FLINN SCIENTIFIC

Name_____

Find the Epicenter Worksheet

Data Table

Seismograph Station	P-wave Arrival Time (hr:min:s)	S-wave Arrival Time (hr:min:s)	Time Delay T_{S-P} (s)	Distance to Epicenter (km)	Map Distance (cm)
New York, NY	5:52:40 a.m.	5:55:18 a.m.			
Louisville, KY	5:49:20 a.m.	5:50:11 a.m.			
Green Bay, WI	5:50:20 a.m.	5:51:52 a.m.			
Pueblo, CO	5:52:00 a.m.	5:54:21 a.m.			
Phoenix, AZ	5:54:40 a.m.	5:58:00 a.m.			

Post-Lab Questions

1. Near what major city is the epicenter located? (Look at a more detailed map of the United States, if necessary.)

Use the Seismic Waves Graph to answer Questions 2 and 3.

2. A seismograph station is 3000 kilometers away from the epicenter of an earthquake. How many seconds after the arrival of the P-wave would the S-wave arrive?

3. What happens to the distance between the P-wave line and the S-wave line as the distance from the epicenter increases? Why is this so?

4. Describe the difference between the focus and the epicenter of an earthquake.

5. Why is useful to know the location of the epicenter once an earthquake has occurred?