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| **ABIOTIC FACTORS 1**  long, cold winters;  short, cool summers;  moderate precipitation;  acidic, nutrient-poor soils | **ABIOTIC FACTORS 2**  low precipitation, variable temperatures; soils rich in minerals but poor in organic material | **ABIOTIC FACTORS 3**  mild temperatures; heavy rainfall, fertile soils that are susceptible to erosion and landslides |
| **ABIOTIC FACTORS 4**  hot and wet year-round;  thin, nutrient-poor soils | **ABIOTIC FACTORS 5**  cold to moderate winters;  warm to hot summers; year-round precipitation; fertile soils | **ABIOTIC FACTORS 6**  Slight seasonal variations in temperatures; distinct rainy seasons |
| **ABIOTIC FACTORS 7**  Mild, wet winters and warm, dry summers; semiarid, frequent fires, nutrient poor soil | **ABIOTIC FACTORS 8**  Warm year-round; rainfall highly seasonal with extremely heavy rain during wet season leading to soil erosion | **ABIOTIC FACTORS 9**  low precipitation; extremely cold winters and moderately cool summers; poorly developed soils; permafrost |
| **ABIOTIC FACTORS 10**  World’s most fertile soils, distinct temperature differences between winter and summer; limited precipitation |  |  |

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| **DOMINANT PLANTS 1**  High numbers of intermixed tree species, large woody vines  and climbing plants; orchids  and bromeliads, epiphytes | | **DOMINANT PLANTS 2**  woody evergreen shrubs with  small, leathery leaves; fragrant,  oily herbs that grow during  winter and die in summer, hot spot for diversity | | **DOMINANT PLANTS 3**  A few species of evergreen trees, lichens | |
| **DOMINANT PLANTS 4**  cacti and other succulents;  plants with thick, leathery leaves to reduce water loss | | **DOMINANT PLANTS 5**  Deciduous plants that leaf out and grow profusely during times of rain, then drop their leaves in the dry season | | **DOMINANT PLANTS 6**  broadleaf deciduous  trees such as oak, beech, and maple; some conifers;  flowering shrubs; herbs | |
| **DOMINANT PLANTS 7**  lush, perennial grasses and  herbs | | **DOMINANT PLANTS 8**  Coniferous trees such as cedars, spruce, hemlock, and Douglas fir | | **DOMINANT PLANTS 9**  ground-hugging plants such  as mosses and lichens; low scrubby vegetation | |
| **DOMINANT PLANTS 10**  Tall grasses, some trees | |  | |  | |
| sageb  Reno, Nevada | grassland_savanna_habitat  Harare, Zimbabwe | | Vina_and_Rain  Lawrence, Kansas | |
| alaskapipeline1  Fort Yukon, Alaska | Manaus_Amazon_Village_brazil  Manaus, Brazil | | pa0608a_lg  Moscow, Russia | |
| e%20deciduous  Montpelier, Vermont | Lisbon, Portugal | | http://www.habitatadvocate.com.au/wp-content/uploads/2012/04/Arthur-River-rainforests-in-the-Tarkine-Photo-by-Ted-Mead.jpg  Eugene, Oregon | |
| Image result for darwin australia tropical dry forest  Darwin, Australia | 1 | | 2 | |
| 3 | 4 | | 5 | |
| C:\Users\shari.mudd.CMSSITES.004\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.Word\SBS_4e_Figure_04_23b_L.JPG  6 | 7 | | 8 | |
| 9 | 10 | |  | |

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| **ANIMAL 1**  Zebra, gazelle, giraffe, lion, hyena  **Adaptation:**  Migrate due to drought season; concentrate near widely spaced water holes | **ANIMAL 2**  Great numbers and diverse species of insects, birds, amphibians and various other animals  **Adaptation:**  Specialists | **ANIMAL 3**  Banana slug, spotted owl  **Adaptation:**  Moisture loving |
| **ANIMAL 4**  Deer, chipmunk, cottontail, toad, woodpecker  **Adaptation:**  Birds migrate, some animals may hibernate | **ANIMAL 5**  Moose, wolf, lynx, bear  **Adaptation:**  Birds migrate, rodents burrow, mammals may hibernate | **ANIMAL 6**  Prairie dog, bison, pronghorn antelope, meadolarks  **Adaptation:**  Birds nest on the ground |
| **ANIMAL 7**  Rattlesnakes, kangaroo mice  **Adaptation:**  Burrowing, nocturnal, nomadic | **ANIMAL 8**  Jackrabbits, coyotes  **Adaptation:**  Do not require much water | **ANIMAL 9**  Mosquitoes, caribou, polar bear  **Adaptation:**  migrate |
| **ANIMAL 10**  Monkey, puma, jaguar, deer, rodents  **Adaptation:**  Migrate, nocturnal |  |  |

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| **1** | **2** | **3** | |
| **4** | **5** | **6** | |
| **7** | **8** | **9** | |
| Image result for tropical dry forest locations map  **10**  **Anthropogenic 1**  Airborne pollutants, melting of permafrost due to climate change, gas and oil development is a threat | **Anthropogenic 2**  Development due to Mediterranean climate | **Anthropogenic 3**  Cleared for logging, erosion of soil | |
| **Anthropogenic 4**  Fragile ecosystems with fragile soils hurt by recreation vehicles | **Anthropogenic 5**  Clearing of land, overgrazing | | **Anthropogenic 6**  Converted to agricultural use (farming and ranching); lost habitats – most animals exist at only a fraction of historic population size |
| **Anthropogenic 7**  Clearing of forests for farming - soil is unusable after a few years; logging | **Anthropogenic 8**  Severe soil loss occurs in areas where people have cleared forest due to extremely heavy rains in wet season. | | **Anthropogenic 9**  Climate change, logging |
| **Anthropogenic 10**  Most lost biome due to development; logging |  | |  |

**Terrestrial Biomes Booklet**

In order to quickly review the characteristics of the 10 terrestrial biomes, you will be creating a booklet to showcase the most important information.

Materials needed:

3 sheets of plain, unlined paper

Biome booklet cards

Scissors and glue

Textbook and/or other reference materials

Procedure:

1. Stack the 3 sheets of unlined paper and fold them to make a booklet.
2. On the front cover, write the title, your name and your class period.
3. At the top of each subsequent page of the booklet, write the name of one of the 10 major terrestrial biomes:
   * + Desert
     + Tropical Savannah
     + Temperate Grassland
     + Arctic Tundra
     + Tropical Rain Forest
     + Tropical Dry Forest
     + Boreal Forest / Taiga
     + Temperate Deciduous Forest
     + Temperate Rain Forest
     + Chaparral
4. Cut out the cards and sort them into the correct terrestrial biome.
5. Glue each of the cards on the page for that biome.
6. Study your booklet for your assessment!

**Grading Rubric:** DO NOT LOSE THIS SHEET!

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|  | **Desert** | **Tropical Savannah** | **Temperate Grassland** | **Arctic Tundra** | **Tropical Rain Forest** | **Boreal Forest** | **Temperate Deciduous Forest** | **Temperate Rain Forest** | **Chaparral** | **Tropical Dry Forest** |
| Location |  |  |  |  |  |  |  |  |  |  |
| Map |  |  |  |  |  |  |  |  |  |  |
| Graph |  |  |  |  |  |  |  |  |  |  |
| Plants |  |  |  |  |  |  |  |  |  |  |
| Animals |  |  |  |  |  |  |  |  |  |  |
| Abiotic |  |  |  |  |  |  |  |  |  |  |