

Tropical Rainforest

Climate	Vegetation	Size and location	Food web	Soil	Productivity
Temperatures range from 25 -28oC, 77 - 82oF, the temperature range is greater during the day and night than it is during the year. High humidity and total annual rainfall of over 2000mm, 80 inches, often with violent storms. Usually light winds.	Mostly very tall trees with many different species. The very tallest can reach to 50m, 200 feet, and their trunks have few branches and the main tree canopy cuts out most of the light. Creepers climb up the main trees to get to the light, few plants which can grow on the ground. Trees and plants grow very quickly. Some may lose their leaves, but not all at the same time and the forest appears to always be green.	17% of the world's surface could be covered by tropical forest. They occur within 5o North and south of the Equator.	Few animals live on the ground, they mostly live in the trees, but many different types of insects live there. There are many different birds.	Very thin, the tree roots do not go far into the ground and the tall trees have buttress roots to stop them from falling over.	
Place _____	Picture _____	Map _____	Food web ____	Soil _____	

Temperate Forest

Climate	Vegetation	Size and location	Food web	Soil	Productivity
Temperatures range from 4o - 18oC, 42o - 64oF. The climate is often cloudy and rain falls throughout the year. Precipitation is usually in the form of rain, but there might be some snow which usually thaws quickly, especially on the lower land. It may be as high as 2000mm, 80 inches or as low as 600mm, 24 inches.	The natural vegetation of the area is deciduous forest and the trees lose their leaves during the cool winters with shorter light periods. There are fewer species than warmer forest regions. Shorter plants have the opportunity to grow before all the leaves come onto the dominant trees so shrubs and ground plants such as blue bells can grow in the spring. However many areas of forest have been cleared for farming and for urban developments.	Between 40o and 60o north and south of the equator on the western coastal margins of continents.	Many insects live in the trees and help to break down the leaves. Animals such as rabbits live on the plants. The insects are eaten by birds and other animals and they in turn may be eaten by predators such as foxes.	Because the leaves decompose quickly the soils are fertile and have therefore been used for farming.	
Place _____	Picture _____	Map _____	Food web ____	Soil _____	

Coniferous / Boreal / Taiga

Climate	Vegetation	Size and location	Food web	Soil	Productivity
Temperatures range from minus 28oC to 15oC, minus 30o - 50oF, the annual range is the greatest in the world. Precipitation of 350mm, 15 inches, falls as snow in the winter, often blown into blizzards, which does not melt until the spring. There may be summer storms. The wind chill factor is high in winter.	Trees have adapted to these harsh conditions. The summers are not long enough for them to grow new leaves each season so they are evergreen, but their leaves are adapted to withstand the cold as pine needles. They have a conical shape to protect them from the cold and stop them being blown over; this also allows the snow to slide off. Little light reaches the forest floor so there are not many ground plants, just a few mosses and lichens. The tree seeds are kept in cones.	60o north and south of the equator, and in areas of high altitude.	Because there is a limited food supply there are not many birds and animals. Some animals eat the new shoots and pine cones and these in turn are eaten by bears, and wolves.	The cold climate means there are not many worms and insects break down the pine needles and the soil is acid.	
Place _____	Picture _____	Map _____	Food web ____	Soil _____	

Desert

Climate	Vegetation	Size and location	Food web	Soil	Productivity
Temperatures range from 20 – 30oC, 68 – 86oF during the year, but the temperature during a 24hour period can differ by as much as 50oC, 140oF with the night temperatures dropping below freezing point. There may be may years without real rain, but dew may fall at night, providing some moisture. When it does rain the rain is very heavy.	Plants have adapted because there is little moisture either by storing water or by preventing moisture being evaporated by the heat. Most plants are short or bushy, often with long roots.	Only 6% of the world is true desert, but up to 33% of the world has very dry areas. Major deserts are usually found in the west of continents in latitudes 15o - 30o north and south of the equator.	Most animals that live in deserts are small and are active at night time, the exception to this is the camel. There are many lizards, snakes and spiders.	These can be very salty with very little goodness in them.	
Place _____	Picture _____	Map _____	Food web ____	Soil _____	

Savanna / Tropical Grasslands

Climate	Vegetation	Size and location	Food web	Soil	Productivity
Temperatures range from 22 - 27oC, 72 - 80oF. 80% of the rainfall total of 1300mm, 50 inches, falls in four months of the year often as heavy storms. The amount of rainfall gets less away from the equator. The wet season is very windy.	Some trees, often with thorns to stop animals eating them. Most of the land is covered with grass. This can be very tall, but there are less trees and shorter grasses away from the equator. Some trees and plants store water for use during the dry season. There can be fires during the dry season. Trees lose their leaves during the dry season.	20% of the world's surface could be covered by tropical grasslands. They are located between 5 and 15o North and south of the equator.	Over 40 different types of large animals graze on the grass and they in turn are eaten by other animals such as lions. Insects burrow in the soil.	The soils are quite thin, but many plant nutrients are stored in the dry grasses during the dry season.	
Place _____	Picture _____	Map _____	Food web ____	Soil _____	

Tundra

Climate	Vegetation	Size and location	Food web	Soil	Productivity
emperatures range from minus 28oC to 5oC, minus 30o - 40oF. the precipitation is very low, only 110mm around 5 inches per year.	There are no trees, just mosses and lichens. It has the lowest number of species of plant of all the biomes. Plants are small to avoid the wind chill in winter and have to be able to withstand the extreme cold and lack of available water. In spring or on south facing slopes flowers can grow and some small shrubs such as bilberries.	Lies north of the coniferous forests.	There are few animals and birds which live here all the year round, most migrate to warmer areas when the weather is very cold. Reindeer eat the mosses and there are wolves and arctic foxes.	Apart from the top 50cm or 20 inches the ground is permanently frozen. In summer the top layers become waterlogged as the melting water cannot flow away through the layers below.	
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