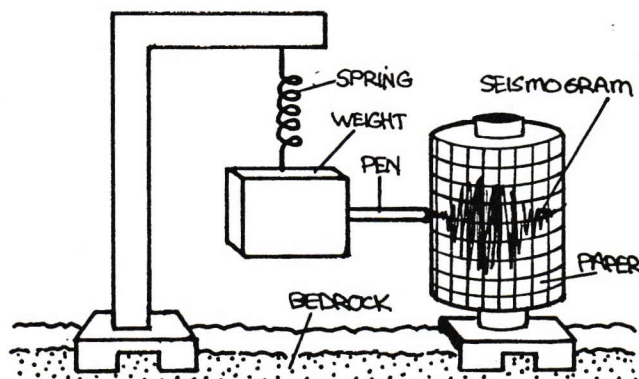


Size Up the Seismograph

A **seismograph** records the earth's movement. A marking device is attached to a motionless weight and records the rock's movements on a revolving drum. The drum is anchored in bedrock (solid rock under the soil). Under normal conditions, a straight line is traced on the drum. During an earthquake, the marking device moves with the earth's vibrations to record a wavy line. The wavy line is called a **seismogram**.



Scientists measure the waves to estimate the **magnitude** (how much the earth moved) of each quake. They use a series of numbers called the Richter Scale. The scale starts with a magnitude of 1 for the mildest quakes. The magnitude is determined by the distance the marking device moves above and below the straight line.

Some Earthquakes on Record			
Location	Date	Richter Scale	Death Toll
Lisbon, Portugal	1755	8.75-9 (est.)	30,000
San Francisco, CA	1906	8.25	452
Tokyo, Japan	1923	8.3	100,000
Quetta, India	1935	7.5	40,000
Agadir, Morocco	1960	5.8	12,000
Alaska	1964	8.6	131
Mexico City, Mexico	1985	7.9	4,600
Painted Hills, CA	1986	5.9	0

Use the table and information given to answer the questions.

1. What is recorded on a seismograph? _____
2. What number system is used to describe a quake? _____
3. What does "magnitude" mean? _____
4. What is a seismogram? _____
5. How many earthquakes listed happened in the United States? _____
6. Which quake was the weakest? _____
7. Which quake had the largest death toll? _____

Challenge! "The higher an earthquake's number on the Richter Scale, the larger the death toll." Is this true or false? Why?