

Student Name: Margaret A. Lambert

Subject: Life Sciences

Topic: Biomes
Grade Level: 7th
School and CI Name: Lambert, Curry Charter Middle School
Date of Lesson Enactment: Whenever

Duration: 45 minutes

**Essential Questions:** What is a biome? What are the different types of biomes and where are they located on the Earth? What are some examples of types of adaptations that animals acquire to survive in their home biome?

**Virginia Standards of Learning (SOLs):**

LS.9  The student will investigate and understand how organisms adapt to biotic and abiotic factors in an ecosystem. Key concepts include a) differences between ecosystems and biomes;  b)  characteristics of land, marine, and freshwater ecosystems; and  c)  adaptations that enable organisms to survive within a specific ecosystem.

**Objectives:**

Students will be able to **know** what makes a biome unique and to name the biomes on Earth. Students will **understand** that a biome is an environment that an animal has adapted over a long period of time to live in and therefore has shaped those animals’ characteristics and behaviors. Students will be able to **do** the following:

* identify and list all of the biomes on earth including: tundra, desert, forest, grassland, aquatic
* predict the biome, if given a list of it’s characteristics or a picture of an animal from that biome
* examine how certain organisms have adapted to acquire certain characteristics as a result of the biomes they have evolved within

**Materials/Resources:**

* projector
* power point with images of biomes
* books with images of animals in their environments
* images of people in different environments around the world
* student sheet with blanks for note-taking during the biome overview
* student sheet with animals to practice placing in different biomes

**Safety**

* There are minimal to no safety concerns in this lesson. However, students should adhere to all classroom rules, and should be careful around technology.

**Procedures:**

**Phase 1:**

Introduction:

* Start with images of biomes placed around the room and ask students to place a pile of animals correctly into the various biomes using tape.
* Give students time to work in small groups to place the animals around the room and then have them come back together to discuss any animals they weren’t sure about placing.
* After a brief discussion, introduce students to the word “biome” by writing it up on the board and ask them if they can define the word. Take some suggestions before giving them an answer.

Presentation of content & Skill:

1. Hold up a copy of each animal that they students were given and ask them to describe the physical features of the animal by filling out a **note sheet**.
2. Ask students to describe the different biomes by watching a power point slideshow and filling in a **sheet with spaces left blank** for them.
3. While the students are taking notes, the teacher will circulate around the room to ensure that all students are completing the notes.
4. The teacher will periodically pause throughout the presentation to ask if the students have any questions and if they need clarification.

Biomes:

1. Grassland: generally dry, open, flat (but not always), filled with herbaceous plants, few trees (if trees, then large and spread apart)
2. Aquatic: in the water or near shore, can be salt or freshwater or brackish, mix of plants and open water, deep sea and surface
3. Desert: dry, extreme temperature variation, poor compacted soil, seasonal flooding
4. Forest: characterized by the presence of trees, over story and understory plants, can be low or high elevation, can be tropical or temperate
5. Tundra: cold treeless plain, permafrost- permanently frozen subsoil, can have bogs and ponds form when rains collects above the permafrost

**Phase 2:**

Guided Practice

* Students will have a note-taking worksheet with the images of all the biomes and the animals involved in the opening activity and they will be able to take notes directly on the sheet. This is labeled “Biome Worksheet.”
* Students will take notes on the characteristics of each biome by using the outline on the worksheet provided and following along with the power point presentation.

Independent Practice

* Students will be given a different worksheet with various animals on it and will be asked to place them into one of the biomes they just learned about. They will be asked to write 1-2 sentences about why they placed each animal in the biome that they did.
* Teacher will walk around to assist some students who are struggling.
* Worksheets will be turned in at the end of class or beginning of next class.

**Assessment:**

* Students will be assessed based on the answers and supporting details they gave for the second worksheet they filled out about placing animals in their correct biome.
* The teacher will use the results of the assessment to inform future teaching. If the students have misconceptions, the teacher will address these at the beginning of the next class period.

**Closure:**

* Small groups will have an opportunity to revisit each of the biomes on the wall and either change or validate each choice they made at the beginning of the class. Biome pictures and animals will remain up on the walls throughout the entire unit.
* The teacher will direct students back through the names and general characteristics of each biome.
* The teacher will let the students know that they will be covering animal adaptations in greater details later in the unit.

**Accommodations for individual differences:**

The language used on the worksheet will be clear enough that there isn’t a need for any modifications for ELL. This lesson also isn’t very reading heavy intentionally to allow for a lot of active student participation. The teacher will provide adequate examples of biomes and animals via listening, looking at pictures, and taking notes on a provided sheet.

**Behavioral and organizational strategies:** The teacher will create work groups that can function well together and work independently. The desks or tables in the classroom will be set up in a way that allows for students to work in groups of four. The teacher will decide the groups beforehand and students will come in and sit where they see their names. Groups will begin at their pods and then move around the room for the first phase of the lesson. In phase two, they will return to their seats for the power point note-taking portion and independent worksheet portion of class. After they turn in their independent work, they will be able to get up and move around the room and revise the placement of any animals that they think are in the wrong place.

**Resources/References:**

[**http://www.ucmp.berkeley.edu/glossary/gloss5/biome/**](http://www.ucmp.berkeley.edu/glossary/gloss5/biome/)