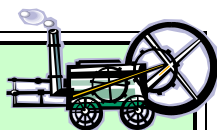


DEPARTMENT 24 JUNIOR MECHANICAL SCIENCE



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.

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

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.

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