Name: _____ Period: ____ Date:_____ Score: _____

Evidence for Evolution HW

Match the best answer with each statement or definition. You may use responses more than once.

a. common ancestor b. homologous c. evolution d.embryos e. fossils

1. explains how a common ancestor can change into new species 1. _____
2. prenatal organisms that are evidence for evolution 2. _____
3. structures with the same shape but not necessarily the same function 3. _____
4. change in a population over time 4. _____
5. an organism that evolved into many different species 5. _____
6. used to compare ancient organisms to modern organisms 6. _____

Write TRUE if the statement is true, and FALSE if the statement is false. If it is false, correct the statement.

7. Fossils are important in tracing the evolution of humans. _____
8. Similarities among different animal embryos are evidence of evolution. _____
9. Individuals evolve. _____
10. Fossils allow scientists to study ancient organisms by comparing them to modern day organisms _____
11. Evolution is a very quick process. _____
12. Homologous structures always have similar functions. _____
13. Homologous structures are used to support the theory of evolution. _____

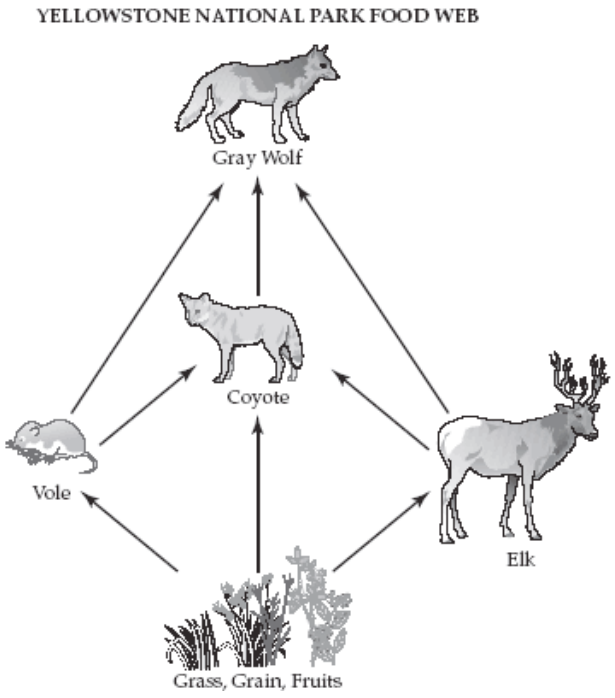
HSA Questions:

1. Part of the food web in Yellowstone National Park is shown below.

Gray wolves were reintroduced into Yellowstone National Park in 1995. Two years later, the population of coyotes had decreased by 50%. Coyotes were found in all habitats of the park before the gray wolves were reintroduced. Now, coyotes are most often found in the hills and mountains.

Coyotes and gray wolves have a high degree of relatedness. Which of these best describes why the two species are closely related?

F They have similar behaviors.
G They have a common ancestor.
H They feed on the same types of food.
J They are found in the same habitat.



2. A 200-million-year-old small mammal skeleton was recently discovered in Russia. The role of this small mammal in its environment can best be determined by comparing its skeleton to:

A) ancient small mammal skeletons
B) Ancient small mammal DNA
C) Modern small mammal DNA
D) Modern small mammal skeletons

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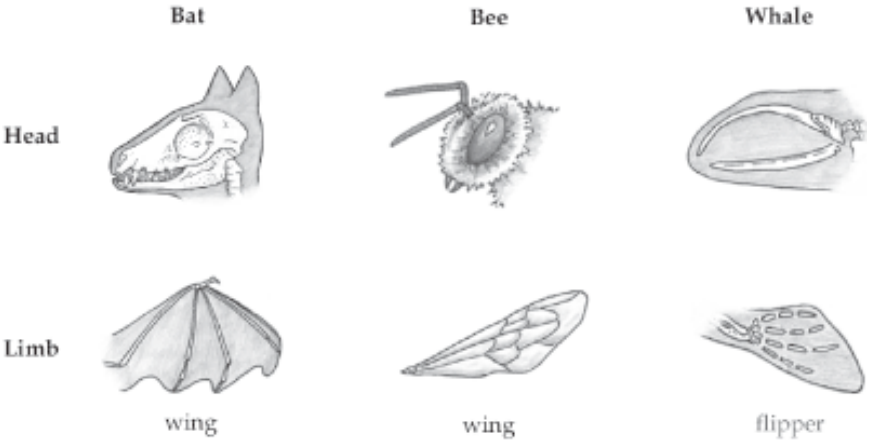
3. The presence of some similar structures in all vertebrates suggests that these vertebrates:
   A) all develop at the same rate
   B) evolved from different animals that appeared on Earth at the same time
   C) all develop internally and rely on nutrients supplied by the mother
   D) may have an evolutionary relationship

4. Similar structures are present in the embryos of fish, chicken, and rabbits. In fish, these structures develop into gills, but in chickens and rabbits, they either disappear or develop into other body parts later in embryonic development. Which of the statements below best explains the presence of these structures in the embryos of all three species?
   A) the embryos of the three species are similar in size
   B) the reproductive mechanisms are similar among the adults of the three species
   C) the three species have a common ancestor with these embryonic structures
   D) Breathing structures are similar among the young of the three species

5) Students used the three organisms shown below to study evolutionary relationships.

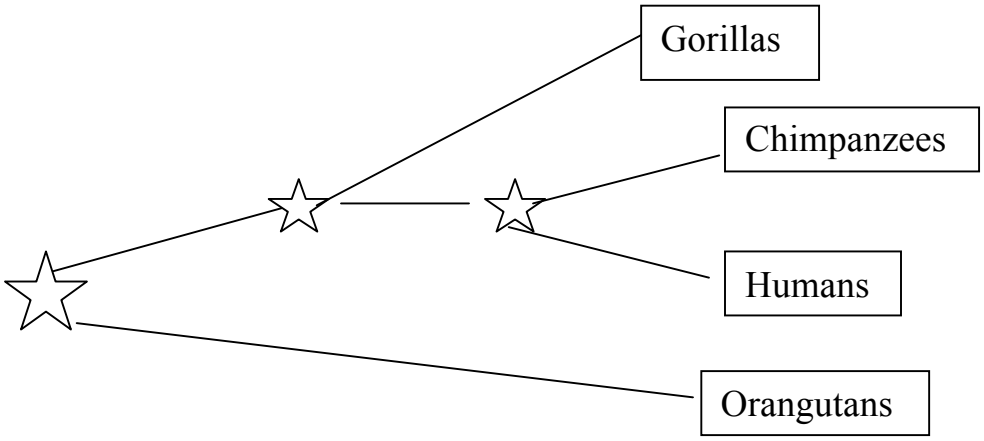


Which of these structures are the best evidence of an evolutionary relationship?

a. bat wing and bee wing
b. bat lower jaw and whale lower jaw
c. whale flipper and bee wing
d. bat wing and whale flipper

The following is a diagram showing the evolution of primates and humans.

6) Which species is most closely related to humans? _____



☆ = COMMON ANCESTOR

7) **Circle** the common ancestor that gorillas, chimpanzees, humans, and orangutans all share.

8) Which species is least related to humans?

9) What are three different ways scientists can prove that organisms shared a common ancestor?