
Environmental Scientist

Overview:

This lesson and activity are designed to give students hands-on experience understanding the concept of a biome.

Grade: 3

TEKS

Scientific processes

3.2 (B, D, E)

3.3 (C)

3.4 (A)

Science Concept

3.5 (A)

3.8 (A)

3.11 (A, B)

Literature

If You're Not From The Prairie

Vocabulary

Biome

Ecosystem

Resources

Renewable

Nonrenewable

Inexhaustible

Materials

Discovery Book

Compass

Thermometer

Field Guides

Ziploc Baggies

My Biome

Classroom Activity

1. Write the word Biome on the overhead and discuss with students its possible meaning. After some discussion, explain a *Biome is a major region of distinctive plant and animal groups well adapted to the physical environment of its distribution area.*
2. Direct the discussion toward your local area and discuss your local plants and animals. Create a web on the overhead as your students begin suggesting ideas about plants, animals and the local geography.
3. Analyze your physical environment. What are the physical attributes of your local area? How would you describe your local environment to someone from Alaska? Add these attributes to your list of animals and plants.
4. One of the easiest ways to understand your biome is to create a "Climograph". This type of graph shows both average monthly temperature and precipitation. Use the "My Biome Climograph" template at the end of this lesson to make a transparency and copies for your students. View an example of a climograph at:
<http://www.cotf.edu/ete/modules/mseese/earthsysflr/climograph.html>
5. It will take one year to complete a climograph for your local area. This is an excellent long-term project to help students

understand the amount of time, energy and effort scientists put into researching the environment.

6. Next, create a "classroom museum" about your biome. Begin by creating a list of all the plants and animals found in your local area. This is a good time to help students understand the concepts of Animal and Plant Kingdoms. Ask your students to bring to class pictures of the different animals and plants in your biome. Plus, remind your students to look out for bird feathers, insects, nests, bones of animals, and leaves of trees. The idea is to get your students looking closer at their biome. Use the "My Biome Checklist" to help your students begin brainstorming about their biome.
7. What geographic features are unique to your area? What kind of soil do you have? What color is your soil? What is the annual precipitation in your biome? The idea here is just to get your students asking questions and thinking about the critical attributes of their biome. Make a list on the overhead as your students suggest ideas about their biome.
8. Review your biome lists with your students. Compare and contrast your local biome with the biome of a desert. Use a Venn diagram to compare and contrast the two biomes.
9. Prior to visiting the Eastman Nature and Wildlife Habitat Center, take your class on a virtual tour of the Eastman nature trail at <http://www.eastman.com/EastmanOutdoors/trail.htm>. The trail guide developed by Dr. Eric Taylor will give your students an opportunity to learn about the many different trees along the Eastman nature trail.
10. To close the lesson by reading David Bouchard's book *If You're Not From The Prairie*. After reading the book, discuss with your students the ideas in the book. What makes the "prairie" so special for the author? Why does the author say, "You don't know..." Have your students create a book titled *If You're Not From East Texas*. Help your students focus on the critical attributes of the East Texas biome.

In the Field

My Biome

1. Prior to leaving your school make sure you have the following items.
 - Discovery Books
 - Ziploc Baggies (1 gallon size)
 - Pencils (inexpensive mechanical pencils are excellent)
 - Compass
 - Thermometer
 - Water
 - First Aid Kit
 - Sack Lunch or light snack
 - Camera
 - Backpack
2. Before getting on the trail, remind students their observations and data collected will be used back in the classroom to create charts and graphs of their observations.
3. Set your behavior expectations before leaving the parking lot. Explain how students are to behave along the trail and in small groups. State specifically what behaviors you want to see along the trail. Remind students the higher their voices are the less likely they will see wildlife along the trail.
4. Distribute Discovery Books to students and record weather data observations. Teachers a gallon size ziploc baggie make an excellent container for pencils and Discovery Books during lunch or at the end of the day.
5. Walk through the gate and follow the trail. Remember to go slow and listen to your student's observations along the trail.
6. If you have enough adult supervision, divide your class into two groups. Have each group go in opposite directions along the trail. This will help reduce the noise level and also give your students an opportunity to share their observations when the class comes together at the halfway point. This is a good opportunity reinforce the idea that scientists share data too.

Post Eastman Activities

My Biome

- Ask your students to discuss their experiences while at the Eastman Nature and Wildlife Habitat Center.
- What can your students do to help their biome?
- Have your students write a narrative about their experiences at the Eastman Nature and Wildlife Habitat Center.
- Invite a Biologist to visit your classroom and discuss the importance of using technology to help improve our environment.
- Students create an "Environmental Report" based on their Discovery Book observations.
- Write a Haiku about their biome.
- Use the data collected in the field at the Eastman Nature and Wildlife Habitat Center. to compare and contrast the environment around your school.
- Discuss with students the difference between an ecosystem and a biome.
- Produce "Big Books" about our biome and read the book to a younger student.
- Maintain an Environmental Journal for 1 school year.
- Compare and contrast the animal and human resources around your school.
- Write an environmental report based on your students' "Discovery Book" observations.

My Biome Checklist

Plants

Trees: _____, _____, _____,

Shrubs: _____, _____, _____,

Grass: _____, _____, _____,

Vines: _____, _____, _____,

Wildflowers: _____, _____, _____,

Animals

Birds: _____, _____, _____,

Mammals: _____, _____, _____,

Insects: _____, _____, _____,

Soil

What type of soil do you have around your school or backyard?

What color is the soil?

What does it feel like?

Weather

What is the annual precipitation?

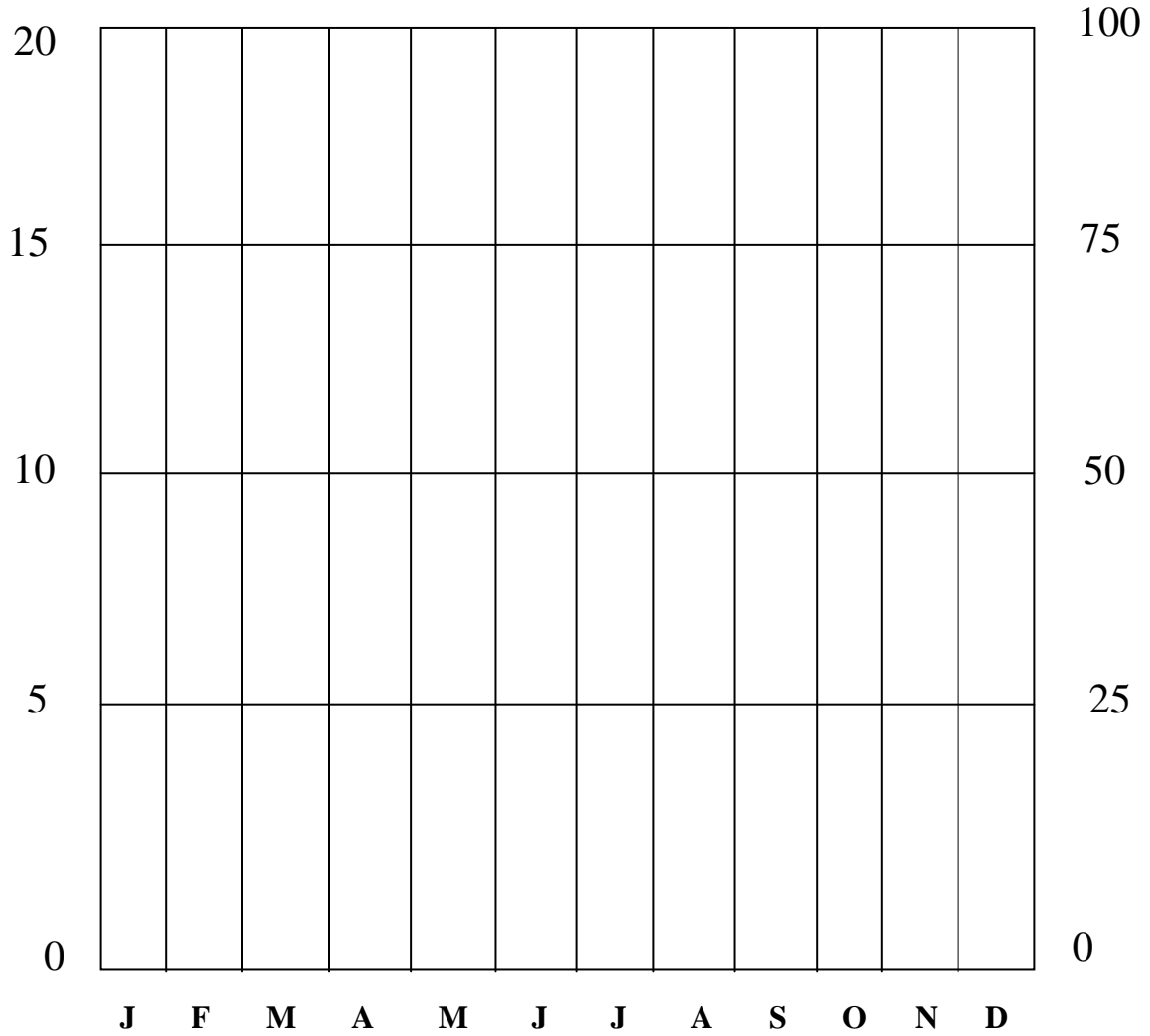
What is the average monthly (high and low) temperatures?

What is the average monthly wind speed?

My Biome Climograph

Inches of Rain

Temperature



Resources

Publications

Peach and Blue by Sarah Kilborne

If You're Not From The Prairie by David Bouchard

Sunship Earth by Steve Van Matre

Field Guide for the Eastman Nature Trail by Eric L. Taylor, Ph.D.

Web Pages

The World's Biomes

<http://www.ucmp.berkeley.edu/glossary/gloss5/biome/>

Tour of Biomes

<http://www.cotf.edu/ete/modules/msese/earthsysflr/biomes.html>

Acorn Naturalists

<http://www.acornnaturalists.com/store/>

Forest Walk

<http://library.thinkquest.org/17456/main1.html>

Weather Images

<http://www.cotf.edu/ete/modules/weathernot/wonmonitoresources.html>

The Globe Program

<http://www.globe.gov/>

Earth Viewer

<http://www.fourmilab.ch/earthview/vplanet.html>

Journey North

<http://www.learner.org/jnorth/>

Map Machine

<http://education.nationalgeographic.com/education/mapping/interactive-map/>