

1. Define Species and Population and list 2 characteristics of each.

A population is defined as a group of organisms of the same species that live in a particular area. There can be more than one population living within any given area. There can be a population of Saguaro Cacti, a population of Cactus Wrens and a population of Bark Scorpion living in the same areas.

A species is the smallest group of organisms with characteristics that are so similar that they are able to produce offspring and its members are able to successfully reproduce. A species can be defined as a plant, animal, bacteria, fungus or any other living thing. A Saguaro Cactus is a specific species of plants. A Cactus Wren is a specific species of bird. A Bark Scorpion is a specific species of insect.

2. What is the difference between a species and a population?

A species is a group of organisms that share similar characteristics and a species can live within many different areas. Field mice are a species that can live in Iowa and they can also live in Africa. A population is a group of one species that live within a particular area so the population of Field Mice in Iowa is different from the population of Field Mice in Africa.

3. How does a boundary define a population?

The boundary is physical area that defines the population. There can be more than one population within a particular boundary. But also the boundary of a particular population can be in a

different area. The boundary of the population of the Field Mice in Iowa is different from the boundary of the population of Field Mice in Africa.

4 Define Habitat and Niche.

A habitat is a location that has certain physical characteristics that can meet the needs of the plants and animals that live within that particular area.

A niche is defined by the role that an organism has within a habitat but this is not limited to the food web. No two species can occupy the same niche. Plants can provide a nesting space for birds and that would be its niche or role in a particular habitat.

5 List 5 characteristics of a habitat.

There are several physical characteristics that can define a habitat and support the needs of the organisms that within that habitat. The temperature, amount of precipitation, the type of soil, the terrain, and access to water are examples of certain characteristics that make up a particular habitat.

6. What things about an animal show us its niche?

An animal's niche is its role in the habitat and the animal's characteristics define how the organism helps energy and material flow through the environment.

7. What is the scientific meaning of community?

Scientists define community as a group of populations that live in a particular area and interact with one another.

8. How is a school community similar to living things?

A school community which consists of people who do many different things is similar to a community of living things because they both interact with one another.

9. List the five levels of organization in an environment and describe each one.

Biome – A biome is a very broad definition of an area where the climate and plants are similar and can be found in various places throughout the world. For example, the forest is a biome with a similar climate and plants that be found in different areas throughout the world.

Ecosystem – Within a biome there are many ecosystems and within each ecosystem living and non-living systems interact with one another to form a stable system. Biotic factors or living things and abiotic factors or non-living things make an ecosystem. An ecosystem is much smaller than a biome and includes organisms within a local environment.

Community – The living components such as the plants, animals, and other organisms that interact with one another make up the community within an ecosystem.

Population – The population is defined as the group of organisms of the same species that live in the same area.

Organism – An organism is a single individual plant, animal or other living thing.

10. Write or draw 3 examples of animal populations forming patterns within their environment.

The animals will form a pattern in a particular environment in order to meet their needs and to survive successfully. The season, access to a food supply and shelter to feed and raise their young are factors that determine the patterns that animals form within an environment.

11. Is a herd a pattern in space or time?

A particular pattern of organisms that occupy a certain space can help the organisms or animals survive. A herd is a group of animals that form a pattern in space in order to survive and rely on each other for safety.

12. How does living in a large herd meets animals' needs?

Living in large herds helps that particular animal survive. By staying close together they can protect each other and if one of the animals is attacked by a predator the rest of the herd will still survive.

13. Patterns in ant and wasp population are related to time. The population of wasps in the spring is much smaller until the queen wasp lays eggs. By the end of the summer the wasp eggs have hatched and the population increases significantly. Ants form a pattern in space and form a pattern in spring and summer because ants work together to locate a food source and shelter in order to survive and do not necessarily rely on a particular season for reproduction.