

## Types of Radiation Bell Ringer Activity Student Edition

Select the best answer to each of the following questions.

1. A nucleus is considered unstable when:
  - a) It contains magic numbers of protons and/or neutrons
  - b) The neutron to proton ratio is too high or too low
  - c) The nucleus is small
  - d) The nucleus is large
2. Small nuclei have...
  - a) A strong nuclear force equal to its electromagnetic force
  - b) A strong nuclear force less than its electromagnetic force
  - c) A strong nuclear force greater than its electromagnetic force
  - d) A strong nuclear force and no electromagnetic force
3. The strong nuclear force...
  - a) Holds the nucleus together
  - b) Pushes the protons and neutrons apart
  - c) Allows particles to be released from the nucleus
  - d) Creates unstable nuclei
4. The N/Z ratio determines ...
  - a) The number of isotopes which exist for an element
  - b) The mass number
  - c) The atomic number
  - d) The stability of the nucleus
5. Which of the following isotopes is likely to be stable?
  - a)  ${}^{137}_{56}\text{Ba}$
  - b)  ${}^{10}_5\text{B}$
  - c)  ${}^{209}_{83}\text{Bi}$
  - d)  ${}^{80}_{35}\text{Br}$