

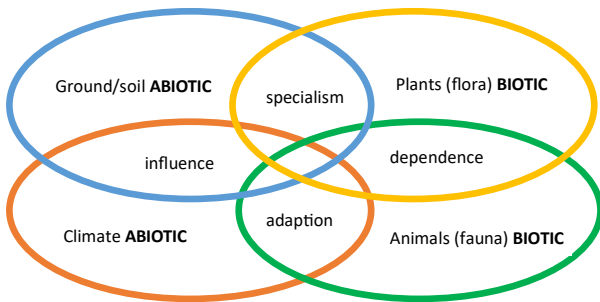
GEOGRAPHY 7.1. ECOSYSTEMS

1. and 2. Ecosystems and Biomes

An ecosystem is an environment in which living (biotic) communities of **plants** (flora) and **animals** (fauna) exist suited to the conditions of the non-living (abiotic) **ground** and **climate** in that area.

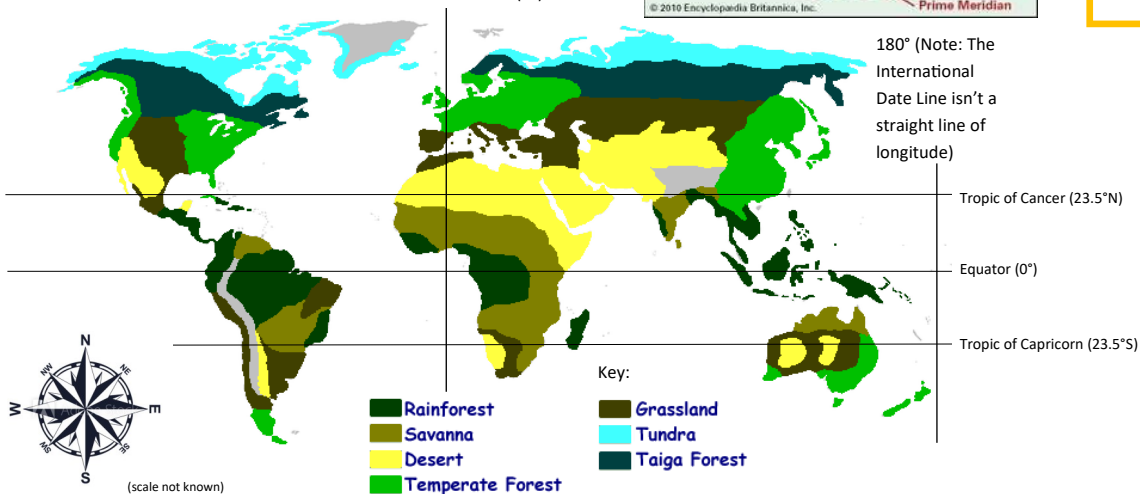
These four components (biotic and abiotic) all influence each other; this is called **interdependence**. See the Venn diagram set out below.

Ecosystems can be as small as a garden pond, or as massive as a desert. Large scale ecosystems are called **biomes**. Examples are rainforests, coniferous forest or coral reefs.



3. Global Biomes and key latitudes

Greenwich Prime Meridian Line (0°)

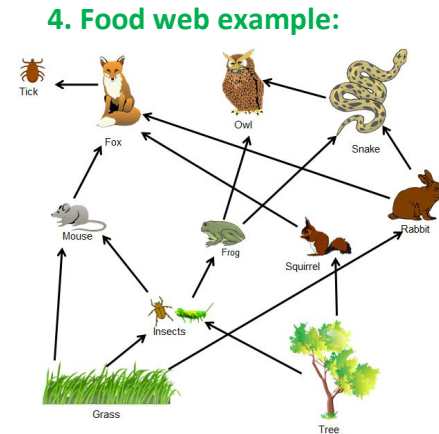


4. Food Chains and Webs

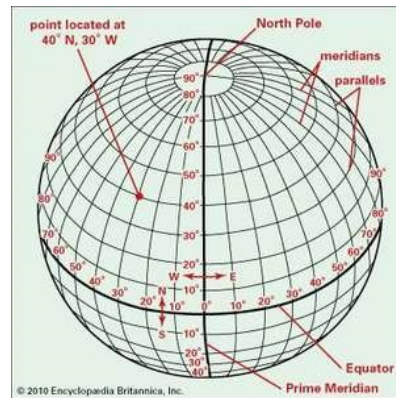
A **food chain** follows a path of energy flow in an ecosystem as animals consume food. **Producers** create food and **consumers** eat them. Some consumers are eaten by **secondary consumers** (**predators**).

A **food web** consists of many food chains as many animals eat a variety of different things—so the food chains become connected at different points. Nutrients are recycled by **decomposers** when a biotic component dies.

See examples of chain and web to the right...



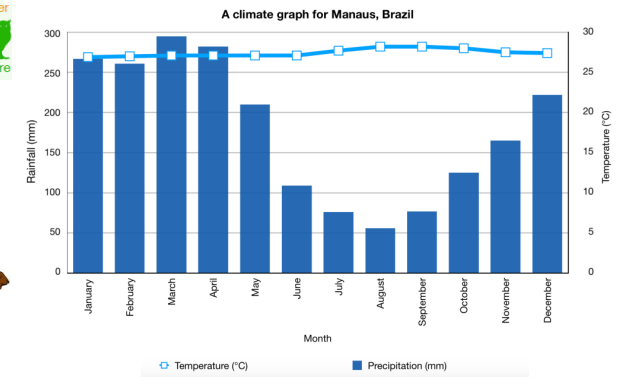
A04 - Longitude and Latitude



Ecosystem Key terms

Ecosystem	biome	biotic	abiotic
interdependence		food web	food chain
nutrient cycle	habitat	producers	consumers
biomass	carnivore	omnivore	herbivore
predator	decomposers	longitude	latitude
Tropics	poles	Equator	continents
Africa	Europe	North America	South America
Asia	Oceania	Antarctica	

A04 Climate Graphs and Analysis



A04—Statistical Analysis Core skills

Mode	The number which appears the most often in a set of numbers (data)
Bi-modal	If there are two modes
No mode	If one number does not appear more than any other
Median	The number in the middle of the set when the numbers are arranged in order
Range	Find the largest and smallest numbers in the set and subtract
Mean	Add up the numbers and divide by how many there are
Continuous data	Can be measured and take any value. Temperature is continuous over the year on climate graphs and therefore shown as the line.
Discrete data	Data that can only take particular values. Rainfall is discrete on climate graphs (by month) and therefore shown as non-touching bars.

3. 5. 6. 7. Major global biomes overview:

Biome	Locations:	Climate:	Characteristics
Temperate Deciduous Forest	Between 40-60° N or S of the Equator	Mild all year - Cool winters and warm summers. Wet all year	Deciduous trees that lose leaves in winter time. Found in western Europe, eastern USA, eastern Asia and southern Oceania.
Tropical Desert	Generally between 20-35° N or S—along the tropics	Very hot summer and cool winters. Very dry all year.	Cacti and xerophytes survive here. Extreme climate. Found in North and South America and Africa, western Asia and Oceania.
Tropical Rainforest	Along the equator—between the tropics	Always hot, humid and wet with rain all year	Dense multi-layered forest with a permanent growing season. Found in Central and South America, central western Africa, South-east Asia and northern Oceania.