Date _____ Per. _____

This is a quiz about some skills and content used in Earth Science.
It is intended to find out how much you already know. This paper will *not* be used to determine your grade
in this course, only to measure your present skills and knowledge in science and mathematics.

Record your answers in spaces to the left of each question. You may write calculations, etc. on this paper.

_____ 1. All matter is composed of tiny particles called...

_____ 2. The length of your body is between one and two...
           a. kilometers   b. centimeters
           c. meters   d. millimeters
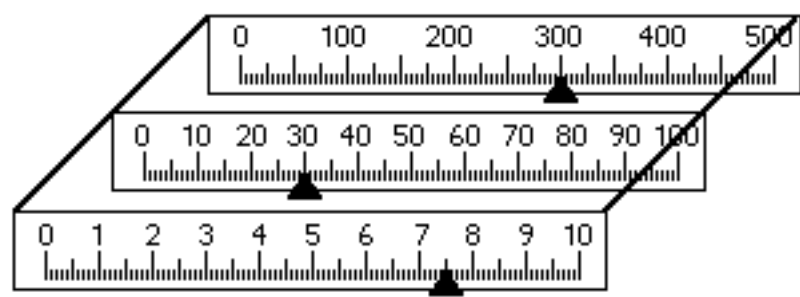
_____ 3.   The diagram above shows the scale of a triple beam balance.
           What is the mass of the object being measured.

_____ 4.   Divide 33 into 110.

_____ 5. $\dfrac{15}{360} = \dfrac{50}{X}$, find the value of "X".

_____ 6.   Divide 20 into 5. (That is $^5/_{20}$ equals what decimal number?)

_____ 7.   If a = 3 and b = 3, use the formula that follows to find the value of c: $a = \dfrac{b}{c}$

_____ 8   Express $^1/_5$ as a percent.

_____ 9.   A student measured the temperature outside his home for one week.
           Which of the following would cause an error in his measurements?
           a. The temperature changed from day to day.
           b. He held the thermometer by the bulb as he read it.
           c. He always took the temperatures at the same location.
           d. On some days the sky was covered by thick clouds.

_____ 10. An observer on the earth is watching a satellite with a circular orbit. The observer
           is located at the center of the orbit. Which statement below is therefore true?
           a. The satellite will appear to become larger and larger.
           b. The satellite will appear to become smaller and smaller.
           c. The satellite would always seem to be the same size.
           d. The satellite would seem to get larger and then smaller.

Skills & Knowledge Survey Tips

Difficulty: Variable from question to question

Content: This survey test provide useful information and a basis of identifying students with learning difficulties or comparing classes from year to year.

Preparations: None

Materials: None

Time: 10 - 10 minutes

Suggestions for the Teacher:

1. Stress that you want accurate information but this will not go into student grades. (See top paragraph on the test.)

2. Circulate among students as they take this survey.

3. You can use this as an opportunity to establish seating for future tests. Spread the students out and assign seats.

4. This test may help you spot students with learning difficulties.

Post-Lab: You may want to enter student scores into a spreadsheet for statistical analysis and comparisons.

Extensions: Research "Misconceptions" in Earth science. You may find it harder to correct some preconceived student ideas than you realize. Experienced colleagues can be especially helpful.

Key : Skills & Knowledge Survey

(10% for Each Answer)

Tip:
Please watch for plausible or logical student answers that may not match my key. Students should never be penalized if they are using their own independent, although completely valid, ideas.

1. Atoms or molecules
2. c (Meters)
3. 337.5 g

4. 3⅓ of 3. $\overline{3}$
5. X = 1200
6. 0.25

7. 1
8. 20
9. b

10. c