

# Dept.16 Natural Resource Sciences

Ronda Czerwonka, Superintendent

## Rules Governing Exhibits

4-H members must be enrolled in the Adventures, Astronomy, Backpacking, Conservation, Exploring Your Environment, Fishing, Forestry, Geology, Home Energy, Recycling, Safety, Science, Shooting Sports (including Archery, Air Pistol, Rifle, Shotgun or Muzzle loading), Weather, Wildlife projects.

- Any items removed before 5 p.m. on Sunday will not be paid a premium.
- All Divisions will be judged, face-to-face, from 10 a.m. - 7 p.m. on Tuesday, in the Youth Building
- Posters must be 14" x 22" poster or tag board
- Entry tag should be attached on the lower right hand corner on front of the item
- Exhibitors may enter a maximum of 10 exhibits within this department, with a maximum of five posters
- Exhibitors must enter the correct Class number and the same grade throughout this Department 16
- Shooting Sports open to all youth in Sportsmen Project (sportsmen, gun safety, shooting sports)

## Department 16 Premiums

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

Division A- Natural Space	Class Number		
	Grade3-5	Grade6-8	Grade9-13
Wildflower or Wild Plant Naturarium (must be exhibited in glass or plastic vessel)	1	2	3
Chart or Pictures showing different conservation practices that might be used by man to improve the environment	4	5	6
Poster Showing how Resources Affect Man	7	8	9
Series of Pictures, Photos or Drawings telling the story of the inter-relationship of plants, animals, birds, insects, etc. to one another and man	10	11	12
Poster Showing Recycling Practices	13	14	15
Poster Showing a Wildlife Ecosystem which shows the inter-relationship between plants and animals	16	17	18
Creative Art Poster Related to Conservation Theme	19	20	21
Conservation Collection (may be leaf prints, drawings, bark or twigs, wood samples, animal tracks, minerals or other nature relate items)	22	23	24
Illustrate a Conservation Project Developed by Member (in booklet form or mounted on board)	25	26	27
Photographic Conservation Story (Tell the story of your conservation project with pictures. Or use pictures of good or poor land use, erosion and pollution to tell a story)	28	29	30
Exhibit Related to Astronomy (solar system, stars, etc.)	31	32	33
Journal/Diary of What You Learned in This Project	34	35	36
Exhibit of at Least Eight Different Animal Tracks/Prints, Labeled	37	38	39
Any Other Item Related to Nature Space	40	41	42
Any Other Item Related to Nature Space, Made in Summer Clubs	43	44	45
Educational Display of Invasive Species	46	47	48

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Division B - Forestry	Class Numbers		
	Grade3-5	Grade6-8	Grade9-13
Exhibit of 15 Mounted Leaves, Labeled	1	2	3
Chart or Diagram Showing the Annual Life History of a Tree	4	5	6
Branch wood Mounts of Five Important Trees, Properly Labeled	7	8	9
Diagram of a Tree and a Cross Section of its Trunk	10	11	12
Lumber Mounts of 10 Important Native Trees, Properly Labeled	13	14	15
Exhibit Illustrating Different Tree Shapes	16	17	18
Individual Exhibit of 10 Mounted Tree Seeds	19	20	21
Poster Showing Different Wood Measuring Systems (Including board, feet, cords, etc.)	22	23	24
Map of Farm Woods and Study Area	25	26	27
Exhibit of 20 Mounted Specimens of Wood, Cross and Longitudinal (Sections showing wood structure properly labeled. These specimens must have been mounted within the past 12 months, and each specimen must be at least more than 2 - 3" in diameter and 4" long cut to expose the center. Specimen should be prepared with either the varnish or paraffin process.)	28	29	30
Individual Exhibit of Five Soft and Five Hardwood Mounted Tree Seeds (scientific names should be specified)	31	32	33
Simple Log or Cruising Stick Using Long Scales	34	35	36
One Pint Maple Syrup (in clear glass jar with resalable screw type lid)	37	38	39
One Half Pound of Maple Sugar	40	41	42
Rustic Bird House (made using rustic materials)	43	44	45
Photo Journal with captions (at least one photo of self, planting or pruning trees)	46	47	48
Educational Display of Tree Disease/Insect Infestation with Explanation of Progression	49	50	51

## Division C –Wildlife Management

Game Farm	Class Numbers		
	Grade3-5	Grade6-8	Grade9-13
Display of Wildflower Cover Map of Your Farm Showing Plans for Improvement Already Established	1	2	3
Chart Showing All Game Animals Found on Your Farm with Notes on Their Feeding Habits, Reproduction and Habitat Requirements	4	5	6
Display of Mounted Plant Specimens Which are Important Wildlife Food Plants, or Display of Foods Found in the Crops of Game Birds Taken on or Near Your Farm	7	8	9
Photo Journal of Wildlife Damage, With Captions	10	11	12
Poster Describing the Planning and Implementation of a Wildlife Food Plot	13	14	15

<b>Song Birds</b>	<b>Grade3-5</b>	<b>Grade6-8</b>	<b>Grade9-13</b>
Scrapbook of at Least 20 Bird Pictures (Either drawings or cut-outs of birds seen and identified by the member. Each drawing should be properly labeled and the food habits, migratory habits and nesting habits of each bird included with the label)	16	17	18
Compare and Contrast Five Birds of the Field with Five of the Forest or Marsh	19	20	21
Exhibit of Two Single Unit Bird Houses for Wren, Bluebird, Tree Swallow or One Martin House	22	23	24
Display Showing Owl Pellets (Picked apart showing the feeding habits of owls. The owl should be identified along with the food items found in the pellets.)	25	26	27
Display of Pictures or Drawings and Explanation of the Different Kinds of the Following Bird Parts: Beaks, Feet, Feathers or Other Bird Parts	28	29	30
Display and Report Your Observations of Body Part of a Bird and Their Functions	31	32	33
Display and Report Your Observations of the Changing Feeding Habits of One Bird Species Throughout the Year	34	35	36
Display and Report Comparisons and Contrasts of Five Birds for Each of Two of the Following Types of Birds: Upland Game, Waterfowl, Marsh and Shore Birds, Song Birds and Birds of Prey	37	38	39
<b>Fish Management</b>	<b>Gr. 3-5</b>	<b>Gr. 6-8</b>	<b>Gr. 9-13</b>
Exhibit of 10 Kinds of Aquatic Plants Properly Preserved and Labeled	40	41	42
Exhibit of 20 Water Insects, Mounted and Properly Labeled	43	44	45
Poster or Scrapbook of 15 Popular Species of Fish Found in Wisconsin (grades 6-13 must include scientific names)	46	47	48
Diagram of Fish Aging by Scales	49	50	51
Display of Pictures or Drawings and an Explanation of the Different Kinds of the Following Fish Parts: Fins, Gills or Other Body Parts	52	53	54
Diagram of Fish Parts Properly Labeled	55	56	57
Handmade Fishing Lure (exhibited in a clear plastic container or bag)	58	59	60
<b>Wildflower Study</b>	<b>Gr. 3-5</b>	<b>Gr. 6-8</b>	<b>Gr. 9-13</b>
Collection of 15 Wildflowers, Properly Pressed, Mounted and Labeled	61	62	63
Exhibit of a Picture or Actual Pressed Blossom of a Flower With All Flower Parts Properly Labeled	64	65	66
Chart or Diagram Showing the Life Cycle of a Plant (use pressed specimens to show each stage of development)	67	68	69
Collection of 15 Kinds of Wildflower Seeds That Show Various Adaptations to Dispersal by Wind, Water, Birds and Mammals	70	71	72
Display of Two Principal Wildflower Families, Showing Four or More Flowers of Each Family, Properly Labeled	73	74	75
Mounted Collection of Five Native Ferns, Properly Labeled	76	77	78
Mounted Collection of 10 Specimens of Native Wild Shrubs and Vines, Properly Labeled	79	80	81
Plan of Your Wildflower Garden or Preserve (description of area, numbers transplanted or grown from seed, success of plantings and habitat requirements of each plant)	82	83	84

<b>Division D - Sportsmanship</b>	<b>Gr. 3-5</b>	<b>Class Numbers</b>	
		<b>Gr. 6-8</b>	<b>Gr. 9-13</b>
Poster or Display Telling Story of Proper Gun Handling in One of the Following Areas: Afield (group, crossing a fence, resting); Transporting (in a car or boat); Storage (in home)	1	2	3
Poster or Display of at Least 10 Types of Guns (Sketch or use a picture to identify. Include name, action design and other information to help identify the weapon)	4	5	6
Poster or Display Identifying the Parts of a Gun with a Key to the Purpose of Each Part	7	8	9
Poster or Display Identifying the Common Game Animals and Birds (notes of identification, feeding habits, reproduction and habitat requirements and state laws regulating hunting of the animal or bird)	10	11	12
Poster or Display on Preparing Game (skinning, plucking, drawing etc.)	13	14	15
Poster or Display on Any Other Subject Related to Hunting	16	17	18
Any Taxidermy Article	19	20	21
Scrapbook Illustrating Activities Learning About Wildlife	22	23	24
Scrapbook of a Game Management Tour	25	26	27
Scrapbook of a Wildlife Area Developed	28	29	30
Diary of the Hunt	31	32	33
Wood Duck House	34	35	36
Display of at Least Five Different Species of Duck Wings (mounted)	37	38	39
Display Depicting What Exhibitor has Done or Learned About Wildlife Ecology and Hunting	40	41	42
Illustration of shotgun shell or rifle bullet (identify parts and illustrating shot examples @ 30 yards)	43	44	45
Poster Emphasizing Some Phase of Gun Safety	46	47	48
Education Poster, Guns and/or Ammunition (kinds, different makes, etc.)	49	50	51
Poster or Display of Any Phase of Sportsmanship or Gun Safety	52	53	54
Sportsmanship Booklet of 15 Wildlife Birds and/or Animals (Either drawn or pictures with short story on each. Story should include food eaten, cover most desirable, raising of young and any other interesting facts about each species.)	55	56	57
Scrapbook of Gun Safety Activities	58	59	60
Gun Safety Poster	61	62	63

<b>Division E - Insects</b>	<b>Gr. 3-5</b>	<b>Class Numbers</b>	
		<b>Gr. 6-8</b>	<b>Gr. 9-13</b>
Collection Contrasting Differences Between 10 Insects Found in a Flower Garden and 10 Insects Found in a Hay Field (show the insects)	1	2	3
Collection Contrasting Differences Between 10 Insects Found Near Lakes, Rivers or Ponds and 10 Insects Found in a Hay Field (show the insects)	4	5	6
Collection of 20 Insects Attracted by Baits (show the insects)	7	8	9
Collection Contrasting Differences Between 10 Insects Attracted to Light and 10 Insects Collected During the Daytime	10	11	12
Collection of 20 Insects Attracted to Colored Light Bulbs	13	14	15
Collection of Four or More Cocoons or Chrysalises Emerging Moths or Butterflies	16	17	18
Collection of Three or More Nest Building Insects	19	20	21
Collection of 10 or More Colorful Insects	22	23	24
Drawing of the Two Different Life Cycles of Insects	25	26	27
Exhibit of Three Insects Which are Natural Predators (mounted in insectbox)	28	29	30

<b>Division F -Weather</b>	<b>Gr. 3-5</b>	<b>Class Numbers</b>	
		<b>Gr. 6-8</b>	<b>Gr. 9-13</b>
Poster or Exhibit on One of the Following Topics: Understanding the Weathermakers, How Winds Create Rain or Signposts of the Weather	1	2	3
Exhibit of a Rain Gauge (accompanied by precipitation records, cloud observation records and other information to complete an actual weather study)	4	5	6
Poster or Exhibit on Heat, a Weathermaker	7	8	9
Exhibit of an Instrument Shelter and Thermometer (accompanied by temperature records and other information to complete an actual weather study)	10	11	12
Poster or Exhibit of One of the Following Topics: Pressure of Air, Water Vapor in the Air or Putting Your Knowledge of Weather to Work	13	14	15
Exhibit of an Anemometer (accompanied by wind direction readings and other information to complete an actual weather study)	16	17	18
Exhibit of a Weather Vane (accompanied by wind direction readings and other information to complete an actual weather study)	19	20	21
Poster or Exhibit on how Weather Affects Us (include effect on man, crops and other plants, animals, insects, fish and diseases)	22	23	24
Climatology, Diagram or Exhibit Showing an Experiment as Explained in Unit I. Include Explanation	25	26	27
Climatology, Diagram or Exhibit Showing an Experiment as Explained in Unit II. Include Explanation	28	29	30
Climatology, Diagram or Exhibit Showing an Experiment as Explained in Unit III. Include Explanation	31	32	33
Climatology, Diagram or Exhibit Showing an Experiment as Explained in Unit IV. Include Explanation	34	35	36

<b>Division G--Bees and Honey</b>	<b>Gr. 3-5</b>	<b>Class Numbers</b>	
		<b>Gr. 6-8</b>	<b>Gr. 9-13</b>
Jar of Clover Honey (in clear glass jar with a resealable screw type lid)	1	2	3
Jar of Buckwheat Honey (in clear glass jar with a resealable screw type lid)	4	5	6
Jar of Wildflower Honey (in clear glass jar with a resealable screw type lid)	7	8	9
Comb of Honey	10	11	12

<b>Division H - Adventures</b>	<b>Gr. 3-5</b>	<b>Class Numbers</b>	
		<b>Gr. 6-8</b>	<b>Gr. 9-13</b>
<b>Backpacking/Camping</b>			
Scrapbook Showing the Planning of and Participation of a Day-long Hiking Adventure	1	2	3
Scrapbook Showing the Planning of and Participation of an Overnight Backpacking Adventure	4	5	6
Kit With Essentials for Surviving in an Emergency (with explanation of contents)	7	8	9
Scrapbook Chronicling the Assisting of the DNR, Sierra Club or Other Organization on Trail Maintenance Project	10	11	12
Menu to Watch Calories Needed to Sustain a Person of Your Weight for a Day's Backpacking	13	14	15
PowerPoint Presentation That Could be Given to a Civic Group About Your Backpacking Experience of Knowledge (provide print out of slides)	16	17	18
Homemade Sleeping Bag or Tent	19	20	21
Scrapbook of a Bicycling Adventure Day Trip	22	23	24
Seasonal Journal of Observations Along a Bicycle Trail	25	26	27
Poster or Display of Wisconsin Bike Trails (include a brief description of each)	28	29	30
Scrapbook Showing the Planning of and Participation in an Overnight Bicycle Adventure	31	32	33
First Aid Kit for a Group Bicycling Trip With an Explanation of the Contents (Assembled from scratch)	34	35	36

<b>Division H - Adventures</b>	<b>Class Numbers</b>		
	<b>Gr. 3-5</b>	<b>Gr. 6-8</b>	<b>Gr. 9-13</b>
Scrapbook of the Planning and Implementation of a Blue Bird Trail Along a Bicycle Trail	37	38	39
PowerPoint Presentation That Could be Given to a Civic Group About Your Bicycling Experiences or Knowledge (Include a print out of slides)	40	41	42
Scrapbook of a Community Bike Safety Day (includes a bicycle rodeo skills contest)	43	44	45
<b>Canoeing/Kayaking</b>	<b>Gr. 3-5</b>	<b>Gr. 6-8</b>	<b>Gr. 9-13</b>
Interview of a Professional Kayak Racer or Judge	46	47	48
Scrapbook of the Planning and Implementing of a Canoe or Kayak Day Trip	49	50	51
Scrapbook of the Planning and Implementing of a Canoe or Kayak Overnight Trip	52	53	54
Homemade Portage Pads for a Canoe	55	56	57
Design of a Nutritionally Balanced Three-day Canoe Camping Menu	58	59	60
Waterproof First Aid and Repair Kit (with explanation of its contents, assembled from scratch)	61	62	63
PowerPoint Presentation That Could be Given to a Civic Group About Your Canoeing/Kayaking Experiences or Knowledge (include a print out of slides)	64	65	66
<b>Winter Travel</b>	<b>Gr. 3-5</b>	<b>Gr. 6-8</b>	<b>Grade9-13</b>
Scrapbook Showing the Planning and Implementing of a Day-long Winter Travel Adventure	67	68	69
Scrapbook Showing the Planning and Implementing of an Overnight Winter Travel Adventure	70	71	72
Poster Contrasting Various Forms of Winter Travel	73	74	75
First Aid Kit for Winter Outing (explanation of contents, assembled from scratch)	76	77	78
Photo Journal of Participation in a Ski Race	79	80	81
Photo Journal of Participation in Digging and Using a Snow Cave	82	83	84
Display of Clothing Layered for a Winter Adventure (with explanation)	85	86	87
Chart of Wind Chill Temperatures for at Least 30 Days in the Previous Winter	88	89	90
Photo Journal of a Winter Snow or Ice Sculpture	91	92	93
PowerPoint Presentation That Could be Given to a Civic Group About Your Winter Travel Experience or Knowledge (include a print out of slides)	94	95	96
<b>Division I - Home Energy</b>	<b>Gr. 3-5</b>	<b>Class Numbers Gr. 6-8</b>	<b>Gr. 9-13</b>
Poster Illustrating Ways the Member Became Aware of Ways to Save Energy	1	2	3
Development of Scale Model Illustrating How Energy Could be Saved or Manufactured	4	5	6
Poster on Alternative Energy Sources (solar, wind, hydropower, etc.)	7	8	9

<b>Division K – Shooting Sports</b>	<b>Class Numbers</b>		
	<b>Gr. 3-5</b>	<b>Gr. 6-8</b>	<b>Gr. 9-13</b>
Poster Identifying the Parts of a Gun and the Purpose of Each Part (No clippings. Draw or trace)	1	2	3
Display Showing the Parts of Center Fire Cartridge, Rim Fire Cartridge and Shotgun Shell, and the Purpose of Each	4	5	6
Exhibit Showing the Observance of and/or Disregard of the 10 Commandments of Firearm Safety	7	8	9
Exhibit Showing Proper Firearm Handling in the Field, Transporting and Storage	10	11	12
Poster Showing the Four Shooting Positions and the Advantages and Disadvantages of Each	13	14	15
Illustration of Five Different Caliber Cartridge Casings (correctly labeled and identified)	16	17	18
Scrapbook Identifying Five Wisconsin Game Animals (notes on feeding habits, habitat requirements and state laws regulating hunting)	19	20	21
Scrapbook Identifying Five Wisconsin Game Birds (notes on feeding habits, habitat requirements and state laws regulating hunting)	22	23	24
Display of Two Wisconsin Game Birds (feathers) and Two Wisconsin Game Animals (piece of fur) (all identified)	25	26	27
Scrapbook of a Hunting Experience (include: license, results, examples of following safety practices and game laws and personal memories)	28	29	30
Collection of Five Targets Showing Improvement in Accuracy (Five shots in each. Label each target with date, exact type of firearm, with or without scope and distance shot)	31	32	34
Display Identifying the Parts of a Recurve Bow and Compound Bow and the Purpose of Each Part (No clippings. Draw or trace)	34	35	36
Poster Identifying the Parts of an Arrow and the Purpose of Each Part (No clippings. Draw or trace)	37	38	39
Arrow made by Exhibitor (Target and field points only)	40	41	42
Arrow Stand made by Exhibitor	43	44	45
Target Stand made by Exhibitor	46	47	48

<b>Division L - Recycling</b>	<b>Class Numbers</b>		
	<b>Gr. 3-5</b>	<b>Gr. 6-8</b>	<b>Gr. 9-13</b>
Poster on "Recycling - What is it?"	1	2	3
Useful Household Item from Recycled Products/Materials	4	5	6
Make Your Own Paper From Newspapers, Waste Paper or Other Recycled Materials (Create project using your handmade paper. Submit one sheet of paper and project)	7	8	9
Compile a Household Waste Composition Journal, Recording your family's household waste for at least one week (submit in binder)	10	11	12
Design a Useful Recycling Container (submit design on poster along with information of why design would work as a recycling container)	13	14	15
Poster Displaying a Recycling Community Service Project You Helped Carry Out	16	17	18
Report on Methane Gas and How it can be Either a Hazardous or Valuable By-product of Landfills (minimum of two pages)	19	20	21
Build an Organic Waster Methane Generator (chart information asked for on page 27 of literature. Submit pictures of finished generator and data sheet)	22	23	24
Build a Landfill Model	25	26	27
Any Other Project Using Recycling Not Listed	28	29	30

<b>Division M - Sports Fishing</b>	<b>Class Numbers</b>		
	<b>Gr. 3-5</b>	<b>Gr. 6-8</b>	<b>Gr. 9-13</b>
Poster Showing the Parts of a Fish (drawn and labeled)	1	2	3
Poster Showing the Types of Fish in Wisconsin	4	5	6
Poster Showing the Different Types of Bait	7	8	9
Poster Showing the Different Types of Fishing Knots	10	11	12
Poster Showing the Different Parts of a Fishing Reel	13	14	15
Poster Showing How to Make an Artificial Lure or Fly (with examples)	16	17	18
Soda Bottle Trap	19	20	21
Decorated Lure or Jig (in a clear plastic container or bag)	22	23	24
Lure Design Plan	25	26	27
Refurbished Rod and Reel	28	29	30
Design a Fishing Related Game (must include written rules and game pieces)	31	32	33
Poster Listing Differences Between Bobber and Bottom Fishing	34	35	36
Poster Showing How to Cast a Bait or a Fly	37	38	39
Poster Showing How to Use a Spinning Rod and Reel	40	41	42