**A Hands-on approach to seismology.**

**Playing the Game Summary:**

1. Teach the game in a step-by-step process. (may take 2-3 days)
2. Object of game – to correctly locate the origin of an earthquake (earthquake will be a member of the group).
3. Players and assignments –
   1. The Earthquake – Generator of the seismic wave.
   2. The Seismometers – Detectors, collectors and informers of seismic activity.
   3. The Mediums – Carriers of seismic waves (analogous to the Earth’s interior).
4. Line-up – Students stand in a line and hold hands. The person at one end of the line will represent the Earthquake. The person at the other end is the Seismometer. All players in between are Mediums.
5. The P-Wave –
   1. Let players know the waves they are submitting will be quite different than actual earthquake waves.
   2. Waves are passed with the squeeze of a hand. As soon as a player receives a P-wave in one hand, he/she transmits it immediately by squeezing the hand of his neighbor.
   3. It is important to send the wave as fast as possible.
   4. Once the P-wave reaches the Seismometer, the student playing that role should shout, “P-wave!”
6. The S-Wave –
   1. This is a wave sent from player to player. Like a P-wave, an S-wave can only originate and move away from an Earthquake.
   2. This wave differs from a P-wave in two ways:
      1. It is not a squeeze, but a single shake of a player’s hand.
      2. Before transmitting an S-wave, a player must wait two seconds. This delay is mandatory in order to make the game work.
   3. The earthquake starts an S-wave by counting silently, “one-one thousand, two-one thousand.” The earthquake then shakes the hand of his/her neighbor. This pattern will continue down the line.
   4. When the S-wave reaches the Seismometer, the Seismometer should immediately shout, “S-wave!”
7. Combining the Waves – Next, P-waves and S-waves are combined.
   1. Earthquake begins by sending a P-wave (quick squeeze), wait two seconds, and then send a S-wave (shake). This process will continue until both waves reach the Seismometer.
   2. There should be a significant time gap between the shouting of “P-wave” and “S-wave”.\
8. See additional game ideas.