

## DEPARTMENT 116 - NATURAL SCIENCES

Do not collect or disturb threatened or endangered plants or animals.

Please see the judging schedule for dates and times if you would like to do face to face judging.

**All posters and charts are 14" x 22" or 28" x 22"**

Group "A"	Group "B"	Group "C"	Group "D"
\$2.00	\$1.75	\$1.50	\$1.25

### **CLASS A – Exploring Your Environment**

#### **Open to members enrolled in "Eco-Wonders"**

1. Ecosystem you have constructed
2. Food chain or food web
3. Weather log
4. Exhibit about cycles found in nature
5. Exhibit about how to compost
6. Exhibit about sources of pollution
7. Exhibit about mammal parts and characteristics
8. Exhibit about types of animal camouflage
9. Exhibit about life in a sidewalk crack
10. Any other project from the member guide

#### **Open to members enrolled in "Eco-Adventures"**

11. Exhibit about my watershed
12. Soil profile
13. Exhibit about pollination
14. Identification key you have made
15. Exhibit about how to reduce or prevent pollution
16. Exhibit about the effects of acid rain on plants
17. Exhibit about plant galls
18. Exhibit about bird identification
19. Record of bird sightings and migration patterns
20. Any other project from the member guide

#### **Open to members enrolled in "Eco-Actions"**

21. Major biomes of the world
22. Exhibit about interactions in an ecosystem
23. Possibilities and concerns of biotechnology
24. Exhibit about energy
25. Exhibit about global climate change
26. Exhibit about impacts of different transportation choices
27. Journal of observations and reflections from y special natural spot
28. Exhibit about alien plant and animal species
29. Exhibit about wetlands
30. Any other project from the member guide

## **CLASS B-SKY PHENOMENA-Astronomy and Weather**

**Open to members enrolled in any of the Natural Sciences Projects**

### **Astronomy**

1. Display about the sun
2. Display about constellations, their history, following the stars, etc.
3. Exhibit about constellations and Greek Mythology
4. Exhibit about planets
5. Exhibit about moon phases or of photos of the moon phases
6. Display on how telescopes work
7. Exhibit about space exploration-The Hubble Telescope, the Mars Rover, etc.
8. Exhibit on an astronomy-related career

### **Weather**

21. Poster on severe weather and safety advice
22. Video (1-3 minutes) of yourself giving a meteorology report
23. Display about cloud formations
24. Homemade anemometer
25. A phenology journal
26. Photo display documenting weather related event
27. Report about a tour of a weather station or interview of a meteorologist

## **CLASS C - FORESTRY**

**Open to members enrolled in "Follow the Path"**

1. Collection of 10 different tree leaves, or seeds, mounted and identified.
2. Poster or report contrasting coniferous and deciduous trees
3. Poster or report on root systems
4. Display a cross-section of a tree. Indicate your birth year and points of history on the appropriate rings.
5. Completed project book.

**Open to members enrolled in "Reach for the Canopy"**

10. Report on impact of invasive species on forests
11. Poster showing parts of a tree or forest, labeled
12. An exhibit on how to plant trees
13. Exhibit on recreational activities you can do in the forest
14. Leaf prints of 10 different leaves. Show top and bottom of leaf, identify
15. Completed project book

**Open to members enrolled in "Explore the Deep Woods"**

20. Exhibit on forestry-related careers
21. One-half pint of maple syrup, explain how produced
22. Poster or report on how to identify a tree using a tree key
23. Display of 5 bark rubbings, identified
24. Poster or report on creatures that live in the forest

25. Display of various lumbers produced locally
26. Completed project book

### **CLASS D - FISHING**

#### **Open to members enrolled in "Take the Bait"**

1. Poster or display of the parts of a fish
2. Water cycle exhibit
3. Poster or display of at least five Wisconsin record fish
4. Drawings or photos of at least five common fish found in Douglas County, correctly identified and include habitat needs and feeding habits of each.
5. Poster or display of fishing safety rules.
6. Essay on "Why I like fishing"
7. Poster or display of at least 4 different types of fishing knots and their uses
8. Poster or display of at least 6 artificial fishing lures or flies, correctly identified
9. Tackle made by exhibitor; lure, jig pole, tip-up, etc.
10. Completed project book

#### **Open to members enrolled in "Reel in the Fun"**

20. Poster or display on how to cast bait
21. Display of fishing equipment, explain uses
22. Personal fishing journal
23. Lure or jig made by exhibitor
24. Equipment exhibitor made for fishing
25. Poster or display on cooking fish
26. Completed project book
27. Exhibit related to ice fishing
28. Cleaning a shoreline exhibit
29. Watershed exhibit

#### **Open to members enrolled in "Cast Into the Future"**

40. Poster or display showing parts of a fishing reel
41. Aquatic insect kick net
42. Poster or display on angling ethics
43. Poster or display on sport fishing related careers
44. A fishing related game made by exhibitor
45. Completed project book
46. Mounted fish caught by exhibitor
47. Exhibit or poster on safe fish consumption, i.e. mercury levels, parasites, foodborne illness, etc.
48. Exhibit on local aquatic invasive species
49. Exhibit on preventing movement of aquatic invasive species
50. Water inversion experiment

### **CLASS E - WILDFLOWERS**

### **Open to members enrolled in "Wildflowers"**

1. A plant pressing kit you have made.
2. Exhibit on a plant related career.
3. Art project created with dried flowers.
4. Photos, drawings or collection of 6 wildflowers, mounted, identified
5. Exhibit on protected plants in Wisconsin
6. Collection of 6 wildflower seeds, identified, tell how dispersed
7. Diagram of a single blossom labeling all parts of the flower.

### **CLASS F – ENTOMOLOGY**

**Please See Class Q for lots related to Bees, Honey and Wax**

### **Open to members enrolled in "Entomology"**

All insects must be dead prior to pinning them for display, and the pinning shall have been done at least three days prior to the fair.

### **Open to members enrolled in "Creepy Crawlies"**

1. Poster showing a body system of an insect
2. Poster or report explaining how insects communicate
3. Poster or report on insect adaptations
4. Photos, drawings or collection of 10 common insects, mounted, identified
5. Completed project book

### **Open to members enrolled in "What's Bugging You"**

10. Display on pinning insects
11. Item you made for entomology project
12. Poster or report on metamorphosis
13. Poster or report on nighttime insects
14. Photo, drawings, or collection of 10 common insects, mounted, identified
15. Completed project book

### **Open to members enrolled in "Dragons, Houses and Other Flies"**

20. Poster showing how to identify insects by using an insect key
21. Poster or display on butterfly gardens
22. Poster or report on aquatic insects
23. Journal on insect observations
24. Photos, drawings, or collection of 10 common insects, mounted, identified
25. Exhibit on entomology-related careers
26. Completed project book

### **CLASS G - WATER**

**Open to members enrolled in "Water"**

1. Display or poster identifying water conservation or pollution issues in your community.
2. Display of a service project or activity to help address water quality problems.
3. Exhibit on water management careers.
4. Display or poster of a water cycle in nature.
5. Poster explaining how water can become contaminated

### **CLASS H - ADVENTURES**

#### **Open to members enrolled in "Introduction to Adventures"**

1. Exhibit showing prevention of adventure related accidents
2. Exhibit showing proper clothing for adventure activities
3. Display of menus and gear to cook meals from an adventure trip
4. Homemade piece of adventure equipment
5. Display on map reading and using a compass
6. Exhibit on outdoor survival
7. Journal, story, poem or song about an adventure trip
8. Poster or report about building group unity and trust
9. Exhibit of a family adventure activity
10. Display or exhibit of different knots and their uses
11. A display or poster on different types of cooking fires or cooking stoves
12. An exhibit showing a good, safe campsite
13. A poster or exhibit showing different types of shelters
14. A display illustrating wild edible foods

### **CLASS I – BACKPACKING and HIKING**

#### **Open to members enrolled in "Hiking Trails"**

1. Poster or report on Leave No trace principles
2. Plans for food, clothing and backpack for a day hike
3. Poster or report on blister prevention and care
4. Photos or display of family or group trip
5. Display showing basic backpacking equipment
6. Completed project book

#### **Open to members enrolled in "Camping Adventures"**

10. Poster or report on water purification
11. Poster or report on equipment or shelters for camping
12. Journal of plants or animals you observed on a hike
13. Basic first aid kit for backpacking
14. Completed project book

#### **Open to members enrolled in "Backpacking Expeditions"**

20. Poster or report on packing and adjusting your backpack
21. Poster or report on conditioning for a backpacking trip
22. Poster or report on how to handle an emergency

23. Homemade piece of backpacking equipment
24. Backpacking trip plan
25. Completed project book

### **CLASS J - WINTER TRAVEL**

**Open to members enrolled in "Winter Travel"**

1. Poster showing proper clothing and equipment for winter travel
2. Display of a winter camping overnight with safety precautions explained
3. Display of a winter shelter
4. Pair of homemade snowshoes
5. Poster or display explaining hypothermia and its causes
6. Exhibit on cross-country skiing

### **CLASS K - CANOEING**

**Open to members enrolled in "Canoeing"**

1. Parts of a paddle and canoe display
2. Mounted map highlighting your route, campsites, river features, etc. of a trip you've taken or are going to take
3. Picture story of a canoe trip with family or others
4. Poster, chart, or scrapbook on canoeing safety
5. A display or poster illustrating your river reading skills (example: eddies, V's, haystacks, etc.)
6. Poster or display of canoe strokes

## **CLASS L - BICYCLING**

**Open to members enrolled in Adventure Project - Bicycling,**

**Members enrolled in Mechanical Sciences Bicycling Projects must exhibit in Department 124 - Class C.**

1. Poster, chart, or display on bicycling safety
2. Display showing parts of a bicycle
3. Picture story of a bicycle trip with family or others
4. Poster on the importance of wearing a helmet
5. A repair kit for a bicycling trip made by you, with an explanation on the use of its content
6. Exhibit of 10 natural items observed while bicycling (may be examples, pictures, or drawings)

## **CLASS M -SHOOTING SPORTS**

**Open to members enrolled in Air Pistol, Rifle, Shotgun, Muzzle-loading**

1. Poster or exhibit showing care of gun
2. A drawing showing parts of a firearm
3. A poster on safely using a firearm
4. A display showing equipment and supplies for cleaning a firearm
5. An accessory item you have made for use with firearms
6. Display of 3 target shots
7. Exhibit showing the steps to take in reloading spent shells

## **CLASS N - ARCHERY**

**Open to members enrolled in "Archery"**

1. An exhibit on archery safety
2. An exhibit labeling archery equipment and its function
4. Arrow, construction using primitive materials. Example: shaft cut from the woods (not a purchased dowel), point of rock or bone, fletching naturally acquired, not purchased feathers
5. Target, three-dimensional construction
6. Arrow "board" display. List arrow types and explanation of use.
7. Poster or display on how to determine your dominant eye
8. Poster or display on proper form for shooting
9. Item exhibitor made for use in archery
10. Paper target of 6 shots taken with a bow that shows your shooting pattern.

## **CLASS O - HUNTING**

**Open to members enrolled in Hunting, Any Shooting Sports or Archery**

1. Exhibit on field care and dressing of game.

2. Poster or 1-2 pages report on hunting ethics contrasting courteous and poor hunting behaviors.
3. 1-2 page essay for or against hunting.
4. Exhibit on safely setting up a tree stand or blind
5. Poster on what to do if you are lost.
6. 1-2 page report on skills needed for a successful hunt.
7. Exhibit on tracking animals you have shot.
8. Report on hunting techniques for one of these animals; deer, squirrels, turkeys or waterfowl.
9. Scrapbook of newspaper/magazine articles regarding hunting.
10. Poster illustrating firearm or archery safety while hunting with others
11. Exhibit on using maps and compasses.
12. A hand made decoy
13. Poster on how to set out decoys for a hunt
14. Home-made survival kit made by member-include at least 8 items
15. Journal about an actual hunting experience in which you participated
16. Exhibit identifying 6 local game birds or animals with notes on feeding habits, reproduction, behaviors, habitat requirements and management
17. Exhibit of tracks of 6 local game birds or animals describing why tracking is important
18. Tanned pelt made by exhibitor
19. Animal mount made by exhibitor
20. Poster on process of taxidermy or tanning
21. Creative item made by exhibitor from antlers, hooves, fur, etc.
22. Any other taxidermy-related exhibit

## **CLASS P - RECYCLING**

**Open to members enrolled in "Recycling"**

1. Recycled paper that you have made (5" x7")
2. Exhibit demonstrating how your family recycles waste
3. Audio or video (VHS) cassette 3 minutes long promoting recycling
4. A recycling display
5. An exhibit which describes your composting experience
6. Poster showing need for recycling
7. Recycled article of paper, fabric, wood, or plastic. Attach information card
8. An exhibit showing a new product (with a new use) invented from an old product
9. Exhibit on energy conservation
10. Exhibit showing the daily, weekly, or annual amount of waste generated by a person, family, community or state
11. Exhibit showing how people can reduce the amount of resources they use
12. 1-2 page article discussing the pros and cons of using landfills or incinerators versus recycling
13. Exhibit about renewable and non-renewable resources

## **CLASS Q-HONEY BEES, HONEY AND WAX**

**Open to members enrolled in any of the Entomology projects as well as**

**Self-determined, Wildflowers, Natural Resources, Photography, Cultural Arts, Foods and Nutrition, Fruits, Vegetables, Flowers and Home Grounds:**

1. Poster, chart or display relating to honey bees and pollination
2. Poster, chart or display relating to honey production
3. One pint jar of extracted honey labeled, dated
4. Exhibit of honeycomb with capped honey (comb section honey) in a plastic container
5. Poster, chart or display of non-active hive
6. Poster, chart or display about honey bees and their social behavior
7. Poster, chart or display about Colony Collapse Disorder
8. Poster, chart or display about an interview or visit you had with a beekeeper
9. Homemade beekeeping equipment
10. Poster illustrating/explaining distinctions of the female worker bee, the male drone and the honeybee queen
11. 3 photographs (4x6 or 5x7) of the beekeeping process
12. Photograph of honey bee(s)-4x6 or 5x7
13. Photograph (4x6 or 5x7) of products of honey bees-honey, wax, etc.
14. Poster, chart or display about bee-friendly plantings
15. Poster, chart or display about distinguishing honey bees from wasps and hornets
16. Poster, chart or display about ways to help honey bees and other pollinators
17. Poster, chart or display on ways to attract honey bees to a yard
18. Poster, chart or display on the impact of pesticide-treated plants on honey bees and other pollinators
19. Any other entry relating to the observation, welfare or behavior of honey bees
20. 3 plain muffins displayed on a paper plate in a zippered bag. Made using only honey as the sweetener, attach recipe.
21. ½ loaf of white bread, using no whole grains, displayed on a paper plate in a zippered bag. Made using only honey as the sweetener, attach recipe.
22. Bee's wax item for home use (candle, furniture wax....)
23. Bee's wax cosmetic item for personal use (lip balm, lotion....)
24. Decorated egg, using beeswax process. One egg. Provide holder
25. Batik item
26. Dipped tapers, height 7-8 inches. Natural wax, plain or decorated, continuous wick, one pair
27. Molded candles, height 10-12 inches. Natural wax, one pair
28. Any other beeswax craft
29. Artwork (painting, drawing or other item) depicting honey bees, hives, products of honey bees, etc.