

**Biomes** (p. 168 – 180)**I. Tropical Rain Forest****1. Identify where tropical rain forests are located.**

-Central America, South America, Southeast Asia, West Africa

**2. Determine whether the statement is true or false. If false, then correct the statement to make it true. (X = True; O = False)**

1. X Tropical rain forests have nearly year-round 12 hours days of daylight.
2. X Tropical rain forests receive about 6.6 feet of rain per year.
3. O Most nutrients in a tropical rain forest are located in the soil. <sup>plants</sup>
4. O Tropical rain forests possess nutrient-<sup>poor</sup> rich soils.
5. X Tropical rain forest plants are bright to attract pollinators, since little wind exists.

**3. Match each tropical rain forest term with the correct definition.**

- |                             |  |
|-----------------------------|--|
| 1. <u>C.</u> Understory     | A. Top layer with tallest trees; Trees look umbrella-like              |
| 2. <u>E.</u> Canopy         | B. Plants that grow on other plants (not soil)                         |
| 3. <u>A.</u> Emergent Layer | C. Dark, ground layer; Plants have big leaves & shallow roots          |
| 4. <u>B.</u> Epiphytes      | D. Large aboveground prop roots <sup>(stability in shallow soil)</sup> |
| 5. <u>D.</u> Buttresses     | E. Dense collection of tall trees; 50-80 meters above ground           |

**II. Tropical Dry Forest****1. Identify where tropical dry forests are located.**

-India, southern N. America, Central America, South America, Southeast Asia

**2. Determine whether the statement is true or false. If false, then correct the statement to make it true. (X = True; O = False)**

1. X Tropical dry forests exhibit significant seasonal changes in precipitation.
2. O Tropical dry forests experience <sup>(warm year-round)</sup> drastic seasonal temperature changes.
3. X Wet and dry seasons typically occur in tropical dry forests. <sup>(1/2 a year each)</sup>
4. X Most trees in tropical dry forests are deciduous.
5. X Some animals estivate (deep-sleep dormancy) during difficult times of the year. <sup>(lack of water)</sup>

III. Savanna

## 1. Identify where savannas are located.

- Africa, South America, Australia, India

## 2. Determine whether the statement is true or false. If false, then correct the statement to make it true. (X = True; O = False)

- Savannas receive <sup>less</sup> more rain than tropical dry forests and deserts. (<sup>more than</sup>)
- Distinct dry and rainy seasons occur in savannas.
- Plants in savannas have waxy coverings, grow quickly, and possess thick bark.
- Savanna plants do <sup>not</sup> tolerate fires well. (Deciduous, waxy coverings)
- Savanna animals include lions, elephants, zebras, wildebeests, and giraffes.

IV. Desert

## 1. Identify where deserts are located.

- Around 30° N or S latitude (Drier air <sup>settles down</sup>)

## 2. Determine whether the statement is true or false. If false, then correct the statement to make it true. (X = True; O = False)

- Deserts are the driest biomes on Earth.
- Temperatures remain <sup>hot</sup> relatively stable during the day and night in deserts. (cold) →
- Many desert animals developed survival adaptations, such as being <sup>nocturnal</sup> diurnal.
- Succulents are desert plants that store water. (Cacti, aloe vera)
- Some desert plants have shallow, spread out roots to gather water.

V. Temperate Rain Forest

## 1. Identify where temperate rain forests are located.

- NW United States, South America, Asia (Small sized)

## 2. Determine whether the statement is true or false. If false, then correct the statement to make it true. (X = True; O = False)

- Temperate rain forest annually experience heavy rainfall & <sup>moderate</sup> cool temperatures.
- Most trees in temperate rain forests are <sup>coniferous</sup> deciduous trees.
- Evergreens, such as spruces, hemlocks, and fir trees, replace needles regularly.
- Some of the world's tallest trees are located in temperate rain forests. (Redwood, Sequoia)
- Moss, slugs, and amphibians inhabit the damp, shaded temperate forest floor.

**VI. Temperate (Deciduous) Forest**

1. Identify where temperate (deciduous) forests are located.

- Europe, eastern U.S., eastern Asia

2. Determine whether the statement is true or false. If false, then correct the statement to make it true. (X = True; O = False)

1.  Temperate forests experience hot summers and frigid, harsh winters.
2.  Soils in temperate forests are nutrient-~~poor~~ <sup>rich</sup>.
3.  Precipitation occurs evenly throughout the year in temperate forests.
4.  Temperate forest animals hibernate due to cold weather, not lack of water.
5.  Temperate forest animal adapt by migrating, hiding food, & using camouflage.

**VII. Temperate Grassland**

1. Identify where temperate grasslands are located.

- midwestern U.S., eastern Europe, western Asia

2. Determine whether the statement is true or false. If false, then correct the statement to make it true. (X = True; O = False)

1.  Temperate grasslands are also known as prairies or steppes. (veldt)
2.  Precipitation in grasslands is ~~extreme~~ <sup>moderate</sup>, but the temperatures are ~~moderate~~ <sup>extreme</sup>.
3.  The world's richest soil are present in temperate grasslands.
4.  Grasses grow from their ~~bases~~ <sup>bases</sup> tips, not ~~bases~~ <sup>tips</sup>. (Stay alive when eaten or fires)
5.  ~~Animals~~ <sup>Wind</sup> disperse most seeds on grasslands.

**VIII. Chaparral**

1. Identify where the chaparral is located.

- southern California, Mediterranean Sea, Chile, Southern Australia + Africa

2. Determine whether the statement is true or false. If false, then correct the statement to make it true. (X = True; O = False)

1.  Chaparral biomes experience ~~cold~~ <sup>mild, wet</sup> winters and warm, ~~wet~~ <sup>dry</sup> summers.
2.  Water loss is combated by chaparral plants by growing thick, waxy leaves.
3.  Periodic fires characterize the chaparral biome.
4.  Sage, eucalyptus, and thyme contain oils that ~~deter~~ <sup>enhance</sup> the spread of fires.
5.  Jackrabbits have long ears to dissipate heat during hot, dry conditions.

174

p. 175

Prairie  
- N. America  
Steppe  
- Russia  
Pampas  
- S. America  
Veldt  
- Africa



p. 176

p. 177

### IX. Boreal Forest (Taiga)

#### 1. Identify where boreal forests (taiga) are located.

- Canada, Alaska, Russia, Scandinavia

#### 2. Determine whether the statement is true or false. If false, then correct the statement to make it true. (X = True; O = False)

1.  Compared to temperate forests, boreal forests are cooler and drier.
2.  Conifers thrive in boreal forests.
3.  Conifers are conical shape in order to shed snow easily.
4.  Annually, animal feeding, breeding, & rearing occurs during a few warm months.
5.  Some taiga animals have thick insulation for warmth & change color seasonally.

p. 178

### X. Tundra

#### 1. Identify where the tundra is located.

- northern Alaska, Canada, Scandinavia, + Russia

#### 2. Determine whether the statement is true or false. If false, then correct the statement to make it true. (X = True; O = False)

- Diamonds
1.  The tundra has <sup>cold, dark</sup> mild, bright winters and <sup>mild, bright</sup> cold, dark summers.
  2.  Tundra climate is based on latitude location, <sup>and</sup> but not the tilt of the Earth.
  3.  Mosses and lichens are <sup>common</sup> rare in the tundra. (No tall trees!)
  4.  Permafrost in the tundra soil remains frozen all year long.
  5.  <sup>polar bears, musk oxen</sup> Caribou survive year-round in the tundra. (Caribou leave during harsh winter times.)

### XI. Polar Ice

p. 179

#### 1. Identify where polar ice is located.

- North pole + Antarctica (South pole)

#### 2. Determine whether the statement is true or false. If false, then correct the statement to make it true. (X = True; O = False)

1.  Polar ice is a frozen region almost devoid of plant life.
2.  A continent exists under polar ice in the <sup>Southern Antarctic</sup> Northern Arctic Circle.
3.  Any soil under polar ice is permanently frozen.
4.  Polar ice caps are <sup>not</sup> considered to be biomes.
5.  Some polar fish make natural antifreeze proteins to prevent blood from freezing.