Interdiciplinary Unit

Second Grade Unit 5

2015-2016

Concept: SYSTEMS

Essential Question:

What impact does one small thing have on a big system?

Deepening Question:

How do animals adapt to survive?How do living things cause changes in their nonliving environment?

How do living things interact with one another and with the non-living elements of their environment?

What impact have people had on our community’s environment?

How can we make a difference in our community?

\*(Optional) How do the different systems in our bodies work together?

Suggested Trade Book Resources:

Creature Features: Twenty-Five Animals … by Steve Jenkins (Lexile: 580)

What If You Had Animal Teeth? Paperback by Sandra Markle (Lexile: 930, GR: M)

From Caterpillar to Butterfly by Deborah Heiligman (Lexile: 490, GR: K)

In One Tidepool: Crabs, Snails, and Salty Tails by Anthony D. Fredericks (GR: P)

Big Blue Whale: Read and Wonder by Nicola Davies (Lexile: 760, GR: N)

Scholastic Discover More: See Me Grow by Penelope Arlon (Lexile: 640, GR: K)

Lifetimes by David L. Rice (Lexile: 770, GR: P)

Fossils Tell of Long Ago (Let's-Read-and-Find-Out Science 2) by Aliki (Lexile: 480, GR: P)

PROTECT! Wild Animals (Spectrum® Readers) by Teresa Domnauer (Lexile: 620)

Through Endangered Eyes: A Poetic Journey into the Wild by Rachel Allen Dillon

Kingfisher Readers L5: The Changing Environment by Deborah Chancellor

Sir Cumference and All the King's Tens: A Math Adventure by Cindy Neuschwande (Lexile: 720)

The Great Kapok Tree: A Tale of the Amazon Rain Forest by Lynne Cherry (Lexile: 670, GR: R)

Michael Recycle by Ellie Bethel



Hook:

Artwork: Restoration of a Walking Herd by Charles R. Knight

http://en.wikipedia.org/wiki/Charles\_R.\_Knight

La Brea Tar Pits in California

<http://en.wikipedia.org/wiki/La_Brea_Tar_Pits>

Section 1: Living Things in a Habitat

States: Illinois, Indiana, Missouri, Wisconsin (NOT: Michigan, Minnesota)

(Ohio: cover habitats and then section on how animals change their habitat, also habitats of the past-fossils)

Deepening Questions:

How do animals adapt to survive?How do living things cause changes in their nonliving environment?

How do living things interact with one another and with the non-living elements of their environment?

* Needs of Living Things (review)
	+ - Living Things Needs (attachment)
* Animal Groups (brief review from 1st grade)
* Backbones vs. No Backbones
	+ - Vertebrae and invertebrate worksheet (attachment)
* Animal Life Cycle
	+ - Book: From Caterpillar to Butterfly (Let's-Read-and-Find-Out Science, Stage 1) by Deborah Heiligman
		- Scholastic Discover More: See Me Grow by Penelope Arlon
		- Several Books on wegivebooks.org (<http://www.wegivebooks.org/books/see-how-they-grow---chick>)
	+ Lengths of different animal life cycles
		- Read *Lifetimes* by David L. Rice
* PERFORMANCE TASK: Informative-Animal Life Cycle project. Students will write an expository piece about an animal life cycle (after research) and then create a visual multi-media project.
* Adaptation
	+ Read *Creature Features: Twenty-Five Animals Explain Why They Look the Way They Do* by Steve Jenkins
		- Behavioral adaptations flipbook (attachment)
		- Animal adaptation activities (TPT $2: <https://www.teacherspayteachers.com/Product/Animal-Adaptions-PowerPoint-Presentation-and-Worksheet-678455>)
		- Ideas for creating adaptation stations in the classroom: <http://eisforexplore.blogspot.com/2012/06/animal-adaptations.html>
		- What if You Had Animal Teeth?: <http://oceansoffirstgradefun.blogspot.com/2013/03/what-if-you-had-animal-teeth.html?showComment=1362550086973>
	+ Camouflage
		- Animal Camouflage worksheet (attachment)
		- Online information (<http://animals.howstuffworks.com/animal-facts/animal-camouflage.htm>
		- Read the book *Animal Hide and Seek* (wegivebooks.org)
	+ Migration (brief)
	+ Helpful Traits (e.g. long neck for giraffe)
		- Helpful animal traits (attachment)
		- Animal Tracks (what feet animals have)
	+ Inheriting Traits
		- Traits game (also reviews animal groups): http://mrfedsscienceclass.weebly.com/for-animals.html
* Design an animal project (attachment)
* Kinds of Habitats (Forest, Hot and Cold Desserts, Oceans, Ponds)-(covered in detail in `1st grade)
	+ - A Fawn in the Forest close reading passage (attachment)
		- African Animals close reading passage (attachment)
		- Animals of the Rainforest close reading passage (attachment)
		- Artic Life close reading passage (attachment(
		- Awesome Animal Homes close reading passage (attachment)
	+ Books on animal habitats:

In One Tidepool: Crabs, Snails, and Salty Tails by Anthony D. Fredericks

Big Blue Whale: Read and Wonder by Nicola Davies

* + - Build an online habitat game: http://switchzoo.com/games/habitatgame.htm
	+ Main Idea and Details
		- Describe an animal habitat writing project
* Living Things causes changes on Earth (How Animals Interact with their Habitat) \*\*\*Ohio specific
* Food Chains
	+ Herbivore, carnivore, omnivores
		- Food chain video (<http://www.turtlediary.com/grade-2-games/science-games/food-chain.html>)
		- Food chain stackers (attachment)
	+ Prey/Predator
		- Food chains online game: http://www.curriculumbits.com/prodimages/details/physics/food-chains.html
* Food Webs
	+ What are food webs?
		- Short video: http://www.macmillanmh.com/science/2008/student/il/scienceinmotion/Common/SIM.html?Module=../Grade2/Chapter3-FoodWeb/
	+ Text and Graphic Features
* Habitat Change
	+ - Bat Mystery close reading passage (attachment)
	+ Cause/Effect
* Endangered Species
	+ - Read PROTECT! Wild Animals (Spectrum® Readers) by Teresa Domnauer
		- Through Endangered Eyes: A Poetic Journey into the Wild by Rachel Allen Dillon
	+ Point of View
		- Deep Sea Wonderland close reading passage (attachment)
		- Endangered animals research project (TPT $3.25): <https://www.teacherspayteachers.com/Product/Endangered-Animals-Literacy-Center-and-Research-Activity-651295>
		- Scholastic page with links to articles: <http://www.scholastic.com/browse/collection.jsp?id=220>
* Habitats of the Past (fossil, extinction) (especially Ohio)
	+ - Read *Fossils Tell of Long Ago* (Let's-Read-and-Find-Out Science 2) by Aliki

Section 2: Going Green

States: all

What impact have people had on our community’s environment?

How can we make a difference in our community?

* Human or Physical characteristics of Earth
	+ - Natural vs. Man-made resources sort (attachment)
* Review: Earth’s natural resources (A Closer Look, Unit 3, Lesson 3)
	+ How people use natural resources
	+ Human actions-positive or negative (Adaptations)
		- Preserving natural resources (attachment)
* Plants/Animals and the Environment
	+ Read Kingfisher Readers L5: *The Changing Environment* by Deborah Chancellor
		- Worm hotel: https://suite.io/karrie-mcallister/1w152ef
* Pollution
	+ Types of pollution (land, water, air)
		- Read The Great Kapok Tree: A Tale of the Amazon Rain Forest by Lynne Cherry
		- Harming the Earth wanted poster (attachment)
* Environmental Activism
	+ Recycle, Reuse, Reduce
		- Read Michael Recycle by Ellie Bethel
		- Protect the Earth booklet (attachment)
		- Earth Day superheroes (show here: <http://buzzingaboutsecondgrade.blogspot.com/2012/04/calling-all-earth-day-superheros.html>)
		- Garbage patch drawing project (attachment)
* PERFORMANCE TASK: Informative- Students will research, write and create a presentation on specific things students in the class can do to help protect the Earth and its inhabitants.

Section 3: Add and Subtract (2-digit review) 3-digit number

States: all

My Math: Chapters 6 and 7

Read Sir Cumference and All the King's Tens: A Math Adventure by Cindy Neuschwande

* Review adding/subtracting 2-digit numbers
* Adding Three-digit numbers
	+ Make a Hundred to Add
	+ Add Hundreds
	+ Mentally add 10 or 100
		- Add 10 more/less, add 100 more/less (attachment)
	+ Group Ones to Add
	+ Regroup Tens to Add
	+ Add Three-Digit Numbers
		- Add Three Digits (attachment)
	+ Rewrite Three-Digit Numbers
* Subtract Three-Digit Numbers
	+ Take Apart Hundreds to Subtract
	+ Subtract Hundreds
	+ Mentally Subtract 10 or 100
		- I have who has (attachment)
		- Mental math practice (attachment)
	+ Regroup Tens
	+ Regroup Hundreds
	+ Subtract Three-Digit Numbers
		- Subtract with and without regrouping (attachment)
	+ Rewrite Three-Digit Numbers
	+ Write a Number Sentence: Problem Solving Strategy
	+ Subtract Across Zeros

\*Health: Optional (based on health education standards in school and state

Deepening Question: How do the different systems in our bodies work together?

* Skeletal System
* Muscular & Nervous System
* Circulatory & Respiratory System
* Digestive System
* Persuasive Writing