Evidence for Evolution Worksheet Name:_____Date:_____Per:____

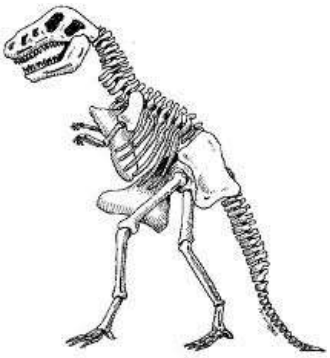
For each question below, explain whether the evidence is comparative anatomy (homologous structures), comparative anatomy (analogous structures), DNA analysis, or from the fossil record. Then, using complete sentences, explain why it is evidence of evolution, or that life changes over time.

Example:

1. Humans, chimpanzees, whales, and bats all have the same bones in their arms, fins, or wings.
    a. What type of evidence is this? _____comparative anatomy (homologous structures)__
    b. Why is this evidence of evolution?

This is evidence of evolution because if all these animals have the same bones, they probably all evolved from one creature that had those bones a very long time ago. Some of its children evolved (or changed) into humans, and other evolved into whales or bats or chimpanzees.

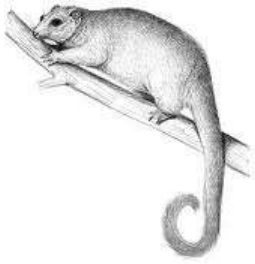
2. Scientists find fossilized bones of a huge animal that doesn't exist today.



    a. What type of evidence is this?_____
    b. Why is this evidence of evolution?

3. The human gene for your muscle protein is different from monkey muscle protein in 4 places and different from a chicken's gene in 25 places.
    a. What type of evidence is this?_____
    b. Why is this evidence of evolution?

4. Honey possums lick nectar from flowers using a long tongue made of soft muscle. Butterflies lick nectar from flowers using a long tongue made of hard protein.
    a. What type of evidence is this?_____
    b. Why is this evidence of evolution?



5. Humans, rabbits, and zebras all have an *appendix*, an extra piece in their digestive system, although in humans it's much smaller.
    a. What type of evidence is this?

    b. Why is this evidence of evolution?

As you flip through the newspaper, you notice that the front page article is about evolution. You are curious, since you are becoming an expert on evolution, so you read it. These are the first 4 sentences of the article…

There is no way that evolution happened. It is something that scientists made up. There is no proof that evolution ever happened. How can we know what happened millions of years ago?

After reading the whole article, you feel that it is your duty as a science scholar to write a letter to the editor of this newspaper to provide facts about evolution to the public. Write your letter in the space below.

1. Begin the letter: Dear Editor,
2. Write 1 paragraph (at least 6 sentences) about how scientists know that evolution happened, or that life has changed over time. In your paragraph, use, **<u>UNDERLINE,</u>** and explain the following terms:
    - evolution, comparative anatomy, homologous structures, DNA, & fossil
3. At the end, sign your name.