

Skills Worksheet

Directed Reading A**Section: Radioactivity****DISCOVERING RADIOACTIVITY**

- _____ 1. What happens to fluorescent minerals when light shines on them?
- The minerals explode.
 - The minerals break into particles.
 - The minerals glow.
 - The minerals give off gases.
- _____ 2. Becquerel made a hypothesis that fluorescent minerals give off
- minerals.
 - X rays.
 - uranium.
 - particles.
- _____ 3. In his experiment, Becquerel discovered that a fluorescent mineral made an image on a photographic plate even though there was no
- energy.
 - uranium.
 - light.
 - X rays.
4. Becquerel concluded that the energy that made the image on the plate came from an element called _____.
5. Energy in the form of particles and rays emitted by the nuclei of some atoms is called _____.
6. Marie Curie named the process Becquerel discovered _____ or radioactive decay.

KINDS OF RADIOACTIVE DECAY

- _____ 7. What does the unstable nucleus of an atom give off during radioactive decay?
- particles and energy
 - molecules and energy
 - particles and gases
 - molecules and gases

Directed Reading A *continued*

Match the correct description with the correct term. Write the letter in the space provided.

_____ **8.** the release of an electron or a positron from the nucleus of an atom **a.** gamma decay

b. alpha decay

_____ **9.** the release of gamma rays from the nucleus of an atom **c.** beta decay

_____ **10.** the release of a particle composed of two protons and two neutrons from the nucleus of an atom

11. Particles released during alpha decay are called _____.

12. The sum of the numbers of protons and neutrons in the nucleus of an atom is called the _____.

13. Particles released during _____ are made up of two protons and two neutrons.

14. Mass number and charge are conserved in _____.

15. An electron or positron released during beta decay is called a(n) _____.

16. Explain why the mass number of a beta particle is 0.

17. Describe what occurs when a carbon-14 nucleus undergoes beta decay.

18. Atoms of an element that have the same number of protons as other atoms of that element, but a different number of neutrons are called _____.

19. Explain what happens during any beta decay.

