

Animal Biodiversity

Teacher Resources - High School (Cycle 1)

Biology

Redpath Museum

Ecology

What defines a habitat?

1. Geographic Location

The location of a habitat is determined by its latitude and its longitude. The habitats of most animals are large and may cover a large range of coordinates.

2. Climate

Temperature, humidity, atmospheric pressure, wind and precipitation are the variables that define climate. All of these characteristics are variable with, and will be influenced by the geographic location of the habitat. For example, climates close to the poles will tend to have lower temperatures than habitats near the equator.

3. Flora

The flora is defined by the community of plant that exist in the habitat. The variety of species in the flora is greatly influenced by the climate, elevation and soil.

4. Fauna

The fauna consists of the community of animals living in the habitat. It is influenced by the climate and elevation. The flora will also influence the fauna by providing food and shelter for animals.

5. Human Presence

The presence of humans may affect the habitat, either by providing alternative sources of food such as waste or livestock, or by leading to competition for food by domesticated animals.



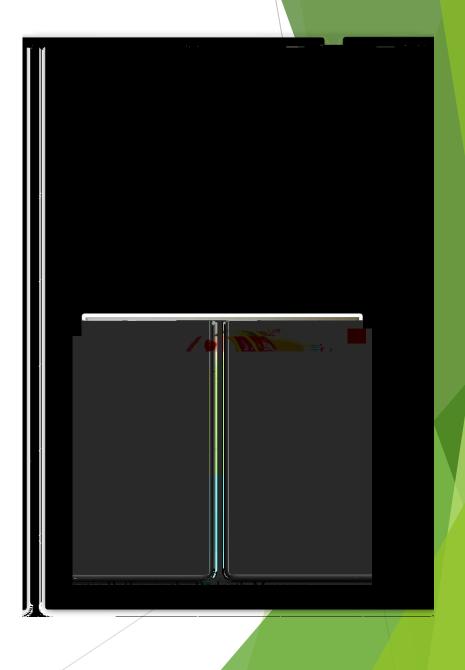
Ecology

Describe habitats of certain species

Atlantic Puffin

The habitat of the Atlantic puffin is particular because it extends over both land and water. It extends from the coast of Eastern North America the coast of Western Europe, up to the coastal margins of the Arctic. Their range includes all land and water within this area. The climate in which the puffin thrives is then relatively constant, as the proximity of water bodies tempers the precipitation (always high) and temperature variation.

highly variable, as it extends over land and sea.



Adaptation

Physical adaptations increasing chances of survival

1. Camouflage

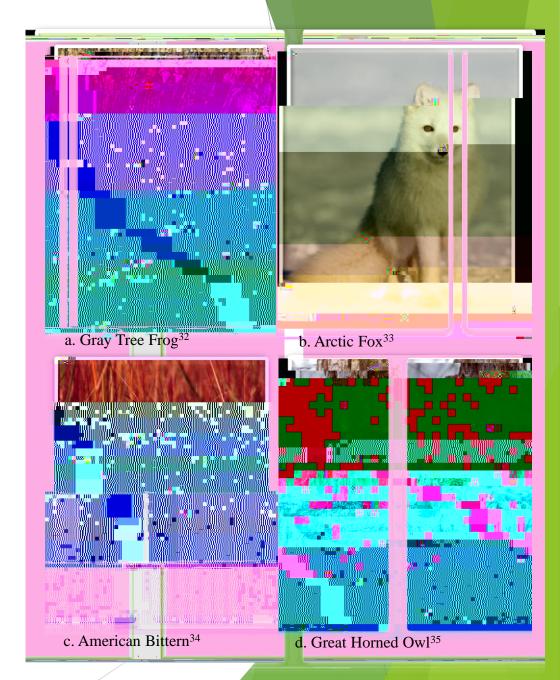
Animals hide in their environment by physically looking like it Helps to prevent predation, thus increasing survival

a. The Gray tree frog hides on tree barks

b. The arctic fox hides in the snow in winter

c. The American bittern hides in marsh vegetation

d. The great horned owl resembles tree bark



Adaptation

Physical adaptations increasing chances of survival

2. Mimicry

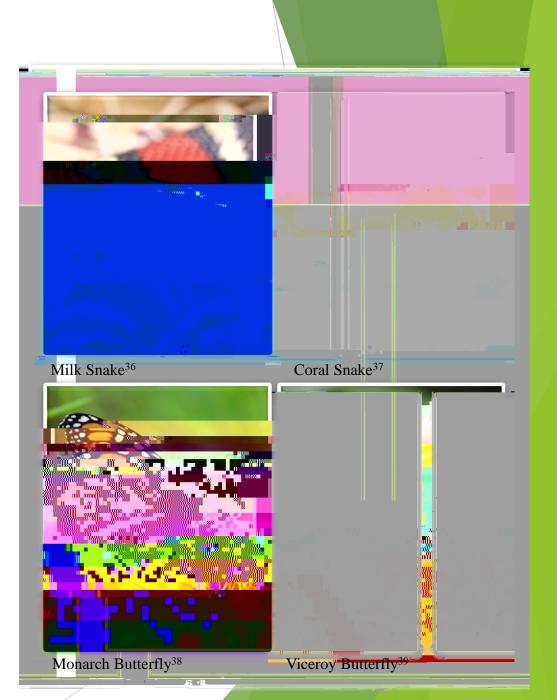
Animals resemble other harmful organisms Predators confound the mimic species for a harmful one,

a. Batesian Mimicry

A harmless organism resembles a harmful one Milk Snake (harmless) and Coral snake (deadly)

b. Müllerian Mimicry

Both organisms are harmful and look alike Monarch and viceroy butterflies



Adaptation

Behavioural adaptations increasing chances of survival

1. Safety in numbers

By grouping with conspecifics, an individual is less likely to be the victim of predation than if it were by itself.

Muskox

Form a circle around the young to protect them from all angles

Sardines

Group to increase chances of survival against attacks from fishes or birds

