

Factors Effecting the Environment

① Temperature

The higher the temperature, the greater the amount of water lost by the organisms. Losing too much water may result in plants wilting or animals dying from dehydration.

Different organisms are suited to survive at different temperatures. For example, plants in a tropical climate like Singapore thrive in a temperature of about 30°C while some plants grown in colder climates thrive at much lower temperatures.

The amount of light and the temperature of the environment may be interrelated since the greater the amount of sunlight received by the habitat, the hotter the environment will be.

The temperature affects the availability of water since on a hot day, more water will evaporate to form water vapour.

The temperature affects the type of soil present. On a hot day, the soil will be drier since there is less water in the soil.

The temperature affects the availability of food since temperature will have an impact on plant growth. This affects both plant and animal eaters. If there were fewer plants, there would be fewer plant eaters, resulting in less food for the animal eaters as well.

② Presence Of Other Organisms In The Habitat

Advantages:

- Plants provide food and shelter for the other organisms.
- Decomposers help to break down dead organisms and return them back to the soil to enrich it.
- Underground animals such as earthworms help to loosen the soil to introduce air so as to make the soil more absorbent to nutrients. This leads to healthier and more abundant plant growth.
- Some animals may become the prey of other animals.

Disadvantages:

Too many organisms living in the same habitat may lead to overcrowding and competition for necessities such as air, food, water and even sunlight.

③ Amount Of Air

Plants and animals require oxygen for respiration.

Green plants require carbon dioxide for photosynthesis. If carbon dioxide is limited, the plants will not be able to make food and will eventually die.

④ Availability Of Food

All living things need food to carry out essential life processes for survival.

Ideally, the habitat should have sufficient food for the inhabitants.

⑤ Availability Of Water

Depending on the amount of water an organism needs for its survival, it will seek out a habitat that provides sufficient water for its needs.

⑥ Amount Of Light Available

Green plants need light to photosynthesize.

Some animals prefer to live in places with ample sunlight while others like to live in dark places, such as in a leaf litter. The darkness may serve to help the prey to hide from its predator.

⑦ Type Of Soil

Plants survive well in rich, fertile soil. Without soil, the roots of the plants cannot be anchored firmly in the ground and the plants will die.

If the soil does not contain sufficient water and nutrients for the plant, it will not grow well and may die.

Earthworms and some insects also survive in the soil, especially soil rich in the remains of dead organisms.