



Name \_\_\_\_\_ Date \_\_\_\_\_

## Plate Tectonics Scavenger Hunt

Using the [www.thesciencequeen.net](http://www.thesciencequeen.net) website, go to the 7<sup>th</sup> grade section, projects and click on the Plate Tectonics Scavenger Hunt.

### Website - Earth - Our World in Motion

*Click on What's the Big Idea about Earth.*

1. We live on the Earth's \_\_\_\_\_, a layer of rock about \_\_\_\_\_ thick.
2. What motion in the inner core cause the Earth to act like a giant magnet? \_\_\_\_\_
3. Intense heat flowing out of the \_\_\_\_\_ and mantle makes the \_\_\_\_\_ flow in circles.
4. The motion of the \_\_\_\_\_ causes the \_\_\_\_\_ to move.
5. The moving \_\_\_\_\_ create \_\_\_\_\_.
6. The \_\_\_\_\_ release gases into the \_\_\_\_\_.

### Website – Great Rift Valley

7. The Great Rift Valley runs from Northern \_\_\_\_\_ to \_\_\_\_\_ in East \_\_\_\_\_.
8. The valley is created from the \_\_\_\_\_ plate & the \_\_\_\_\_ plate rifting apart.

### Website – Mid-Atlantic Ridge

9. The **Mid-Atlantic Ridge** is an \_\_\_\_\_ of the \_\_\_\_\_, which runs from \_\_\_\_\_ to \_\_\_\_\_.
10. This is the \_\_\_\_\_ mountain range on Earth.
11. According to plate tectonics, this ridge runs along a \_\_\_\_\_.

### Website: Build Your Bridge



*Click on the Quake Country Section at the Top of the page*

12. \_\_\_\_\_ suggested that all the world's continents had been part of a super-continent named \_\_\_\_\_.

13. Where do most submarine tremors occur? (Hint: Drag your mouse over the map.)

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14. What two faults (OTHER THAN THE SAN ANDREAS FAULT) pose great earthquake risk to California?

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15. Scientists measure earthquakes two ways.

- The Richter Scale measures \_\_\_\_\_.
- The Modified Mercalli Scale measures \_\_\_\_\_.

16. What are the chances the Bay Area will have an earthquake in the next twenty years?

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*Click on the Engineering for Earthquakes Section*

Build each type of bridge, and then answer the following questions:

17. How well does a beam girder bridge with shock absorbers withstand a 7.0 San Andreas quake?

Explain your answer.

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18. How well does a cantilever bridge with shear links withstand an 8.2 San Andreas quake?

Explain your answer.

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19. How well does a suspension bridge with cable stays withstand an 8.0 San Andreas quake? Explain your answer.

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20. How well does a steel arch bridge with ductile materials withstand a 7.5 Hayward quake? Explain your answer.

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21. Out of all the bridges; please explain which bridge (and which added safety bridges) was able to withstand the strongest quakes best.

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**Website: Pompeii**

*Click on Vesuvius*

22. Who is a plinian eruption named after and what he do that was so important?

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23. What kind of volcano is Vesuvius? \_\_\_\_\_

*Click on Pompeii*

24. Where did people in Roman times go see the circus? \_\_\_\_\_

25. Whose eyewitness account gives us insight into the eruption at Pompeii? \_\_\_\_\_

**Website - Volcano Explorer**

26. What is a stratovolcano?

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27. Build a virtual volcano.

a. What type of volcano is created with magma with high viscosity & high gas content?

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b. What type of volcano is created with magma with low viscosity & high gas content?

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c. What type of volcano is created with magma with high viscosity & low gas content?

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d. What type of volcano is created with magma with low viscosity & low gas content?  
\_\_\_\_\_

e. What type of volcano is created with magma with medium viscosity & high gas content?  
\_\_\_\_\_

**Website - Worst Earthquakes in US History**

28. What was the worst earthquake in US History? \_\_\_\_\_

How many perished & by what ? \_\_\_\_\_

29. How many tsunamis have made the US worst earthquake list? \_\_\_\_\_

30. What was the world's worst earthquake disaster? \_\_\_\_\_

31. In Arizona in 1887, how much damage did an earthquake do to Tucson?  
\_\_\_\_\_

32. When was the largest earthquake in Arizona? \_\_\_\_\_

33. When was the last earthquake in Arizona? \_\_\_\_\_

**Website -Life along the fault line**

*Click on page 2.*

34. What did Alfred Wegener name his "supercontinent"? \_\_\_\_\_

35. How long did Wegener think it took for the supercontinent to break apart and form the positions our continents are in today? \_\_\_\_\_

36. What two plates meet at the San Andreas fault? \_\_\_\_\_

*Click on Page 3*

37. What is the most common type of fault in California? \_\_\_\_\_

38. What is a seismic creep? \_\_\_\_\_

*Click on Page 5*

39. According to the graph, when and where did the most powerful earthquake take place?  
\_\_\_\_\_

