



## 4th Grade – African Savanna Food Webs

### Teacher Guide

**Goal:** Students will be able to discuss the roles of different animals within the African savanna.

**GSE Connections:**

S4L1A: Develop a model to describe the roles of producers, consumers and decomposers in a community.

S4L1B: Develop simple models to illustrate the flow of energy through a food web/food chain beginning with sunlight and including producers, consumers and decomposers.

**Background Information:** The African savanna *ecosystem* is home to a diverse collection of animals and plants that create a complex *food web*. From important decomposers like the termite to lions at the top of the food chain, each living organism works in a delicate balance to play an important role in moving energy through trophic levels. *Food chains* are made up of two main levels, producers and consumers. *Producers* use the sun's energy to create food while *consumers* consume plants and/or animals. Different types of consumers are *herbivores*, *omnivores* and *carnivores*. Additionally, *scavengers* and *decomposers* help to break down dead plant and animal material to continue the cycle of energy.

Vocabulary	
<b>Ecosystem</b> - a biological community of interacting organisms and their physical environment	<b>Consumer</b> - organisms that consume plant and/or animal material for energy
<b>Food chain</b> - a hierarchical series of organisms, each dependent on the next as a source of food	<b>Herbivore</b> - an animal that feeds on plants
<b>Food web</b> - a system of interlocking and interdependent food chains	<b>Omnivore</b> - an animal that feeds on both plants and animals
<b>Population</b> - a group of organisms of the same species that live in a particular area	<b>Carnivore</b> - an animal that feeds on other animals
<b>Community</b> - a naturally occurring group of native plants, animals and other organisms that are interacting in a unique habitat	<b>Scavenger</b> - an animal that eats dead plant and animal material
<b>Producer</b> - organisms that use the sun's energy to create food	<b>Decomposer</b> - organisms that break down dead or decaying material

**Activity:** Provide each student with a Student Explore Sheet to record their observations and research about the African savanna animals. Before they begin, discuss the African savanna as a unique ecosystem and home to diverse plants and animals. Ask students to explain to you how energy moves through the ecosystem, making sure to touch on the above vocabulary. Students will have an opportunity on their data sheet to define some of these terms as review. With your students, spend time observing each of the African species to better understand how they are interconnected. Once students have completed the Student Explore Sheet, use the additional activity as an extension in your classroom.



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### Student Explore Sheet

Student Review: Define the following terms.

Ecosystem -	Consumer -
Food Web -	Herbivore -
Producer -	Omnivore -
Decomposer -	Carnivore -

Visit the animals of the African Savanna, research the signage, and make observations to answer the following questions:

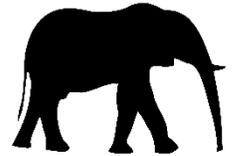
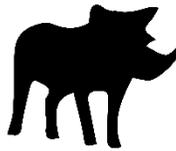
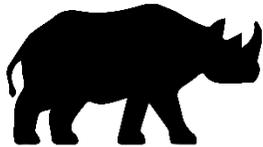
	How does this animal receive its energy (what does it eat)?	Is this animal a producer, consumer or decomposer?	If it is a consumer: is it an herbivore, omnivore, carnivore or scavenger?
Kori bustard			
Meerkat			
Lion			
Ostrich			
Giraffe			
Rhino			
Elephant			
Warthog			
Vulture			
Zebra			



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### Classroom Extension:

African Savanna Food Web - Using the information that you discovered about animals of the African savanna, cut out the following animals and place each of the animals on the food web based on how they get their energy. Draw in plants and animals of the food web that are missing. Draw lines to show how energy flows between energy levels in the food web.



### Think and Discuss:

What would happen if a member of the food web were to disappear?



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### Classroom Extension Worksheet: African Savanna Food Web

Using the information that you discovered about animals of the African savanna, place each of the animals on the food web based on how they get their energy. Draw in plants and animals of the food web that are missing. Draw lines to show how energy flows between energy levels in the food web.

