

5th Grade – Life Science: Energy in Ecosystems

- Week 1
 - **Food Log** - Log what you eat daily during the break. Research the sources of your food and write a summary of how your daily diet affects ecosystems.
 - **Sun Blocker** - Energy from the Sun is important to life in an ecosystem, the energy from the Sun can also be harmful. Animals have fur, feathers, or other special coverings to help protect against sunburn. Humans must rely on other ways to protect themselves from the Sun.
 - Think of different ways people protect themselves from the Sun. Design a new way for people to protect themselves from the Sun and be prepared to share your design with the class upon return.
 - **Read literacy Article 2B: Competition in the Animal Kingdom** ([link](#)): Answer the questions to support understanding of competition in food webs.
- Week 2
 - **Ecosystem Math** - Complete the following story problems:
 - There are 10 mice in a schoolyard ecosystem. If there are 40 animals in the entire ecosystem, what fraction of the animals in the ecosystem are mice? Solve, and write the fraction in simplest form.
 - The remaining animals in the schoolyard ecosystem include 12 squirrels, 1 hawk, 13 salamanders and 4 sparrows. What fraction of the total is birds?
 - What fraction of the ecosystem's population is mice and birds?
 - **Food Chain Energy Pyramid Attributes** - Create a food chain energy pyramid using the animals from Ecosystem Math above.
 - How many lines are in the pyramid?
 - How many angles does it have? What types of angles are they?
- Week 3
 - **Take Home Science Sheet** ([link](#)): **Growing Decomposers**
 - **Read literacy Article 3B: The Recyclers in the Natural World** ([link](#)): Answer the questions to help support understanding of decomposers.
 - **Habitats on the Bookshelf** - Select and read two books on habitats, and then write a comparison about the similarities and differences in the two habitats.
 - *What If There Were No Lemmings?* A Book About the Tundra Ecosystem (Food Chain Reactions) by Suzanne Slade
 - *What Can Live in a Desert?* by Sheila Anderson
 - *Life in a Coral Reef* by Wendy Pfeffer and Steve Jenkins
 - *Here Is the African Savanna* by Madeleine Dunphy

- **African Plains Ecosystems Math** - Challenge students to solve the following word problem: In one ecosystem in the African plains, there are 10 lions, 30 zebras, 40 antelopes, and 20 elephants.
 - Determine what fraction of the population is represented by each animal in this ecosystem.
 - Convert all the fractions to decimals.
- Week 4
 - **Read literacy Article 4A: Every Member Counts** ([link](#)): Answer the questions to help further explore food chains.
 - **Sphere Vacation** - Create a pamphlet for a vacation to the sphere of your choice. Construct an argument for why the sphere you chose is a better vacation destination than Earth's other spheres. Prepare to present your pamphlet to the class upon return.
- Week 5
 - **Read literacy Article 5A: The Amazing Potato** ([link](#)): Answer the questions to help further explore the importance of crops on Earth
 - **Environmental Disasters** – Use the Science in the News Article to help research one of the following topics. After you have read an article and completed a Science in the News Article Report, write one page about the effects on the ecosystem and the efforts made to fix the problem or lessen human impact. Choose from these topics:
 - Deepwater Horizon oil spill
 - Love Canal toxic waste site
 - Great Pacific Garbage Patch
 - Effect of plastic shopping bags in ocean
 - Coral bleaching due to temperature changes and chemicals
 - Deforestation of the Amazon Rain Forest
 - **Innovators in Science** – Pick a person below, research and write about why they can be called an "innovator in science."
 - Ynes Mexia - <https://plants.istor.org/stable/10.5555/al.ap.person.bm000033443>
 - Rachel Carson - <https://www.rachelcarson.org/>
 - Shawn Urbanski - <https://www.fs.usda.gov/rmrs/people/surbanski>

