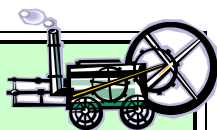


## DEPARTMENT 24 JUNIOR MECHANICAL SCIENCE



Superintendent – Michael Thorelli Assistant – TBD

All Posters & Hardboard Panels are to be 14"x22"

### Premiums:

1st \$2.50 2nd \$2.25 3rd \$2.00 4th \$1.75

#### CLASS A – TRACTOR

##### Item No.

1. Poster showing steps in daily maintenance of tractor
2. Poster showing a diagram of a fuel system
3. Poster showing a diagram of lubrication system
4. Poster illustrating ideas of tractor safety
5. Poster displaying diagram of ignition system
6. Poster with information of proper care of machinery
7. Display board showing different kinds of nuts, bolts, washers, screws, & other fasteners used on farm machinery, properly labeled
8. Poster illustrating ideas of machinery safety

#### TRACTOR OPERATOR'S CONTEST (Pre-Fair)

Superintendents – Howard Larson and Ed Lusk

The Tractor Operator Contest will be held at the end of June. Date, time and a location TBD. Those entering will receive additional information.

### Premiums:

1st \$2.50 2nd \$2.25 3rd \$2.00 4th \$1.75

#### CLASS B – Grade 3-8, Junior Division

#### CLASS C – Grade 9-13, Senior Division

##### Item No.

1-Contest will include the following events: tractor safety, written exam, practical exam, 2 and 4 wheel driving events

### Premiums:

1st \$2.00 2nd \$1.75 3rd \$1.50 4th \$1.25

#### CLASS D – SMALL ENGINES I (Four-Cycle Engine)

##### Item No.

1. Poster identifying parts of small engines & their function
2. Small engine safety poster
3. Poster emphasizing the skills of servicing small engines
4. Poster showing steps in preparing small engines for storage
5. Poster showing the events in a 4 cycle engine with a brief explanation

### Premiums:

1st \$2.00 2nd \$1.75 3rd \$1.50 4th \$1.25

#### CLASS E – SMALL ENGINES Unit II (Two-Cycle Engines)

##### Item No.

1. Poster showing diagram of ignition system
2. Display showing worn or faulty engine parts with a statement as to cause & prevention
3. Small engine safety poster
4. Poster showing events in a 2 cycle engine with a brief explanation
5. Poster of carburetor parts with explanation of function of each. Float type or diagram type
6. Poster listing preventive maintenance measures recommended for 2-cycle engines

#### CLASS F – BICYCLE Level 1: BICYCLING ADVENTURES

##### Item No.

1. Poster on proper way to wear a helmet
2. Display on helmet types
3. Poster on bike safety check
4. Exhibit on highway signs
5. Poster on how to make safe turns

6. Poster on crossing intersections safely
7. Poster on how to make safe stops
8. Display on riding a bike in traffic
9. Display on locating bike hazards
10. Display on choosing safe places to ride
11. Bike scrapbook
12. Report on a group bicycle ride

#### CLASS FA – BICYCLE Level 2: BICYCLING ADVENTURES

##### Item No.

1. Poster on purchase information on bikes
2. Display on bike parts
3. Poster on tire inflation
4. Display on bike adjustments
5. Display on chain maintenance
6. Poster on safe scanning
7. Poster on how to make safe turns
8. Poster on using gears efficiently
9. Poster on quick stopping
10. Display on dodging obstacles
11. Display on planning a bike trip
12. Exhibit on how to be a safe, courteous cyclist
13. Bike adventure journal

#### CLASS FB – BICYCLE Level 3: BICYCLING ADVENTURES

##### Item No.

1. Price comparison of bikes to buy
2. Display on how to fix a flat tire
3. Poster on chain maintenance (advanced)
4. Display on how to replace break cables
5. Poster on making emergency turns (advanced)
6. Poster on using gears efficiently
7. Display on riding safely at night, in bad weather
8. Report on career opportunities
9. Report on bike activism or community service
10. Report on a bike rodeo

### Premiums:

1st \$2.50 2nd \$2.25 3rd \$2.00 4th \$1.75

#### CLASS G – AUTOMOTIVE

##### Item No.

1. Poster reporting a study of uses of family automobile
2. Poster indicating types of traffic signs, signals, & highway markings used in Wisconsin
3. Poster emphasizing hand signals & their meaning
4. Poster emphasizing fuel economy
5. Poster with information on selection & care for tires
6. Poster, how to safety check your car personally
7. Poster on map symbols
8. Booklet with information on car keeping, interior care, exterior care, washing, vacuuming, removing stains, polishing etc.
9. Booklet, engine parts & functions or power train & brake system parts & functions
10. First-aid & emergency equipment car kit

### Premiums:

1st \$2.00 2nd \$1.75 3rd \$1.50 4th \$1.25

#### CLASS H – AEROSPACE

All poster are to be 14"x22"

##### Member's Grade:

3-8

9-13

##### Item No.

##### Item No.

- |   |    |   |
|---|----|---|
| 1 | 31 | Model airplane-plastic  |
| 2 | 32 | Model airplane-stick & paper, regular   |
| 3 | 33 | Model airplane, gas powered   |
| 4 | 34 | Kite, homemade  |
| 5 | 35 | Model glider  |
| 6 | 36 | Model rocket w/ plastic fins  |
| 7 | 37 | Single stage model rocket   |
| 8 | 38 | Multi-stage model rocket  |
| 9 | 39 | Single stage model rocket previously launched, attach a card describing launch, flight & recovery |

10	40	Multi-stage model rocket previously launched, attach a card describing launch, flight & recovery
11	41	Poster, model rocket parts, labeled
12	42	Poster on model rocket safety
13	43	Poster, instrument panel
14	44	Poster, airplane history or progress in aerospace
15	45	Poster, airplane parts & functions
16	46	Poster, outer space study
17	47	Any other aerospace exhibit
18	48	Poster comparing birds to airplanes
19	49	Poster of aerospace careers
20	50	Poster of different types of aircraft
21	51	Poster on how weather affects flying
22	52	Paper flight simulator
23	53	Feather wing glider
24	54	Display of remote control parts and their functions
25	55	Poster of helicopter parts and their functions
26	56	Altitude tracker
27	57	Poster on how to earn a pilot's certificate
28	58	Poster of a navigation system
29	59	Personal career profile
30	60	Poster of at least 6 aircraft types and their usage.

**Premiums:**

**1st \$2.50 2nd \$2.25 3rd \$2.00 4th \$1.50**

**CLASS J – MODELS**

**Member's Grade:**

<b>3-8</b>		<b>9-13</b>
<u>Item No.</u>	<u>Item No.</u>	
1	40	Train, snapfit
2	41	Train, glued, precolored
3	42	Train, glued, visible handpainted
4	43	Truck, snapfit
5	44	Truck, glued, precolored
6	45	Truck, glued, visible handpainted
7	46	Car, snapfit
8	47	Car, glued, precolored
9	48	Car, glued, visible handpainted
10	49	Ship, snapfit
11	50	Ship, glued, precolored
12	51	Ship, glued, visible handpainted
13	52	Motorcycle, snapfit
14	53	Motorcycle, glued, precolored
15	54	Motorcycle, glued, visible handpainted
16	55	Submarine, snapfit
17	56	Submarine, glued, precolored
18	57	Submarine, glued, visible handpainted
19	58	Tank, snapfit
20	59	Tank, glued, precolored
21	60	Tank, glued, visible handpainted
22	61	Airplane, snapfit
23	62	Airplane, glued, precolored
24	63	Airplane, glued, visible handpainted
25	64	Helicopter, snapfit
26	65	Helicopter, glued, precolored
27	66	Helicopter, glued, visible handpainted
28	67	Race car, snapfit, decaled
29	68	Race car, glued, decaled
30	69	Building, snapfit
31	70	Building, glued, precolored
32	71	Building, glued, visible handpainted
33	72	Any other model, snapfit
34	73	Any other model, glued, precolored
35	74	Any other model, glued, visible handpainted
36	75	Original design, glued, visible handpainted
37	76	Any other original design

38	77	Modified model from a kit (attach a 3"x5" card to explain modifications)
39	78	Any other model

**Premiums:**

**1st \$2.00 2nd \$1.75 3rd \$1.50 4th \$1.25**

**CLASS K – HANDYMAN PROJECT**

Open to any age woodworking or mechanical science project member doing repairing and refinishing type projects

Attach a statement of intended use, what was recycled and/or methods used and work done.

**Item No.**

1. Repaired, refinished, or constructed from recycled building materials article for use in the workshop
2. Repaired, refinished, or constructed from recycled building materials, article for sport or recreational purposes
3. Repaired, refinished, or constructed article for use in the home
4. Repaired, refinished, or constructed from recycled building materials, article for use out of doors

**CLASS L – SHOP PROJECTS**

(must be enrolled in Mechanical Science projects,

**Item No.**

1. A fabricated metal item
2. A hand machined metal item
3. A computer machined metal item
4. A Plexiglass item
5. Any other exhibit