Chapter 6: Biomes
Section 2, Forest Biomes

Forest Biomes

- Of all the biomes in the world, _____ are the most widespread and the most diverse.
- The large trees of forests need a lot of water, so forests can be found where temperatures are _____ and where rainfall is _____.
- There are three main forest biomes of the world: _____.

Tropical Rainforests

- _____ are forests or jungles near the equator.
- They are characterized by _____ and _____ in temperature and contain the greatest known diversity of organisms on Earth.
- They help regulate world climate an play vital roles in the _____.
- They are humid, warm, and get strong sunlight, which allows them to _____ that is ideal for a wide variety of plants and animals.

Nutrients in Tropical Rainforests

- Most nutrients are within the _____, not the soil.
- Decomposers on the rainforest floor _____ and _____, but plants quickly absorb the nutrients.
- Some trees in the tropical rain forest support _____ that feed on dead organic matter on the rainforest floor.
- In this relationship, the fungi _____ the nutrients from the dead matter directly to the tree.

Nutrients in Tropical Rainforests

- Nutrients from dead organic matter are removed so efficiently that runoff from rain forests is often as _____.
- Most tropical soils that are cleared of plants for _____ for more than a few years.
- Many of the trees form above ground roots called _____ that grow sideways from the tree to provide it with _____ in the thin soil.

Layers of the Rainforest

- In tropical rain forests, different types of plants grow in different layers.
- There are _____ main layers of the rain forest:
    - _____
    - _____
    - _____
    - _____

Layers of the Rainforest

- The _____ is the top foliage layer in a forest where the trees extend above surrounding trees.
- Trees in this layer grow and emerge into _____ reaching heights of _____ and can measure up to 5 m around.
- Animals such as eagles, bats, monkeys, and snakes live in the emergent layer.

Layers of the Rainforest

- The _____ is the layers of treetops that _____ the forest floor, and is considered to be the _____ of the rain forest.
- The tall trees, more than 30 m tall, form a dense layer that absorbs up to _____ of the sunlight.
- The canopy can be split into and _____ canopy with the lower canopy receiving less of the sunlight.

Layers of the Rainforest

- _____ are plants that use another plant for support but not for nourishment, and are located on high trees in the canopy.
- Growing on tall trees allows them to _____ needed for photosynthesis, and to _____ that run down the tree after it rains.
- Most animals that live in the rain forest live in the canopy because they depend on the _____ that grow there.

Layers of the Rainforest

- The _____ is the foliage layer that is beneath and shaded by the main canopy of a forest.
- _____ reaches this layer allowing only trees and shrubs adapted to shade to grow there.
- Most plants in the understory do not grow more that _____.

- _____ with large flat leaves that grow on the forest floor capture the small amount of light that penetrates the understory.

Species Diversity

- The diversity of rainforest vegetation has led to the _____ of a diverse community of animals.
- Most rainforest animals are _____ that use specific resources in particular ways to avoid _____ and have adapted amazing ways to capture prey and avoid predators.
- Insects use _____ to avoid predators and may be shaped like leaves or twigs.

Threats to Rainforests

- Every minute of every day, _____ acres of tropical rainforest are cleared for _____.
- Exotic pet trading robs the rain forests of rare and valuable plant and animal species only found there.
- _____ occurs when land inhabited by an organism is destroyed or altered.
- If the habitat that an organism depends on is destroyed, the organism is at risk of disappearing.

Threats to Rainforests

- An estimated _____ native peoples live in tropical rain forests and are also threatened by habitat destruction.
- Because they obtain nearly everything they need form the forest, the loss of their habitat could force them to leave their homes and move into cities.
- This drastic change of lifestyle may then cause the native peoples too lose their culture and traditions.

Temperate Forests

- _____ are forests communities that are characterized by
    - _____
    - _____
    - _____
    - _____
- They occur in North America, Australia, and New Zealand, and are dominated by evergreen trees such as the _____.

Temperate Deciduous Forests

- _____ are forests characterized by trees that _____ in the fall, and located between 30º and 50º north latitude.
- The range of temperatures can be extreme, with summer temperatures soaring to 35ºC and winter temperatures often falling below freezing.

- They receive _____ of precipitation annually, which helps to decompose dead organic matter contributing to the rich soils of the forest.

Plants of Deciduous Forests

- Plants in the deciduous forests grow in _____ with tall trees, such as _____, dominating the _____ while shrubs cover the _____.
- Also, _____ reaches deciduous forest floors than rain forests floors allowing more plants to grow.
- Temperate forest plants are _____ to survive seasonal changes.
- In the fall and winter, trees _____ their leaves and seeds go _____ under the insulation of the soil.
- With the returning warmth in the spring, the trees grow new leaves and seeds germinate.

Animals of Deciduous Forests

- The animals of temperate deciduous forests are adapted to use the forest plants for both _____.
- Birds cannot survive the harsh winter of the deciduous forests so each fall they _____ for warmer weather and better availability of food.
- Other animals, such as mammals and insects, _____ so that they do not need as much food for energy, enabling them to survive the winter.

Taiga

- The _____ is the region of _____ below the arctic and subarctic tundra regions.
- The taiga has long winters and little vegetation.
- The growing season can be as short as _____ with most plant growth occurring during the summer months because of nearly constant daylight and larger amounts of precipitation.

Plants of the Taiga

- A _____ is a tree that has seeds that develop in cones.
- Their leaves' _____ helps them to retain water in the winter.
- The conifer's shape also helps the tree _____ to the ground and not get weighed down.

- Conifer needles contains substances that make the soil _____ when they fall to the ground preventing plants from growing on the floor.
- Also, soil forms slowly in the taiga because the climate and acidity _____ decomposition.

Animals of the Taiga

- The taiga has many _____ that in the summer attract birds that feed on insects.
- To avoid the harsh winters, birds _____, while some year round residents, such as shrews, burrow underground for better insulation.
- Other animals, such as snowshoe hares, have adapted to avoid predation by shedding their brown summer fur and growing white fur that camouflages them in the winter snow.