

### CONCEPT DIAGRAM

Waves
Energy

**③ Key Words**

Energy  
Sound  
medium  
transverse  
amplitude  
vacuum  
frequency  
Speed  
Wavelength  
longitudinal  
Crest  
trough  
light  
mechanical  
electromagnetic  
disturbance

**① CONVEY CONCEPT**  
**② OFFER OVERALL CONCEPT**  
**③ NOTE KEY WORDS**  
**④ CLASSIFY CHARACTERISTICS:**

Always Present	Sometimes Present	Never Present
frequency	medium to travel	transport of
amplitude	Crest/trough	matter
wavelength	Compression/rarefaction	
Speed	travels in a vacuum	
	Particle motion	

**⑤ EXPLORE EXAMPLES**      **Examples:**

Transverse light - electromagnetic

Surface waves Stadium Ocean

Transverse

longitudinal or Sound Waves

Seismic waves (all 3 types)

**Non-Examples:**

Soccer ball (matter)

leaf

light bulb

Energy

**⑥ PRACTICE WITH NEW EXAMPLE**

**⑦ TIE DOWN A DEFINITION**

A wave moves Energy, not matter, and is described by frequency, amplitude, wavelength and speed. Waves can be transverse or longitudinal.

Student  
Work  
completed  
using Cue-  
Do-Review

③ Key Words

- Ocean wave
- Sound
- energy
- vibration
- heat wave
- force
- speed
- water
- light
- up + down
- Radio
- microwave
- nuclear
- hair
- heat
- wave
- moves
- tsunami
- swim
- ripple
- solar wave
- earthquake
- hand wave

① CONVEY CONCEPT

② OFFER OVERALL CONCEPT

③ NOTE KEY WORDS

④ CLASSIFY CHARACTERISTICS:

Wave

①

phenomenon

②

Always Present

Sometimes Present

Never Present

medium (matter)

move energy

force (start)

Speed

measured

up + down

back + forth

Take up space

⑤ EXPLORE EXAMPLES

Examples:

Non-Examples:

ripple

Pwaves and Swaves

tsunami

Earthquake

hair

⑥ PRACTICE WITH NEW EXAMPLE

⑦ TIE DOWN A DEFINITION

A wave is a phenomenon that start with force, move energy through a medium at a speed that can be measured