

Grade 10 Unit 8 Quiz: Nuclear, Environmental, Materials, Atmospheric

30 minutes. All data are fictional paper models; distinguish measurements from broad causal claims.

1. In ${}^{14}_6\text{C}$, state protons and neutrons. [2 pts]

2. Balance mass and charge in ${}^{238}_{92}\text{U} \rightarrow {}^{234}_{90}\text{Th} + ?$. [2 pts]

3. A half-life graph falls by half each interval. What does it support and not predict about one individual atom? [2 pts]

4. A local water card reports nitrate concentration on two dates. State a supported comparison and a missing condition before causal claim. [2 pts]

5. A material has high conductivity and is malleable. Identify a bonding/model explanation. [2 pts]

6. A polymer sample is stretched; data show recovery differs at two temperatures. State a graph/data conclusion and limit. [2 pts]

7. A CO₂ sensor record rises over a period. State one measurement claim it supports and one climate claim it does not settle alone. [2 pts]

8. A poster says a model result proves a community outcome will occur. Identify two uncertainty/evidence problems. [2 pts]
