

Lab: Virtual Earthquake

Name _____ (95 points)

Before you start the lab, answer this question based on what you already know.

1) What's an earthquake? (3)

Web site used:

www.sciencecourseware.com (USE VIRTUAL EARTHQUAKE (ORIGINAL))

Welcome to Virtual Earthquake

Read the 1st web page and **define** the following terms. (2 each)

2) Seismograph -

3) Seismogram -

4) Focus -

5) Epicenter -

Click on "Execute Virtual Earthquake".

Compare your answer to "What's an Earthquake?" to the computers answer.

6) How are they **similar** and **different**. (3)

Read the 2nd web page and **define** the following terms (2 each-7-10)

7) Seismic Waves-

8) P-Waves -

9) S-Waves -

10) At what speed do the two waves travel? P-wave _____ and S-wave _____.

11) What are the 4 parts to a seismogram? (4)

12) How is an earthquake's epicenter located? (3)

13) What region did you select: _____ (**Click Submit Choice**)

Study the measuring the S-P interval diagram. When you feel comfortable with the information **Click on View Seismograms**.

Enter your calculations below. (6)

14) _____ seismic station S-P interval = _____ seconds.

15) _____ seismic station S-P interval = _____ seconds.

16) _____ seismic station S-P interval = _____ seconds.

Click on Convert S-P Interval

Read Determining the Earthquake Distance.

Do Practice Question. (2)

17) How long does it take the p-wave to travel the same distance (300km)? _____

Determine your Distance from S-P. Enter the information into **your data table**.(15)

Station	Your S-P Interval	Your Epicenter Distance	Actual S-P Interval	Actual Epicenter Distance

Click on Find Epicenter.

18) How well did you do? _____

Remeasure if needed.

19) Where was your earthquake located? _____

Now Click on Compute Richter Magnitude.

Richter Magnitude

Read about Richter Magnitude and answer the following questions.

20) When was the Richter scale introduced and by who? (3)

21) **Define** the term Magnitude (3)

Click on Go to Next Page

Read and study the Richter nomogram.

Click on Go to Next Page

Read the directions and do what you are instructed. (3)

22) S-Wave Amplitude - _____

23) S-Wave Amplitude - _____

24) S-Wave Amplitude - _____

Click on Submit to Nomogram

25) Enter Your magnitude - _____ (2)

Click on Confirm Magnitude

26) Enter Actual magnitude - _____

27) Give us the name and location of your earthquake.

28) Tell a little about your earthquake, loss of life and property damage. (3)

29.) Select a new region: _____ **(Click Submit Choice)**

Study the measuring the S-P interval diagram.

Enter your calculations below. (6)

30) _____ seismic station S-P interval = _____ seconds.

31) _____ seismic station S-P interval = _____ seconds.

32) _____ seismic station S-P interval = _____ seconds.

Click on Convert S-P Interval

Read Determining the Earthquake Distance.

Determine your Distance from S-P. Enter the information into **your data table**. (15)

Station	Your S-P Interval	Your Epicenter Distance	Actual S-P Interval	Actual Epicenter Distance

Click on Find Epicenter.

33) How well did you do? _____

Remeasure if needed.

34) Where was your earthquake located? _____

Now Click on Compute Richter Magnitude.

Richter Magnitude

(3)

35) S-Wave Amplitude - _____

36) S-Wave Amplitude - _____

37) S-Wave Amplitude - _____

Click on Submit to Nomogram

38) Enter Your magnitude - _____ (2)

Click on Confirm Magnitude

39) Enter Actual magnitude - _____

40) Give us the name and location of your earthquake.

41) Tell a little about your earthquake, loss of life and property damage. (3)

42) **Get a Certificate** printed with your name, school, and city to be handed in as a sign of completing the lab. These will go on the Earth Quake Awareness Board!☺