

Adaptations | Driving Question: How can we teach others about how animals adapt to survive?

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Project Title: Adaptations (*tentatively begin week of Jan.27th)

Driving Question: How can I teach others about how animals adapt to survive?

Learning Journal: need to finish and send by January

Standards:

Social Studies Standards

GEOGRAPHICAL STUDY and analysis and their relationship to changes in society and the environment. (5D)Relationships within places Human-Environment Interactions

1. Describe how people of Missouri are affected by, depend on, adapt to and change their physical environments in the past and in the present.

(5G)Using geography to interpret, explain and predict.

1. Explain how geography affected important events in Missouri history.

Science Standards

LS1-From Molecules to Organisms: Structure and Processes

A-Structure and Function

1. **Construct an argument with evidence that in a particular ecosystem some organisms--based on structural adaptations or behaviors--can survive well, some less well, and some cannot survive at all [Clarification Statement: Examples of evidence could include needs and characteristics of the organisms and their habitat make up a system in which the parts depend on each other.]**

LS3-Heredity: Inheritance and Variation of Traits

B-Natural Selection

1. Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving and finding mates. [Clarification Statement: Examples of cause and effect relationships could be plants that have large thorns than other plants may be less likely to be eaten by predators;and animals that have better camouflage coloration than other animals may be more likely to survive and therefore more likely to leave offspring.]

C-Adaptation

1. Construct an argument with evidence that in a particular ecosystem some organisms--based on structural adaptations or behaviors--can survive well, some less well, and some cannot survive at all [Clarification Statement:

Project Ideas:

Create a video to present information learned about an adaptation of an animal native to Missouri. They will also have a "scholastic news" as an informational piece they write about their animal (5 paragraph)

- [Organization idea for animal & adaptation](#)
- [Idea for adaptations notebook](#)
- [Ways to teach others about adaptations](#)
- [Diagram of animal and adaptation](#)
- **Make top ten list of animal adaptations, students choose one to learn all about**

Create an informational video (we video) to teach others about an adaptation of an animal native to Missouri.

- [Wevideo](#) (have district account [how to](#))

*students will need some time to look at how to use wevideo (sign in through google chrome)

Day to Day Lesson Ideas:

Entry Event Idea:

Clay County Parks Ranger to speak on adaptations 11/5

Aaron Kagay

Natural Resources III

Clay County Parks

18001 Collins Rd. Smithville, MO. 64089

Phone 816-407-3416

Cell 816-604-9795

Examples of evidence could include needs and characteristics of the organisms and their habitat make up a system in which the parts depend on each other.]

D-Biodiversity and Humans

1. Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals live there may change. [Clarification Statement: Examples of environmental changes could include changes in land characteristics, water distribution, temperature, food and other organisms.]

ELA Standards

R.1.D. Independent Text

Read independently for multiple purposes over sustained periods of time by:

- a. reading text that is developmentally appropriate
- b. producing evidence of reading

R.3.A. Text Features

- a. explain the author's purpose
- b. identify the details or facts that support the main idea
- c. use text and graphic features to locate information and to make and verify predictions

W.2.B. Informative/Explanatory

Write informative/ explanatory texts that:

- a. introduce a topic or text being studied
- b. develop the topic with simple facts, definitions, details, and explanations
- c. use specific, and relevant, words that are related to the topic, audience and purpose
- d. uses the student's original language, except when quoting from a source
- e. use transition words to connect ideas within categories of information
- f. create a concluding statement or paragraph

W.1.C. Revise/Edit

Reread, revise and edit drafts with assistance from adults/peers, to:

- a. develop and strengthen writing by revising
 - main idea
 - sequence (ideas)
 - details/facts (from sources, when appropriate)
 - word choice (related to the topic)
 - sentence structure
 - transitions
 - audience and purpose

- b. edit for language conventions

W.3.A. Research Process

Email akagay@claycountymo.gov

Adaptation

- Look again at state flag - Why are there bears on the flag?
- Discuss the near wipeout of black bears in MO due to settlement
- [Bear Reports](#) - MO Dept Conservation Be sure to click on MO Black Bear project - revisit how the buffalo were nearly wiped out as settlers moved west

Animal Adaptations

- What is an adaptation? Connect to MO History project {do some sort of a Kagan Structure to tie in to previous knowledge from migration of species with westward expansion)
- Give an example of an adaptation.
 - [Adaptations](#) - Britannica School
- What is a physical adaptation?
- What is a behavioral adaptation?
 - [Animal Adaptations](#) - Study Jams
 - [Adaptations](#) - PebbleGo Next
- List top 10 animal adaptations.
 - [Top 10 Animal Adaptations](#) - Animal Planet (with team)
- Extra resource
 - [Structural and Behavioral Adaptations](#) - NHPBS
- What important things about adaptations did we learn that others need to know?

Black Bears

- Are there black bears in Missouri today?
- Where are they located?
- How do scientists study and track black bears? {migration tie-in/connection from MO History/Mapping PBLs}
 - [MO Black Bear Project Tracking](#) - Missouri Department of Conservation
 - [Black Bear Behaviors](#) Disc Education

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Apply research process to:

d. locate information in reference texts, electronic resources, interviews, or visual sources and literary and informational texts

e. determine the accuracy and relevance of the information related to a selected question

f. take simple notes in own words and sort evidence into provided categories or organizer

[Bears and Hibernation](#) - Untamed Science

-More information

[Field Guide: American Black Bears](#) - Missouri Department of Conservation

Readers Workshop Mini-Lessons
main idea

ELA tie in: [Migration: Good News for Bears?](#)
[Scholastic News - form](#)

ELA tie in: All American Animal [Scholastic News](#)

ELA tie in: [Turkey Trouble](#) Scholastic News)

[Ecosystems](#)

-What is an ecosystem?

-What are examples of ecosystems?

-How do living and nonliving things in an ecosystem live together?

[Ecosystem](#) - Britannica School

[Biomes](#) - PebbleGo Next

[Food Chains](#)

-What is a food chain?

-How are food chains and food webs different? How are they the same?

-What is an example of a food chain?

[Food Chain](#) - Britannica School

[Nature Unleashed](#) - Missouri Department of Conservation (magazine)

[Food Chains and Webs](#) - PebbleGo Next

[Habitats](#)

-What is a habitat?

-What habitats are around us here in Liberty, Missouri?

-What living and nonliving things live in these habitats?

[Habitat](#) - Britannica School

[Field Guide: A-Z](#) - Missouri Department of Conservation

-structural/physical [adaptations, hands on for 3rd grade](#)

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	<p>Self-Guided Study/Research:</p> <ul style="list-style-type: none"> -Field Guide of Animals - Missouri Department of Conservation -Animal adaptations - Britannica School -Different animal adaptations - BrainPop Jr. -Interactive Site: Animal Adaptations -Mrs. Barnetts's Research Tools -Zoology Resource: has vocab etc...teacher resource to share with students <p>Display:</p> <ul style="list-style-type: none"> *Organization idea for animal & adaptation *Idea for adaptations notebook *Ways to teach others about adaptations *Diagram of animal and adaptation *Make top ten list of animal adaptations, student choose one to learn all about <p>Presentation:</p> <p>Create informational video (we video, imovie, stop motion) to teach others about an adaptation of an animal native to Missouri.</p> <ul style="list-style-type: none"> * Students will then write script and make informational video to present *Movie how to *WeVideo how to Wevideo (have district account how to) <p>ELA tie-in:</p> <ul style="list-style-type: none"> Awesome ants Raz kids Coral Reefs Raz Kids Puffins Raz Kids <p>And many more on other animals (level Q)</p> <ul style="list-style-type: none"> -many animal articles on this site
<p>8 Components of our PBL:</p>	
<p>Key Knowledge, Understanding & Success: -standards (listed above)</p>	<p>Standards for Social Studies, Science, and ELA (listed above)</p>
<p>Challenging Problem or Questions:</p>	<p>Driving Question:</p>

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	How can I teach others about how animals adapt to survive?
Sustained Inquiry:	<p>Research Links: (linked above in day to day lessons)</p> <ul style="list-style-type: none"> -Elementary Britannica -Kids Discovery -BrainPop Jr. -National Geographic for Kids -Pebble GoNext -Animal Planet -Missouri Department of Conservation -Study Jams <hr/> <p>Brainpop jr: Plant adaptations (use to lead into PLTW)</p> <p>Grow Native - Missouri Prairie Foundation</p>
Authenticity: (experts, community connection)	<p>Missouri Dept. Of Conservation- Wendy Book zoo visit? Here is link...could it be the food chain one and just focus on adaptations bc of food chain?</p> <p>VD...</p> <p>Could we reach out to a couple of these "experts" and explain what we are doing and through video or an email back get info from them? Long shot but could be fun.</p>
Student Voice and Choice:	<p>Students will choose which animal adaptation they want to become an expert in.</p> <p>Students will choose how they want to display the information learned.</p> <p>Students will choose which video media they would like to use to present their learning.</p>
Reflection:	<ul style="list-style-type: none"> *Journal/Notebook *Seesaw *Partner & Team Collaboration (Kagan)
Critique & Revision:	*Use during several stages of the

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<p>Critique Guidelines -be helpful -be specific -be kind</p>	<p>research, display, and presentation phases</p> <p>Adaptations Project Proposal Gallery walk for feedback:</p> <p>I like...</p> <p>I wonder...</p> <p><u>Rubrics:</u></p>
<p>Public Product:</p>	<p>Students will use choice media to create a video to teach first-grade students about an animal adaptation, which aligns to the first grade PLTW module on adaptations that they will be working on.</p>