



كلية العلوم

القسم : المغيرياء

السنة : الثانية

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{{ A to Z مکتبہ }} {{ }}

Facebook Group : A to Z مكتبة

كلية العلوم ، كلية الصيدلة ، الهندسة التقنية

يمكنكم طلب المحاضرات برسالة نصية (SMS) أو عبر (What's app-Telegram) على الرقم 0931497960



What Are The Waves ?

A wave : It Is a disturbance that transfers energy from one place to another .

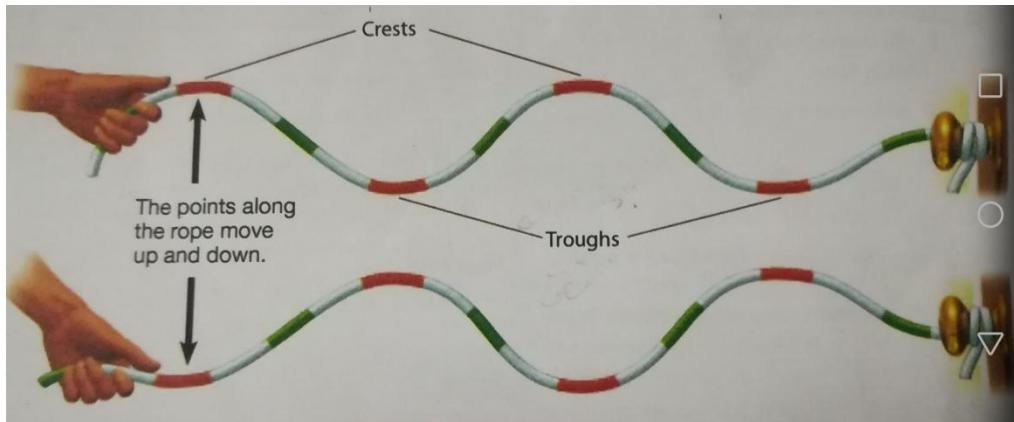
Waves are disturbances .Many waves travels by disturbing a material . The materials then returns to its original place .

A medium : It is the material through which a wave travels .

A wave transfers energy from one place to another . It does not transfer matter .

The points where the wave is highest are called **crests** .

The points where the wave is lowest is called **troughs** .

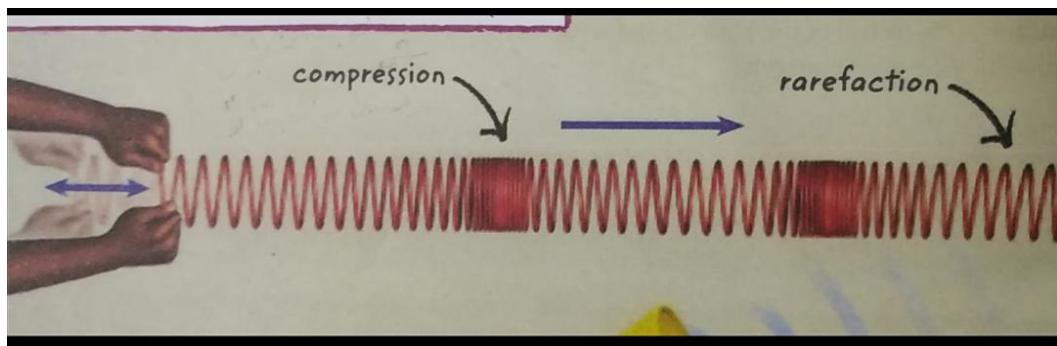


Some waves need a medium to transfer energy , such as sound waves and water waves .

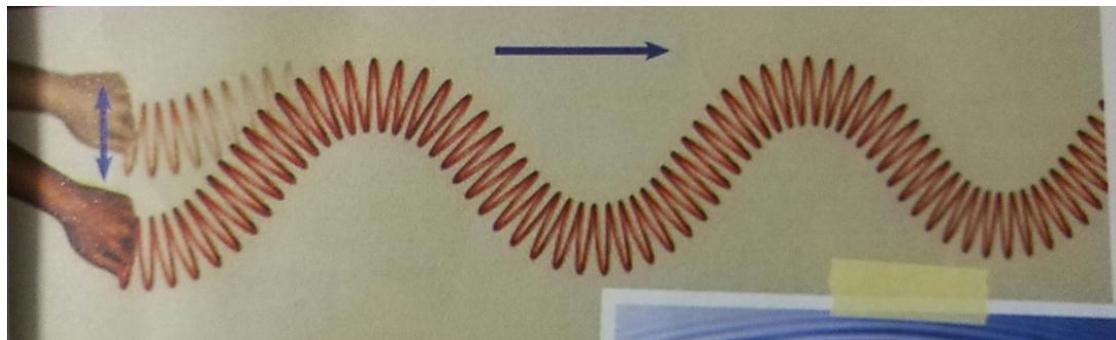
Some waves can transfer energy without a medium , such as light waves .

How does a wave transfer energy ?

1 – As a longitudinal wave : Particles move back and forth in the same direction that the wave travels , or parallel to the wave .



2 – As a transverse wave : particles move perpendicularly to the direction the wave travels .



An earthquake sends both longitudinal waves (called P waves) and transverse waves (called S waves) through earth' s crust .

In this case , the longitudinal waves are faster .

During an earthquake , the faster P waves arrive first . A little while later , the S waves arrive . The S waves are slower but usually more destructive .

A transverse wave and longitudinal wave can combine to form another kind of wave called a surface wave .

What are some types of wave ?

1 – Mechanical waves : A wave that requires a medium to travel is called a mechanical wave .

2 – Electromagnetic waves : It is a disturbance in electric and magnetic fields .

Examples of EM waves include :

- **Visible light**
- **Radio waves**
- **Micro waves**
- **Ultraviolet waves**
- **X - rays**