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