MAJOR TEMPERATURE ZONES OF THE EARTH.

TEMPERATURE ZONES.

The different temperature zones are also called heat zones. The heat in each of these zones depends on how far it is from the equator. The climatic zones near the equator are the hottest. As we move away from the equator, the climactic zones become cooler. The coldest climatic zones are near the poles. The same climatic zones are found in the northern and the southern hemispheres. The climate in the temperature zones has an impact on the natural vegetation as well as the animal life of the zone. It also affects the lives of the people who live there.

The three zones are:

1) the Torrid (torrid=very hot) or Hot Zone, between the equator and the tropics of Cancer and Capricorn.
2) the Temperate (neither too hot nor too cold) Zone, between the two tropics and the Arctic and Antarctic Circles.
3) the Frigid (frigid=very cold) or Cold zone, from the Arctic and Antarctic Circles to the poles.

I) THE TORRID ZONE.

The areas which are near the equator- 10° North and South of the equator-are called the equatorial regions. Areas between 150 and 25° North and South of the equator are called the tropical regions. The torrid zone also has hot deserts and tropical grasslands.

Features of the Torrid Zone.

1) Equatorial regions-parts of Africa, South America and South-East Asia.
i) 10° N and S of the equator.
ii) hot and humid with rain throughout the year.
iii) evergreen equatorial rainforests in layers.
iv) largest variety of land and water animals.
v) very few people live here, there is mainly a tribal population.
2) Tropical regions-Indian subcontinent and other parts of South-East Asia.
i) between 15 and 25° N and S of the equator.
ii) hot summers, rainy months cooler winters in the plateaus and hills.
iii) deciduous trees (those that shed leaves in winter) like teak and sal.
iv) plant-eating and flesh-eating animals, wild animals.
v) farmers and people who live and work in cities and towns.
3) Hot deserts-Sahara Desert, Australian Desert, Sonoran and Mexican Desert, Arabian Desert.
i) 15° to 35° N and S of the equator.
ii) lie on the western sides of the continents; the Sahara stretches from the western to the eastern shores of Africa.
iii) hot and dry with hardly any rain.
iv) hardy plants, adapted with fleshy stems, thorny and tiny leaves, long roots and strong seeds.
v) camels, lizards and nocturnal animals (animals that come out at night) like rats, snakes and owls.
vi) tribal population and some cities.
4) Tropical Grasslands-Parts of Africa, South America, India and Brazil.
i) 5° to 25° N and S of the equator.
ii) also called savannah.
iii) partially humid, hot rainy summer cool drier winters with limited rain further away from the equator.
iv) not very fertile soil which supports large stretches of tall grass and acacia trees.
v) both plant-eating-buffaloes, rhinos, giraffes, elephants and flesh-eating animals-leopards, jackals, hyenas. Termites are found in plenty.
vi) wandering herdsmen, who have herds of cattle.

II) THE TEMPERATE ZONE.

This zone includes all the continents except Antarctica. Temperate means neither too hot nor too cold, which is what the climate in this zone is. Some areas are dry and arid others have grasslands and there are some forested areas as well.

Features of the Temperate Zone.

1) Climate.
   i) neither too hot nor too cold.
   ii) warmer near the tropics in both hemispheres.
   iii) colder as we move away from the equator.
   iv) desert climate in the arid regions.
   v) less rain than hot zone.
   vi) has four distinct seasons-summer, winter, spring, autumn.
2) Natural vegetation.
   i) Grasslands-grasses and acacia trees.
   ii) deserts-thorny plants or those with fleshy stems like cactus.
   iii) deciduous--trees that shed their leaves like oak, maple, beech, elm.
   iv) coniferous-tall straight cone-bearing trees with needle-like leaves like pine, fir.
   v) Mediterranean-mixed vegetation: deciduous, conifers, sequoia and bushes like lavender and rosemary.
3) Animal life.

Animals are adapted to the habitat in various ways including hibernating (sleeping through the cold) and migrating (moving to another place).

   i) Northern hemisphere- Plant-eaters (herbivores) like bison, grizzly bear, elks (a kind of deer), giant panda; carnivores (meat-eaters).
   ii) Southern hemisphere-anteaters, llamas, alpacas, anacondas,kangaroos, koala bears and wallabies.
4) Natural vegetation.

Northern hemisphere-

   i) farming mechanized farming in developed areas that grow large amounts of wheat, hence this region is called 'granaries of the world
   ii) people who live and work in cities

Southern hemisphere-

   i) nomadic (wandering) population in arid regions
   ii) farmers and ranchers
   iii) people who live and work in cities

III) THE FRIGID ZONE.

The northern frigid zone includes the northern parts of Asia, Europe and North America and the frozen areas to their north. Antarctica lies in the southern frigid zone. The regions around the poles in the frigid zone are permanently frozen. In both hemispheres, these parts of the Frigid Zone are called polar ice caps. The region around the North Pole is frozen water, whereas in the South Pole it is frozen land. Antarctica is called the 'Frozen Continent' as it is always icy here.

Features of the Frigid Zone.

1) Climate.

Northern hemisphere-

   i) extremely cold, mostly frozen water.
   ii) strong winds and blizzards (snowstorms) in winter.
   iii) small belt of melted snow in summer in some parts of Europe, Asia and North America

Southern hemisphere-

   i) completely frozen throughout the year.
   ii) cold, windy and dry with hardly.
   iii) any new snowfall.

2) Natural vegetation.

Northern hemisphere-

i) very difficult for plant life as ground is frozen almost throughout the year.
ii) mainly dormant plants moss, lichen, berry-bearing plants small trees and bushes during summer-called Tundra vegetation.

Southern hemisphere-

i) does not support plant life as land is either frozen or barren rock.
ii) very small parts that are sheltered from the wind have Tundra vegetation.

3) Animal life.

Northern hemisphere-

i) land and sea mammals-polar bear (fish eating), reindeer (moss eating), walrus, arctic hare.
ii) birds, butterflies.
iii) mosquitoes and black flies in summer.
iv) no reptiles.

Southern hemisphere-

i) sea animals-elephant seal, and different kinds of whales.
ii) migratory sea birds –albatross, petrels, terns, cormorants.
iii) penguins are the region's best known birds-the flightless birds.

4) People.

Northern hemisphere-

i) people live only in the coastal regions chief occupations are hunting and fishing; people live off animal products as it is impossible to grow crops.
ii) traditional life of the people has changed.

Southern hemisphere-

i) no permanent settlers.
ii) only tourists and scientific researchers.
iii) many countries, including India, have their stations there to study the weather and natural resources.

EFFECTS OF HUMAN ACTIVITY.

Human beings sometimes interfere with nature for different reasons. This has an impact on animal and plant life, as well as on people who live there. Two examples of this are:

1) In the temperate zone, large areas of grasslands were converted into farmland as well as towns and cities for people to live. Animals, like the mighty bison of North America that lived there in thousands, were reduced to very small numbers.
2) In the torrid zone, large areas of forests are being cut down to clear land for housing or agriculture and to use the valuable timber. In this way, the natural habitats of numerous animals, like the orangutan, are disappearing and we are also losing the smaller creatures and plants that survive in these habitats. The local tribal people also lose their traditional way of life.

A wise man in the 19th century said: 'The earth is our mother . . . Whatever happens to the earth, happens to the children of the earth .... All things are connected.' All human beings need to think about this.

SUMMARY.

1) The special latitudes and the tilt of the earth's axis influence the climate of the earth.
2) The earth is divided into three temperature zones-the torrid zone, the temperate zone and the frigid zone. These are the same in both hemispheres.
3) The special latitudes are the dividing lines between the zones.
4) Each zone has its own features with regard to climate, natural vegetation and animal life.
5) To some extent, the life of the people also depends on the climate and other features of the temperature zone in which they live.
6) In many places people are interfering, and have interfered, with the natural world.
7) Hurricanes, cyclones and typhoons are all violent storms that arise in the warm seas of the tropics. They often cause severe damage when they move over land.

8) Sometimes the night sky in the frigid zone is lit up by spectacular bands of red and green lights. These are called Polar Lights.