

Name _____

How Are Isotopes Related To Elements?

Open-Ended Response Questions

1. Investigate the role of isotopes in radiocarbon dating. How does carbon-14 help determine the age of ancient objects, and what are its limitations?
2. Explore the importance of isotopes in nuclear medicine. How are radioactive isotopes used in diagnosing and treating medical conditions?
3. Discuss the significance of isotopes in nuclear physics and energy production. How do isotopes like uranium-235 play a role in nuclear reactors and nuclear weapons?
4. Reflect on the impact of isotopes on our understanding of elemental composition in the universe. How do isotopes help scientists trace the origin of elements in celestial bodies and stars?

