Wildlife Habitat Checklist

Habitat Lab Field Journal Activity Lesson Plans & Resources

Online Lesson Plans & Resources available on the Alabama Wildlife Federation website

Students will research an animal native to Alabama that they would like to attract to the school's habitat lab and the habitat resources that animal needs to survive. Then, they will explore the habitat lab to determine whether or not the resources needed are available in the school's wildlife habitat.

Materials: Copies of the "Wildlife Habitat Checklist" Field Journal Activity Page, Clipboards, Pencils, and copies of Field Identification Guides such as the *National Audubon Society Field Guide to the Southeastern States*, *Birds of Alabama*, and *National Wildlife Federation Field Guide to Insects and Spiders*

Duration: Intro Discussion & Research – 45 min. Outdoor Exploration – 30 min. Indoor Review – 30 min.

STEP 1: Engage through Discussion

The background information, vocabulary review and questions below can be used to help introduce the topic, engage the students, and build a foundation to discuss the topic:

Background Information (online as a PDF)

Habitat is the natural home or **ecosystem** where an animal lives. Different habitats have different characteristics such as their geographical location, **climate** (weather patterns), and geology and soil structure. The plants and animals in a habitat are adapted physically and behaviorally to survive in that specific environment.

Habitat must provide the resources that the various species (types) of plants and animals need to survive including sources of food, water, shelter/cover, and places to raise their young to survive in their habitat. Therefore, all animals cannot live in all types of habitats. Some habitats provide a species the resources it needs to survive, while others do not. Some animals can find all of the resources they need in a small area (like a frog in a pond), while others may have to travel over a larger geographical area to find all of the resources they need (such as birds searching for food).

When a resource disappears, such as the loss of nesting sites due to new construction or the loss of water sources due to a drought, the animals may become displaced or may not be able to find new habitat. If they have to travel through dangerous areas (near predators or across roads) to find the resources they need, this can lead to a decline in that species' **population**. Therefore, resource availability can have an effect on a population's rate of reproduction and survival.

Humans can help though. We can research what resources are needed by specific wildlife species, and we can try to provide those resources in a schoolyard or backyard habitat. For example, bird baths can provide water, berry-producing bushes and bird feeders can provide food sources, and trees and nesting boxes can provide shelter and places to raise their young for Eastern bluebirds.

Vocabulary Review

Climate – prevailing weather patterns in a specific geographical location.

Ecosystem – a biological community of interacting organisms and their physical environment.

Habitat – the natural home or ecosystem where a plant or animal lives.

Population – the number of a specific species living in a defined area.

Species – a group of organisms (living things) that have the same traits and characteristics, and they can exchange genetic material and reproduce.

Example Discussion Questions & Answers (online as an Interactive PowerPoint or PDF)

Q: What is a habitat?
A: *A habitat is the natural home or ecosystem where an animal lives. The animals in a specific habitat are adapted physically and behaviorally to their environment.*

Q: What are the major characteristics of habitats?
A: *Major characteristics that vary between different types of habitats are (1) geographical location, (2) climate/weather conditions, (3) geology and soil structure, (4) plant communities, and (5) animal communities.*

Q: What types of habitat could we find in Alabama?
A: ☑ *Forest – Woodland with canopy, understory & forest floor. – YES*

☐ *Temperate Forest – Forest with four seasons. – YES*

Tropical Rainforest – Stays warm and wet all year. – NO

Desert – Hot and dry with few plants. – NO

Water (Aquatic) Habitat – YES. Freshwater Habitat (creek, river, pond, or lake) – YES Saltwater Habitat (ocean) – YES

Grassland (meadow, glade or prairie) – Large areas with grasses, herbs and wildflowers but little to no trees. – YES

Wetlands – Areas with shallow standing water such as marshes, bogs or swamps. – YES

☐ *Polar Tundra – Land is covered by massive areas of ice and snow. – NO*

Q: What do animals need in their habitat to survive?
A: *(1) Food, (2) Water, (3) Shelter/Cover from predators & bad weather, and (4) Places to Raise their Young*

Q: What if the habitat does not have enough resources? What is the habitat is damaged or destroyed? ***A:*** *The animals may find the resources they need by expanding their territory. However, while searching for these resources, they risk death due to predation (from lack of cover) or vehicle collisions (if crossing roads).*

Q: If they cannot find the resources they need, will they all survive?
A: *No, the population will most likely decline due to:*

- *Starvation – if they cannot find enough food.*
- *Sickness/Diseases – if they are hungry, dehydrated from lack of water, and weak.*
- *Low Reproduction - if they aren't healthy then they often cannot reproduce or the babies will not be healthy enough to survive.*

Q: Can a habitat provide a "home" for more than one species (or type) of wildlife?
A: *Yes, One habitat can provide the resources needed by numerous different species of insects, birds, amphibians, reptiles, and mammals.*

Q: How do the different animals share the resources and interact in the habitat?

A: *All of the organisms (plants and animals) in the habitat make up a system (an ecosystem) in which the organisms depend on each other.*

Q: Can we do anything to increase the resources available for local wildlife around our school?
A: *Yes, we can research what resources different wildlife species need to survive, and then try to add those resources to our school's campus and habitat lab. The more diverse the native plant species are in a habitat, then the greater the variety of wildlife species that will use the habitat.*

Q: What types of animals could we provide habitat for in our habitat lab?
A: *We could provide habitat for butterflies, song birds, lizards, frogs, bats & other critters.*

STEP 2: Explore with Literature

These books can be used to further explore the topic with your students:

- *Backyard Habitats*: A Bobbie Kalman Book (ISBN: 978-0778729853)

STEP 3: Explain using Technology

These videos can be used to further explain the topic to your students

- Why Garden for Wildlife? (1:35 min) http://sciencenetlinks.com/videos/why-garden-wildlife/
- Science Trek: Habitat (4:48 min) https://www.pbslearningmedia.org/resource/idptv11.sci.life.eco.d4khab/habitat/#.WvCBw4gvw2w ·
  Over the Hedge from DreamWorks Animation (83 min): must rent or purchase

STEP 4: Elaborate with a Field Investigation in the Habitat lab 

The Habitat lab Field Journal Activity Observation Page(s) allow students to apply what they have learned as they investigate and record their real-world observations in their field journals. Before you go outside, don't forget to review the activity tips, instructions, and your Habitat lab Rules:

- **Habitat lab Activity Tip:** If possible, split your students into groups of two or three students so that they can work together as a team to research the animal that they want to provide habitat for in the habitat lab. Then assign each group of students a class of animals that they can choose from so that you have at least one group researching a bird, amphibian, reptile, mammal, insect, etc. Utilize field identification guides and safe websites to conduct their research:
- Alabama Dept of Conservation & Natural Resources' Watchable Wildlife @ https://www.outdooralabama.com/watchable-wildlife
- Alabama Butterfly Atlas @ http://www.alabama.butterflyatlas.usf.edu/
- *National Audubon Society Field Guide to the Southeastern States* (ISBN: 978-0679446835)
- *National Wildlife Federation Field Guide to Insects & Spiders of North America* (ISBN: 978-1402741531)
- *Birds of Alabama Field Guide* by Stan Tekiela (ISBN: 978-1591931515)
- *Turtles of Alabama (Gosse Nature Guides)* by Dr. Craig Guyer Ph.D., Mark A. Bailey, Robert H. Mount (ISBN: 978-0817358068)
- *Butterflies of Alabama: Glimpses into Their Lives (Gosse Nature Guides)* by Paulette Haywood Ogard and Sara Cunningham Bright (ISBN: 978-0817355951)
- *Mammals of Alabama (Gosse Nature Guides)* by Dr. Troy L. Best Ph.D. and Dr. Julian L. Dusi Ph.D. (ISBN: 978-0817357498)

- **Activity Instructions:** Have students use a field identification guide and/or websites to research a wildlife species native to Alabama and its habitat needs. Then explore your habitat lab to determine if your schoolyard wildlife habitat provides habitat for this wildlife species.
- **Example Habitat lab Rules:** The habitat lab is not a playground, so do not run and do not climb on anything. Remember that the habitat lab provides habitat (a home) for local wildlife, and you should not damage the local wildlife habitat. Therefore, do not pick up wildlife, plants, flowers or rocks. Also, do not feed wildlife.

STEP 5: Review and Assess

Review and assess the students' observations and answers on their observation pages. You can use the second version of the Activity Pages as an evaluation tool by assigning one specific animal species to research.

 **Alabama Course of Study Standards for Third Grade**
Language Arts (2016)
10) Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. [RI.3.1]
12) Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause and effect. [RI.3.3]
14) Use text features and search tools (e.g., key words, sidebars, hyperlinks) to locate information relevant to a given topic efficiently. [RI.3.5]
16) Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur). [RI.3.7]
19) By the end of the year, read and comprehend informational texts, including history/social studies, science, and technical texts, at the high end of the Grades 2-3 text complexity band independently and proficiently. [RI.3.10]
28) Conduct short research projects that build knowledge about a topic. [W.3.7]
Science (2015)
11) Construct an argument from evidence to explain the likelihood of an organism's ability to survive when compared to the resources in a certain habitat. Create models that illustrate how organisms and their habitats make up a system in which the parts depend on each other.