

Discussion Questions for Visualizing Radiation

Name: _____ Teacher: _____ Date: _____

After watching the Cloud Chamber videos, answer the following questions.

1. Where do cosmic rays originate?
2. What are two of the most common cosmic ray particles?
3. Briefly explain what happens when a cosmic ray enters a cloud chamber.
4. List three types of particles that can be visualized in a cloud chamber.
5. Where is carbon-14 formed?
6. What is the half-life of carbon-14?
7. What is the detection limit of carbon-14 today?
8. List two commonly used isotope pairs that can be used to date materials older than 50,000 - 60,000 years.
9. What type of mineral (that traps carbon-14) does Professor Lifton use in his research?
10. How many years does it take for carbon-14 to reach its saturation concentration in materials sitting continuously at the Earth's surface?