



# Light and sound

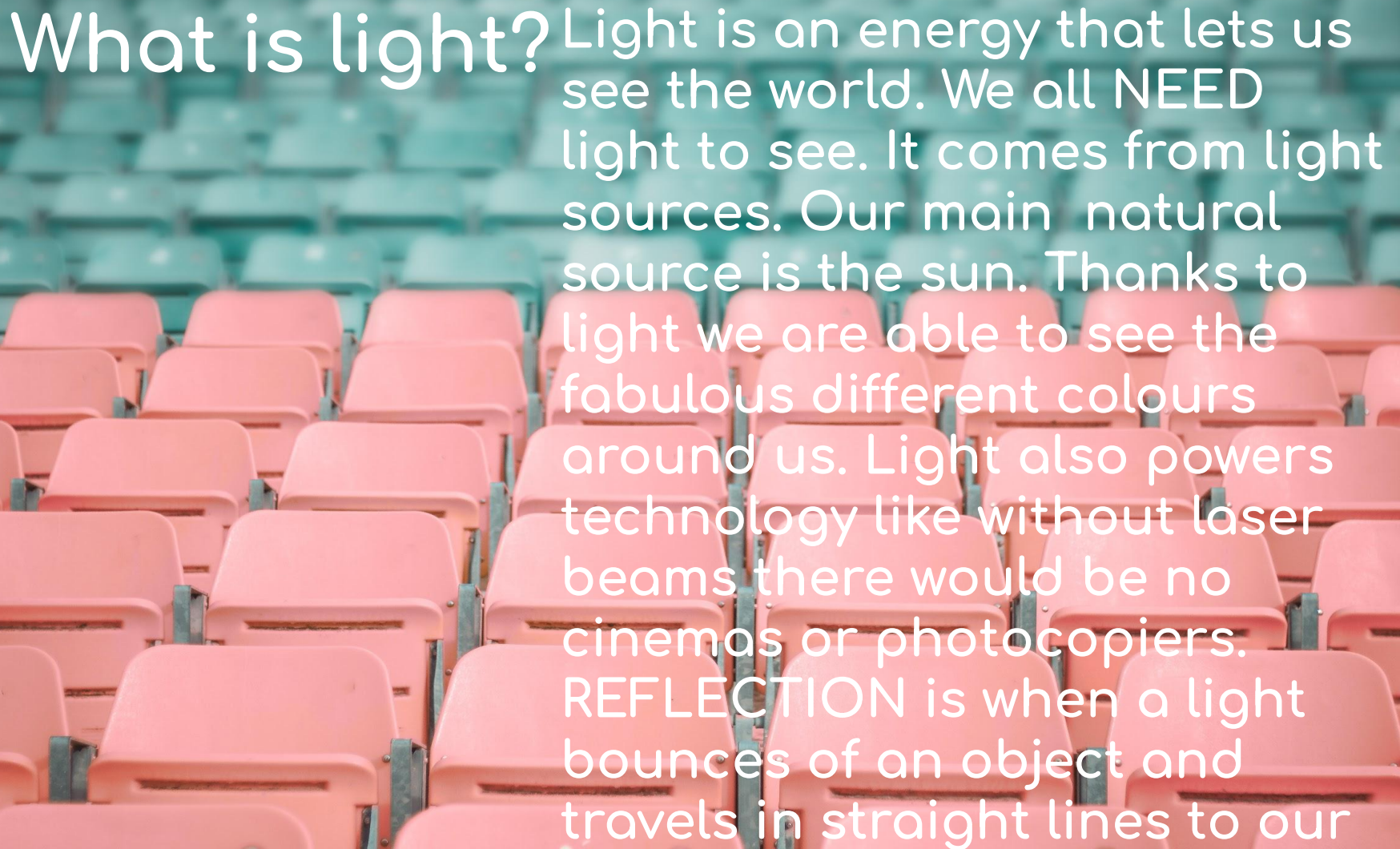
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# Light and Sound



Today you are going to learn about light. We have two very cool experiments set up for you.

We are going to show you how to do the creepy finger and you are going to be able to see Sound!

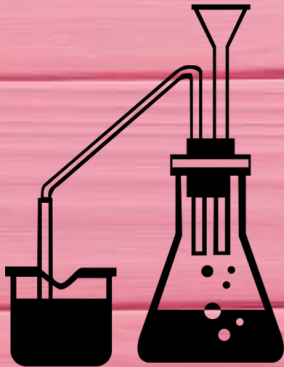


**What is light?** Light is an energy that lets us see the world. We all **NEED** light to see. It comes from light sources. Our main natural source is the sun. Thanks to light we are able to see the fabulous different colours around us. Light also powers technology like without laser beams there would be no cinemas or photocopiers. **REFLECTION** is when a light bounces off an object and travels in straight lines to our

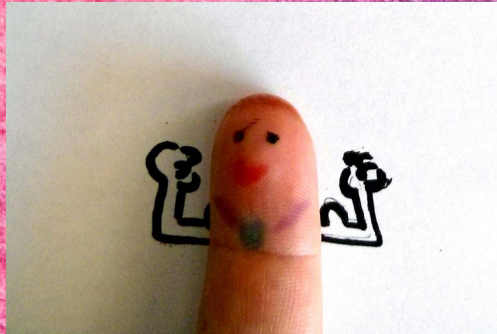




# The Experiment



# What you will need



- A small plastic mirror
- A long and clear lunch box container
- Your finger



# What to do

1. Put the mirror into the clear bowl full of water at an angle of about 45 degrees
2. Look into the mirror through the water and put your finger into it

What should happen

When the mirror is at 45 degrees  
it creates a reflection and that's  
why you see 2 fingers in the  
water



Does anyone have any questions?





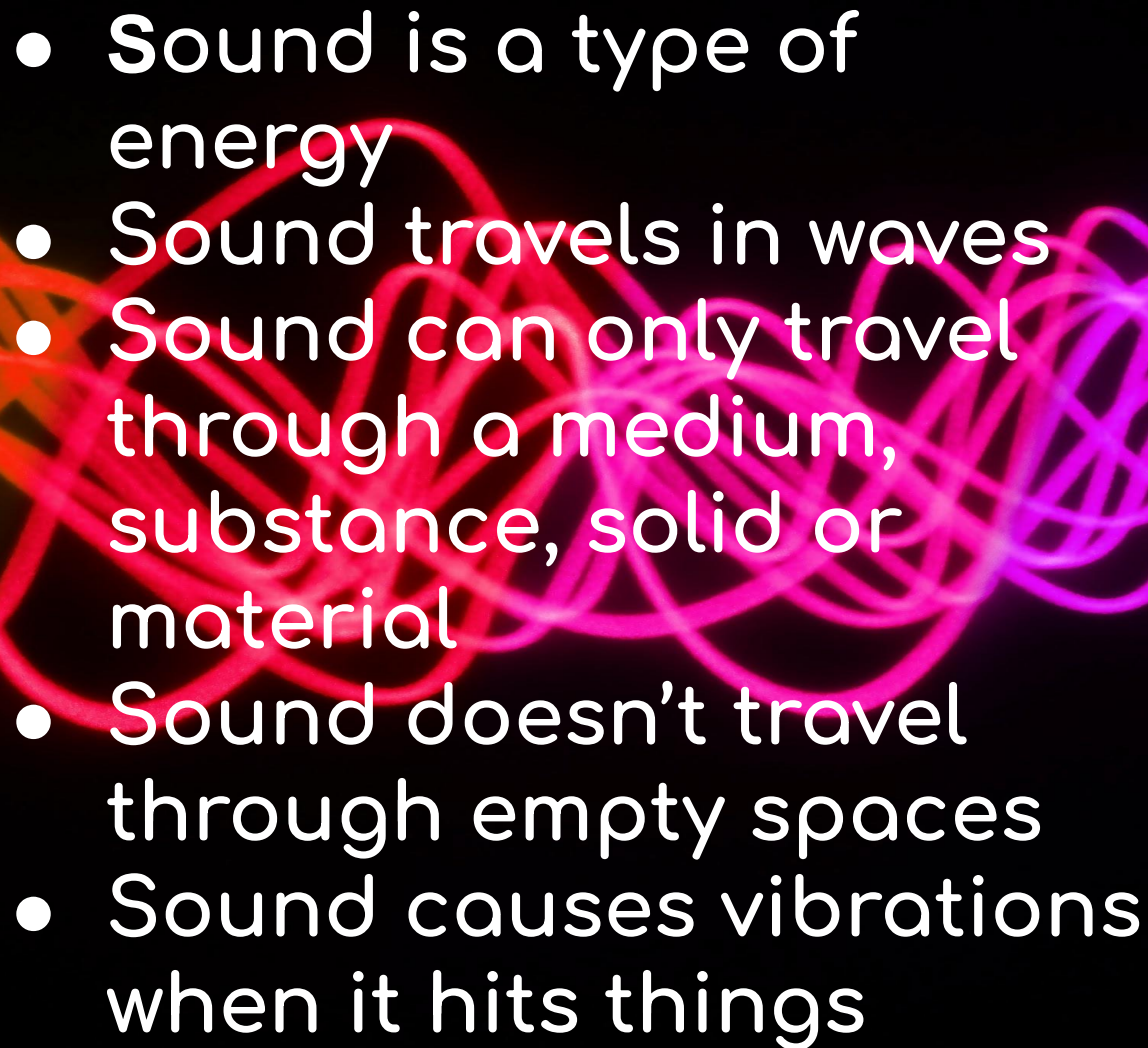
# Sound





What is sound?



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- Sound is a type of energy
  - Sound travels in waves
  - Sound can only travel through a medium, substance, solid or material
  - Sound doesn't travel through empty spaces
  - Sound causes vibrations when it hits things

# How sound works

Sound is created when something vibrates. It then sends waves of energy into our ears. The sound travels through solid air, liquid or gas before it eventually reaches our ears.

**If there is a stronger vibration the sound you hear will be louder. If there is a softer vibration the sound will be quieter.**

**If there is a quick vibration the pitch will be higher. If there is a slow vibration the pitch will be lower**





# The Experiment



In this experiment we are going to let you see the sound waves somebody's voice creates.

We will use sugar to represent sound waves.

We will use someone's voice as a vibration.

Morgan has kindly agreed to let us use her voice for this experiment.



# What you will need

- Empty clear, glass mixing bowl
- Plastic wrap/ cling film
- Large rubber band
- Sugar granules

# How to do it

1 Place a sheet of plastic wrap over the bowl, secure the plastic wrap with a rubber band

2 Place a few pieces of sugar on top of the plastic wrap

3 Now we need Morgan

4 Get close to the bowl and say something loud, then try whispering.



## How it works

The sugar vibrates because of the sound from your voice. The louder the noise or vibration the more the waves/sugar will move. If you whisper the waves/sugar will not move as much. The cling film and bowl together act like a trampoline.



# Quiz

1. True or false light is very important
2. True or false we put our mirror at 24 degrees
3. True or false our experiment didn't work

1. True or false sound is not a type of energy.
2. True or false sound travels in waves.
3. True or false sound vibrations get sent to your toes.



*The End*

*Thankyou*