

Bearded Dragon Dinner Party

What's for Dinner?

I'm hungry!



Teacher: Kandis Torch

Willyard Elementary School
Ravenna School District (Ohio)

Classroom Pet: Darwin (Bearded Dragon)

Lesson Overview

Students will research organisms that a bearded dragon will eat in its native environment. They will also research what those organisms eat and get eaten by in order to construct a food web to show how the organisms are all connected. Students will identify the role of each organism based on how they acquire energy [(ex)producer, consumer, herbivore, carnivore, omnivore]. Students will take their knowledge and use their creativity and imagination to create a menu and seating arrangement for a dinner party hosted by Darwin, our class bearded dragon. Students will also be given a reading passage that describes how the environment is being changed and analyze how the changes will affect the populations of bearded dragons and other organisms.

*Social Studies connection: Students will describe how location affects the climate of an area due to the amount of direct sunlight it receives. They will be given the absolute location of a place and need to determine why or why not a bearded dragon could survive at that location.

Ohio's Learning Standards

Grade 5 Science

Strand: Life Sciences (LS)

Topic: Interconnections within ecosystems

This focuses on foundational knowledge of the structures and functions of ecosystems.

Content Statement

Organisms perform a variety of roles in an ecosystem.

- Populations of organisms can be categorized by how they acquire energy.
- Food webs can be used to identify the relationships among producers, consumers and decomposers in an ecosystem.

Grade 5 Social Studies

Strand Geography

Topic Spatial Thinking and Skills

Content Statement

5. Latitude and longitude can be used to make observations about location and generalizations about climate.

Grade 5 Technology

Standard 5: Technology and Information Literacy Students engage in information literacy strategies, use the Internet, technology tools and resources, and apply information-management skills to answer questions and expand knowledge.

Lesson Objectives/ Expectations for Learning

Students will be able to construct a food web of organisms to show the connections to a bearded dragon. They will be able to describe how energy flows from each organism and will correctly identify producers and consumers in the food web based on how they acquire energy. Students will be able to explain whether the populations of organisms will increase or decrease based on changes being made to the environment.

Prior Learning Experiences/Background Knowledge

Students have been learning about biomes and their distinguishing characteristics, and how organisms are adapted to survive in those environments. Students have learned about the flow of energy in an ecosystem and can explain how it begins with the sun, passes onto producers that use the sun's energy to make food through photosynthesis, and then the energy goes to consumers who eat plants for energy. Students have practiced reading, creating, and analyzing food chains.

Lesson Materials

Chromebooks, iPods, reading passages, food web charts, dry erase boards, dry erase markers, science notebooks

Lesson Plan

Part 1

Students will rotate between 4 stations to review and practice previous material and skills. Each station is approximately 15 minutes. Students rotate stations with their group members.

<u>Word up!</u> Students will use the website/app Quizlet to review vocabulary. They will do the “scatter” activity to match vocabulary words with their meanings and examples.	<u>Tech Time</u> Students will use the iPods to scan QR codes that are linked to short video clips or images. They will watch the videos and use the information they gather to create a food chain. *Videos/images will be of a bearded dragon eating a cricket (or other insect), the insect eating a plant, and a plant growing in sunlight.
<u>Create it!</u> Students will be given a chart of organisms and what they eat. They will need to read the chart and then work as a team to create a food web on large dry erase boards.	<u>Analyze it</u> Students will read an article or other non-fiction passage about how human actions are changing the environment. After reading, students will need to figure out how human actions are affecting the plants and animals and what the changes will do to their populations (increase/decrease). *This station is guided by the teacher. *Passages are differentiated by reading level.

Part 2

*Students will receive a detailed instruction sheet and rubric. They will also see an example project. Introduce assignment:

Darwin is quite a social lizard, and he loves to invite guests over for dinner. Who will Darwin invite to dinner this time? To figure out who he will invite to dinner, you need to research what types of organisms bearded dragons eat AND what organisms will eat bearded dragons in the wild. Your challenge is to find a combination of at least 10 organisms (2 producers and 8 consumers) in order to create a food web to show how bearded dragons are connected to other organisms.

-Research what a bearded dragon eats, what animals eat bearded dragons, and what else do those animals eat.

Part 3

Create a food web from your research using the Google app Drawings. Include images of the organisms in your food web to show how they're connected. Highlight the producers in your web green. Make sure your arrows are pointing in the right direction to show the flow of energy through the food web.

Create a list of 4 guests Darwin will invite to dinner based on your food web.

Make a menu for what each animal will eat, and make a seating chart to show where everyone will sit. An animal cannot sit right next to an organism it eats.

Part 4

Read the non-fiction passage. Describe how the changes being made to the environment will affect the populations of organisms in your food web.

Part 5

Students will be given an absolute location (latitude and longitude coordinates). They will need to find the location on a map. Students will need to explain whether or not a bearded dragon could survive at that location based on the climate there and availability of resources.

EVALUATION

How will students demonstrate that they have achieved the lesson objective?

1. Station work from day 1: Teacher will check student scores from Quizlet. Students will take a picture of their food web on the white board and email it to the teacher. Student notebooks will be checked for student answers from "Tech Time" and "Analyze it!" stations.

2. Completed food webs

- Include at least 2 producers
- Producers are highlighted green
- Includes at least 8 consumers (including bearded dragon)
- Organisms are connected with arrows
- Arrows are pointing in the correct direction of energy flow (point to "the mouth they go into")
- Images are included for each organism

3. Reading passage analysis (of how organisms will be affected by change)

4. Entrance/Exit tickets

5. Food web quiz using Google Forms

6. Summative assessment- Life science test at the end of the unit



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