

**4**

SCIENCE PARENT GUIDE – UNIT 4

|  |  |
| --- | --- |
| ***IMPORTANT CONCEPTS YOUR STUDENT SHOULD KNOW AND ACTIVITIES TO DO AT HOME*** | |
| **ECOSYSTEMS** | |
| **DESCRIPTION** | |
| Fourth grade students will explore the processes that influence the distribution and abundance of organisms, the interactions among organisms, and the interactions between organisms and the transformation and flow of energy. In summary, students will:   * Examine the roles of organisms and the flow of energy within an ecosystem. * Distinguish the roles and relationships among the producers, consumers, and decomposers in an ecosystem. * Identify the factors that affect the survival or extinction of organisms within an ecosystem.C:\Users\KENNEDY\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\RZ4Z3IL4\BACKPACK[1].jpg | |
| **KEY WORDS TO KNOW** | |
| * Environment- All of the living and nonliving things surrounding an organism. * Organisms- any living thing * Ecosystem-A community of living things and the community’s physical environment. * Community-All the populations of organisms living in an environment. * Producer- A living thing, such as a plant, that can make its own food. * Consumer- A living thing that can’t make its own food and must eat other living things. * Decomposer- A living thing that feeds on the wastes and remains of plants. * Habitat- An environment that meets the needs of an organism * Herbivore- An animal that eats only plants or other producer. | * Carnivore- An animal that eats only other animals. * Omnivore-An animal that eats both plants and other animals * Scarcity: the condition of not having enough of a resource * Abundance: the condition of having more than what is needed of a resource * Food chain- A series of organisms that depend on one another for food. * Prey- Consumers that are eaten by predators. * Predator- A consumer that eats prey. * Food web- A group of food chains that overlap. * Energy pyramid- A diagram showing how much energy is passed from one organism to the next in a food chain * Prey- Consumers that are eaten by predators. * Predator- A consumer that eats prey.   http://1.bp.blogspot.com/-QOn2S_p5PU8/Vg5eWgC54BI/AAAAAAAAPuU/lQnA-gp1UkM/s640/vocabulary.png  **AT HOME VOCABULRY STRATEGIES**  **1**. Read aloud with your child.  **2**. Use vocabulary words in daily conversations.  **3**. Build a word wall or window.  **4**. Play simple vocabulary games.  **5.** Relate words to real life experiences. |

SCIENCE PARENT GUIDE – UNIT 4

**4**



|  |  |  |
| --- | --- | --- |
| C:\Users\KENNEDY\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\QH0NFGU2\idea-azione-motivazione[1].png**Recommended Children’s Literature**  *One plastic bag: Isatou Ceesay and the recycling women of the Gambia* / Miranda Paul ; illustrated by Elizabeth Zunon.  *Wangari Maathai : the woman who planted millions of trees* / Franck Prévot ; illustrated by Aurélia Fronty.  *What's the difference? : An endangered animal subtraction story* / by Suzanne Slade ; illustrated by Joan Waites.  *Can we save the tiger?* / Martin Jenkins ; illustrated by Vicky White. | | |
| **ECOYSTEMS** | | |
| **Important Concepts**  **Addressed in this Unit** | **Sample Problems** | **How You Can Help Your Student** |
| S4L1. Obtain, evaluate, and communicate information about the roles of organisms and the flow of energy within an ecosystem.  a. **Develop a model** to describe the roles of producers, consumers, and decomposers in a community. (Clarification statement: Students are not expected to identify the different types of consumers – herbivores, carnivores, omnivores and scavengers.)  b. **Develop simple models** to illustrate the flow of energy through a food web/food chain beginning with sunlight and including producers, consumers, and decomposers.  c. Design a scenario to demonstrate the effect of a change on an ecosystem.  (Clarification statement: Include living and non-living factors in the scenario.)  d. Use printed and digital data to **develop a model** illustrating and describing changes to the flow of energy in an ecosystem when plants or animals become scarce, extinct or over-abundant. | 1. Identify the producers, consumers, and decomposers.   Image result for food web with decomposers   1. Explain how animals use camouflage to survive. 2. How does pollution affect an ecosystem? 3. How will changes in the environment affect a community of organisms? 4. What is the role of the producer, consumer, and the decomposer in an ecosystem? | **Digital Resources**    **C:\Users\KENNEDY\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\QH0NFGU2\jigsaw-puzzle-kids-games-online[1].jpgVideo**  <http://www.bbc.co.uk/schools/ks2bitesize/science/living_things/food_chains/read1.shtml>  **Flashcards**  <https://quizlet.com/18664455/food-chain-flashcards-flash-cards/>  **Song**  <https://youtu.be/M_3_vM-ohkc>  **Videos:**  <https://youtu.be/5WECs5-jNlc>  **Animal and Plant Adaptations**  <https://youtu.be/x1MUl8XSZGA>  **Population Growth** <http://studyjams.scholastic.com/studyjams/jams/science/ecosystems/population-growth.htm>  **Food Chains** <http://studyjams.scholastic.com/studyjams/jams/science/ecosystems/food-chains.htm>  **Food Webs** <http://studyjams.scholastic.com/studyjams/jams/science/ecosystems/food-chains.htm> |

|  |  |
| --- | --- |
| **Changes to Science Standards: Students are expected to perform the practices while learning the content and understanding the crosscutting concepts.** | |
| **Science and Engineering Practices**  Students can use their understanding to investigate the natural world through the practices of science inquiry, or solve meaningful problems through the practices of engineering design.  **Crosscutting Concepts**  Provide students with connections and intellectual tools that are related across the differing areas of disciplinary content and can enrich their application of practices and their understanding of core ideas  **Core Ideas**  Core ideas cover the four domains: physical sciences, earth and space sciences, life science, and engineering and technology. |  |