

# Biodiversity

Chapter 3, Section 3

TB Pages 95-105

# Reading Preview

- Look at the pictures, graphs and red and blue subtitles.
- Read the Key Concepts on page 95.
- Read the Key Terms on page 95.

# Background Knowledge

s- page \_141\_

- 1. What organisms thrive in our area? Name 3 types of plants and 5 animals.
- 2. Would you say that there is a great deal of diversity among the species living here?

# Staple in 3 pages of notes

- Biodiversity notes, page 1 (# 1-6), on spiral page \_142\_\_.
- second page (# 7-13) on spiral page \_143\_\_.
- the last, half sheet page (# 14-22) on spiral page \_144\_\_.

# Diversity of Species

- Read TB page 95. Answer Question # 1 in your notes.
- Oceans might have 10 million species that we don't even know about!!!
- Look at the Figure 7, Which group of organisms have the greatest number of species? (s- page \_145\_\_)

# The Value of Biodiversity

- Would you enjoy Missouri as much if it didn't have as many different species?
- Read pages 96. Answer notes question 2.

# Economic Value (spiral page 145, bottom half )

Read textbook page 96.

**economic**= a process which goods (items) and services (things a person can do/provide) can be sold and bought

1. How can entire ecosystems, such as rain forests, savannas, and mountain ranges be used to generate sources of money?
2. What might happen if the biodiversity of some of these ecosystems is disrupted?
3. How might this effect the economy of the area?

# Ecological Value spiral p. \_146\_

- Read page 97.
- 1. Define a keystone species IN YOUR OWN WORDS? Note: You will probably have to read all of p. 97 before being able to answer this question in your own words.
- 2. Figure 9- How do sea otters help keep their ecosystem in balance?



- Complete the notes on sp page 142, # 2-4.

# On Line Activity

- Go to the “[what is happening in our world](#)” link.
- Each pin represents something happening in our world. Choose any one, click on it and read about it.

# Factors Affecting Biodiversity review

- Notice the blue words on pages 98-99. Let's review the definitions of these words before you read these sections.
- **Area**- length times width= how much space inside the flat, 2D shape (like the whole floor)
- **Climate**- typical weather pattern over time
- **Niche Diversity**
  - Niche- an organism's unique role in an ecosystem, how it makes its living (Do you remember this was our vocab word from chapter 1?)

# Factors Affecting Biodiversity

- Read page 98 and the top of page 99.
- Complete notes #'s 5-7.

# Climate- spiral page \_147

- Definition: typical weather pattern (precipitation and temperature) over a long period of time
- 1. Which area is more likely to have greater biodiversity- a tropical rain forest or an area closer to Earth's poles?
  - Why?
- 2. What might happen to the biodiversity of deer if its climate becomes much colder?

# Niche Diversity spiral page \_\_148

- 1. Why does a coral reef have such a diverse ecosystem?

# Land and Ocean Ecosystems See Figure 10

text page 98, answer on spiral page \_\_148, bottom ½ .

- 1. How much of Earth's land area is made up of rain forests?
- 2. What percentage of Earth's species are found there?
- 3. What explanation can you give to explain how such a small percentage of Earth's land can be home to such a large percentage of species?

# Gene Pool Diversity- Background Knowledge spiral page \_\_149

- 1. Name one type of fruit or vegetable, such as apples or potatoes.
- 2. Make a list of all the different *varieties* of that specific type of fruit or vegetable the store sells.
- 3. Describe how the appearance between the varieties are different.
- Next time you are at the grocery store, check it out!



# Gene Pool Diversity (spiral page \_\_150)

- Read page 99 and complete notes #'s 8-10.
- 1. What is the gene pool of a species?
- 2. How does having a diverse gene pool enable a species to survive changes in the environment?

# Gene Pool Diversity (con't spiral page \_\_150)

- 3. How do dogs of the same breed might vary?
- 4. Genes determine some of an organism's characteristics. So, what is the gene pool of a species?

# Extinction of Species

- Read pages 100-101. Answer notes questions 11-13 in your spiral.

# Extinction of Species (s p. \_151\_)

- 1. What does it mean for YOU to be “in danger”?
- 2. What do you do when YOU are threatened?
- 3. What is extinction?
- 4. How do threatened species *differ* from endangered species?

# Figure 12, T-page 100-101

- Read about the different endangered species in the figure.
- What similar problem has caused the populations of California tiger salamanders and grizzly bears to decrease?

# Misconceptions

- “Extinction has only occurred in the distant past, a long time ago. It doesn’t happen anymore.” **WRONG!!!**
- Students frequently **OVERUSE** the word “extinction” and they are using the word incorrectly. For example, “if all of the rabbits died in their ecosystem, they would become extinct.” What is wrong with this statement?

# Look into Extinct Species in the past 300 years

Have you heard of any of these animals?

- Quagga
- Dodo
- Moa
- Tasmanian wolf
- Dusky seaside sparrow
- Santa Barbara song sparrow
- Great auk
- Hawaii oo
- Passenger pigeon
- Abington tortoise
- Blue pke
- Tecopa pupfish
- Sampson's pearly mussel
- Others?

# Causes of Extinction

- Read pages 102-103 and answer notes #'s 14-19.



# Human Causes of Extinction (spiral page \_152\_\_)

- 1. How does habitat fragmentation contribute to extinction?
- 2. What is the illegal removal or killing of wildlife called?
- 3. How does pollution contribute to species extinction?
- 4. How does bringing exotic species into an area threaten biodiversity?

# Math- Analyzing Data textbook p.

103 (top of the page)

- Examine the graph and answer the questions in your science spiral page \_153\_.
- DDT is a pesticide that farmers use to spray over their crops to keep bugs from eating their crop plants. Read more about their problem at the [Department of Natural Resources](#) for kids. Scroll down to “What Happened to Them” to find out more!
  - 1. (HINT-X-axis goes across, your IV)
  - (HINT-Y axis goes up and down, your DV)
  - 2.
  - 3.
  - 4.

# Protecting Biodiversity

Read page 104-105 in your textbook.

Answer questions in your notes, #'s 20-22.

## Protecting Biodiversity (spiral p. \_154\_\_)

- 1. Captive Breeding- What are the advantages and disadvantages of this approach for protecting biodiversity?
- 2. Laws and Treaties -What is one disadvantage of using laws and treaties to protect species?

# Habitat Preservation (con't spiral page \_154\_)

- 3. Why is setting aside wildlife habitats as parks an effective way to preserve biodiversity?
- 4. How does setting aside large ecosystems as wildlife habitats protect species that live only in a small area of the ecosystem?

Apply this to your life. (con't spiral page \_\_154\_\_)

- 5. What can you do to protect biodiversity?

# Section 3 Assessment Textbook

## page 105

- Answer all parts of questions 1-4 in your science journal page 155 and (156 if needed).
  - 1. a, b
  - 2. a, b, c
  - 3. a, b
  - 4. a, b, c
  - Do NOT do the Lab Zone part.

# Peregrine Falcon (extra time)

- Go back to the web site from the [Department of Natural Resources](#) and read the whole article about the almost extinct peregrine falcon.



# Wild Birds Extinction



- As of 2012, 1300 birds are facing extinction!
- Use the web site from [Bird Life International](#) to read about the 200 species that
- Helpful vocabulary definitions-
  - **Extant** means “still existing, not lost”

# Species Competition (extra time)

- Research introduced species that compete with native species in the US.
- Report on where competition is prevalent and consequences to the native species.
- Examples: purple loosestrife, kudzu leafy spurge, flathead catfish, sea lamprey, zebra mussel, gypsy moth, fire ant, brown tree snake, and starling.

# Go Online (extra time)

- [Endangered Species in Missouri- online activity](#)
  - Get a [worksheet](#) from me. Before clicking on Missouri, you can answer questions 1 and 2. Then click on Missouri and answer questions 3-7.

[state endangered species lists](http://ecos.fws.gov/tess_public/StateListing.do?state=all) [http://ecos.fws.gov/tess\\_public/StateListing.do?state=all](http://ecos.fws.gov/tess_public/StateListing.do?state=all)

**Do NOT print. I  
have a copy of this  
for you.**

[http://www.endangeredspecie.com/Ways\\_To\\_Help.htm](http://www.endangeredspecie.com/Ways_To_Help.htm)

[Endangered\\_Species.com](http://www.Endangered_Species.com)

# Quia Games

- [Section 1](#)
- [Section 2](#)
- [Section 3](#)
- [Whole chapter flashcards, word search, concentration](#)
- Whole chapter [Battleship](#)