

National Geographic Educator Certification Lesson Plan Template

Note: This lesson plan should be your own work and written in your own words with sources cited. You are encouraged to take inspiration from National Geographic resources and expected to build upon them to create your own unique plan.

Your Name: Rebecca Smith

Lesson/Activity Title: Animals' Survival

Recommended Age(s)/Grade(s): 4th Grade

Time Needed – Preparation: My time took several hours to collect data about each animal and compile the resources, but if you use the same animals and resources I used, your preparation time should be minimal - sharing links or making copies for your students.

Time Needed – Execution: This unit is designed to take about two weeks of science lessons to complete.

Standards:

District Level Standards:

- I can examine evidence to support an argument that the internal and external structures of animals function to support survival, growth, behavior, and reproduction (e.g heart, stomach, lung, brain, skin).
- I can investigate different ways animals receive information through the senses, process that information, and respond to it in different ways.

State Course of Study:

- Examine evidence to support an argument that the internal and external structures of plants (e.g., thorns, leaves, stems, roots, colored petals, xylem, phloem) and animals (e.g., heart, stomach, lung, brain, skin) function to support survival, growth, behavior, and reproduction.
- Investigate different ways animals receive information through the senses, process that information, and respond to it in different ways (e.g., skunks lifting tails and spraying an odor when threatened, dogs moving ears when reacting to sound, snakes coiling or striking when sensing vibrations).

Objectives:

By the end of this lesson, students will be able to:

- *Describe what habitat is and understand how particular creatures are suited for particular habitats*
- *Describe features of animals that help it survive*
- *Provide details about how a particular animal communicates*
- *Offer reasons as to why particular animals are endangered*
- *Offer possible solutions to protect the animal and prevent extinction*
- *Understand that lives of humans and animals around the planet are intertwined*

Materials and Preparation Needed:

What materials will need to be gathered or prepared for this lesson? Note what should be prepared in advance, and include links to electronic resources.

- To help my students research, I will narrow down the choices of animals for them and provide information for each group. A more detailed table with animals can be found at the end of this document

Directions:

How does the lesson work, step by step? Note actions taken by educators and learners in enough detail that a peer could replicate this lesson.

1. This lesson is more of a unit, so below, I will be breaking it down into days. Each day, there will be a mini lesson, followed by time for students to work independently on their chosen animal. This [Google Slideshow](#) will help with more details as well.
2. Day 1: Spark curiosity by asking questions about how animals survive and why some may be endangered. Tell the students about the project they are about to start. Allow pairs or small groups of students to choose one of the 11 endangered animals listed on the slideshow and at the end of this lesson plan. For the rest of the time period, students will use the links provided (also at the end of this lesson plan) to learn a little more about their particular animal. If time allows, students can begin their Google Slideshow Presentation with a title page and some photographs.
3. Day 2: Watch the link from Discovery Education (below and in the Slideshow) about habitats. Use the Animal Habitats link from National Geographic (below and in the Slideshow) to help students describe the habitat of their animal. Students will use already provided links to describe the animal's habitat and add it to their Google Slideshow Presentation.
4. Day 3: Learn about adaptations through the article from National Geographic and BrainPop. Then, students will use already provided links to describe the animals adaptations in their Slideshow.
5. Day 4: Students will learn about food webs, and how different levels of the food chain are all connected and affected by one another. Start by showing students pictures of food webs to help them understand why it is more of a web than a chain. Then, have students read the article about food webs to learn more about how things are so interconnected. Students will then conduct the "Food Web Fun" Activity about Australia's Shark Bay Ecosystem. After developing an understanding of food webs, students will add information about their own animal's food web to their Slideshow.
6. Day 5: Students will learn about how animals communicate. Watch the video about the four types of animal communication (auditory, tactile, visual, chemical). Then, watch the video about interesting ways animals communicate. After getting a basic understanding, students will search for and add information about how their animals communicate.
7. Day 6: Students will learn about why animals become endangered. Start by opening the room for classroom discussion. Then, have students read the article from National Geographic about endangered species. Through discussion or an online forum, have students answer why animals become endangered. Then, students will need to learn more about their own animal and why it has become endangered.
8. Day 7: Students will learn about efforts to conserve animals and how those efforts are making a difference. Students will read the article about animals that have recovered from the endangered list and through an online forum or class discussion, talk about efforts that have made positive impacts on animal populations. Then, students will include information about how to preserve their own animal in their slideshow.
9. After that, use whatever time is needed to allow students to complete their slideshows. It would also be best if students could share their slideshows with the classroom or perhaps even a wider audience!

Vocabulary:

What new vocabulary will students need to learn to complete this lesson?

- Habitat
- Adaptation
- Food web
- Endangered species

Scales and Perspectives, Human and Natural World Connections:

How does this lesson allow students to examine the world from different scales and perspectives? How are themes of the human and natural world, and their intersections, covered in this lesson?

- This lesson, including animals from around the world, is taught on a **global scale**, however, through investigating why the animal is endangered, I hope that students will also be able to make **local scale** connections.
- As the students learn about the animal's habitat, they will learn about **spatial and geological perspectives**.
- As students learn about the particular animal itself, they will learn about **ecological perspectives**.
- When students learn more about why the animal is endangered, and what we can be done to help the animal, students may become involved with **cultural, economical** and even **political perspectives**.

Learning Framework Connections:

How does this lesson connect with one or more of the attitudes, skills, and knowledge areas of the National Geographic Learning Framework?

Attitudes:

- Children make suggestions for how to counteract harm to the environment and work productively to promote environmentally safe activities.

Skills:

- Children combine information from diverse resources to create a single narrative.
- Children work in teams to solve problems.
- Children form and state opinions in group activities.
- Children respect others' opinions.

Knowledge:

- Children understand that living things affect the physical landscape of the areas, large and small, they live in.
- Children recognize that in a healthy ecosystem, multiple species can coexist and meet their individual needs in a relatively stable web of life.

Assessment:

How will student learning be assessed for this lesson?

Students will be assessed on their prepared presentation (Google Slideshow) using a simple rubric with each required part of the presentation. [Rubric](#)

Opportunities for Modifications and Extensions:

Suggest ways in which the lesson might be modified or extended for specific student audiences, different abilities, deeper learning, etc.

Different Age/Ability Groups: An easy modification is for students to do this project in larger or smaller groups. Another easy modification would be to provide more or less resources for each group.

Extensions: Students could turn this into an action project and take action to protect the animal, possibly turning into writing persuasive letters or speeches.

Resources:

What outside materials did you use to support this lesson? Please include links.

- What is habitat? Video from Discovery Education -
<https://www.youtube.com/watch?v=ZrSWYE37MJs&t=269s>
- Animal Habitats - <https://www.nationalgeographic.org/media/animal-homes-and-habitats/>
- Animal Adaptations -
<https://www.nationalgeographic.org/article/adaptation-and-survival/3rd-grade/>
- BrainPop - Natural Selection -
<https://www.brainpop.com/science/cellularlifeandgenetics/naturalselection/>
- Food Web - <https://www.nationalgeographic.org/encyclopedia/food-web/3rd-grade/>
- Food Web Fun Activity - <https://www.nationalgeographic.org/activity/food-web-fun/>
- Four ways animals communicate - <https://www.youtube.com/watch?v=i74RbATjBk4&t=2s>
- Interesting Ways Animals Communicate - <https://www.youtube.com/watch?v=cX7LUNed7Sc>
- Endangered Species Categories -
<https://media.nationalgeographic.org/assets/photos/000/281/28188.jpg>
- Endangered Species Article -
<https://www.nationalgeographic.org/encyclopedia/endangered-species/3rd-grade/>
- Animals that have recovered from being on the endangered list:
<https://www.wanderlust.co.uk/content/5-animals-back-from-the-brink-of-extinction/?cmpredirect>



Arched's Frog

http://www.edgeofexistence.org/species/archey_s-frog/
<https://www.nationalgeographic.org/media/animal-conservation/>
<https://www.doc.govt.nz/nature/native-animals/reptiles-and-frogs/frogs-pepeketua/archeyes-frog/>



Giant Panda

<https://www.nationalgeographic.org/media/endangered-animals/>
<https://www.nationalgeographic.org/video/giant-pandas-101/>
<https://www.worldwildlife.org/species/giant-panda>



Karner Blue Butterfly

https://www.fws.gov/midwest/endangered/insects/kbb/kbb_fact.html
<https://www.nationalgeographic.org/media/endangered-animals/>
https://www.fs.fed.us/wildflowers/pollinators/pollinator-of-the-month/karner_blue_butterfly.html



Florida Manatee

<https://www.nationalgeographic.org/education/classroom-resources/explorer-magazine/products/pathfinder/2017-01-01/>
<https://www.fws.gov/southeast/wildlife/mammals/manatee/>



Scalloped Hammerhead Shark

<https://galapagosconservation.org.uk/wildlife/scalloped-hammerhead-shark/>
<https://www.nationalgeographic.org/media/endangered-animals/>
<https://www.fisheries.noaa.gov/species/scalloped-hammerhead-shark>



California Tiger Salamander

https://www.fws.gov/sacramento/es_species/Accounts/Amphibians-Reptiles/ca_tiger_salamander/
<https://www.nationalgeographic.org/media/endangered-animals/>
https://www.epa.gov/sites/production/files/2013-08/documents/ca-tiger-salamander_0.pdf



Western Lowland Gorilla

<https://www.worldwildlife.org/species/western-lowland-gorilla>
<https://www.nationalgeographic.org/media/photo-ark-western-lowland-gorilla/>
<https://nationalzoo.si.edu/animals/western-lowland-gorilla>



Columbia Basin Pygmy Rabbit

<https://www.fws.gov/wafwo/articles.cfm?id=149489590>
<https://wdfw.wa.gov/species-habitats/species/bachylagus-idahoensis#climate>
<https://www.oregonzoo.org/conserve/fighting-extinction-pacific-northwest/columbia-basin-pygmy-rabbits>

	<p>https://www.nationalgeographic.org/media/mexican-gray-wolf/</p> <p>https://defenders.org/wildlife/mexican-gray-wolf/</p> <p>https://www.fws.gov/southwest/es/mexicanwolf/</p> <p>https://www.nationalgeographic.org/media/photo-ark-mexican-gray-wolf/</p>
	<p>https://www.nationalgeographic.org/media/photo-ark-golden-lion-tamarin/</p> <p>https://www.nationalgeographic.org/video/golden-lion-tamarins-poco-das-antas/</p> <p>https://nationalzoo.si.edu/animals/golden-lion-tamarin</p>
 <p>PHOTOARK JOEL SARTORE</p>	<p>https://www.pangolinsq.org/pangolins/sunda-pangolin/</p> <p>http://www.edgeofexistence.org/species/sunda-pangolin/</p> <p>https://wwf.panda.org/discover/knowledge_hub/where_we_work/borneo_forests/?345210/Sunda-Pangolin-Manis-javanica-Has-a-sweet-Nam-e-unfortunately-not-as-sweet-as-its-fate</p>