

SMALL ENGINES

(Last updated 12/2020)

State Fair Entries: One per level

References:	BU-8186	Small Engines 1 (Grades 3-5), Crank It Up!
	BU-8187	Small Engines 2 (Grades 6-8), Warm It Up!
	BU-8188	Small Engines 3 (Grades 9-12), Tune It Up!

Find these books
for **FREE** at the
Extension Office!

Engine Display Requirements: 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 that a notebook with details and pictures of what was done to the engine accompany the display.

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.

Display Board Requirements:

- No more than 36"x36" 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

Exhibits:

BEGINNER (Grades 3-5):

- Picture poster showing what you have learned about small engines. (poster size is 22" x 28")
- Display of basic tools needed to maintain 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.)

INTERMEDIATE (Grades 6-8)

- An educational display comparing the different types of engines.
- An educational poster illustrating and explaining the internal parts of an engine. (poster size is 22" x 28")
- An educational display showing how transmissions work.
- An educational display showing how to adjust a carburetor according to owner's manual instructions and in accordance with EPA regulations.
- An educational display how to conduct a compression check.
- 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.

ADVANCED (Grades 9-12)

- 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 about emissions systems on small engines and future trends.
 - An educational display related to the electrical system of a small engine.
 - 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.
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