# Unit 1: Introduction to seismic refraction geophysical imaging

## Multiple choice questions

1. Seismic waves used by geophysicist to make images of the subsurface environment are *most similar* to:

1. Light waves
2. Gravity waves
3. Sound waves
4. Surfing waves

2. Geophysical measurements may be used by Earth Scientists and engineers typically to:

1. Save time and money
2. Find exact answers to problems
3. Make projects cost more
4. Help with air quality studies

3. Making judgements of the depth of bedrock would be best classified at what level of geoscience skill?

1. Evaluation
2. Analysis
3. Application
4. Knowledge

4. The following instruments would be required to measure velocity

1. Seismograph, accurate timing device
2. Ruler, accurate timing device
3. Ruler, hammer
4. Hammer, accurate timing device

5. While a wave may be recorded in units of \_\_\_\_\_\_\_\_\_\_\_\_\_, the wavelength is measured in units of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. Distance, Time
2. Time, Frequency
3. Frequency, Distance
4. Time, Distance

6. You would be *most likely* to find bedrock where:

1. Below soil
2. Above soil
3. Below water
4. Above a foundation

## Short Answer Questions

1. Give three examples of careers that a geophysicist may have, and describe how geophysical imaging may be used.
2. Explain what bedrock is in your own words and why it is important to the daily life of people.
3. Explain two reasons that make it more difficult to measure seismic images in urban environments compared with wildland settings.
4. Consider someone talking at a frequency of 110 Hz (approximately the average frequency of a human voice). How far from the speaker would you have to stand to be one wavelength away?