Earth and Life History Name:

Relative and Absolute Dating Period:

This exercise will help you gain a greater understanding of how geologists figure out how the age of a rock or a fossil.

Step 1—Get the piece of paper that you will use to make the block model.

Step 2—Color the layers, using the colors listed in the coloring key. The key will end up being on the bottom of your block.

Step 3—Cut out the block model.

Step 4—Fold it and glue it together using a glue stick.

Step 5—Use the completed block to answer the questions below. You can also use Chapter 8, Section 3 of your textbook if you are getting stuck.

---

1. Most of your block is made of layers of sediment. What is sediment? *Hint: reread p.239.*

   Sediment is ...

2. Which of the 3 kind of rocks is made of sediment? _____ *Hint: reread p.238.*

3. Find the skull on the block. You can tell something about its age from its location. *Hint: reread p.240.*

   The skull must be _____ than the rock below it, and _____ than the rock above it.

4. If you are comparing the age of something based upon its <u>position</u> between two layers (it is younger or older), what kind of dating is this? *Hint: reread p.238.*

   This is _____ dating.

5. If you are able to learn the exact age of something (through radiometric dating) by studying the decay of its isotopes, what kind of dating is this? Relative or absolute? *Hint: reread p.247.*

   This is _____ dating.

6. The layers of ash on your block have exact ages. What kind of useful rock is volcanic ash? *Hint: reread p.247.*

   Volcanic ash must be an _____ rock.

7. What is the age of the skull on the block*?*

   The skull must be between _____ million years and _____ million years old.

8. Where in the world is this sequence of rock layers found? *Hint: read the block.*

   This block represents layers found in ...

9. The skull comes from an ancestor of humans. What is the name of this ancestor? *Hint: read the block.*

   In these layers, an _____ skull was found.

10. Which kind of absolute dating has been used to figure out the age of Earth? *Hint: reread p.249.*

    Because of _____ dating, we know Earth is 4.6 billion years old.