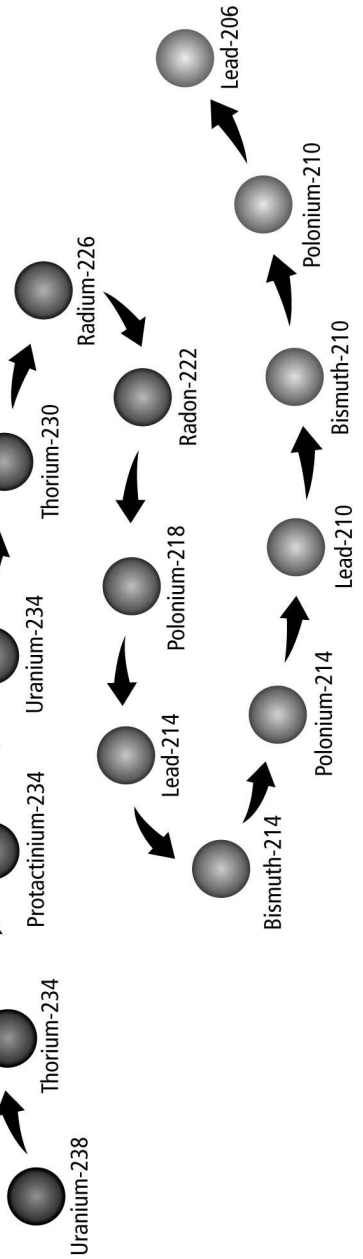
# RADIOACTIVE DECAY

*Use with Chapter 21*
*Section 21.3*




| | Number of Half-Lives | 0 | 1 | 2 | 3 |
|---|---|---|---|---|---|
| | Elapsed Years | 0 | 5730 | 11,560 | 17,090 |
| | Percent Daughter Element | 0 | 50 | 75 | 87.5 |
| | Percent | 100 | 50 | 25 | 12.5 |

Date Period Name

# WORKSHEET 6 Teaching Transparency

## RADIOACTIVE DECAY

***Use with Chapter 21 Section 21.3***

**1.** What is the first radioactive element that forms when uranium-238 decays?

**2.** What is the half-life of uranium-238?

**3.** In the decay of uranium-238, how many radioactive isotopes form before stable lead-206 forms?

**4.** What radioactive element forms when bismuth-214 decays?

**5.** How is U-238 used to determine the age of a rock?

**6.** What nonradioactive element forms when carbon-14 decays?

**7.** How long does it take for 50% of a specific amount of carbon-14 to decay?

**8.** How many half-lives have passed after 11,560 years?

**9.** What percentage of carbon-14 remains after 2 half-lives?

**10.** What percentage of nitrogen-14 has formed after 2 half-lives?