HABITAT AND ADAPTATIONS

SCIENCE PRESENTATION

IBAAD ULLAH KHAN
HAMZA AHMED
M.HASAN JAWAID

SUBMITTED TO MS.SEEMA ADIL

WHAT IS A HABITAT?

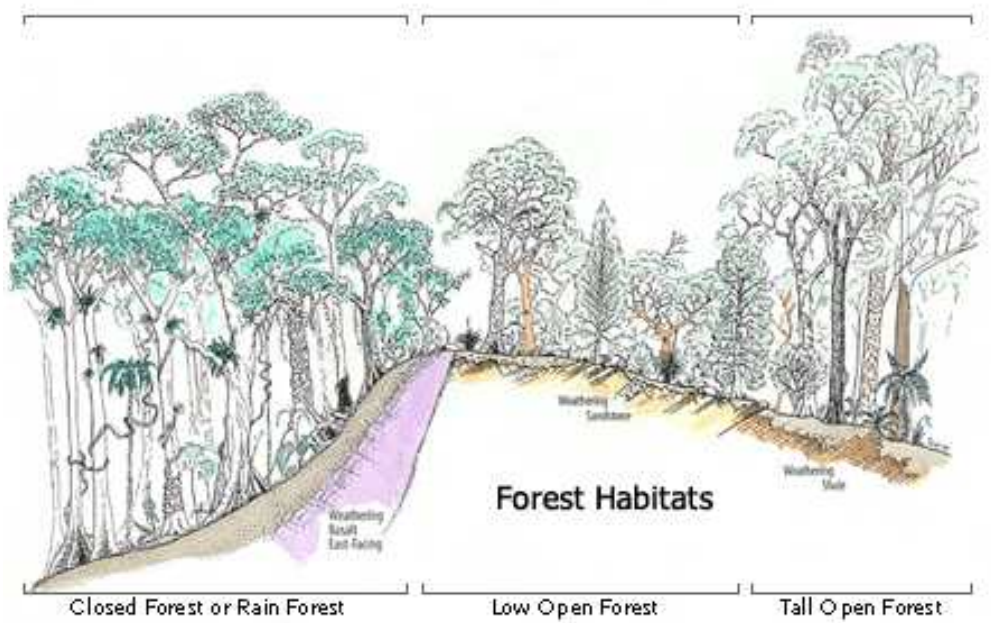
A **habitat** is an ecological or environmental area that is inhabited by a particular species of animal, plant, or other type of organism.[1][2] It is the natural environment in which an organism lives, or the physical environment that surrounds a species population.[3]

A habitat is made up of physical factors such as soil, moisture, range of temperature, and availability of light as well as biotic factors such as the availability of food and the presence of predators. A habitat is not necessarily a geographic area—for a parasitic organism it is the body of its host, part of the host's body such as the digestive tract, or a cell within the host's body.[4]

DIFFERENT TYPES OF HABITAT:

FOREST HABITAT:

Forest Habitat : It is a type of habitat which covers a large area where many trees, plants and animals live.The plants in forests provide shade and protection to many different types of animals



DIFFERENT TYPES OF FORESTS

Different types of forest are

1) <u>Deciduous Forest</u>: These are forest in cool rainy areas.they can be found in middle of Europe or Eastern half of North America. Animals living in this habitat must adjust to cold winters and hot summers.The trees in the forest provides shelter to them

Examples of animals living in this habitat are

Black bear, Grey squirrel, Turkey, Rat snake

2) <u>Coniferous forest</u>: This habitat is found in Europe, Canada.The Northern coniferous forests are called Taiga.This is largest type of habitat in world. It has fewer animals as comparison to in deciderous forest cold weather makes life very difficult in these forests.

Examples of animals living in this habitat:

Lynx, Moose, Squirrel, Loon, Hawk owl

DESERT HABITAT

Deserts are characterized by dry conditions and a wide temperature range.These are defined as regions that has a less than 254 mm of annual rainfall or precipitation.

Types of Deserts

Hot and dry Dessert: Most hot and dry deserts are near the Tropic of Cancer or Tropic of Capricorn

WATER HABITAT

Cold Deserts: These are near the Arctic part of world. Cold Deserts have animals like Kangaroo rats, Antilope, Jack Rabbits.

Just as some animals prefer to live on land some need water habitat to survive

Water Habitat:Some animals love water habitats they cannot survive anywhere else. Some water habitats are made up of fresh water like ponds or rivers other habitats are made up of salt water.

GRASSLAND HABITAT

Rivers are full of life they are habitats of different types of fish, algae and mosses.They are sources of water, food, shelter necessary for animals to survive.

Sea contains different creatures Huge that are horrible as well as small that are harmless.

Grassland Habitat: They are big open spaces of grass.about one quarter of land on earth is in grassland.

DIFFERENT TYPES OF GRASSLANDS

The two different types of grasslands are :

Temperature grasslands: They are farther from the equator and have both cold winters and hot summers

Tropical grasslands: These are closest to the equator and all hot all the year

Since Grassland lack in trees and heavy bushes Hence grasslands are homes to large herds of the grazing animals such as Bison, Giraffe ,Lion, Zebra, Ostrich

TUNDRA HABITAT

Tundra Habitat: The 2 major charecterstics of tundra are Arctic tundra, Alpine tundra.These are located at high altitudes on mountains around the world. About one fifth of the earth ’s land is Tundra. The Arctic tundra is frozen for much of the year. The ground ispermanently frozen 10 feet 3 inches down so the trees cannot grow there.

Animals living in tundra are Loons ,Snow birds, Mosquitoes, Flies, Polar bear, Wolves, Flat fish

ADAPTATIONS:

The special characteristics that enable plants and animals to be successful in a particular environment are called adaptations.

Camouflage, as in a toad's ability to blend in with its surroundings, is a common example of an adaptation. The combination of bright orange and black on a monarch butterfly is an adaptation to warn potential predators that the butterfly is poisonous and prevent it from being eaten. These special features have evolved over long periods of time, through the process of natural selection. Adaptations afford the organism a better chance to survive in its surroundings.

ANIMAL ADAPTATIONS:

Desert Adaptations

Deserts, where the environment is generally hot and extremely dry, provide many striking examples of how plants and animals are adapted to their surroundings. Plants have many adaptations to cope with the lack of water. Some desert plants, such as the barrel cactus, have expandable stems for storing water. Other plants have adaptations that reduce water loss from their leaves, the part of a plant through which most of the water is lost. Still others have a waxy coating on the leaves, or have small leaves, that reduce the surface area exposed to the drying elements. In many cases, desert plants have no leaves at all. Photosynthesis, which normally occurs in green leaves, is carried out in the stems, which are themselves green with the pigment chlorophyll.

Desert animals also have many adaptations as well to help them survive in the desert climate. Many are nocturnal, meaning active during the cool night rather than the hot daylight hours. The kangaroo rat conserves water by excreting a solid urine rather than liquid.

Tropical Rainforest Adaptations

In sharp contrast, the climate of the tropical rainforest is hot and wet. With over 80 inches of rain per year, as opposed to the desert's 10 inches or less, plants have adaptations that enable them to shed water efficiently. The leaves of many rainforest plants have drip tips for this purpose. Buttress and stilt roots are thought to provide extra support for trees growing in spongy, wet soils.

Tropical rainforest plants also have adaptations to take in what little sunlight is available on the dark forest floor. Large leaves are common; they increase the amount of sunlight a plant can capture. Other plants, like orchids, bromeliads and ferns, grow as epiphytes high up in the canopy where there is more sunlight.

Other Adaptations

The adaptations discussed above are all adaptations to specific climatic conditions, but organisms have also developed adaptations to other aspects of their environment. Some animals have adapted to eat a certain type of food; others have adapted to avoid being eaten themselves. Most animals have behavioral adaptations which help them attract a mate. In the plant world, many flowers have evolved specific structures that help ensure pollination by the insects they attract.

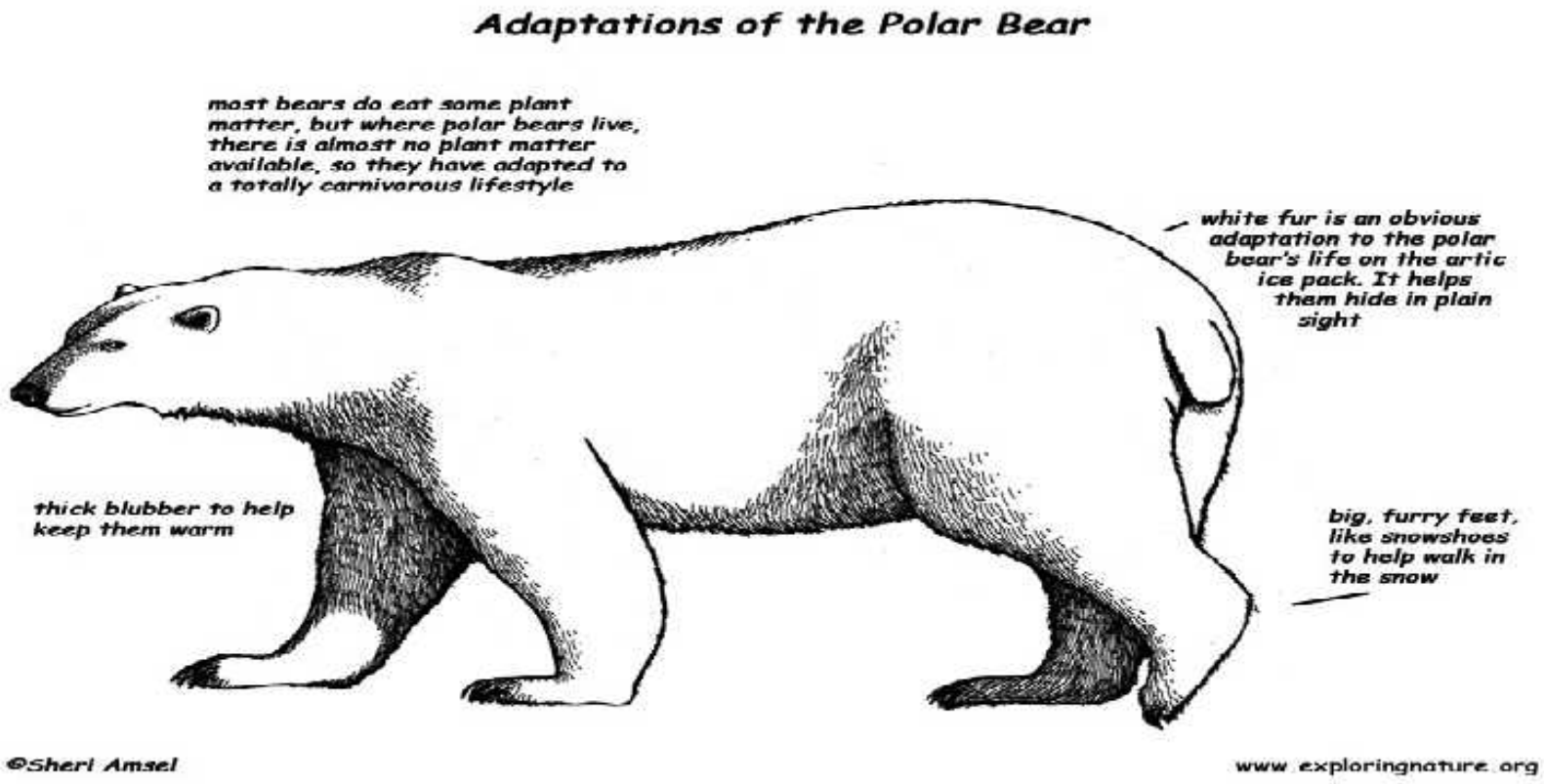
EXAMPLE OF ANIMAL ADPTATIONS

The polar bear has many adaptations for its life on the polar ice pack. Their white fur helps them hide in plain sight. This is a good thing as there are no trees or rocks to hide behind in their habitat. Blending in is the only way to hide. This adaptive trait is a physical adaptation.

They also are one of the only bears that have a totally carnivorous diet. This means that they eat only meat. Most bears are omnivores and do eat plant matter. But where polar bears live, there is almost no plant matter available, so they have adapted a totally carnivorous lifestyle. Their long, sharp claws help them pull seals right out of the water when they surface to breathe and onto the ice where the bears can feed.

Polar bears also have thick blubber and dense fur to help keep them warm. They have big, furry feet that act like snowshoes to help them walk on the snow. These are all physical adaptations that help a polar bear survive in its environment.

PHOTO OF ITS ADAPTATIONS



PLANT ADAPTATIONS

Plants have adaptations to help them survive (live and grow) in different areas. Adaptations are special features that allow a plant or animal to live in a particular place or habitat. These adaptations might make it very difficult for the plant to survive in a different place. This explains why certain plants are found in one area, but not in another. For example, you wouldn't see a cactus living in the Arctic. Nor would you see lots of really tall trees living in grasslands.

Video links :

http://www.teachertube.com/video/animal-and-plant-adaptations-93830

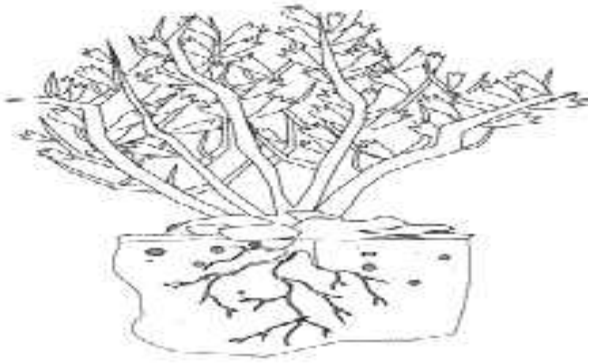
Plant Adaptations

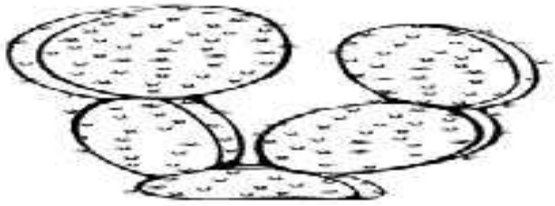
Many desert plants are a dull gray. If you look closely, you will see why. The leaves of some plants, such as sagebrush, are covered with tiny hairs. Leaf hairs reflect the rays of the sun and protect it from being dried out by the wind.

Some desert plants, such as rabbitbrush have very small leaves. Big leaves would allow too much water to escape through evaporation, but small leaves helps the plant conserve water.

Big Sagebrush grows two sets of leaves. Large leaves in the spring allow the plant to take in water and grow rapidly. These leaves fall off in the summer. The smaller leaves that grow on the plant year-round allow for less evaporation and conserve water.

Sagebrush has another way of surviving harsh desert conditions. Three levels of roots allow the plant to obtain all available water. A shallow mat of roots absorbs rainfall rapidly. A second, deeper set of roots extracts water that soaks into the soil as the winter snowpack melts. Finally a taproot extends downward six feet or more to drink in long-lasting ground water.





Whenever the water supply is plentiful, Prickly Pear Cactus collects moisture in the spongy tissue of its enlarged stems, called pads. The cactus can then draw on this stored supply of water when the weather turns dry.