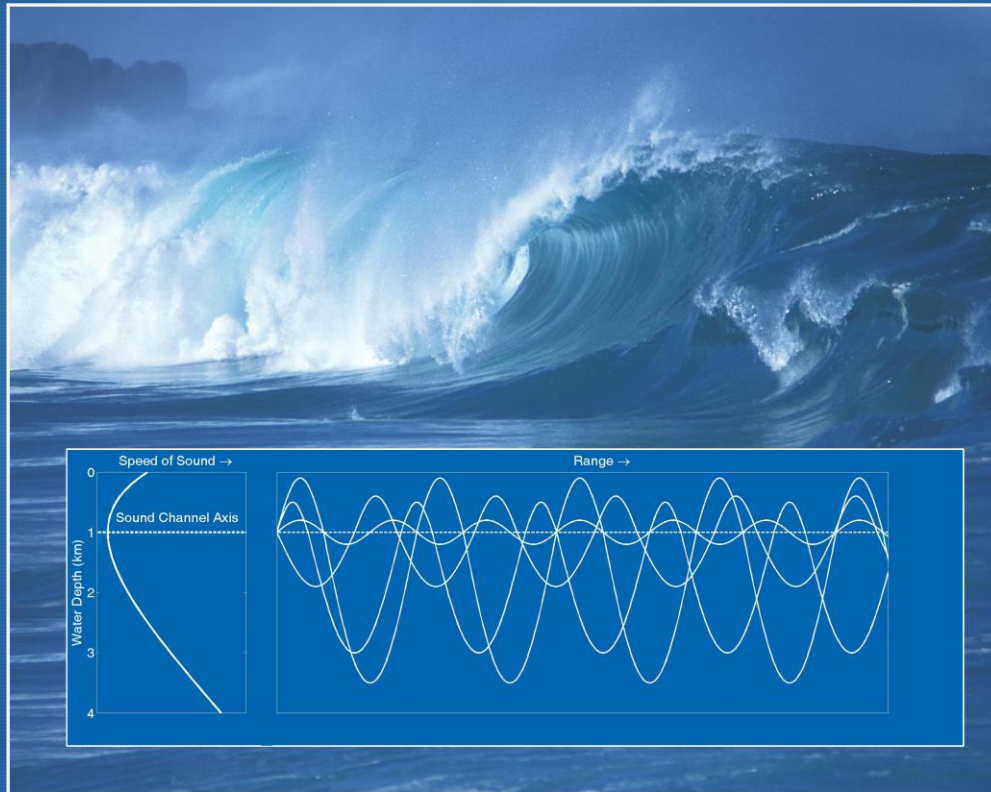


Waves



What is a Wave?

- A wave is a disturbance that transfers energy from one place to another.



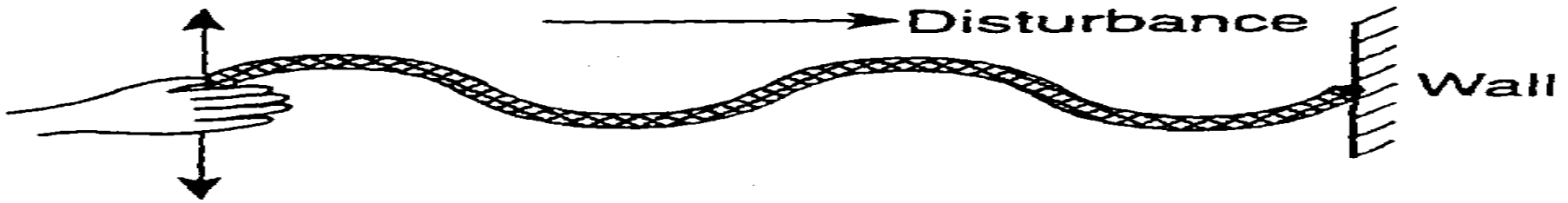
What is Energy?



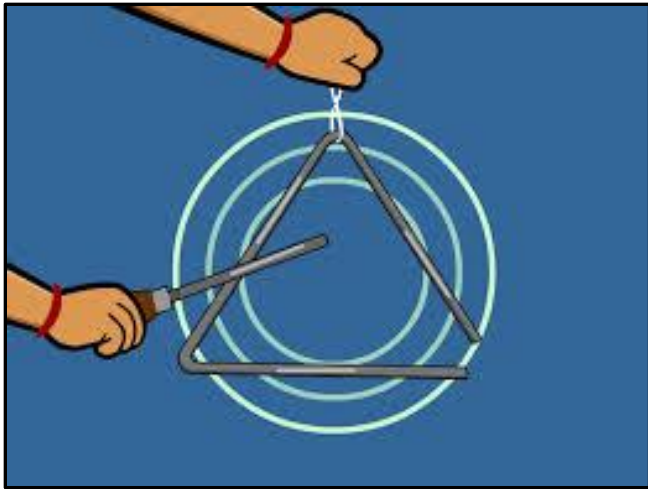
- The ability to do work.
- WORK:
Movement of an object over a distance.

What is a Medium?

- A material through which a wave can travel
- Example of mediums:
 - Gases – air
 - Solids – rope
 - Liquids – water



How is a Wave Created?



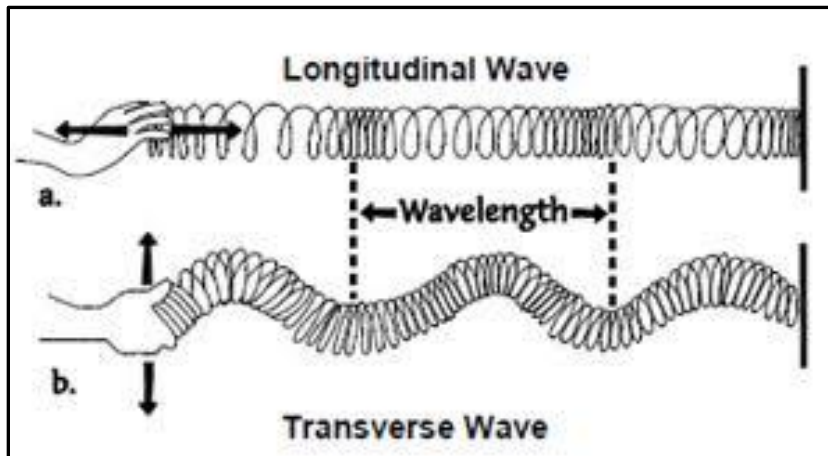
- Waves are caused when a source of energy causes a medium to vibrate (move)

How does a boat transfer energy to the water?

- The moving propeller causes a disturbance in the water. Transferring energy causes a wave.



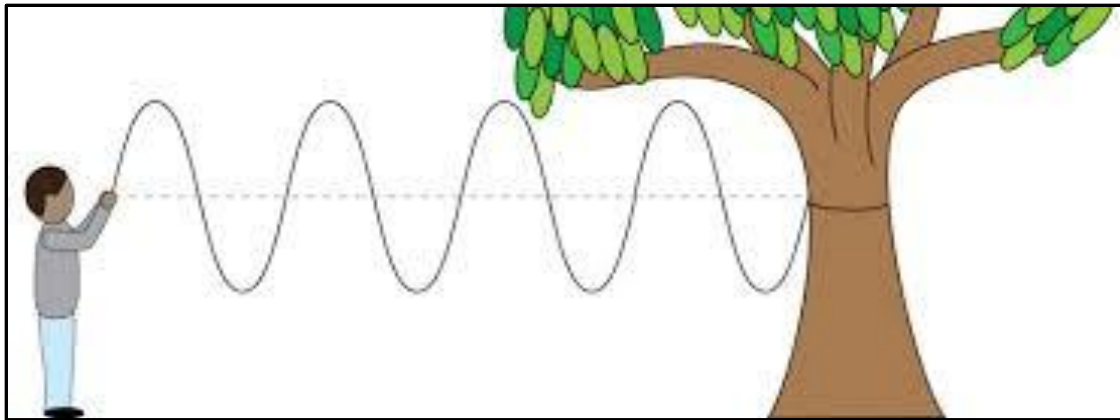
What types of waves are there?



- Longitudinal
- Transverse
- Surface

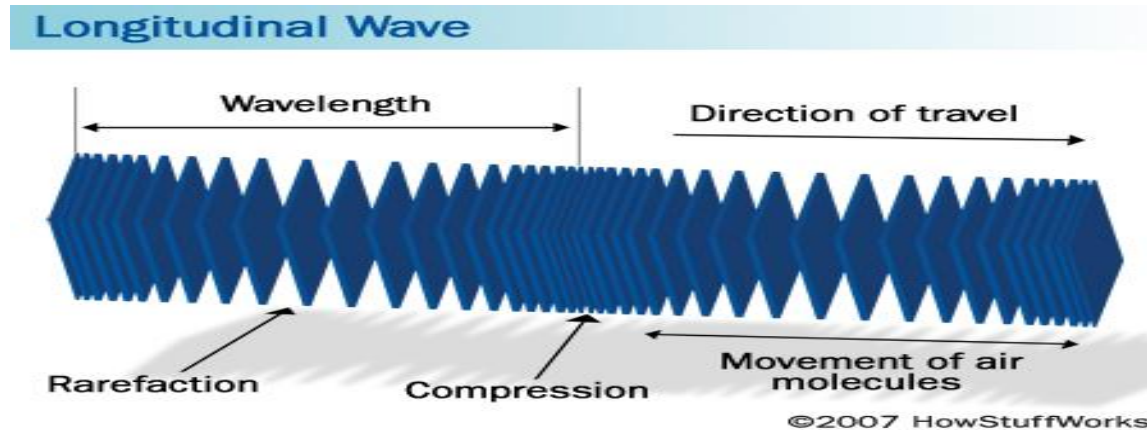
What is a Transverse Wave?

💧 Waves where the disturbance moves perpendicular to the direction of the wave.

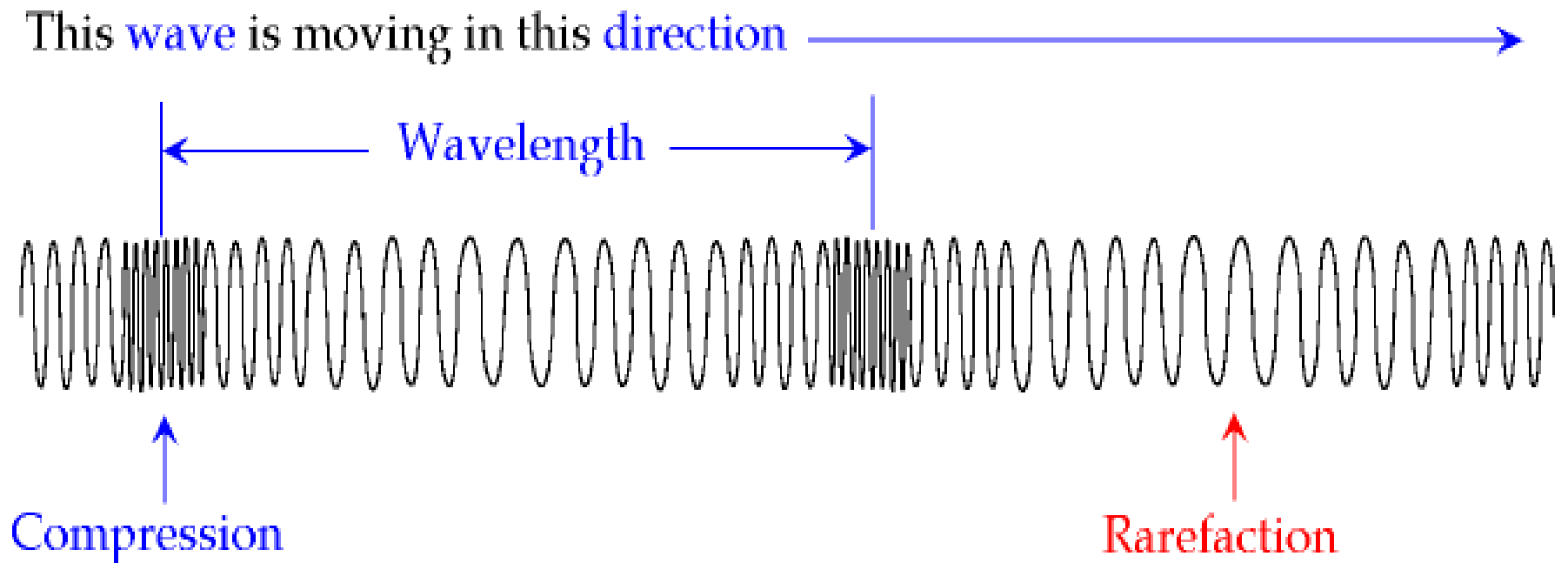


What is a Longitudinal Wave?

- Waves where the disturbance moves in the same direction as the wave.

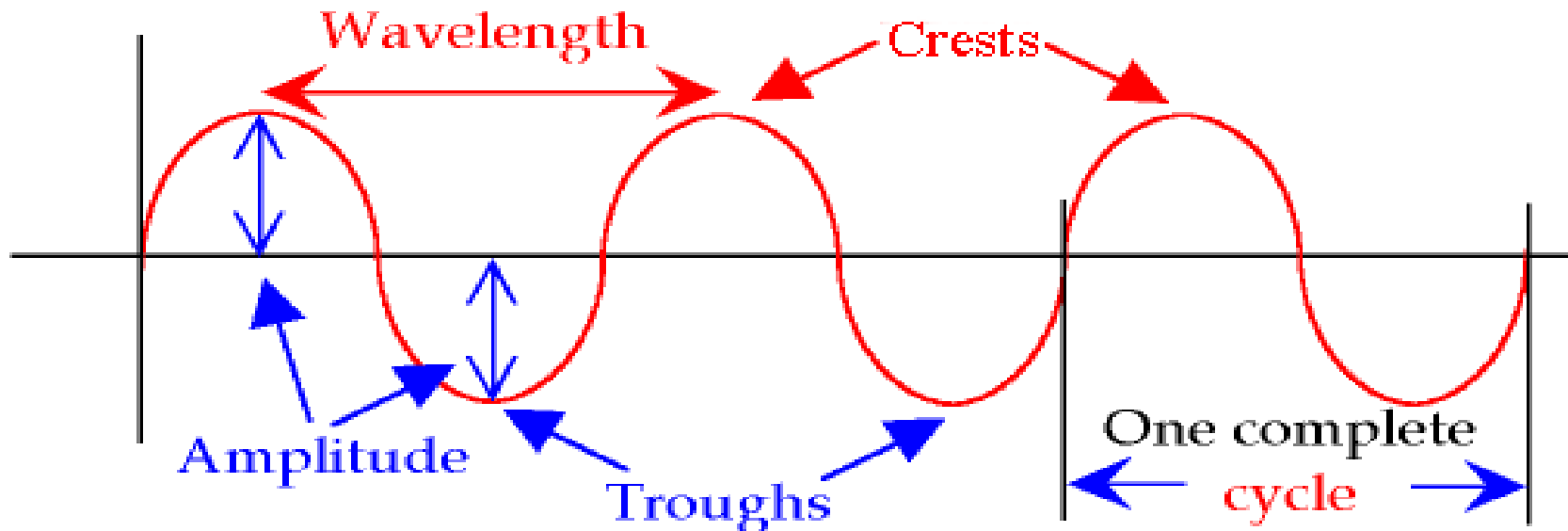


Longitudinal Wave



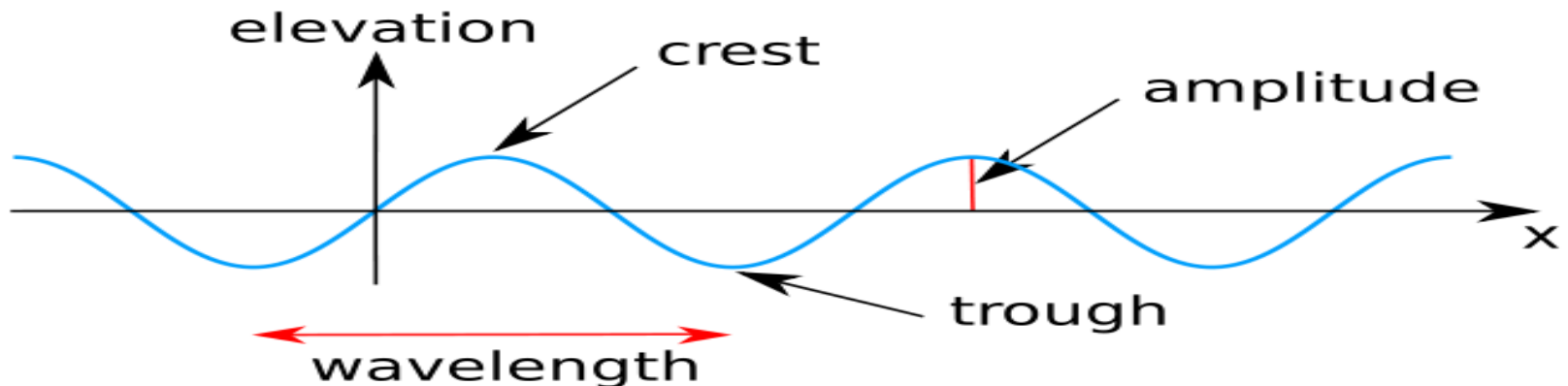
Transverse Wave

This wave is moving
in this direction



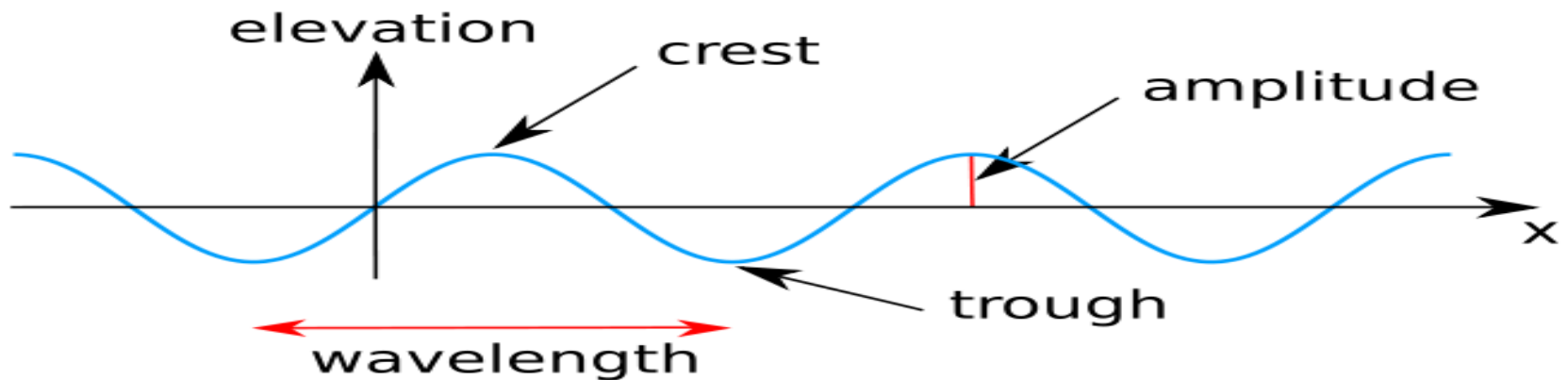
What is an Amplitude?

- Maximum distance the medium carrying the wave moves away from the rest position.
- Height of the wave from the rest position.



What is Wavelength?

- Distance between two corresponding wave parts.
- Distance from crest to crest, trough to trough, etc.



What is the Frequency?

- Number of complete waves that past a given point in a certain amount of time.
- Measured in HERTZ.
- Speed divided by the wavelength.
- Inversely related to the wavelength.

