



The Cook Museum of Natural Science (CMNS) provides a hands-on, immersive experience where visitors can explore, interact with, and learn about nature.

**A visit to the Exhibits or an Educational Class can provide supplemental activities and experiences for Scouts, but typically do not meet all the requirements to complete a badge.** Below are some ways that leaders, volunteers, and parents can align the visit to badge requirements that the Scouts may be working toward.

Some of the listed requirements below can be met by a visit to the Museum and others are just touched upon.

## Connections for Cub Scouts & Boy Scouts

Rank	Badge/Adventure	Badge Activity	CMNS Exhibits	CMNS Classes/Camps
Tiger	My Tiger Jungle Adventure	3 - Point out two different kinds of birds that live in your area. With your parent, guardian, or other caring adult, or with your den, find out more about one of these birds.	Visit these Exhibits to learn about different birds: a) Discover Exhibit b) Rivers & Streams Exhibit c) Forests Exhibit d) Birds Exhibit	
Tiger	Tigers in the Wild Adventure	3b - Listen while your leader reads the Leave No Trace Principles for Kids. Discuss why you should "Trash Your Trash."	Visit Know Before You Go to learn about Leave No Trace.	
Tiger	Tigers in the Wild Adventure	6 - Find two different trees and two different types of plants that grow in your area. Write their names in your Tiger Handbook.	Visit these Exhibits to learn about different trees: a) Rivers & Streams Exhibit b) Forests Exhibit	
Tiger	Tigers in the Wild Adventure	7 - Visit a nature center, zoo, or another outside place with your family or den. Learn more about two animals, and write down two interesting things about them in your Tiger Handbook.	Visit any Exhibit.	a) Alabama Biomes (Grades K - 2) b) Exploring Reptiles and Amphibians (Grades Pre-K - 2) c) Interesting Insects (Grades Pre-K - 2) d) Power of Pollination (Grades K - 2) e) Ocean Explorers (Grades Pre-K - 2)
Tiger	Tiger Elective Adventure: Sky Is The Limit	4 - Observe in the sky or select from a book, chart, computer, or electronic device two constellations that are easy to see in the night sky. With your parent, guardian, or other caring adult, find out the names of the stars that make up the constellation and how the constellation got its name. Share what you found with your den.	Visit the Looking Up Exhibit and use the Hubble Space Telescope Interactive.	

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Wolf	Paws on the Path Adventure	4 - Before hiking, recite the Outdoor Code and the Leave No Trace Principles for Kids with your leader. (This may be combined with Requirement 3 of The Call of the Wild Adventure.) After hiking, discuss how you showed respect for wildlife.	Visit Know Before You Go to learn about Leave No Trace.	
Wolf	Paws on the Path Adventure	6 - Name two birds, two insects, and/or two other animals that live in your area. Explain how you identified them.	Visit any Exhibit. Visit the Birds Exhibit to learn more about using field marks to identify birds.	a) Interesting Insects Class (Grades Pre-K - 2) b) Alabama Biomes (Grades K - 2)
Wolf	Wolf Elective Adventures: Code of the Wolf	2a - With other members of your den or family, identify three different types of shapes that you see in nature.	Visit Patterns in Nature area of the Discover Exhibit.	
Bear	Fur, Feathers, and Ferns Adventure	2 - Visit one of the following: zoo, wildlife refuge, nature center, aviary, game preserve, local conservation area, wildlife rescue group, or fish hatchery. Describe what you learned during your visit.	Visit the Museum.	Any Class
Bear	Fur, Feathers, and Ferns Adventure	3 - Name one animal that has become extinct in the last 100 years and one animal that is currently endangered. Explain what caused their declines.	Learn about some of the endangered animals that the Museum cares for in the following Exhibits: a) Discover Exhibit b) Oceans Exhibit	
Bear	Fur, Feathers, and Ferns Adventure	4 - Observe wildlife from a distance. Describe what you saw.	All of the animals in the Exhibits are still considered wildlife. They are not pets.  Visit these Exhibits to see live animals: a) Discover Exhibit b) Rivers & Streams Exhibit c) Oceans Exhibit d) The Wonderful World of Insects Exhibit	
Bear	Fur, Feathers, and Ferns Adventure	5 - Use a magnifying glass to examine plants more closely. Describe what you saw through the magnifying glass that you could not see without it.	Use the Dino-Lite Interactive in the Discover Exhibit.	Power of Pollination (Grades K - 2)
Bear	Bear Elective Adventure: A Bear Goes Fishing	1 - Discover and learn about three types of fish in your area. Draw a color picture of each fish, record what each one likes to eat, and describe what sort of habitat each one likes.	Visit the Rivers & Streams Exhibit to see live and taxidermy freshwater fish that would be found in North Alabama.  Though they are not native to North Alabama you can all see a variety of saltwater fish in the Oceans Exhibit.	

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Bear	Bear Elective Adventure: Critter Care	3b - Learn about careers that involve the care of animals. What education, training, and experience are required?		For A Day Camps
Bear	Bear Elective Adventure: Super Science	1 - Make static electricity by rubbing a balloon or a plastic or rubber comb against another material, such as a fleece blanket or wool sweater. Explain what you learned.		Electromagnetism: Science or Superpower? (Grades 3 - 8)
Bear	Bear Elective Adventure: Super Science	2 - Conduct one other static electricity investigation. Explain what you learned.		Electromagnetism: Science or Superpower? (Grades 3 - 8)
Webelos	Webelos Walkabout	3 - Recite the Outdoor Code and the Leave No Trace Principles for Kids from memory. Talk about how you can demonstrate them on your Webelos adventures.	Visit Know Before You Go to learn about Leave No Trace.	
Webelos	Webelos Walkabout	5 - Describe and identify from photos any poisonous plants and dangerous animals and insects you might encounter on your hike or activity.	Visit Know Before You Go.	
Webelos & Arrow of Light	Webelos/AOL Elective Adventure: Earth Rocks!	1 - Do the following: a) Explain the meaning of the word "geology." b) Explain why this kind of science is an important part of your world.		Rocks, Minerals, Geology! (Grades 3 - 6)
Webelos & Arrow of Light	Webelos/AOL Elective Adventure: Earth Rocks!	2 - Look for different kinds of rocks or minerals while on a rock hunt with your family or your den.	Visit the Foundations Exhibit.	Rocks, Minerals, Geology! (Grades 3 - 6)
Webelos & Arrow of Light	Webelos/AOL Elective Adventure: Earth Rocks!	3 - Do the following: a) Identify the rocks you see on your rock hunt. Use the information in your handbook to determine which types of rocks you have collected. b) With a magnifying glass, take a closer look at your collection. Determine any differences between your specimens. c) Share what you see with your family or den.	3a - Visit the Foundations Exhibit. 3b - Use the Dino-Lite Interactive in the Discover Exhibit.	Rocks, Minerals, Geology! (Grades 3 - 6)
Webelos & Arrow of Light	Webelos/AOL Elective Adventure: Earth Rocks!	6 - Do the following: a) Identify some of the geological building materials used in building your home. b) Identify some of the geological materials used around your community	Visit the Foundations Exhibit.	
Webelos & Arrow of Light	Webelos/AOL Elective Adventure: Into the Wild	3 - Watch for birds in your yard, neighborhood, or area for one week. Identify the birds you see, and write down where and when you saw them.	Visit the Birds Exhibit to learn more about using field marks to identify birds.	

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Webelos & Arrow of Light	Webelos/AOL Elective Adventure: Into the Wild	4 - Learn about the bird flyways closest to your home. Find out which birds use these flyways.	Use the Whooping Crane Interactive in the Rivers & Streams Exhibit to learn more about their migration.  Visit the Birds Exhibit.	
Webelos & Arrow of Light	Webelos/AOL Elective Adventure: Into the Wild	6 - Identify an insect, reptile, bird, or other wild animal that is found only in your area of the country. Tell why it survives in your area.	Visit these Exhibits to learn about different animals: a) Discover Exhibit b) Rivers & Streams Exhibit c) Caves Exhibit d) Forests Exhibit f) Birds Exhibit g) Curiosity Cabin Exhibit h) Wonderful World of Insects Exhibit	Herpetology 101 (Grades 3 - 5)
Webelos & Arrow of Light	Webelos/AOL Elective Adventure: Into the Wild	7a - A producer, a consumer, and a decomposer in the food chain of an ecosystem		Perplexing Pellets (Grades 3 - 5)
Webelos & Arrow of Light	Webelos/AOL Elective Adventure: Into the Wild	8 - Learn about aquatic ecosystems and wetlands in your area. Talk with your Webelos den leader or family about the important role aquatic ecosystems and wetlands play in supporting life cycles of wildlife and humans, and list three ways you can help.	Learn about North Alabama aquatic ecosystems and wetlands and the species that live there by visiting the following Exhibits: a) Discover Exhibit b) Rivers & Streams Exhibit	
Webelos & Arrow of Light	Webelos/AOL Elective Adventure: Into the Wild	9a - Visit a museum of natural history, a nature center, or a zoo with your family, Webelos den, or pack. Tell what you saw.	Visit the Museum.	Any Class
Webelos & Arrow of Light	Webelos/AOL Elective Adventure: Into the Woods	2 - Identify four trees common to the area where you live. Tell whether they are native to your area. Tell how both wildlife and humans use them.	Visit these Exhibits to learn about different trees: a) Rivers & Streams Exhibit b) Forests Exhibit	
Webelos & Arrow of Light	Webelos/AOL Elective Adventure: Into the Woods	3 - Identify four plants common to the area where you live. Tell which animals use them and for what purpose.	Visit these Exhibits to learn about different plants in North Alabama: a) Rivers & Streams Exhibit b) Forests Exhibit	
Merit Badge	Bird Study	2 - Show that you are familiar with the terms used to describe birds by sketching or tracing a perched bird and then labeling 15 different parts of the bird. Sketch or trace an extended wing and label types of wing feathers.	Visit the Birds Exhibit to learn more about using field marks to identify birds.  Study the birds in the following Exhibits: a) Discover Exhibit b) Rivers & Streams Exhibit c) Forests Exhibit d) Birds Exhibit e) Curiosity Cabin Exhibit	

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Merit Badge	Bird Study	10a - Identify a bird species that is on the endangered or threatened list. Explain what caused their decline. Discuss with your counselor what can be done to reverse this trend and what can be done to help remove the species from the endangered or threatened list.	Use the Whooping Crane Interactive in the Rivers & Streams Exhibit.	
Merit Badge	Environmental Science	3a(3) Ecology - Discuss what is an ecosystem. Tell how it is maintained in nature and how it survives.	Visit the Foundations Exhibit.	
Merit Badge	Environmental Science	3e(1) Endangered Species - Do research on one endangered species found in your state. Find out what its natural habitat is, why it is endangered, what is being done to preserve it, and how many individual organisms are left in the wild. Prepare a 100-word report about the organism, including a drawing. Present your report to your patrol or troop.	Visit the following Exhibits: a) Discover Exhibit b) Rivers & Streams Exhibit c) Caves Exhibit d) Oceans Exhibit e) Forests Exhibit	
Merit Badge	Environmental Science	3e(2) Endangered Species - Do research on one species that was endangered or threatened but which has now recovered. Find out how the organism recovered, and what its new status is. Write a 100-word report on the species and discuss it with your counselor.	Visit the Rivers & Streams Exhibit.	
Merit Badge	Environmental Science	3g Pollination 1. Using photographs or illustrations, point out the differences between a drone and a worker bee. Discuss the stages of bee development (eggs, larvae, pupae). Explain the pollination process, and what propolis is and how it is used by honey bees. Tell how bees make honey and beeswax, and how both are harvested. Explain the part played in the life of the hive by the queen, the drones, and the workers.  2. Present to your counselor a one-page report on how and why honey bees are used in pollinating food crops. In your report, discuss the problems faced by the bee population today, and the impact to humanity if there were no pollinators. Share your report with your troop or patrol, your class at school, or another group approved by you.  3. Hive a swarm OR divide at least one colony of honey bees. Explain how a hive is constructed.	Learn more about bees in the following Exhibits: a) Discover Exhibit B) Arctic/Desert Exhibit	

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Merit Badge	Geology	1 - Define geology. Discuss how geologists learn about rock formations. In geology, explain why the study of the present is important to understanding the past.		Rocks, Minerals, Geology! (Grades 3 - 6)
Merit Badge	Geology	2 - Pick three resources that can be extracted or mined from Earth for commercial use. Discuss with your counselor how each product is discovered and processed.	Visit the Foundations Exhibit.	
Merit Badge	Geology	5c(1) - Define rock. Discuss the three classes of rocks including their origin and characteristics.	Visit the Foundations Exhibit.	Rocks, Minerals, Geology! (Grades 3 - 6)
Merit Badge	Geology	5c(2) - Define mineral. Discuss the origin of minerals and their chemical composition and identification properties, including hardness, specific gravity, color, streak, cleavage, luster, and crystal form.	Visit the Foundations Exhibit.	Rocks, Minerals, Geology! (Grades 3 - 6)
Merit Badge	Geology	5c(3b) - With your counselor's assistance, identify 15 different rocks and minerals. List the name of each specimen, tell whether it is a rock or mineral, and give the name of its class (if it is a rock) or list its identifying physical properties (if it is a mineral).	Visit the Foundations Exhibit.	
Merit Badge	Insect Study	2 - Tell how insects are different from all other animals. Show how insects are different from centipedes and spiders.	Visit the Wonderful World of Insects Exhibit.	
Merit Badge	Insect Study	3 - Point out and name the main parts of an insect.	Visit the Wonderful World of Insects Exhibit.	
Merit Badge	Insect Study	5a - Observe 20 different live species of insects in their habitat. In your observations, include at least four orders of insects.	Visit the Wonderful World of Insects Exhibit.	
Merit Badge	Insect Study	5b - Make a scrapbook of the 20 insects you observe in 5a. Include photographs, sketches, illustrations, and articles. Label each insect with its common and scientific names, where possible. Share your scrapbook with your merit badge counselor.	Visit the Wonderful World of Insects Exhibit.	
Merit Badge	Insect Study	8 - Compare the life histories of a butterfly and a grasshopper. Tell how they are different.		Arthropod Comparative Anatomy Study (Grades 5 - 8)
Merit Badge	Insect Study	10a - Observe an ant colony in a formicarium (ant farm). Find the queen and worker ants. Explain to your counselor the different chambers found within an ant colony.	Visit the Wonderful World of Insects Exhibit.	
Merit Badge	Mammal Study	1 - Explain the meaning of "animal," "invertebrate," "vertebrate," and "mammal." Name three characteristic that distinguish mammals from all other animals.	Visit the Wonderful World of Insects Exhibit.	

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Merit Badge	Mammal Study	2 - Explain how the animal kingdom is classified. Explain where mammals fit in the classification of animals. Classify three mammals from phylum through species.	Visit the Wonderful World of Insects Exhibit.	
Merit Badge	Mammal Study	4e - Visit a natural history museum. Report on how specimens are prepared and cataloged. Explain the purposes of museums.	Visit the Museum.	
Merit Badge	Mining in Society	1a - Select 10 different minerals. For each one, name a product for which the mineral is used.	Visit the Foundations Exhibit.	
Merit Badge	Mining in Society	1c - From the list of minerals you chose for 1a, determine the countries where those minerals can be found, and discuss what you learned with your counselor.	Visit the Foundations Exhibit.	
Merit Badge	Nature	1 - Name three ways in which plants are important to animals. Name a plant that is important to animals that is protected in your state or region, and explain why it is at risk.	Visit the following Exhibits: a) Rivers & Streams Exhibit b) Forests Exhibit	
Merit Badge	Nature	2 - Name three ways in which animals are important to plants. Name an animal that is protected in your state or region, and explain why it is at risk.	Visit the following Exhibits: a) Discover Exhibit b) Rivers & Streams Exhibit c) Caves Exhibit d) Oceans Exhibit e) Forests Exhibit	
Merit Badge	Nature	3 - Explain the term "food chain." Give an example of a four-step land food chain and a four-step water food chain.		a) Perplexing Pellets (Grades 3 - 5) b) Aquarist For A Day (Grades 4 - 10)
Merit Badge	Nature	4c(1) Reptiles And Amphibians - Show that you can recognize the venomous snakes in your area.	Visit the following Exhibits: a) Know Before You Go b) Discover Exhibit c) Forests Exhibit	Herpetology 101 (Grades 3 - 5)
Merit Badge	Nature	4d(1) Insects And Spiders - Collect and identify either in the field or through photographs 10 species of insects or spiders	Visit the following Exhibits: a) Discover Exhibit b) The Wonderful World of Insects Exhibit	
Merit Badge	Nature	4e(1) Fish - Identify two species of fish native to your area.	Visit the Rivers & Streams Exhibit.	
Merit Badge	Nature	5 - Discuss the principle of Leave No Trace and how it relates to nature.	Visit Know Before You Go.	

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Merit Badge	Oceanography	2 - Define salinity, temperature, and density, and describe how these important properties of seawater are measured by the physical oceanographer. Discuss the circulation and currents of the ocean. Describe the effects of the oceans on weather and climate.		Aquarist For A Day
Merit Badge	Oceanography	5 - List the main salts, gases, and nutrients in sea water. Describe some important properties of water. Tell how the animals and plants of the ocean affect the chemical composition of seawater. Explain how differences in evaporation and precipitation affect the salt content of the oceans.		Aquarist For A Day
Merit Badge	Oceanography	6 - Describe some of the biologically important properties of seawater. Define benthos, nekton, and plankton. Name some of the plants and animals that make up each of these groups. Describe the place and importance of phytoplankton in the oceanic food chain.		Aquarist For A Day
Merit Badge	Oceanography	8b - Visit one of the following: (1) an oceanographic research ship, or (2) an oceanographic institute, marine laboratory, or marine aquarium. Write a 500-word report about your visit.	Visit the Oceans Exhibit.	
Merit Badge	Plant Science	3a - Explain how honeybees and other pollinating insects are important to plant life.	Visit the Discover Exhibit.	
Merit Badge	Plant Science	6 - List by common name at least 10 native plants and 10 cultivated plants that grow near your home. List five invasive nonnative plants in your area and tell how they may be harmful. Tell how the spread of invasive plants may be avoided or controlled in ways that are not damaging to humans, wildlife, and the environment.	Visit the following Exhibits: a) Rivers & Streams Exhibit b) Forests Exhibit c) Hilltop Woodland Display (View from the Overlook Walkway)	
Merit Badge	Plant Science	Supplemental - not a requirement	Look through the Naturalist Journal in Curiosity Cabin.	
Merit Badge	Reptile and Amphibian Study	1 - Describe the identifying characteristics of six species of reptiles and four species of amphibians found in the United States. For any four of these, make sketches from your own observations or take photographs. Show markings, color patterns, or other characteristics that are important in the identification of each of the four species. Discuss the habits and habitats of all 10 species.	Visit the following Exhibits: a) Know Before You Go b) Discover Exhibit c) Rivers & Streams Exhibit d) Caves Exhibit e) Arctic/Desert Exhibit f) Oceans Exhibit g) Forests Exhibit	a) Herpetology 101 (Grades 3 - 5) b) Herpetologist For A Day (Grades 4 - 8)
Merit Badge	Reptile and Amphibian Study	3 - Describe the main differences between a) Amphibians and reptiles b) Alligators and crocodiles c) Toads and frogs d) Snakes and lizards		a) Herpetology 101 (Grades 3 - 5) b) Herpetologist For A Day (Grades 4 - 8)



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Merit Badge	Reptile and Amphibian Study	4 - Explain how reptiles and amphibians are an important component of the natural environment. List four species that are officially protected by the federal government or by the state you live in, and tell why each is protected. List three species of reptiles and three species of amphibians found in your local area that are not protected. Discuss the food habits of all 10 species.		a) Herpetology 101 (Grades 3 - 5) b) Herpetologist For A Day (Grades 4 - 8)
Merit Badge	Reptile and Amphibian Study	5 - Compare how reptiles reproduce to how amphibians reproduce.		a) Herpetology 101 (Grades 3 - 5) b) Herpetologist For A Day (Grades 4 - 8)
Merit Badge	Reptile and Amphibian Study	6 - From observation, describe how snakes move forward. Describe the functions of the muscles, ribs, and belly plates.	Visit the Discover Exhibit.	a) Herpetology 101 (Grades 3 - 5) b) Herpetologist For A Day (Grades 4 - 8)
Merit Badge	Reptile and Amphibian Study	7 - Describe in detail six venomous snakes and the one venomous lizard found in the United States. Describe their habits and geographic range. Tell what you should do in case of a bite by a venomous species.	Visit the following Exhibits: a) Know Before You Go b) Arctic/Desert Exhibit	Herpetology 101 (Grades 3 - 5)
Merit Badge	Reptile and Amphibian Study	8b - Choose a reptile or amphibian that you can observe at a local zoo, aquarium, nature center, or other such exhibit (such as your classroom or school). Study the specimen weekly for a period of three months. At each visit, sketch the specimen in its captive habitat and note any changes in its coloration, shedding of skins, and general habits and behavior. Discuss with your counselor how the animal you observed was cared for to include its housing and habitat, how the lighting, temperature, and humidity were maintained, and any veterinary care requirements. Find out, either from information you locate on your own or by talking to the caretaker, what this species eats and what are its native habitat and home range, preferred climate, average life expectancy, and natural predators. Also identify any human caused threats to its population and any laws that protect the species and its habitat. After the observation period, share what you have learned with your counselor.	Visit the following Exhibits: a) Discover Exhibit b) Rivers & Streams Exhibit c) Oceans Exhibit	
Merit Badge	Reptile and Amphibian Study	9b - Identify by sight eight species of reptiles or amphibians.	Visit the following Exhibits: a) Know Before You Go b) Discover Exhibit c) Rivers & Streams Exhibit d) Caves Exhibit e) Arctic/Desert Exhibit f) Oceans Exhibit g) Forests Exhibit	a) Herpetology 101 (Grades 3 - 5) b) Herpetologist For A Day (Grades 4 - 8)

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Merit Badge	Weather	1 - Define meteorology. Explain what weather is and what climate is. Discuss how the weather affects farmers, sailors, aviators, and the outdoor construction industry. Tell why weather forecasts are important to each of these groups.		Weather Watchers II: Clouds, Lightning, and Tornadoes! (Grades 3 - 6)
Merit Badge	Weather	2 - Name five dangerous weather-related conditions. Give the safety rules for each when outdoors and explain the difference between a severe weather watch and a warning. Discuss the safety rules with your family.	Visit the Foundations Exhibit.	Weather Watchers II: Clouds, Lightning, and Tornadoes! (Grades 3 - 6)
Merit Badge	Weather	3 - Explain the difference between high- and low-pressure systems in the atmosphere. Tell which is related to good and to poor weather. Draw cross sections of a cold front and a warm front, showing the location and movements of the cold and warm air, the frontal slope, the location and types of clouds associated with each type of front, and the location of precipitation.		Weather Watchers II: Clouds, Lightning, and Tornadoes! (Grades 3 - 6)
Merit Badge	Weather	4 - Tell what causes wind, why it rains, and how lightning and hail are formed.	Visit the Foundations Exhibit.	Weather Watchers II: Clouds, Lightning, and Tornadoes! (Grades 3 - 6)

If you identify more connections, we would love to hear about it. You can let us know at [museumprogramming@cookmuseum.org](mailto:museumprogramming@cookmuseum.org).