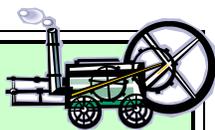


DEPARTMENT 24 JUNIOR MECHANICAL SCIENCE



Superintendent – Dustin Heitkamp

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

Premiums:

1st \$3.00 2nd \$2.75 3rd \$2.50 4th \$2.25

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

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

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

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

CLASS H – AEROSPACE – Grade 3-8

CLASS HA – AEROSPACE – Grade 9-13

Item No.

1. Model airplane-plastic
2. Model airplane-stick & paper, regular
3. Model airplane, gas powered
4. Kite, homemade
5. Model glider
6. Model rocket w/ plastic fins
7. Single stage model rocket
8. Multi-stage model rocket
9. Single stage model rocket previously launched, attach a card describing launch, flight & recovery
10. Multi-stage model rocket previously launched, attach a card describing launch, flight & recovery
11. Poster, model rocket parts, labeled
12. Poster on model rocket safety
13. Poster, instrument panel
14. Poster, airplane history or progress in aerospace
15. Poster, airplane parts & functions
16. Poster, outer space study
17. Any other aerospace exhibit
18. Poster comparing birds to airplanes
19. Poster of aerospace careers
20. Poster of different types of aircraft
21. Poster on how weather affects flying
22. Paper flight simulator
23. Feather wing glider
24. Display of remote control parts and their functions
25. Poster of helicopter parts and their functions
26. Altitude tracker
27. Poster on how to earn a pilot's certificate
28. Poster of a navigation system
29. Personal career profile
30. Poster of at least 6 aircraft types and their usage

CLASS J – MODELS – Grade 3-8
CLASS JA – MODELS – Grade 9-13

Item No.

1. Train, snapfit
2. Train, glued, precolored
3. Train, glued, visible handpainted
4. Truck, snapfit
5. Truck, glued, precolored
6. Truck, glued, visible handpainted
7. Car, snapfit
8. Car, glued, precolored
9. Car, glued, visible handpainted
10. Ship, snapfit
11. Ship, glued, precolored
12. Ship, glued, visible handpainted
13. Motorcycle, snapfit
14. Motorcycle, glued, precolored
15. Motorcycle, glued, visible handpainted
16. Submarine, snapfit
17. Submarine, glued, precolored
18. Submarine, glued, visible handpainted
19. Tank, snapfit
20. Tank, glued, precolored
21. Tank, glued, visible handpainted
22. Airplane, snapfit
23. Airplane, glued, precolored
24. Airplane, glued, visible handpainted
25. Helicopter, snapfit
26. Helicopter, glued, precolored
27. Helicopter, glued, visible handpainted
28. Race car, snapfit, decaled
29. Race car, glued, decaled
30. Building, snapfit
31. Building, glued, precolored
32. Building, glued, visible handpainted
33. Any other model, snapfit
34. Any other model, glued, precolored
35. Any other model, glued, visible handpainted
36. Original design, glued, visible handpainted
37. Any other original design
38. Modified model from a kit (attach a 3"x5" card to explain modifications)
39. Any other model

Legos / Building Blocks – All lego projects need to have a base.

(Size – as small as possible to fit the project)

40. Lego Construction (blocks – kit)
41. Lego Construction (blocks – custom design)
42. Lego Construction (Technics – kit)
43. Lego Construction (Technics – custom design)
44. Lego Construction (Mindstorm – kit)
45. Lego Construction (Mindstorm – custom design)
46. K'Nex Project (kit)
47. K'Nex Project (custom design)
48. Any other Lego/Building Block item not listed

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