Name _____

Shaking Ground and Uncertain Predictions: Can Earthquakes Be Forecasted?

Short Answer Key

1. Short-term earthquake prediction estimates the likelihood of a larger, mainshock earthquake based on monitoring foreshocks, which are smaller earthquakes that precede the mainshock.
2. The main challenge in accurately predicting earthquakes lies in the complex and diverse geological conditions worldwide, as well as the difficulty in measuring the release of accumulated stress accurately.
3. Early warning systems for earthquakes use real-time data from seismic sensors to detect initial P-waves, which travel faster than more destructive waves. Alerts are sent out seconds to minutes before the damaging waves arrive, allowing people to take protective actions.
4. Long-term earthquake forecasts estimate the likelihood of earthquakes occurring in broad regions over decades to centuries. This information informs building codes, land-use planning, and disaster preparedness measures.
5. Answers will vary but may include securing heavy objects, creating emergency plans, practicing earthquake drills, and having emergency supplies on hand.

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