

Unit EQ: How do waves affect the transfer and transformation of energy?

- Lesson EQ: How is energy transferred and transformed as waves?
- Lesson EQ: Where does the energy in mechanical waves come from and how is it transferred and transformed?
- Lesson EQ: Where does the energy in electromagnetic waves come from and how is it transferred and transformed?

Wave-

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graph TD; Wave[Wave-] --- WP[Concept: Wave Properties]; Wave --- MW[Concept: Mechanical Waves]; Wave --- EW[Concept: Electromagnetic Waves];
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Concept: Wave Properties
What do waves carry?

How do we classify waves?

What are the properties of a wave?

Concept: Mechanical Waves

Concept: Electromagnetic Waves

Unit EQ: How do waves affect the transfer and transformation of energy?

- Lesson EQ: How is energy transferred and transformed as waves?
- Lesson EQ: Where does the energy in mechanical waves come from?
- Lesson EQ: Where does the energy in electromagnetic waves come from?

All Waves:

•Two Major Types of Waves

•Mechanical Waves:

•Both have some
common properties:

•Electromagnetic Waves:

Unit EQ: How do waves affect the transfer and transformation of energy?

•Lesson EQ: Where does the energy in mechanical waves come from?

All Mechanical Waves:

Two Major Types of Mechanical Waves

•**Transverse Waves:**

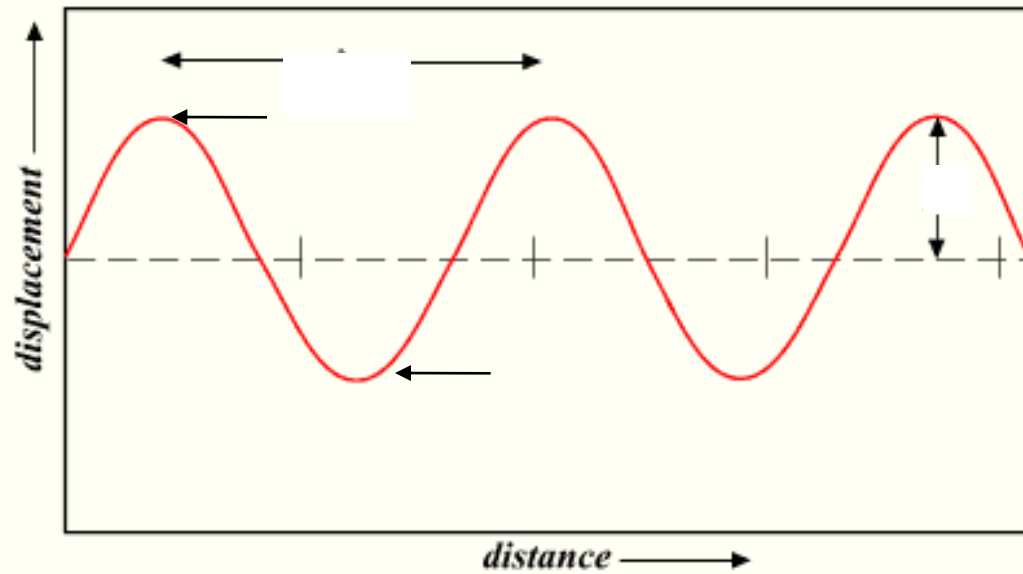
• **Examples:**

•**Both have some common properties:**

•**Longitudinal Waves:**

•**Examples:**

Transverse Waves



Transverse Wave-

Wavelength-

Amplitude-

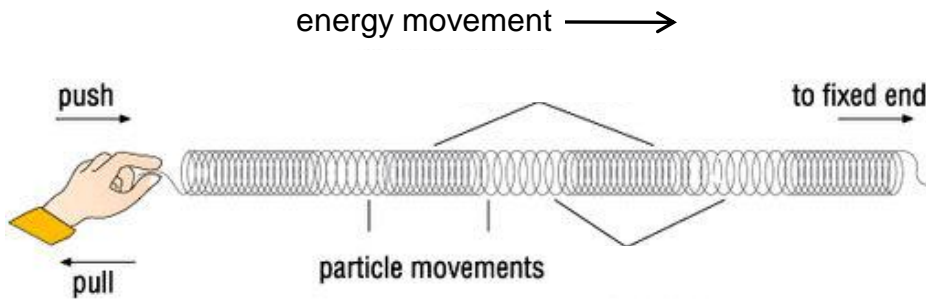
Frequency-

Crest-

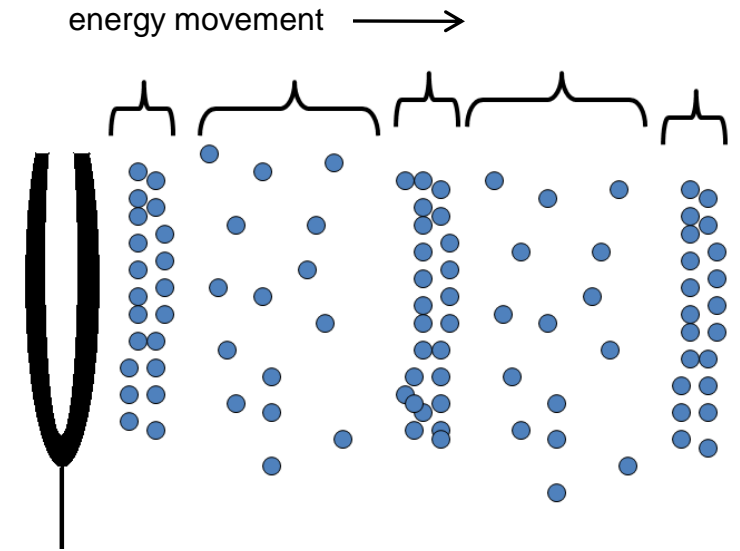
Trough-

Longitudinal Waves

Longitudinal wave in a spring



Longitudinal wave given off by a tuning fork



Longitudinal Wave-

Wavelength-

Amplitude-

Frequency-

Compressions-

Rarefaction-