

Name \_\_\_\_\_

## Measuring the Mighty Quakes: How Scientists Gauge Earthquake Power

### Open-Ended Response Answer Key

1. Answers may vary but could include steps such as securing heavy objects, creating an emergency kit, having a family emergency plan, and practicing the "Drop, Cover, and Hold On" technique. When receiving an earthquake early warning, one might take cover, move away from windows, and stay informed about updates.
2. Answers will vary depending on the recent earthquake event discussed. Include details about the magnitude, location, impacts, and any response efforts.
3. Using both magnitude and intensity scales provides a more comprehensive understanding of an earthquake's characteristics. Magnitude measures the overall size and energy release, while intensity describes the localized effects, helping authorities respond effectively and assess potential damage.
4. The Richter scale and the Moment Magnitude Scale both measure earthquake magnitude but differ in their calculations and application. The Richter scale is logarithmic and primarily considers amplitude, while the Moment Magnitude Scale is more versatile and takes into account various factors such as fault slip, fault length, and rock rigidity. The Moment Magnitude Scale is now the preferred choice for measuring earthquake magnitude due to its accuracy and ability to handle a wider range of earthquake sizes.

