needed
3. Project ideas and suggestions: Adjustable jacks, portable loading chute, garden cart, mechanics floor creeper, pipe saw horses, trailer, welding table/stand, 3 point hitch tractor hoist, snow blade, hand cart, tool rack

Educational Poster Exhibit Requirements

All posters, notebooks, and display boards must include a reference list indicating where information was obtained, giving credit to the original author, to complete the 4-H member's exhibit. This reference list should/might include web site links, people and professionals interviewed, books, magazines, etc. It is recommended this reference list be attached to the back of a poster or display board, be the last page of a notebook, or included as part of the display visible to the public. A judge is not to discredit an exhibit for the way references are listed.

Posters are to be 22"x28" and displayed horizontally and placed in a clear plastic sleeve or covered with clear plastic to protect contents. Display boards should be designed to sit on a table using no more than 36" of tabletop space. Space should be left in the lower right-hand corner to place an exhibit tag provided by Purdue Extension staff.

Division I (suggested Grades 3-5)

Exhibit a poster on one of the following topics: illustrate a butt weld, lap weld and a tee-weld, welding safety equipment, types of welders

Division II (suggested grades 6-8)

Exhibit a poster on one of the following topics: illustrate the four welding positions (flat, horizontal, overhead and vertical), types of welding rods, welding safety, uses of welding

Division III (suggested grades 9-12)

Exhibit a poster on one of the following topics: careers in welding, welding safety, history of welding, science of welding, or any other advanced welding topic