

## Department Junior Mechanical Projects #24

### Important Information:

1. Click here for online entry <http://nwsfa.fairwire.com>
2. Schedule can be found online and on page 1. Judging times are subject to change based on entry count, and judges' schedule.
3. **Only use this year's Exhibitors Guide.**
4. General information that pertains to all departments can be found online and starting on page 2. It is the exhibitor's responsibility to follow all expectations.
5. By participating in the Northern Wisconsin State Fair, you agree to follow the Code of Ethics set forth by the NWSFA Board. Mistreatment of any animal will not be tolerated. Any exhibitor or person found mistreating animals during the exhibition will be dismissed from the fairgrounds with loss of premiums.
6. By participating you authorize the use of your image in pictures, audio, and video productions for advertising and marketing needs of the NWSF.
7. Judging & awards:
  - All entries will be judged by certified specialty judges using the Danish system.

### Types of judging:

- **Face-to-Face:** Used for two departments.
    - B10(A) small animals, a.k.a. pocket pets. These animals are at the fairgrounds only for their conference with the judge. Ribbons will be given at the time of conferencing. Exhibitors may choose to display a picture of the animal the ribbon in the Youth building.
    - B17 Younger Youth grade K-2. Exhibitors individually discuss their project with a judge, learning the strengths and weaknesses of their project. All exhibitors in this department earn a multi-colored ribbon when they meet with the judge.
  - **Conference:** Used for all other Junior non-animal departments. The exhibitors conference with a judge, who may ask youth questions about their project and use the knowledge as well as the quality of the exhibit to place the entries according to the Danish method.
    - **Danish Method:** The judge will award ribbons AFTER all items have reviewed. This process determines the quantity of each place ribbon that can be awarded in that class. For example: if there are 15 items in a class, then only 3 may receive a blue, up to 7 may receive a red, up to 11 may receive a white, and up to 15 may receive a pink.
  - Classes may be further divided at the discretion of the judge.
  - Additional ribbons MAY be given at the judge's discretion and may include either a Judge's Choice ribbon (following State Fair rules) OR a Best in Show ribbon.
8. The department supervisor has the privilege of removing deteriorating exhibits during the fair.
  9. **Premiums:** Each worthy exhibit will receive a uniform premium of \$1.50.

### Department Junior Mechanical #24 Notice the new terminology Department – Division – Class

- Work must have been created by the exhibitor since August 1 of the previous year (during the past 11 months)
- School projects done for a grade may not be entered.
- Projects may only be entered once. May not be entered a second year.
- Posters may not be larger than 18x24.

### **Division A – Tractor - Class # - Description**

1. Poster explaining tractor or machinery safety.
2. Display board showing various kinds of nuts, bolts, screws, rivets, and other fasteners used on farm machinery, properly labeled.
3. Poster showing the importance of proper tractor care and adjustments as they relate to good tractor operation. Examples: Spark plugs, batteries, tires, air cleaners, carburetors, etc.
4. Display of one piece of toy farm machinery, (includes toy tractor or implement) mounted on plywood board, with written explanation of significance of this toy farm machinery.
5. Presentation about a tractor restored by exhibitor with explanation of restoration process.

### **Division B – Automotive - Class # - Description**

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1. Poster indicating types of traffic signs, signals and highway markings used in Wisconsin.
2. Poster reporting a study of the uses of the family automobile.
3. Maintenance schedule (Form 1) for family car, cost account for one month (Form 2) and insurance charges (Form 3). These to be put on a poster.
4. Poster with information on car keeping: (a) interior care; (b) exterior care: washing, vacuuming, removing stains, polishing, etc.
5. Poster or display showing operation of any one working unit of an automobile engine.
6. Chart showing stopping distances required for different road conditions at different M.P.H. ranges.
7. Chart or display showing the operation of any one working unit of any automobile engine.
8. Display of carburetor identifying the various component parts.
9. Display of distributor identifying the various component parts.
10. Display of the engine cooling system identifying the various component parts.
11. Display of sections of different worn tires with explanation of causes of wear.
12. Exhibit of worn brake lining and damaged brake drums versus new lining and smooth drums.
13. Automotive safety poster.

### Division C - Small Engines - Class # - Description

1. Panel exhibit of small engine parts with identification to the parts.
2. Poster showing correct steps in preparing a small engine for winter storage (14"x22"). Maximum panel size is 4'x4'.
3. Panel showing worn or faulty engine parts with a statement as to cause and prevention. Panel 4'x4' is maximum size.
4. Poster showing the events in a four-cycle engine with a brief explanation
5. Panel exhibit of carburetor parts with explanation of function of parts, float, or diaphragm type.
6. Poster showing events in a two-cycle engine with a brief explanation.
7. Small engine safety poster
8. Safety poster on chainsaw use, outboard motors, or motor bikes
9. A cut away small engine with a brief explanation of the work done.
10. A rebuilt small engine with a brief explanation of work done.

### Division D – Bicycle - Class # - Description

1. A study project on the types of bicycles, past or present (examples: booklet or miniature models).
2. Identification of bicycle parts, poster
3. Steps in care and maintenance of a bicycle, poster
4. Poster on safe bicycle operation,
5. Poster on vehicle and bicycle laws,
6. Bicycle safety poster,
7. Log of at least 3 bicycle trips.

### Mechanical

#### Division E – Aerospace - Class # - Description

1. Poster, illustrating an airplane instrument panel.
2. A balsawood flying model airplane.
3. A plastic model airplane-from a kit, assembled by exhibitor.
4. A model of an airplane mock-up to demonstrate aircraft controls.
5. Model rocket built from a kit. Be prepared to discuss assembly procedures. Grades 3-8.
6. Model rocket built from a kit Be prepared to discuss assembly procedures. Grades 9-13.
7. Model rocket previously launched by exhibitor grades 3-8.
8. Model rocket previously launched by exhibitor grades 9-13.
9. Aerospace safety poster.

#### Division F – Models – Class # - Description

- All Mechanical Science Models, including LEGO's, Knex or similar construction kits.
  - Reference to Legos is meant to include comparable products in every case.
  - No engine driven rockets
1. Models made from building blocks (Lego style) from a kit - Grade 5 and under
  2. Models made from building blocks (Lego style) from a kit - Grades 6-8

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3. Models made from building blocks (Lego style) from a kit - Grades 9-12
4. Models made from building blocks (Lego style) not from a kit - Grade 5 and under
5. Models made from building blocks (Lego style) not from a kit - Grades 6-8
6. Models made from building blocks (Lego style) not from a kit - Grades 9-12
7. Models made from Knex blocks
8. Model made from a kit - (pre-painted plastic)
9. Model made from a kit - (pre-painted steel)
10. Model made from a kit - (self-painted)
11. Customized models\*\*Made from parts from kits of other models. Example: Model A Ford Kit, with parts from a Pinto or other car to customize the kit or stock car from a model kit.
12. Any other model from your own original design, constructed.

#### **Division G – Handyman - Class # - Description**

1. Repaired or constructed article for use in the workshop. (Attach a statement of work done and method used.)
2. Repaired, refinished, or constructed articles for sport or recreational purposes. (Attach a statement of work done and method used.)
3. Repaired, refinished, or constructed articles for use in the home. (Attach a statement of work done and method used.)
4. Repaired, refinished, or constructed articles for use outdoors. (Attach a statement of work done and method used.)
5. Constructed article using recycled materials.

#### **Division H – Welding - Class # - Description**

1. Poster showing the different equipment used for welding.
2. A display of 3 welds (t-joint, butt weld and lap weld) using oxyacetylene, arc or wire welder. Joints may be no more than 3" long.
3. Repaired item.
4. Manufactured item.
5. Any other welding projects.