

SMALL ENGINE

LEVEL/GRADE:

Level 1 (BU- 8186): Grades 3, 4, 5

Level 2 (BU-8187): Grades 6, 7, 8

Level 3 (BU-8189): Grades 9, 10, 11, 12

RULES:

1. Community Judging of all 4-H Small Engine Projects will be at Project Check-In.
2. Choose one of the topics listed below, appropriate for your grade in school, and create an educational display based on what you learned from the activity. Options include:
 - a. Poster Display
 - 22"x28"
 - Mounted on a stiff backing foamboard, thin plywood, peg board or very stiff cardboard.
 - Displayed horizontally.
 - Covered in plastic
 - 4-H member's exhibit card to be displayed in the lower right hand corner.
 - b. Actual Engine Display
 - Must be mounted on a stable base no larger than 30" wide x 30" deep and free standing.
 - For safety reasons, all fluids (fuel and oil) must be removed.
 - Note: It is strongly suggested that a notebook with details and pictures of what was done to the engine accompany the display.
 - 4-H member's exhibit card to be secured in lower right hand corner.
 - c. 3-dimensional display.
 - No more than 36"x36" and free standing.
 - All items to be securely fastened.
 - 4-H members's exhibit card to be secured in lower right hand corner.
3. 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 manner in which references are listed.

EXHIBIT:

LEVEL 1 - GRADES 3, 4, & 5

Educational display: Any educational display related to what you have learned in this project. Some possibilities of exhibits might include:

- Picture poster showing what you have learned about small engines.
- Display of basic tools needed to maintain a small engine.
- An educational display related to what you have learned about two-cycle engines.
- An educational display related to what you have learned about four-stroke engines.
- An educational display showing proper maintenance and care of a lawn mower.
- An educational display of proper safety labels and procedures for small engines.
- Small engines parts display board with a brief explanation of the purpose of the parts and how they work.
- Display related to some system that you learned about in small engines (filters, cooling, ignition, etc.).
- Action demonstration on any aspect of small engines covered in this manual.

LEVEL 2 - GRADES 6, 7, & 8

Educational display: Any educational display related to what you have learned in this project. Some possibilities of exhibits might include:

- An educational display comparing the different types of engines.
- An educational poster illustrating and explaining the internal parts of an engine.
- An educational display showing how transmissions work.
- An educational display showing how to conduct a compression check.
- An educational display showing how to adjust a carburetor according to owner's manual instructions and in accordance with EPA regulations.
- A display using a real small engine with a brief explanation showing steps in preparing a small engine for storage.
- Carburetor parts display board with a brief explanation of the purpose of the parts and how they work together.
- An income and expense record of your lawn mowing business, including costs, hours worked, pay for individual jobs, etc.
- Action demonstration on any aspect of small engines covered in this manual.

LEVEL 3 ADVANCED - GRADES 9 & ABOVE

Educational display: Any educational display related to what you have learned in this project. Some possibilities of exhibits might include:

- An educational display showing how to use diagnostic tools on small engines.
- An educational display showing how to tear down and reassemble a small engine.
- An educational display related to the electrical system of a small engine.
- An educational display about emissions systems on small engines and future trends.
- An educational display showing mower blade inspection and maintenance skills.
- An educational display about careers in small engines.
- An educational display about your work in finding resources about small engines on the Internet.
- An educational display about trouble-shooting common problems with small engines.
- An educational display about small engines designs.
- Any educational display related to what you have learned in this project.
- Action demonstration on any aspect of small engines covered in this manual.

STATE FAIR:

There will be one state fair entry from each level.