

Name: _____
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NOTES

Science 8 Properties of Waves

Read pgs 134-138 and complete the following worksheet.

A wave is a disturbance or movement that transfers energy through matter or space.

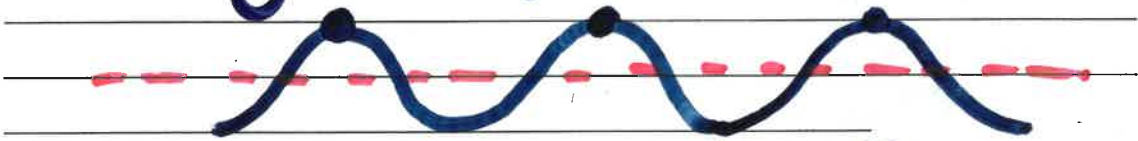
energy is the ability to apply a force over a distance.

force is a push or pull on an object.

Define the following FEATURES OF A WAVE:

1. Crest:

highest point of a wave



2. Trough:

lowest point of a wave



3. Wavelength:

distance between: (λ)

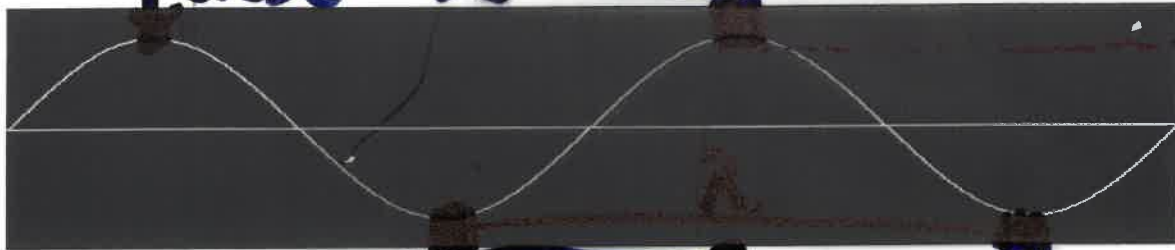
crest to crest
trough to trough
(measured in meters)

measured
in
metres

4. Amplitude:

height of a wave from (A)
the rest position to the crest.
or rest to trough.
(measured in meters)

Use the terms: crest, trough, wavelength and amplitude to correctly label the following wave diagram:



The number of oscillations (repetitive motions) that occur in a given time is called frequency and is measured in Hertz (Hz).

Hertz is defined as cycles per second.

$$\text{Hz} = \# \text{ cycles/sec}$$

THE SHORTER THE wavelength, THE GREATER THE frequency. Scientists refer to this as an inverse relationship.

TYPES OF WAVES:

1. Transverse (skip rope)
2. Compression (slinky)

The matter that waves move through is referred to as a medium.
 For sound waves the medium is air (gas).
 For ocean waves the medium is water (liquid).

TRANSVERSE WAVES:

The matter in the medium moves UP and DOWN perpendicular (at right angles) to the direction that the wave travels. Example:

- tie a rope to a tree & move one end up & down

COMPRESSION WAVES:

The matter in the medium moves back and forth along the same direction that the wave travels. Example:

- slinky with a piece of tape attached to it.



side to side