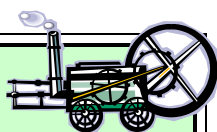


DEPARTMENT 24 JUNIOR MECHANICAL SCIENCE



Superintendent – Dustin Heitkamp

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.

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

Premiums:

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

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

Item No.

- Poster identifying parts of small engines & their function
- Small engine safety poster
- Poster emphasizing the skills of servicing small engines
- Poster showing steps in preparing small engines for storage
- 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.

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

CLASS F – BICYCLE Level 1: BICYCLING ADVENTURES

Item No.

- Poster on proper way to wear a helmet
- Display on helmet types
- Poster on bike safety check
- Exhibit on highway signs
- Poster on how to make safe turns
- Poster on crossing intersections safely
- Poster on how to make safe stops
- Display on riding a bike in traffic
- Display on locating bike hazards
- Display on choosing safe places to ride
- Bike scrapbook
- Report on a group bicycle ride

CLASS FA – BICYCLE Level 2: BICYCLING ADVENTURES

Item No.

- Poster on purchase information on bikes
- Display on bike parts
- Poster on tire inflation
- Display on bike adjustments
- Display on chain maintenance

- Poster on safe scanning
- Poster on how to make safe turns
- Poster on using gears efficiently
- Poster on quick stopping
- Display on dodging obstacles
- Display on planning a bike trip
- Exhibit on how to be a safe, courteous cyclist
- Bike adventure journal

CLASS FB – BICYCLE Level 3: BICYCLING ADVENTURES

Item No.

- Price comparison of bikes to buy
- Display on how to fix a flat tire
- Poster on chain maintenance (advanced)
- Display on how to replace break cables
- Poster on making emergency turns (advanced)
- Poster on using gears efficiently
- Display on riding safely at night, in bad weather
- Report on career opportunities
- Report on bike activism or community service
- Report on a bike rodeo

Premiums:

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

CLASS G – AUTOMOTIVE

Item No.

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

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

Premiums:

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

CLASS J – MODELS

Member's Grade:

3-8		9-13		
<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