Name: Date: Period:

Directions: Watch the movie and answer the questions. Try to be as detailed with your answers as possible. URL: http://www.youtube.com/watch?v=T_PQWA5ZYks

1. When did Japan' major earthquakes occur? What was its magnitude?

2. Why is Japan a major earthquake region?

3. Describe the process which triggered the immense earthquake in Japan?

4. How did Japan notify the public about the major earthquake?

5. Describe the difference between P and S waves?

6. How deep do major earthquakes occur?

7. What is liquefaction?

8. How many times greater was the earthquakes strength compared to the atomic bomb dropped on Hiroshima and Nagasaki?

9. How much did Earth's axis shift due the immensity of the earthquake in Japan?

10. What other properties did this Earthquake change on Earth?

11. How did the earthquake get so big? Describe the transfer of energy that caused this huge earthquake?

12. What is a tsunami?

13. Describe the process of how this earthquake formed a devastating tsunami?

14. How tall was the tsunami in some places?

15. What do the Japanese have to protect from tsunamis? Were they effective? Why or Why not?

16. Why did some areas have little hope from escaping the movement of the tsunami inland?

17. How much time did the Japanese notice to react for the earthquake and the tsunami?

18. Where have scientists tried to predict earthquakes? Were they successful? Why or Why not?

19. Why is it hard to predict when an earthquake will happen?

20. How do scientists forecast earthquakes?

21. Describe how the Japanese planned earthquake safe nuclear plants? How did they fail?

22. How did the nuclear plant fail? Describe the process.

23. How concerned should the Japanese be about the radioactivity? What was the fallout of this situation?