

# DEPARTMENT 24

## MECHANICAL

### PROJECTS

<u>Lot#</u>	<u>1st</u>	<u>2nd</u>	<u>3rd</u>	<u>4th</u>
	\$3	\$2.75	\$2.50	\$2.25

All posters must be 14x22 inches.

**Class A - Aerospace (Grades 3 - 5)**

**Class B - Aerospace (Grades 6 - 8)**

**Class C - Aerospace**

**(Grades 9 - 12 & 1 yr. beyond)**

- 1 Model airplane made from scratch of balsa wood, paper, or cardboard, etc. made not to fly
- 2 Model airplane made from scratch of balsa wood, paper, or cardboard, etc. made to fly
- 3 Model of airplane, from kit made not to fly
- 4 Model of airplane, from kit made to fly
- 5 Poster showing parts of an airplane

#### ***Model Rocketry***

- 6 Model rocket made from scratch, explain construction, launch and tracking results
- 7 Model rocket, made from kit, skill level 1-2. Explain construction, launch and tracking results
- 8 Model rocket, made from kit, skill level 3-4. Explain construction, launch and tracking results
- 9 Poster illustrating safe rocket launch
- 10 Photo story of project activities
- 11 Poster on basic parts of rocket showing functions
- 12 Model rocket for display only
- 13 Any other aerospace item or display not listed above

**Class D - Bicycle (Grades 3 - 5)**

**Class E - Bicycle (Grades 6 - 8)**

**Class F - Bicycle (Grades 9 - 12 & 1 yr. beyond)**

- 1 Poster on traffic control signs
- 2 Poster on types of bikes past and present
- 3 Poster showing one or more safety hazards and corrective measures
- 4 Poster on proper care, maintenance and use of bicycle
- 5 Scrapbook on how your bike works and how you care and maintain it
- 6 Poster or display board showing basic parts of a bike
- 7 Poster on bicycle rules
- 8 Bicycle repair kit
- 9 Picture story of a bicycle trip
- 10 Rebuild bicycle, explain process

**Class G - Operation and maintenance (Grades 3 - 5)**

**Class H - Operation and maintenance (Grades 6 - 8)**

**Class I - Operation and maintenance (Grades 9 - 12 & 1 yr. beyond)**

- 1 Panel exhibit of small engine parts with identification of each part
- 2 Poster illustrating steps in a small engine service job
- 3 Poster showing correct steps in preparing a small engine for off-season storage
- 4 Poster on small engine safety

**Class J - Four Cycle Engine (Grades 3 - 5)**

**Class K - Four Cycle Engine (Grades 6 - 8)**

**Class L - Four Cycle Engine (Grades 9 - 12 & 1 yr. beyond)**

- 1 Panel exhibit of small engine parts with identification of parts
- 2 Poster illustrating steps in a small engine service job

- 3 Poster showing correct steps in preparing a small engine for off season storage
- 4 Small engine safety poster
- 5 Poster showing events in a four cycle engine with a brief explanation or each
- 6 Panel exhibit showing diagram of ignition, fuel or lubrication system
- 7 Panel showing worn or faulty engine parts with a statement as to cause and prevention
- 8 Panel display of small engine parts, identified

**Class M - Two cycle engines (Grades 3 - 5)**

**Class N - Two cycle engines (Grades 6 - 8)**

**Class O - Two cycle engines (Grades 9 - 12 & 1 yr. beyond)**

- 1 Poster showing events of a two-cycle engine with a brief explanation
- 2 Panel exhibit of carburetor parts with explanation of function of parts (float type or diaphragm type)
- 3 Poster listing preventive maintenance measures recommended for two-cycle engines
- 4 Poster on safety in using one of the following: chain saws, or outboard motors, or motorcycles, or motor bikes
- 5 Panel exhibit showing diagram of ignition, fuel or lubrication system
- 6 Panel showing worn or faulty engine parts with a statement as to cause and prevention
- 7 Small engine safety poster
- 8 Panel display of small engine parts, identified

**Class P - Tractor Maintenance (Grades 3 - 5)**

**Class Q - Tractor Maintenance (Grades 6 - 8)**

- 1 Exhibit showing safe and unsafe operating procedures in maintenance or driving
- 2 Exhibit panel of worn parts caused by poor tractor maintenance collected by member, with explanation of cause, and how it could have been prevented
- 3 Poster or model telling a story of tractor or machinery safety
- 4 Tractor project booklet
- 5 Any other tractor project educational exhibit

**Class R - Tractor Maintenance (Grades 9 - 12 & 1 yr. beyond)**

- 1 Exhibit showing safe and unsafe operating procedures in maintenance or driving
- 2 Exhibit panel of worn parts caused by poor tractor maintenance collected by member, with explanation of cause, and how it could have been prevented
- 3 Poster or model telling a story of tractor or machinery safety
- 4 Tractor project booklet
- 5 Any other tractor project educational exhibit
- 6 Exhibit showing safe and unsafe operating procedures in maintenance or driving
- 7 Poster displaying tractor service and cost records
- 8 Display board showing different kinds of nuts, bolts, screws, washers and other fasteners used on farm machinery, properly labeled
- 9 Scrapbook/exhibit of farm safety promotion or activity
- 10 Exhibit depicting farm safety

**Class S - Automotive Unit 1 (Grades 3 - 6)**

- 1 Automotive safety hazards poster, exhibit should include a map and at least 6 photographs showing safety hazards in your community
- 2 Illustrated poster showing proper car care procedures
- 3 Poster of types of signs, signals and markings in Wisconsin
- 4 Exhibit showing blind driveways - use model buildings, shrubs, car, etc.
- 5 Scrapbook of automotive repair work
- 6 Any other educational exhibit

**Class T - Automotive Unit 2 (Grades 7 & up)**

- 1 Illustrated poster describing "what to look for in buying a used car"
- 2 Miniature scale model display showing stopping distances required for different road conditions at different m.p.h.
- 3 Exhibit of "worn vs. safe" fan belts

- 4 Display or drawing of the following items: a) carburetor systems b) ignition systems c) four-stroke motor d) cooling system
- 5 Any other educational exhibit

**Class UA - Models (Grades 3 - 5)**

**Class UB - Models (Grades 6 - 8)**

**Class UC - Models (Grades 9 - 12 & 1 yr. beyond)**

- 1 Train from a kit
- 2 Train from scratch
- 3 Truck from a kit
- 4 Truck from scratch
- 5 Car from a kit
- 6 Car from scratch
- 7 Ship and boat from a kit
- 8 Ship and boat from scratch
- 9 Motorcycle from a kit
- 10 Motorcycle from scratch
- 11 Submarine, tank, military equipment from a kit
- 12 Submarine, tank, military equipment from scratch
- 13 Farm equipment from a kit
- 14 Farm equipment from scratch
- 15 Any other model from a kit
- 16 Any other model from scratch

**Class V - Handyman (Grades 3 - 5)**

**Class W - Handyman (Grades 6 - 8)**

**Class X - Handyman (Grades 9 - 12 & 1 yr. beyond)**

- 1 Repaired, refinished or constructed article for use in the workshop (attach a statement of work done & method used)
- 2 Repaired, refinished or constructed article for sport or recreational purposes (attach a statement of work done & method used)
- 3 Repaired, refinished or constructed article for use in the home (attach a statement of work done & method used)
- 4 Repaired, refinished or constructed article for use out-of-doors (attach a statement of work done & method used)
- 5 Repaired, refinished or constructed article for use in another project (attach a statement of work done & method used)

**Class Y - Modeled Landscape Design**

- 1 Agricultural scene
- 2 Military scene
- 3 Construction scene
- 4 Pioneer scene
- 5 Any other scene

**Class ZA - Snowmobile (Grades 3 - 5)**

**Class ZB - Snowmobile (Grades 6 - 8)**

**Class ZC - Snowmobile (Grades 9 - 12 & 1 yr. beyond)**

- 1 Poster identifying snowmobile parts
- 2 Poster of cold weather gear and protection
- 3 Survival kit designed for carrying on a snowmobile
- 4 Display showing proper snowmobile maintenance
- 5 Poster showing snowmobile safety
- 6 Picture story showing snowmobile trip

**Class ZD - Metal Working (Grades 3 - 5)**

**Class ZE - Metal Working (Grades 6 - 8)**

**Class ZF - Metal Working (Grades 9 - 12 & 1 yr. beyond)**

<u>Lot#</u>	<u>1st</u>	<u>2nd</u>	<u>3rd</u>	<u>4th</u>
	\$2	\$1.75	\$1.50	\$1.25

- 1 Repaired or constructed article for use in the workshop (attach a statement of work done & method used)

- 2 Repaired or constructed article for sport or recreational purposes (attach a statement of work done & method used)
- 3 Repaired or constructed article for use in the home (attach a statement of work done & method used)
- 4 Repaired or constructed article for use out-of-doors (attach a statement of work done & method used)
- 5 Repaired or constructed article for use in another project (attach a statement of work done & method used)

**Class ZG - Robot (Grades 3 - 5)**

**Class ZH - Robot (Grades 6 - 8)**

**Class ZI - Robot (Grades 9 - 12 & 1 yr. beyond)**

1 Any Entry