**Biodiversity Quiz Review**

This information SHOULD be found in your notes and homework, however it can also be found in my powerpoints posted on my webpage, the 8th grade textbook – Chapter 18, the 7th grade textbook – Ch. 17and 18, and/or the Sciencesaurus reference book (contains info on all of these subjects). **DO NOT USE THE INTERNET TO LOOK UP THESE ANSWERS!!!!**

**THIS REVIEW PACKET IS EXTRA CREDIT OR MAKE- UP WORK FOR STUDENTS THAT NEED IT.**

**ALL STUDENTS ARE REQUIRED TO COMPLETE THIS PACKET BY THE DAY OF YOUR QUIZ.**

**You may work with other students but YOU are responsible for knowing this info.**

Who was Darwin? What did he contribute to science?

EXPLAIN what natural selection is. What conditions are necessary for natural selection to happen?

What is selective breeding? Give an example.

How are natural selection and selective breeding alike? How are they different?

What are adaptations? How do they contribute to natural selection?

What evidence is there to support the theory of evolution?

How are mutations different from adaptations?

What does the word species mean?

If a population is separated for too long, what happens to their ability to reproduce?

**Directions:** Fill in the blank for each question using the word bank at the bottom of this section.

1. Traits that we get from our parents are expressed by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

2. Changes in genes are called\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

3. A change in genetic information in a POPULATION over long periods of time is\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

4. Evidence of evolution can be found in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_,

 and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

5. An increase in traits that help survival is called\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

6. Finches on the Galapagos Islands evolved to have different shaped \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that help

 them gather different types of food.

**WORD BANK**

beaks fossil records DNA genes mutations

anatomy of organisms adaptation natural selection

**Directions: Classify each adaptation as “B” behavioral or “P” physical.**

8.\_\_\_\_\_\_ Eyes in front of head help locate prey.

9. \_\_\_\_\_\_ Bears hibernate in the winter.

10.\_\_\_\_\_\_ Birds migrate to the south in the winter.

11.\_\_\_\_\_\_ eyes on sides of head help locate predators.

12.\_\_\_\_\_\_ large horns help big horn sheep find female mates.

13.\_\_\_\_\_\_ white fur gives a seal camouflage in Antarctica.

**Directions:** Label each blank as “N” for natural selection or “S” for selective breeding.

\_\_\_\_\_\_\_\_8. Fast swimming shrimp are able to avoid fishermen’s nets.

\_\_\_\_\_\_\_\_9. Some cockroaches are resistant (immune) to common pesticides (poisons).

\_\_\_\_\_\_\_\_10. Dog breeders allow only black labs to produce offspring.

\_\_\_\_\_\_\_\_11. A farmer introduces only certain varieties of tomatoes to his garden.

\_\_\_\_\_\_\_\_12. Dogs pass traits for strong sense of smell to its puppies.

\_\_\_\_\_\_\_\_13. A farmer produces cattle for highest meat production.

What is a dichotomous key? What is it used for? **Be able to correctly identify an organism using a dichotomous key.**

What is the difference between a food chain, food web, and energy pyramid? **Be able to predict changes in an ecosystem if an organism is removed or added.**

What is the 10% rule? Why are there fewer animals at the top of an energy pyramid?

What is the difference between photosynthesis and cellular respiration?

**Directions:** Choose the correct **answer or answers** from each pair of answers in parentheses.

1. (**Oxygen, Carbon dioxide, Water, Sunlight, Sugar**) are needed for photosynthesis to occur.

2. Producers are necessary for an ecosystem because they produce (**oxygen, sugar, radiant energy**).

3. Arrows in a food chain always points towards the (**consumer, producer**) of the energy.

4. A consumer is any organism that cannot use (**sunlight, sugar**) as an energy resource.

5. In a forest ecosystem, if all the wolves died from disease, the population of (**rabbits, blueberries**) is likely to increase.

6. A secondary consumer is an organism that eats (**plants, primary consumers**) as food.

7. 700 mice in a living system can support (**7,000; 700; 70; 7**) owls. \*\*Hint: remember the 10% rule.

8. The original source of most of the energy on the earth is the (**sun, earth’s core**)

**Directions: Choose the best answer from the word bank at the bottom.**

9.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Energy flow model showing the 10% rule of energy transfer.

10.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Organisms that eat primary consumers.

11.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Energy flow model showing flow of energy in an ecosystem.

12.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Examples of producer

13.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Examples of primary consumers.

14.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Examples of secondary consumers

**Word Bank**

oak tree energy pyramid snake food web secondary consumers

rabbit rose bush wolf deer

**\_\_\_\_\_15. Deserts**

**\_\_\_\_\_16. Grasslands**

**\_\_\_\_\_17. Tundra**

**\_\_\_\_\_18. Tropical rainforest**

**\_\_\_\_\_19. Deciduous forest**

**\_\_\_\_\_20. Coniferous forest**

**\_\_\_\_\_21. Marine**

**\_\_\_\_\_22. Levels of organization**

 **in environment**

**\_\_\_\_\_23. abiotic factors**

**\_\_\_\_\_\_24. biotic factors**

**\_\_\_\_\_\_25. decomposers**

a. coldest biome, permafrost, caribou (reindeer)

 animals have thick fur and blubber

b. non-living; air, sunlight, water, soil, sand, rock;

 controls what can live in a biome

c. organism, population, community, ecosystem

d. flat; dry; grassy; long, hot, dry summers generally located in the middle of a continent—far from the coast

e. living; made of cells, reproduces, gets food, etc.

 plants, animals, decomposers

f. highest biodiversity of all biomes; very warm with long growing seasons (9-12 months); most rainfall

g. break down living matter into nutrients for soil;

 mushrooms, bacteria

h. evergreen trees; long, cold winters with short growing seasons

i. driest biome, usually very hot, available water scarce

j. temperate forest; trees shed leaves for winter

k. deep water, contains largest animals on earth;

 divided into zones