Part 3

Biomes

NAME ____________________
**Biomes**

*Chapter 28 Vocab terms (more will be Added)*

**Biogeography**- The study of where plants and animals live throughout the world.

**Dispersal** – Movement of living things from one place to another. How plants and animals are spread around the world.

**Biome**- Division of area on the planet with similar climate, plants, and animals.

**Permafrost**- Permanently frozen tundra soil.

**Conifer** – Evergreen that produces it’s seeds in cones. Most do not lose their needles (leaves).

**Taiga** – Northern most area of coniferous forest biome. Russian word meaning “swamp forest”.

**Canopy** – Roof formed by tall trees in the forest. Upper limit of the forest biomes.

**Marine Biome** – The ocean biome.

**Phytoplankton** – Microscopic plants that live near the surface of the ocean. Vital in the ocean and freshwater food webs.

**Freshwater Biome** – Biome that contains freshwater lakes, streams, ponds, and rivers.

**Estuary** – Boundary between freshwater biome and marine biome.

**Deciduous** – Trees that shed their leaves


Biomes-

1. **Tundra Biome** - Biome that receives less than 25 cm of rain yearly and has a cold average Temperature.

2. **Forest Biomes**
   
a. **Coniferous Forest** – Biome that receives 25 to 75 cm of rain yearly and contains poor soil. The Taiga is in this Biome.

   b. **Deciduous Forest** – Biomes that receive at least 75 cm of rain yearly. Fertile soil. Trees annually shed their leaves.

   c. **Tropical Rain Forest** – Biomes that receive at least 200cm of rain yearly. Greatest variety of plant and animal species found here.

3. **Grassland Biomes** – Biomes that receive 25 to 75 cm of rainfall annually. Largest example located in Africa

   - **African Savannah** – grassland scattered with shrubs and isolated trees
   - **North America Grassland**

4. **Desert Biome** - Biomes that receive less that 25 cm of rain yearly. Deserts can be either hot or cold.

5. **Water Biomes**-
   
a. **Freshwater Biome** - Biome that includes lakes, ponds, streams and rivers.

      - **Lakes** – larger body of relatively still water
      - **Wetlands** – areas in which the soil saturated with water for part of the year or all the year, they include swamps, marshes and bogs

   b. **Marine Biome** – The ocean Biome. Covers about 70% of the Earth.

      - **Eustuaries** - boundary between freshwater and marine biome.
      - **Coral Reef** – the primary organism are corals and are found in marine waters that have warm temperatures, ample sunlight and are therefore restricted to shallow waters of tropical and subtropical regions.
      - **Kelp Forest** – the primary organism are the giant kelp and they are found in coastal water with hard, rocky bottom; cold water currents that carry a continuous supply of nutrients.
Chapter 28 Paragraph Summaries pg. 720-pg. 724

1. Pg. 720 paragraph #1
____________________________________________________________________________________
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2. Pg 720 paragraph #2
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3. pg 720 paragraph #3
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4. pg 721 paragraph #1
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5. pg 721 paragraph #2
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
LAND BIOMES OF THE EARTH

The map above shows the major biomes of the Earth. Study the map on page 724 of your textbook. Using the map from the book and your knowledge of the Earth, answer the questions below.

1. Label:
   North America  South America  Europe
   Africa         Asia            Australia

2. Put a small “X” were you live.

3. Label the six major land Biomes.

4. Color each biome a different color.

5. In which biome do you live? _________________________
**Biomes Project Requirements**

**Introduction:**
Over the last several weeks you have been learning about ecology and how plants, animals, fungi, microscopic organisms, and other non-living factors work together to create an environment. We will now, in small groups, look at specific areas of the world that have similar climatic conditions. These areas are called **biomes**.

**Procedure:**

1. Class members will be separated into groups of 3-4 students
2. Each group will be assigned a biome
3. Each group will produce a poster to display the information about the biome.
4. Each group member will fill out an evaluation about the other members of the group. These evaluations will count on each individual’s grade for this project.

**Information you need to write down about your biome:**

**Biome list for project**

- Tundra
- Desert
- Deciduous forest
- African Savannah (grassland)
- Coniferous forest
- North American Grassland
- Chesapeake Bay (water-marine)
- Everglades (water)
- Coral Reef (water-marine)
- Kelp Forest (water-marine)

1. Name of Biome you have been assigned: __________________
2. Textbook pages you need to read. ____________
3. Section Review Questions you need to answer from textbook (example-page 722, 1-4).
4. Names of the students in your group ____________ ____________ ____________

**Directions:**

**Task A:**

1. Read the appropriate section in chapter 28 that corresponds to your biome. Turn in section review questions from the reading.
2. Create a poster (visual aid) of what your biome looks like.
3. What are the major **producers** in your biome? List 5-10 (depending on biome), beyond what your teacher gave during biome notes.
4. What are the major **consumers** in your biome? List 10-20 (depending on biome). Beyond what your teacher gave during biome notes, the teacher will assign a number of consumers.

**Task B:**
1. Complete all of task A
2. On the poster create a **food web** using the producers and consumers you identified in task A as well as the ones your teacher provided.
   - Consumers should be named and labeled herbivore, carnivore, or omnivore.
3. Draw or use pictures to show all producers and consumers in your biome.
4. A 3-5 minute **presentation** must be given to the class explaining your biome. Include in this presentation what effect humans have had (bad and good) on your biome.

**Complete the below preplanning for the poster**

**ALL Groups**

✓ Who will be responsible for the poster looking like your biome?

________________________

✓ Who will be responsible for the producers?

________________________

✓ Who will be responsible for the consumers?

________________________

**Task B**

✓ Who will be responsible for the food web pictures?

________________________

✓ Who will be responsible for the food web producers?

________________________

✓ Who will be responsible for the food web consumers?

________________________

✓ Who will be responsible for the food web organization?

________________________

✓ Who will be responsible for the food web arrow color coding?

________________________

Before writing anything onto the poster the responsible student will need to check with their teacher.
Biome Project Notes

African Savannah

Location ________________________________

Producers

Most significant (important) producer: __________________________

Four other producers: _______ _______ _______ ________

Consumers

Two herbivores _______ _______ ________

Four carnivores _______ _______ _______ ________

A four step food chain is ______>>_______>>_______ >> ________

The climate is ____________________________________________

Seasons are ____________________________________________

Yearly rainfall is __________________

Temperature is ____________________________________________

A disturbance to this biome is __________________________________

______________________________

and it is hurting these organisms ______________________________

by doing this ____________________________________________

Vocab:

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________
North American Grassland

Location ____________________________

Producers

Most significant (important) producer: ____________________________

Four other producers: ________ ________ ________ ________

Consumers

Two herbivores __________ __________

Four carnivores __________ __________ _________ _________

A four step food chain is ______>>_______>>_______ >> ________

The climate is ______________________________________________

Seasons are ___________________________________________

Yearly rainfall is __________________

Temperature is _______________

A disturbance to this biome is __________________________________

and it is hurting these organisms ________________________________

by doing this __________________________________________________

Vocab:

________________________________________________________________

________________________________________________________________

________________________________________________________________
Tundra

Location ____________________________________________________

Producers

Most significant (important) producer: __________________________

Four other producers: ________ ________ ________ ________

Consumers

Two herbivores __________ __________

Four carnivores __________ __________ __________ __________

A four step food chain is _____ >> ______ >> ______ >> ______

The climate is ______________________________________________

Seasons are ___________________________________________

Yearly rainfall is __________________

Temperature is _________________________________________

A disturbance to this biome is ________________________________

_________________________________________________________

and it is hurting these organisms ______________________________

by doing this ______________________________________________

Vocab:

________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________
Desert

Location

Producers

Most significant (important) producer:

Four other producers:

Consumers

Two herbivores

Four carnivores

A four step food chain is

The climate is

Seasons are

Yearly rainfall is

Temperature is

A disturbance to this biome is

and it is hurting these organisms

by doing this

Vocab:
Coniferous forest

Location ____________________________________________________

Producers

Most significant (important) producer: ___________________________

Four other producers: ________ ________ ________ ________

Consumers

Two herbivores __________ __________

Four carnivores __________ __________ _________ _________

A four step food chain is ______>>_______>>_______ >> ________

The climate is ______________________________________________

Seasons are ___________________________________________

Yearly rainfall is _______________

Temperature is _________________________________________

A disturbance to this biome is __________________________________

______________________________

and it is hurting these organisms __________________

by doing this _______________________________________

Vocab:

_______________________________________________________________

_______________________________________________________________

_______________________________________________________________
Deciduous forest

Location

Producers

Most significant (important) producer: ____________________________

Four other producers: ________ ________ ________ ________

Consumers

Two herbivores __________ __________

Four carnivores __________ __________ _________ _________

A four step food chain is ______>>_______>>_______ >> ________

The climate is______________________________

Seasons are ___________________________________________

Yearly rainfall is __________________

Temperature is _________________________________________

A disturbance to this biome is __________________________________________

and it is hurting these organisms ________________________________

by doing this _____________________________________________

Vocab:

_________________________________________

_______________________________________________________________

_______________________________________________________________
Tropical Rainforest

Location ____________________________________________________

Producers

  Most significant (important) producer: __________________________
  Four other producers: ________ ________ ________ ________

Consumers

  Two herbivores __________ __________
  Four carnivores __________ __________ _________ _________
  A four step food chain is ______>>_______>>_______ >> ________

The climate is ______________________________________________

  Seasons are ___________________________________________

  Yearly rainfall is __________________
  Temperature is ______________________________

A disturbance to this biome is __________________________________

  and it is hurting these organisms ____________________________

  by doing this ____________________________________________

Vocab:

_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
Coral Reef

Location ____________________________________________________

Producers

Most significant (important) producer: ____________________________

Four other producers: ________ ________ ________ ________

Consumers

Two herbivores __________ __________

Four carnivores __________ __________ _________ _________

A four step food chain is ______>>_______>>_______ >> ________

The climate is ______________________________________________

Seasons are ___________________________________________

Yearly rainfall is __________________

Temperature is _________________________________________

A disturbance to this biome is ________________________________

_________________________ ________________________________

and it is hurting these organisms ____________________________

by doing this _______________________________________________

Vocab:

_______________________________________________________________

_______________________________________________________________

_______________________________________________________________
**Estuary (Chesapeake Bay)**

**Location** ____________________________________________

**Producers**
- Most significant (important) producer: _____________________________
- Four other producers: _______ _______ _______ _______

**Consumers**
- Two herbivores __________ __________
- Four carnivores __________ __________ _________ _________
  A four step food chain is ______>>_______>>_______ >> ________

**The climate is** ____________________________________________
- Seasons are _____________________________________________
- Yearly rainfall is ________________
- Temperature is __________________________________________

**A disturbance to this biome is** ________________________________
- and it is hurting these organisms ________________________________
  by doing this _______________________________________________

**Vocab:**
- ___________________________________________________________
- ___________________________________________________________
- ___________________________________________________________
Kelp Forest

Location ____________________________________________________

Producers

Most significant (important) producer: ___________________________

Four other producers: ________ ________ ________ ________

Consumers

Two herbivores __________ __________

Four carnivores __________ __________ _________ _________

A four step food chain is _____ >> ______ >> ______ >> ______

The climate is ______________________________________________

Seasons are ___________________________________________

Yearly rainfall is ______________

Temperature is _________________________________________

A disturbance to this biome is __________________________________

and it is hurting these organisms ________________________________

by doing this _______________________________________________

Vocab:

_______________________________________________________________

_______________________________________________________________

_______________________________________________________________
Lake Superior

Location: ________________________________

Producers

Most significant (important) producer: __________________________

Four other producers: ________ ________ ________ ________

Consumers

Two herbivores ________ ________

Four carnivores ________ ________ ________ ________

A four step food chain is ______>>_______>>_______ >> ________

The climate is ________________________________

Seasons are ________________________________

Yearly rainfall is ________________

Temperature is ________________________________

A disturbance to this biome is ________________________________

and it is hurting these organisms ________________________________

Vocab:

_______________________________________________________________

_______________________________________________________________

_______________________________________________________________
**Wetland - Everglades** (pick a specific wetland for project)

**Location**
__________________________________________________

**Producers**

Most significant (important) producer: ___________________________

Four other producers: ________ ________ ________ ________

**Consumers**

Two herbivores __________ __________

Four carnivores __________ __________ _________ _________

A four step food chain is _____>>_____>>_______ >> ________

The climate is ____________________________________________

Seasons are _____________________________________________

Yearly rainfall is __________________

Temperature is _________________________________________

_A disturbance to this biome is__________________________________________

_and it is hurting these organisms_______________________________________
National Geographic Society  
**American's Endangered Species: Don't say goodbye.**

1. Who are the man and the woman? ________________ and what are they trying to do? __________________________________________

2. What important legislation was passed in 1973? ___________________  
What did this law do to protect endangered living things? _______________  
Why is the protection of habitat an important part of the law? ____________

3. What is the Black-footed Ferret? ____________________________

4. What was the world population of the Black-footed Ferret reduced to? ____

5. What was the cause of ferrets becoming endangered? ________________

6. What extraordinary measures were taken to save the species (Black-footed Ferret)? __________________________________________________________________________________________

7. What important event happened in 1991 to the ferrets? __________________

8. How are the ferrets doing now? _________________________________

9. What is a manatee? _________________________________________

10. What is the population of the Florida Manatee? __________________________

11. What is killing the manatees? ____________________________________


13. What has research learned that could help save the manatee? ________________

14. What is the Golden Trout? ______________________________________

15. What caused the trout to become endangered? __________________________
16. What is being done to save the trout? ______________________________

17. What is the Red Wolf? ___________________________________________

18. What caused the wolf to become endangered? _______________________

19. What is being done to save the wolf? _______________________________

20. Who has a problem with saving the wolf? __________________________

   Why? ___________________________________________________________

21. What was the Red Wolf a 1st for? -

   _______________________________________________________________

22. Describe the scrub land? _________________________________________

23. What is being learned about the living things of the scrub land? _______

   _______________________________________________________________

24. List five endangered animals that exist in the scrub land.

   ______________________  ______________________  ______________________

   ______________________  ______________________
Evaluation of Group Biome Project

Evaluator (print your name): __________________________

Student being evaluated (print name of team member): ___________ ___________ 

Scoring: Mark A, B, C, D or F for 1-4.

A = Excellent    B = Good     C = Average,    D = Below average,    F = Didn’t do much

____  1. Getting their information for the project?

____  2. Work done on time?

____  3. Putting their work on the posters?

____  4. Cooperation with the group?

Comments (you must comment):
_______________________________________________________________
_______________________________________________________________

Student being evaluated (print name of team member): ___________ ___________ 

Scoring: Mark A, B, C, D or F for 1-4.

A = Excellent    B = Good     C = Average,    D = Below average,    F = Didn’t do much

____  1. Getting their information for the project?

____  2. Work done on time?

____  3. Putting their work on the posters?

____  4. Cooperation with the group?

Comments (you must comment):
_______________________________________________________________
_______________________________________________________________

Please fold and tear or cut along the dashed line to turn in.