Name KEY _____ Class _____ Date _____

3.1 What Is Ecology?

Studying Our Living Planet

1. What is ecology?

   Scientific study of interactions among organisms and between organisms and their environment.

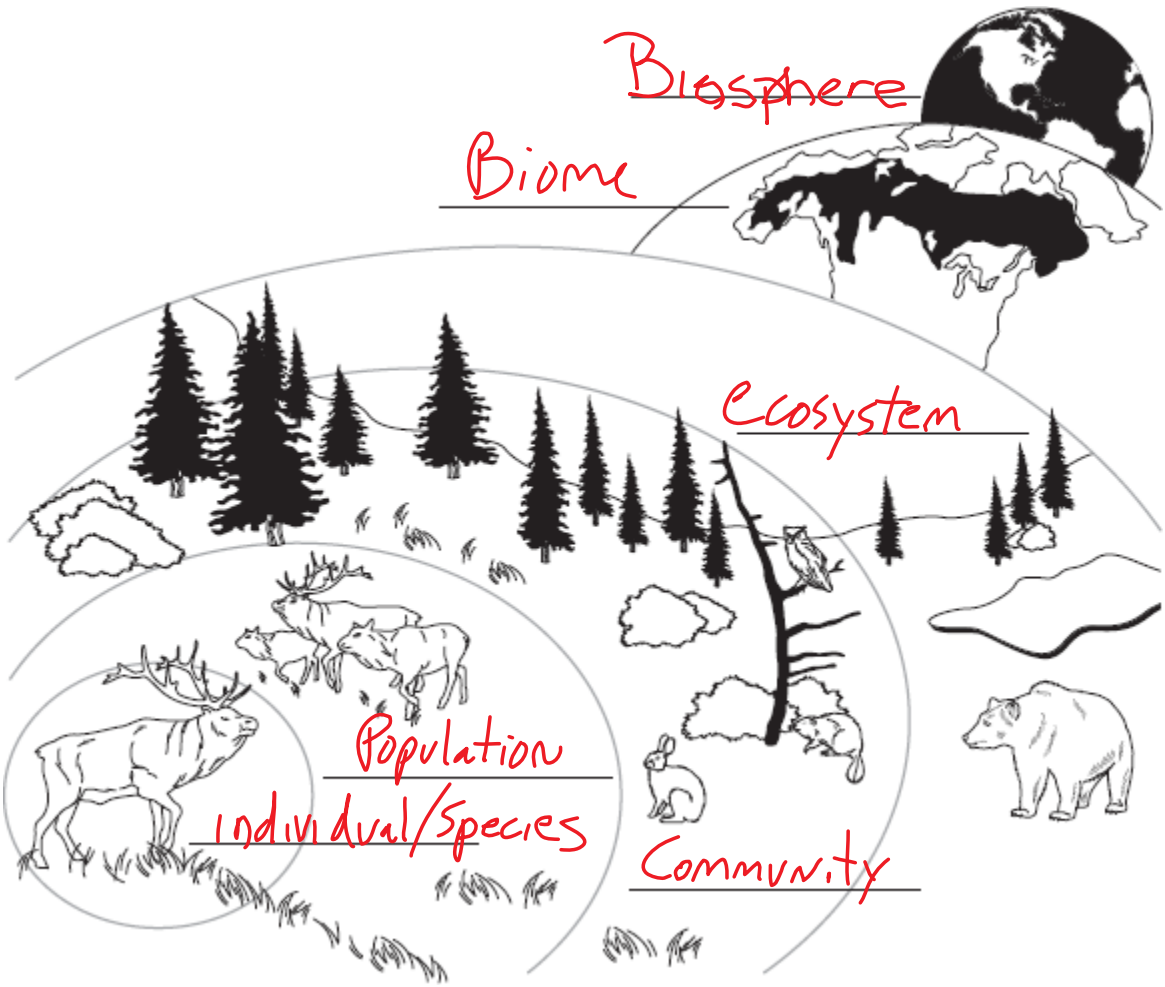
2. What does the biosphere contain?

   All biotic and abiotic factors on Earth.

3. How are human economics and ecology linked?

   Economics deals with humans and their interactions with money, Ecology deals with nature And its interactions between biotic and abiotic factors. (I know this is a lame question).

Use the diagram to answer Questions 4–5



4. Label each level of organization on the diagram.

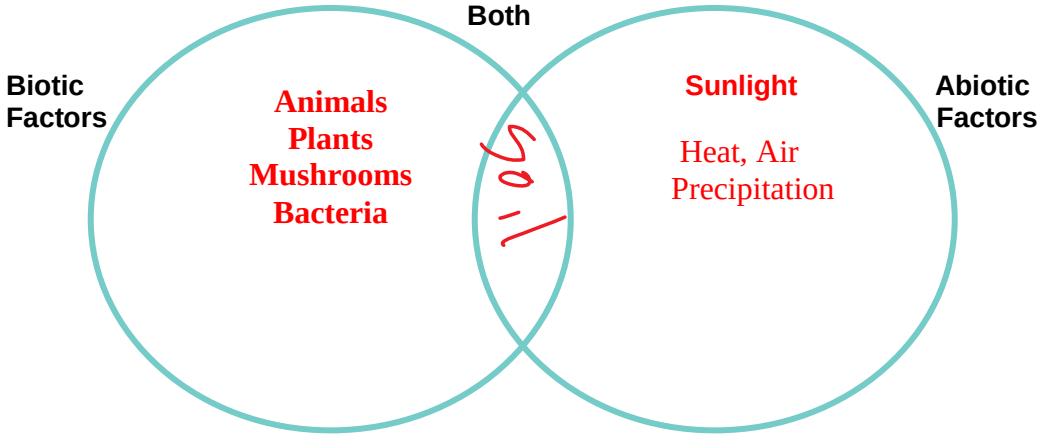
5. Explain the relationship between ecosystems and biomes.

Ecosystem describes all of the organisms that live in a place, together with their physical Environment. A group of ecosystems that share similar climates and organisms is referred To as a biome.

Biotic and Abiotic Factors

6. Use the terms in the box to fill in the Venn diagram. List parts of the environment that consist of biotic factors, abiotic factors, and some components that are a mixture of both.

air	**heat**	**precipitation**
animals	**mushrooms**	**soil**
bacteria	**plants**	**sunlight**



Ecological Methods

7. Why might an ecologist set up an artificial environment in a laboratory?

To imitate and manipulate conditions that organisms would encounter in the natural world

8. Why are many ecological phenomena difficult to study?

Occur over living periods of time, and/or cover very large areas.

9. Why do ecologists make models?

To help solve the problem from question #8.

Apply the Big idea

10. What makes a planet living? Explain your answer by comparing Earth with Mars.

Earth is a living planet because it contains organisms. Life exists on the land, water and atmosphere.

Earth's environments can be described based on biotic & abiotic factors. In contrast Mars is void of life, and can only be described based on abiotic factors.