

Unit: Science for Success	Lesson 8 : Life Science: Ecosystems/ Flow of Energy in Ecosystems
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Objectives

The student will be able to:

- Explain the importance of living and non-living things in an ecosystem.
- Explain a food web using a South Dakota example.

This takes one class period.

Materials:

- New Readers Press Science for the GED Test pages 29-34.
- Computers
- http://www.pbslearningmedia.org/search/?q=food+web&selected_facets=
- **D4K:** "The Food Chain"/ (Food Web :44 video)
- http://changingthebalance.thinkport.org/changing_%20climates/ChangingClimate.html?iframe=true&width=810&height=510 (Changing Climate video 5:20)
- <http://www.pbslearningmedia.org/resource/lsp07.sci.life.eco.oceanfoodweb/antarctic-food-web-game/> (Antarctic Food Web Game)
- <http://www.pbslearningmedia.org/resource/ean08.sci.life.eco.foodfish/warmer-oceans-affect-food-web/> (Warmer Oceans Affect Food Web video2:31)
- ReadWorks *The Eco Pyramid* pages 1 through 7.



WDOK: 1, 2

CCSS:

SDSS: HS-LS4-2, HS-LS4-4, HS-LS4-5

Key Words

- Environment-surroundings, including living and non-living things.
- Ecosystem- a community of living and non-living things and the interactions among them.
- Carrying Capacity-the largest population that an environment can support at any given time.
- Predator- an organism that eats another organism
- Symbiosis- a very close relationship between two species.
- Parasitism- an organism that lives on or in an organism. (The host in this relationship is harmed.)
- Commensalism- an organism gets food or another resource (shelter) from another species, but the other species is not harmed.
- Mutualism- when one species lives in or on an organism of another species and both are helped.
- Biodiversity- a measure of an ecosystem's balance and health
- Invasive species- an alien species that harm an ecosystem.

Introduction: Just like we as human beings need food, water, air and sleep for our bodies to work efficiently, ecosystems need a balance for their continued health. If anything changes, it can upset that balance. So often we study situations that happen across the country or across the world. With ecosystems, we will keep this close to home and limit our discussion to South Dakota and nearby states. We have numerous examples of disrupted ecosystems to discuss.

Instructional Activities: 1. Read and discuss pages 29 through 34 in *Science for the GED Test*.
 2. Watch three videos from PBS Learning Media titled The Food Chain (:44), Changing Climate (5:20), and Warmer Oceans Affect Food Web (2:31).

3. Play the Antarctic Food Web game at the PBS learning media website.

4. Read the article titled, The Eco Pyramid from ReadWorks and answer the questions that follow.

Student Product

- The Eco Pyramid questions and writing.