

DEPARTMENT 24-J JUNIOR FAIR MECHANICAL SCIENCE

Entry Requirements:

1. All exhibits larger than 3' squared and/or need a special display space must contact the UW- Extension office by July 15th.
2. Exhibits must be work of exhibitor.

Danish Judging		1 st	2 nd	3 rd	4 th
Class A	Exhibitor Grades 3-6	\$2.00	\$1.75	\$1.50	\$1.25
Class B	Exhibitor Grades 7-9	\$2.50	\$2.25	\$2.00	\$1.75
Class C	Exhibitor Grades 10 & over	\$3.00	\$2.75	\$2.50	\$2.25

Aerospace

1. Limited to exhibitors enrolled in the Aerospace Project or Model Rocketry project
2. A recovery parachute must be included with all rockets.
3. All models must have an attached 3 5 inch card explaining type of material used (plastic, wood, etc.), type of paint used and number of hours required for assembly

Lots

- Basic part of a rocket and their functions
- Exhibit or rocket built by member - Skill Level 1 or 2 (indicate if kit was used)
- Rocket built by member - Skill Level 3 or over
- Rocket created from original design (example—Duct tape, etc.)

Automotive

1. Limited to exhibitors enrolled in the Automotive Projects.
2. Exhibits must have attached 3x5-inch card explaining details of exhibit.

Lots

- Automotive, any other
- Conditions which may be caused by improper care of an automobile
- Different car costs (gasoline consumption, oil consumption, tire services, seasonal services etc.)
- Formulate a maintenance schedule for a vehicle
- How to buy a car
- Operation of any one working unit of an automobile engine
- Preparation of an engine for storage
- Restoration of an automobile part or parts, explain changes made

Bicycling

1. Limited to exhibitors enrolled in the Bicycling Project.
2. Each exhibitor may exhibit three posters (14 x 22-inches maximum size).
3. All posters must have a title.
4. Exhibits must have an attached 3x5-inch card explaining details of exhibit.

Lots

A scrapbook on how your bike works and how to care and maintain it
Bicycle parts and descriptions of their functions
Bicycle safety or safety gear - Exhibit
Bicycle traffic signals and or signs
Bicycling project, any other
Fitting and or purchasing a personal bicycle
How to perform a bicycle safety check
Rebuilt Bike
Written plan or log for a bicycle trip

Engineering

1. Limited to exhibitors enrolled in the STEM or STEM Exploring Project.
2. Exhibits must have an attached 3x5-inch card explaining details of exhibit.

Lots

Bridge designed or built by exhibitor
Catapult or trebuchet designed or built by exhibitor
Engineering Project, any other
Rollercoaster designed or built by exhibitor
Rube Goldberg machine designed and built by exhibitor
Transportation vehicle designed or built by exhibitor

Legos and K'Nex

1. Limited to exhibitors enrolled in the Scale Models Project or Legos Project.
2. Materials used can be Legos, K'Nex, or similar building materials.

Lots

Airplane or helicopter
Boat or watercraft
Building
Car or truck
Lego, K'Nex, any other, from a kit
Lego, K'Nex, any other, original

Robotics

1. Limited to exhibitors enrolled in the Robotics Project.
2. Exhibits must have attached 3x5-inch card explaining details of exhibits.

Lots

Basic robot from kit (ex. Lego tankbot)
How exhibitor designed a robot to perform a task or to entertain
"Junkdrawer" robot that exhibitor designed and built
Original program design with explanation
Other robotics exhibit
Parts of an RCX (robot's brain)
Robot of any platform designed and created by exhibitor that performs simple task
Types of gears

Scale Models

1. Limited to exhibitors enrolled in the Scale Models Project.
2. All models must have an attached 3 x 5 inch card explaining type of material used (plastic, wood, etc.), type of paint if used, number of hours for assembly, description of original design if not a kit.

Lots

Airplane or helicopter, hand - painted and glued
Airplane or helicopter, snap-fit and or pre - painted
Building, hand - painted and glued
Building, snap-fit and or pre - painted
Car or truck, hand - painted and glued
Car or truck, snap-fit and or pre - painted
Scale Model, hand-painted and glued, any other
Scale Model, snap-fit and or pre-painted, any other

Small Engines

1. Limited to exhibitors enrolled in the Small Engines Project.
2. Exhibit must have an attached 3x5-inch card explaining details of exhibit.

Lots

Correct steps in preparing a small engine for off - season storage
Events of a 2-cycle or a 4-cycle engine with brief explanation
How to disassemble a small engine
Panel exhibit showing diagram of ignition, fuel or lubrication systems (actual parts may be used)
Panel of small engine parts with identification and explanation of function of parts
Panel showing worn or faulty engine parts with a statement as to cause and prevention
Small Engine Project, any other
Small engine safety
Spark plug maintenance
Steps in small engine service job
Tools for working with small engines and their uses

Tractors

1. Limited to exhibitors enrolled in the Tractors Project.
2. All posters and charts should be 14 x 22-inches.
3. All posters and charts must have a title.
4. Exhibits must have an attached 3x5-inch card explaining details of exhibit.

Lots

Basic tool kit
Exhibit of preparing tractor, farm machinery for winter
Restoration of a tractor part or parts, explain changes made
Tractor engine types
Tractor Project, any other