

## SMALL ENGINES

**PLEASE NOTE: Any changes/updates from the previous year will be **BOLDED** and *ITALICIZED*! Pay special attention to any projects with **BOLD**, *ITALICIZED WORDS* because they have changed from last year.**

<i>Completion, exhibition participation, and State Fair information for Small Engines</i>			
<b>Division/Level</b>	<b>Grades</b>	<b>Completion Activities Needed*</b>	<b>Maximum State Fair Entries</b>
<i>Level 1</i>	<i>Grades 3-5</i>	<i>Complete 7 Activities*</i>	<i>1 Entry</i>
<i>Level 2</i>	<i>Grades 6-8</i>	<i>Complete 7 Activities*</i>	<i>1 Entry</i>
<i>Level 3</i>	<i>Grades 9-12</i>	<i>Complete 7 Activities*</i>	<i>1 Entry</i>

\*"Activities" are defined as project manual activities and/or Hendricks County 4-H Workshops related to this topic. Members must be able to prove attendance by getting a signature from 4-H Leader/Project Advisor that conducts the workshop. Activity sheets available in the Extension Office with Small Engines Project Manuals. Fair Exhibit requirements are listed below.

**Remember:** 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. Reference Sheets are available at the Extension Office for use. For personal safety, do not include personally identifiable information such as mailing address or phone numbers on posters/displays/exhibits.

### EXHIBIT:

**NOTE: Engines must be drained and free of gasoline and motor oil before being placed on exhibition.**

Actual Engine Display: The actual small engine may be displayed. It must be mounted on a stable base no larger than 30" x 30". For safety reasons, all fluids (fuel and oil) must be removed. Note: It is strongly suggested a notebook with details and pictures of what was done to the engine accompany the display.

### Display Board Requirements:

- No more than 36" x 36" deep and free standing
- 3-dimensional display
- All items to be securely fastened
- 4-H member's exhibit card to be secured in lower right-hand corner

Be sure to enroll in the project on 4-HOnline and enter exhibit information into FairEntry by designated date.

### Level 1: Grades 3-5

**-Educational display (poster or display board):** 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.).

**-4-H Project Interactive Demonstration** on any aspect of small engines covered in this manual.

## **Level 2: Grades 6-8**

**-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.

**-4-H Project Interactive Demonstration** on any aspect of small engines covered in this manual.

## **Level 3: Grades 9-12**

**-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.

**-4-H Project Interactive Demonstration** on any aspect of small engines covered in this manual