

History of Radiation Protection Worksheet: Teacher Answer Key

1. How many years ago was radioactivity discovered? **Current year - 1896 = XXX years.**

2. Approximately how many years elapsed between the discovery of radioactivity and the first efforts to implement radiation protection rules?

In Britain: 1915 - 1896 = 19 years

In the United States: 1922 - 1896 = 26 years

3. Why were radiation protection guidelines established in the early 1900s?

While scientists and medical professionals saw the benefits of radiation, they were becoming more aware of the illnesses and deaths caused by radiation if it was not handled properly.

4. In what ways do you benefit from the discovery of ionizing radiation and radioactivity?

We benefit from many uses of radiation, including medical and dental treatments and diagnostic tools, nuclear power generation, smoke and security detectors, and safe roads that are built and tested with moisture and density nuclear gauges.

5. Do you think the benefits of radiation outweigh the exposure risks with the existence of radiation protection standards?

Answers will vary.

6. Name at least three types of jobs (or industries) that use radiation or radioactive materials and practice radiation protection.

Answers will vary and may include nuclear power, medical, research, construction, transportation and industrial industries in addition to the military.

7. When might you, or the general public, need to be aware of and practice radiation protection?

Potential answers may include: when receiving medical treatments (e.g., x-rays), when radon levels become too high in a home, in certain work settings, or when an accident occurs and radioactive materials are released into the environment.

