

JUNIOR NATURAL SCIENCE - DEPARTMENT 116
KEY LEADER – Kathleen Tober

JUDGING DAY: FRIDAY of Pre-Fair Judging Week, 12:00 -6:00pm, with the exception of Division Letter A, Bees & Honey, to be judged on Wednesday of the Fair at 4:00 pm at the Barnyard Adventure Barn.

RULES GOVERNING EXHIBITS – READ THEM CAREFULLY

1. Posters are limited to 14" x 22"; no foam board. Displays are limited to a floor/shelf space of 20" x 24". All components of a display must be attached such that the display can be transported as a single unit. Need an exception, please contact Kathy Tober, 262-642-5857. Posters must have back hangers.
2. Exhibitors are encouraged to think creatively about the content of displays they make.
3. If audio-visual equipment is needed to showcase any aspect of a particular exhibit during judging, exhibitors must provide their own and take it home with them immediately following judging.
4. If a video recording, audio recording, or slide show is created as part of the exhibit, a written and/or pictorial description of the content should accompany it for display purposes.
5. Collections of specimens in short supply, state or federal protected flowers, endangered or protected species of any kind, bird nest, or feathers are not allowed as part of a display or exhibit.
6. No real guns or live ammunition may be included exhibits. For safety purposes, sharp objects are only permitted if they are covered.
7. Each Division will be awarded a Grand and Reserve ribbon at the judges' discretion.
8. All general rules on page 84 apply to department entries.

PREMIUMS: 1st - \$2.25 2nd - \$2.00 3rd - \$1.75 4th - \$1.50

Division Letter: A. Insects/Entomology

Rules:

1. Insect displays must be covered with a glass or Plexiglas.
2. All collections must have proper mounting pins.
3. Labeled: name, date found, place found.
4. All insects must have been collected this year in the state of Wisconsin, or the United States.

Class #

After (1) year in the Project, add 5 more insects for each grade

1. Collection of a minimum of 12 Species of insects, Grades 3-5
2. Collection of a minimum of 24 Species of insects, Grades 6-8
3. Collection of a minimum of 30 Species of insects, Grades 9 and above
4. Self-determined any project (ex. Identify insect parts/show how insects move/insect metamorphosis/butterfly garden plans)
5. Any other exhibit relating to entomology (spider web display, insect control displays poster of life stages of an insect)

Division Letter: A. Bees and Honey

Honey exhibits should include 1 clear pint and 1 clear sample jar. The sample jar will be opened and tasted during judging.

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| 6. White Honey | 10. Single Serving of a Food Item Made with Honey (include recipe) exhibitor with picture of when judged. |
| 7. Golden Honey | |
| 8. One Comb of Honey | 11. Poster or Display about some Aspect of Beekeeping or Honey |
| 9. Most Attractive Beeswax Display | |

Division Letter: B. Forestry - Grades 3-5

Class #:

1. Poster or display featuring at least five different species of either coniferous or deciduous trees, including a sample leaf and indication of range and forest type for each.
2. Poster identifying parts of a tree's root system and at least four things that roots do for trees.
3. Poster or display showcasing at least 5 different tree products representative of at least two parts of a tree (e.g. bark and trunk, roots and bark, etc.).
4. Map of your neighborhood using typical topographic map symbols
5. Poster, display, or picture board showcasing at least five different animals, insect, or bird species that make their home in, on, or near a particular species of tree.
6. Any other forestry exhibit.

Division Letter: C. Forestry – Grades 6-8

Class #:

1. Poster or display featuring a cross-section of a tree with rings intact and labeled by year. Additionally, note the variety of tree from which the cross section is taken.
2. Photo journal or field guide featuring on at least ten different organisms and their relationships with each other.
3. Poster or display of a tree labeled with locations affected by tree disease and information about the disease itself.
4. Poster or display featuring five signs of harmful insect infestation in trees, invasive species, or habitat disruptions.
5. Any other forestry exhibit.

Division Letter: D. Forestry – Grades 9 and above

Class #:

1. Binder or display showcasing the leaves of at least 15 different tree species. Include common and Latin names of each species, as well as information about the trees' range.
2. Poster or display of ten or more fruits or seeds labeled with name of tree and categorized as fleshy or dry.
3. Binder or display describing forestry-related businesses or careers.
4. PowerPoint presentation or video interview with at least three tree informants (individuals considered experts at the community or state level in the field of logging or forestry).
5. Research project describing conservation practices or forest management principles.
6. Any other forestry exhibit

Division Letter: DD. Maple Syrup Exhibit, All Grades

Maple syrup exhibits should include 1 clear pint and 1 clear sample jar. The sample jar will be opened and tasted during judging.

Class #:

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|----------------------|---|
| 1. Light Maple Syrup | 3. Single serving of a food item made with maple syrup (include recipe) & picture of exhibitor and food when judged |
| 2. Dark Maple Syrup | 4. Poster or display about some aspect of maple syrup |

Division Letter: E. Birds exhibit, display or poster

Class #:

1. Minimum of 10 birds (pictures, drawings, properly labeled)
2. Minimum of 15 birds (listing food, migratory and nesting habits)
3. Homemade bird feeder or house (identify for type of birds, seeds used, where placed on attached label)
4. Recording of bird sounds (identify the birds in writing)
5. Minimum of 6 game birds (identify habitats, food, nest areas, and hunting laws)
6. Wisconsin's game bird laws
7. Journal regarding bird observation (minimum of 10, add 3 more each year in the project)
8. Picture or drawing of bird parts
9. Any other bird related project (properly labeled)
10. Photo album of birds (5 to 10 different birds, label)

Division Letter: F. Sport Fishing/Water Exhibit, display or Poster

Class #:

1. Picture or drawing of 8 Wisconsin Fish (include name, weight, habitat, feeding habits, WI laws regarding taking of fish)
2. Fishing equipment (all hooks must be covered)
3. Wisconsin Fishing Laws
4. Display of ice fishing project
5. 10 knots for fishing/boating (mounted & labeled)
6. Personal fishing journal (may include lake maps and / or photos)
7. Display of 2 or more handmade lures, jigs, or spinner baits (hooks must be covered)
8. Fish handling (cleaning, preserving, & preparing)
9. Display various fish hooks, lines, and leaders (hooks must be covered)
10. Any other Sports Fishing Exhibit / Water Exhibit (ex. Effects of pollution on habitat of lake)

Shooting Sports

Division Letter: G. Shooting Sports

No real guns or live ammunition allowed as part of exhibits.

Class #:

1. Poster or display illustrating story of proper gun handling
2. Poster or display identifying the parts of a gun with a key to the purpose of each part
3. Poster or display identifying common game animals and birds with notes of identification, feeding habits, reproduction, and state laws regulating hunting of the animal or bird
4. Poster or display of any other subject relating to the sport of hunting
5. Any other exhibit relating to Archery, arrows must be covered or air pistol
6. Any other exhibit relating to Air Rifle or Air Pistol or .22 Rifle or .22 Pistol or Muzzleloader
7. Any other exhibit relating Shooting Sports
8. Any other handmade article related to wildlife or shooting sports
9. Any exhibit featuring effective trail cam usage to capture wildlife (songbirds, wild mammals, waterfowl, etc.)

County Shoot Off

Pre-Fair Activity (Entries for Shoot Off due in June using official entry form available from the UWEX Office)

Must also complete fair entry form to receive premiums and ribbons.

Youth must meet the participation requirements established by Shooting Sports Committee.

Division Letter: H. County Shoot Off – Grades 3-5

Class #:

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| 1. Air Pistol - Bench rest | 9. Archery - Recurve or Longbow – Bare |
| 2. Air Pistol - Silhouette | 10. Archery - Recurve or Longbow – Limited Free Style |
| 3. Air Rifle - Plinker | 11. Air Rifle Silhouettes - Plinker |
| 4. Air Rifle - Sporter | 12. Air Rifle Silhouettes - Sporter |
| 5. Air Rifle - Unlimited Sporter | 13. Air Rifle Silhouettes - Unlimited Sporter |
| 6. Archery - Compound Bow - Bare | 14. Wildlife Ecology or any other exhibit not listed above and homemade |
| 7. Archery - Compound Bow – Free Style | |
| 8. Archery - Compound Bow – Limited Free Style | |

Division Letter: I. County Shoot Off – Grades 6-8

According to state policy, youth 8-11 cannot operate powder-burning firearms. This includes .22 handguns or rifles, muzzle loading rifles, and shotguns

Class #:

1. Air Pistol – Silhouette
2. Air Pistol – Two-Handed
3. Air Pistol – One-Handed
4. Air Rifle – Plinker
5. Air Rifle - Sporter
6. Air Rifle – Unlimited Sporter
7. Archery – Compound Bow – Bare
8. Archery – Compound Bow – Limited Freestyle
9. Archery – Compound Bow – Freestyle
10. Archery – Recurve or Longbow – Bare
11. Archery – Recurve or Longbow – Limited Freestyle
12. .22 Caliber Rifle – Sporter
13. .22 Caliber Rifle – Target
14. .22 Caliber Rifle – Scope Sights
15. .22 Pistol Camp Perry Course
16. .22 Pistol, Slow Fire
17. .22 Pistol, Silhouette
18. Air Rifle Silhouettes - Plinker
19. Air Rifle Silhouettes – Sporter
20. Air Rifle Silhouettes – Unlimited Sporter
21. .22 Caliber Silhouettes – Metallic Sights
22. .22 Caliber Silhouettes – Scope Sights
23. Muzzleloading Rifle
24. Shotgun/Trap
25. Wildlife Ecology or any other exhibit not listed above and homemade

Division Letter: J. County Shoot Off – Grades 9 and above

Class #:

1. Air Pistol – Silhouette
2. Air Pistol – Two-Handed
3. Air Pistol – One-Handed
4. Air Rifle – Plinker
5. Air Rifle - Sporter
6. Air Rifle – Unlimited Sporter
7. Archery – Compound Bow – Bare
8. Archery – Compound Bow – Limited Freestyle
9. Archery – Compound Bow – Freestyle
10. Archery – Recurve or Longbow – Bare
11. Archery – Recurve or Longbow – Limited Freestyle
12. .22 Caliber Rifle – Sporter
13. .22 Caliber Rifle – Target
14. .22 Caliber Rifle – Scope Sights
15. .22 Pistol Camp Perry Course
16. .22 Pistol, Slow Fire
17. .22 Pistol, Silhouette
18. Air Rifle Silhouettes - Plinker
19. Air Rifle Silhouettes – Sporter
20. Air Rifle Silhouettes – Unlimited Sporter
21. .22 Caliber Silhouettes – Metallic Sights
22. .22 Caliber Silhouettes – Scope Sights
23. Muzzleloading Rifle
24. Shotgun/Trap
25. Wildlife Ecology or any other exhibit not listed above and homemade

Division Letter: K. Recycling Exhibit, (Display or Poster)

Class #:

1. Show how a recycling company or landfill works.
2. Compare Renewable and non-renewable resources.
3. Show daily, weekly, monthly, or annual amount of water & recycled materials generated by individual or family.
4. Product made from recycled materials (can characters, junk mail collage)
5. Show how to recycle and the importance of it.
6. Farm composting and/or how to compost.
7. Turn trash into cash.
8. Conserving energy in your home.
9. Air pollution causes and how to reduce.
10. Illustrate reduce, reuse, and recycle.
11. Five recyclable and five non-recyclable materials.
12. Paper-making process.
13. Vermiculture (composting with worms)
14. Outdoor (chair, table, plant stand)
15. Indoor (furniture, etc.)
16. Gardening (pitchfork, wheelbarrow, etc.)
17. Decorations for inside or outside
18. Miscellaneous (jewelry, etc.)

Division Letter: L. Adventures in Environment (Display or Poster, unless otherwise noted)

Class #:

1. Camping equipment or clothing necessary for a specific environmental adventure (e.g. backpacking, rock climbing, night hiking, orienteering, etc. using drawings and / or photos)
2. Campfire safety and equipment needs, as well as a sample menu for a full day's outing.
3. Knot tying techniques and usage for specific outdoor situations.
4. Safety procedures or first aid kit essentials appropriate for outdoor adventures.
5. Fire prevention in the outdoors.
6. Journal, story, poem, or song created by members about a specific real-life adventure experience.
7. Any other outdoor adventure-based exhibit.

Division Letter: M. Wild Flowers Exhibit, display or poster

Class #:

Flowers must be from Wisconsin

1. Pressed blossom of a flower (all parts properly labeled)

2. 10 wildflower photos, identify each flower and tell where photo was taken.
3. Wildflower arrangement
4. 10 kinds of wildflower seeds
5. Show the creation and maintenance of a wildflower garden or prairie study
6. Any other Wildflower project (ex. Pressed flowers)

Division Letter: N. Water (Display or Poster unless otherwise noted)

Class #:

1. Water conservation techniques or methods.
2. Local or national water pollution issues.
3. A local water issue.
4. Portfolio discussing a developed and implemented plan for addressing a specific water issue in the environment.
5. Any other water-related exhibit.

Division Letter: O. Geology

Class #:

1. Collection of 8-20 rock or mineral specimens with a minimum of 3 minerals represented. Collection may include duplications that show variation. Label collection and note where each component was found.
2. Poster or display documenting the results of hardness and streak tests conducted on at least five different specimen. Label and note where found.
3. Poster or display describing plate tectonics.
4. Poster or display tracing fossil history through the geologic ages.
5. Poster or display featuring rocks or minerals used in the lapidary arts.
6. Any other geology exhibit.

Division Letter: P. Canoeing Exhibit, Display or poster

Class #:

1. Canoe Safety, maintenance and equipment
2. Homemade canoe paddles or canoe
3. Canoe Trip
4. Any other canoeing project

Division Letter: Q. Bicycling as Recreation Exhibit

Class #:

1. Bicycle repair kit and equipment
2. Report on bike trails
3. Biking trip
4. Any other bicycling project

Division Letter: R. Wildlife Exhibit (Poster or Display)

Class #:

1. Six wildlife species native to Walworth County or the state of Wisconsin. This may include different species of the same type of animal. This should not include insects.
2. Defense strategies used by four wildlife species.
3. Wildlife reproduction and care of young.
4. Endangered Species.
5. Winged mammals.
6. Attracting wildlife to your home yard.
7. Wisconsin wildlife food chains.
8. Taxidermy.
9. Game management practices and organizations.
10. 6-12 photos taken by exhibitor of wildlife captioned and displayed to tell a factual story or relay miscellaneous facts about one or more species.
11. Any other wildlife exhibit must bring a photo including exhibitor and animal

Division Letter: RR. Wildlife Calls Contest, All Grades

Class #:

1. This is a performance class in which exhibitors will attend judging to perform their own duck call or goose call using just their voice. Exhibitors should provide an audio recording of the duck or goose they are mimicking for judges to listen to. No equipment will be provided, so exhibitors must bring whatever they will need to play the recording. There is no other exhibit to prepare in advance for this class.

Division Letter: S. Exploring Your Environment, Grades 5-7 (Display or Poster, unless otherwise noted)

Class #:

1. Wisconsin state symbols or native trees.
2. Wisconsin hunting and fishing laws.
3. Interactive display connecting fairgoers to the environment through the senses.
4. A Wisconsin habitat and its inhabitants.
5. Factors contributing to pollution in Wisconsin.
6. Stars, constellations, and planets observable in the skies above Wisconsin during a particular time period.
7. Any other environmental exhibit.

Division Letter: T. Exploring Your Environment, Grades 8-10 (Display or Poster)

Class #:

1. Differences between two or more Wisconsin habitats.
2. Tracks from six or more Wisconsin wildlife species.
3. The pollination process.
4. Origins of groundwater and how it is impacted by humans and the environment.
5. Any other environmental exhibit.

Division Letter: U. Exploring Your Environment, Grades 11 & Up (Display or Poster)

Class #:

1. Factors or implications of biotechnology use in our environment.
2. Biodiversity of a specific habitat or Wisconsin region.
3. Climatology and connection to habitats in Wisconsin or beyond.
4. Weather and its connection to environmental studies.

5. Plant successions in Wisconsin habitats.
6. Any other environmental exhibit.

Division Letter: V. Backpacking & Hiking, Grades 3-5 (Display or Poster)

Class #:

1. Detailed explanation of plans for a day hike, including schedule, needed supplies, and meals.
2. Appropriate hiking apparel for two different types of hiking adventures. Specify season and terrain.
3. The value and use of compasses while hiking.
4. Any other backpacking/hiking related exhibit

Division Letter: W. Backpacking & Hiking, Grades 6-8 (Display or Poster)

Class #:

1. Detailed explanation of plans for a multi-day camping trip, including information about travel plans, the camping site, anticipated activities, and needed supplies.
2. Developed meal plans and list of supplies needed for a two day, one-night camping adventure.
3. Steps to be taken on camping trips to honor the "Leave No Trace" principles.
4. Any other backpacking/hiking related exhibit.

Division Letter: X. Backpacking & Hiking, Grades 9 & Up (Display or Poster)

Class #:

1. Detailed explanation of plans for a multi-day group backpacking adventure, including gear to be taken, planned shelter, and a description of the anticipated campsite.
2. Detailed design of a non-tent backpacking shelter, including a list of supplies needed to make it ready to sleep in.
3. Detailed plans for a personal conditioning program designed to prepare you for challenging backpacking adventures.
4. Explanation of map orientation and use of triangulation while hiking/camping.
5. Any other backpacking/hiking exhibit.

Division Letter: Y. Renewable Energy, All Grades

Class #:

1. Exhibit describing how wind or solar energy is collected and/or converted for human use
2. Exhibit describing the benefits of one or more renewable energy sources
3. Exhibit comparing a renewable energy source to a non-renewable energy source
4. Exhibit showcasing one or more careers in a renewable energy field
5. Exhibit focused on usage of renewable energy sources in WI or throughout the U.S.
6. Any other renewable energy exhibit.

JUNIOR GEOSPATIAL

REGULATIONS:

1. Exhibitors may bring their own laptops for demonstration purposes during judging. Neither computers nor internet connections will be provided.
2. Displays are limited to a size of 20" x 22". Posters are limited to a size of 14" x 22".
3. Maximum of two entries per exhibitor.

Division Letter: AA. Geocaching Exhibit, All Grades

Class #:

1. Exhibit comparing sizes and/or types of geocaches
2. Exhibit describing helpful items individuals should take with them when looking for caches
3. Exhibit documenting your personal adventure locating 3-5 geocaches
4. Exhibit showcasing your efforts to create and hide your own cache for others to find
5. Exhibit showcasing your efforts to teach others about some aspect of geocaching
6. Any other geocaching exhibit

Division Letter: BB. Geospatial Exhibit, All Grades

Class #:

1. Make an exhibit explaining what GIS is and how it is used in the world today
2. Design an exhibit describing GIS-related careers
3. Develop a tourist guide for a specific geographical area that features a map of 4-6 sites to be toured, along with positional data sites for the sites, info about the sites, and geo tools used to create the map. (Even businesses, churches, parks or historical in your local community are worthy tourist locations.)
4. Make an exhibit comparing different types of maps or mapping apps
5. Any other geospatial exhibit