Handout 1 (1-1.A) Name_____ Period_____
Standard 1 Objective 1a

Chapter 8: Section 2: Directed Reading Pages 191-196

Section: Determining Absolute Age (page 191)

1. What is absolute age?

RADIOMETRIC DATING (page 193)

_____ **2**. Small amounts of what type of materials in rocks can act as natural clocks?
a. sedimentary materials **b.** intrusive materials **c.** radioactive materials **d.** igneous materials

_____ **3**. Atoms of the same element that have different numbers of neutrons are called
a. varves. **b.** isotopes. **c.** radioactive particles. **d.** alpha particles.

_____ **4**. Radioactive isotopes emit particles and energy
a. at a constant rate regardless of surrounding conditions.
b. at differing rates regardless of surrounding conditions.
c. at differing rates depending on surrounding conditions.
d. at a constant rate if conditions remain the same.

_____ **5**. In what way is the natural breakdown of radioactive elements most useful to scientists?
a. It can provide an estimate of the absolute age of rocks.
b. It can accurately measure the absolute age of rocks.
c. It can provide an estimate of the relative age of rocks.
d. It can accurately measure the relative age of rocks.

_____ **6**. The method of using radioactive decay to measure the absolute age of rocks is called
a. blind dating. **b.** radioactive dating. **c.** radiometric dating. **d.** decay dating.

_____ **7**. The original radioactive isotope in a rock is called
a. the parent isotope. **b.** the daughter isotope. **c.** the breakdown isotope. **d.** the clock isotope.

8. What are daughter isotopes?

9. What is a half-life?

10. What is the half-life of carbon-14?

11. Why does radioactive carbon-14 begin to decay after a plant or animal dies?

12. Explain how radiometric dating is used to estimate absolute age.

Movie Notes: Stars (Schlessinger)

Directions: As you watch the movie please write a response to each question.

1. **What is a star?**

2. **What is the main gas that stars use as fuel?**

3. **About how old are stars?**

4. **How is a star's color related to its temperature?**

5. **How are spectroscopes used to study stars?**

6. **How is a nebula related to star formation?**

7. **What is the difference between a nova and a supernova?**

8. **What are the two different things that can happen to a star after the supernova phase?**

9. **In question number 8, what determines which of those two things will happen?**

Talk about something new that you learned from this movie