Light 1

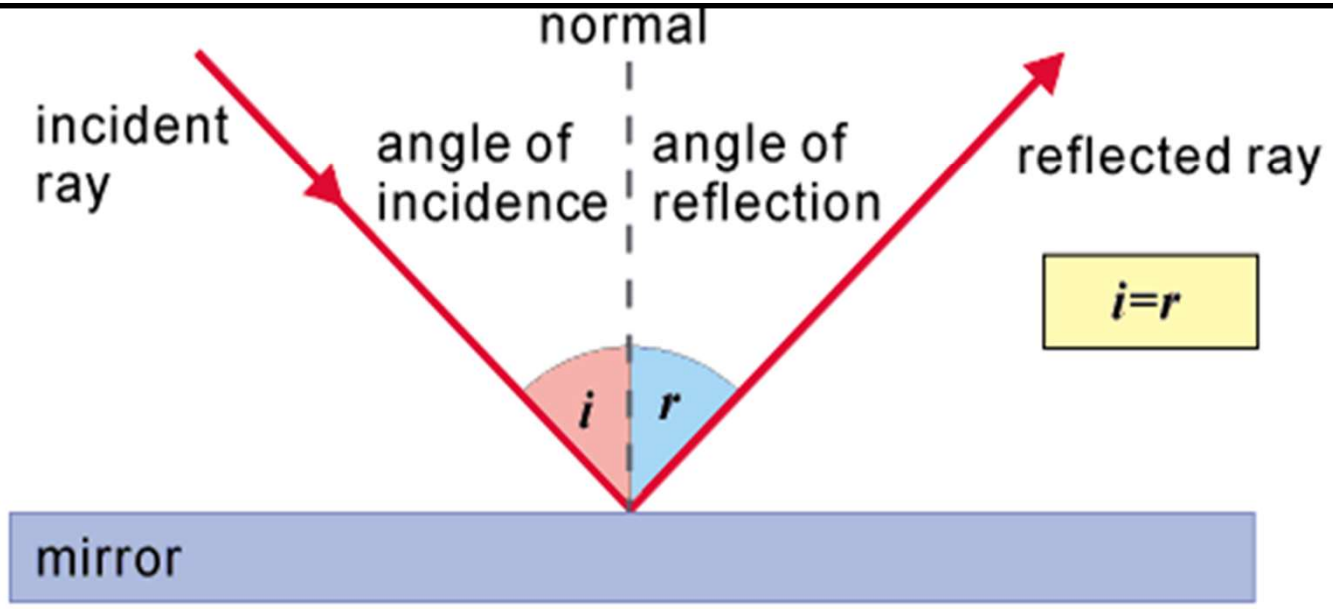
Monday 11 May 2020

Light Travels In Straight Lines

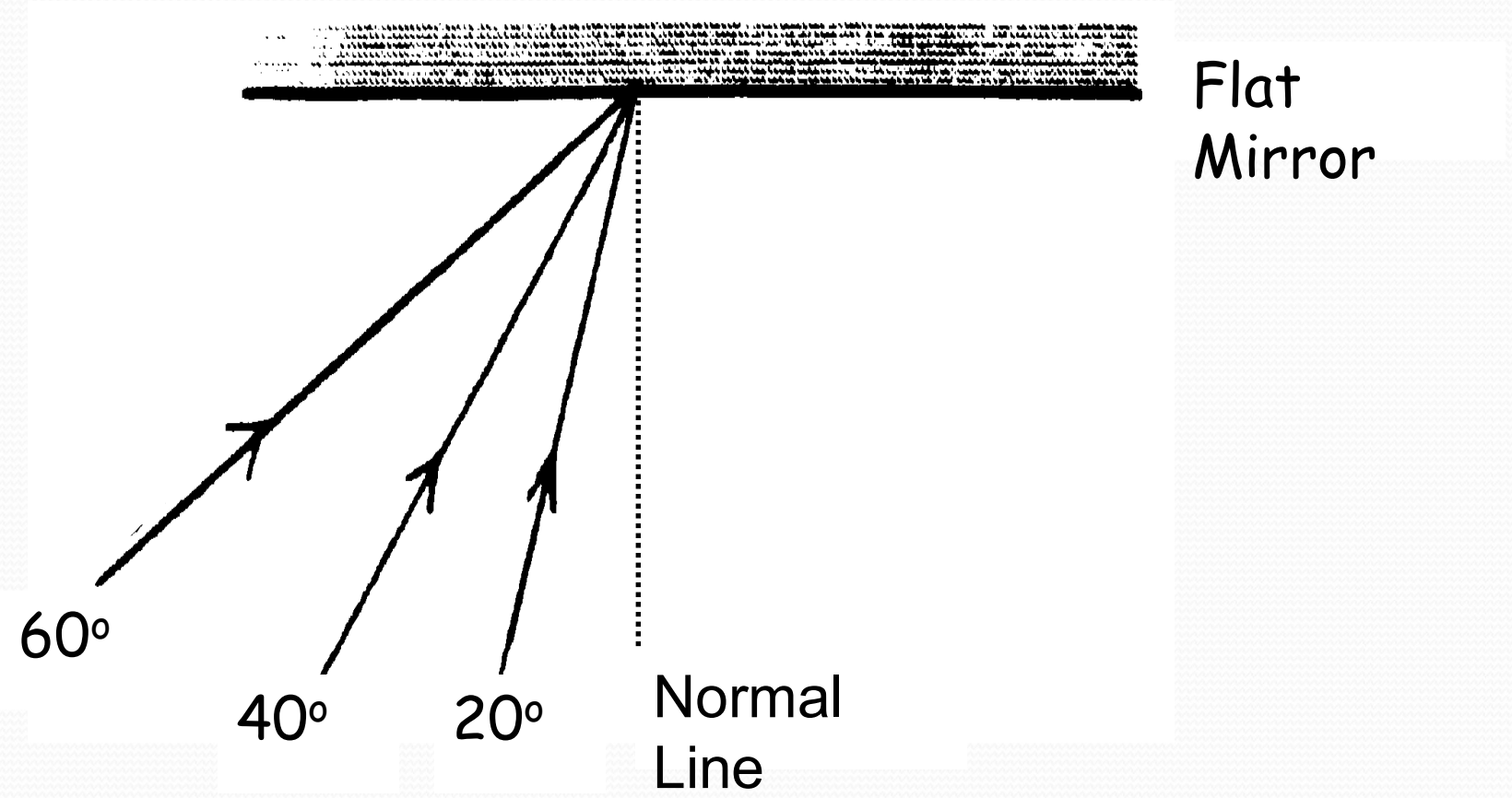
Once **light** has been produced, it will keep travelling in a **straight line** until it hits something else. Shadows are evidence of **light** travelling in **straight lines**. An object blocks **light** so that it can't reach the surface where we see the shadow.

Law of Reflection

The **law of reflection** states that when a ray of **light** reflects off a surface, the angle of incidence is equal to the angle of **reflection**.



Reflection – Copy And Complete The Following Diagram



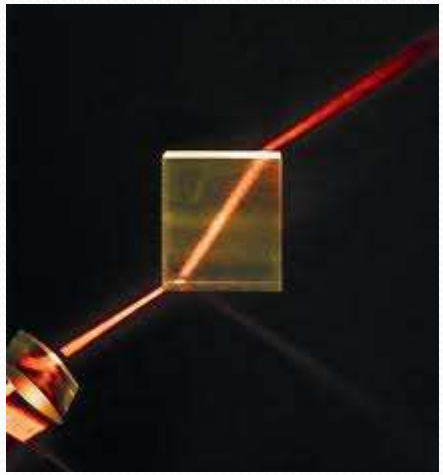
Everyday Uses Of Light Reflection

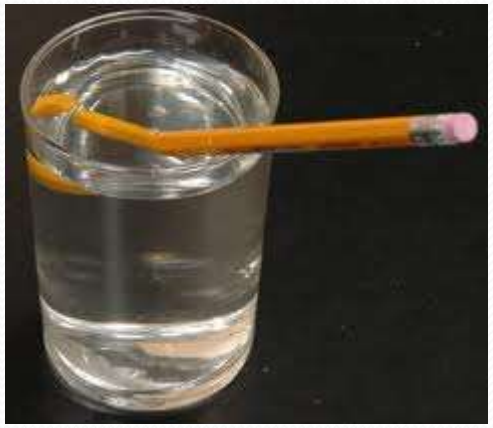
Using the internet research some everyday applications of light that rely on light reflection.

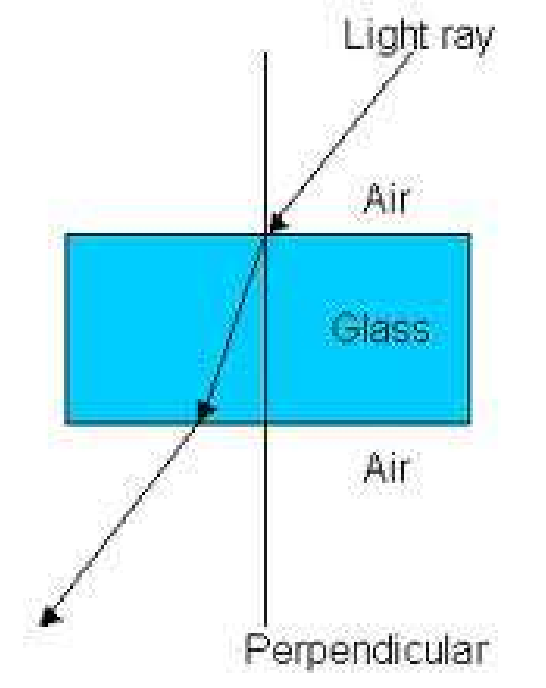
Select any 2 applications and write a short description of them

Refraction

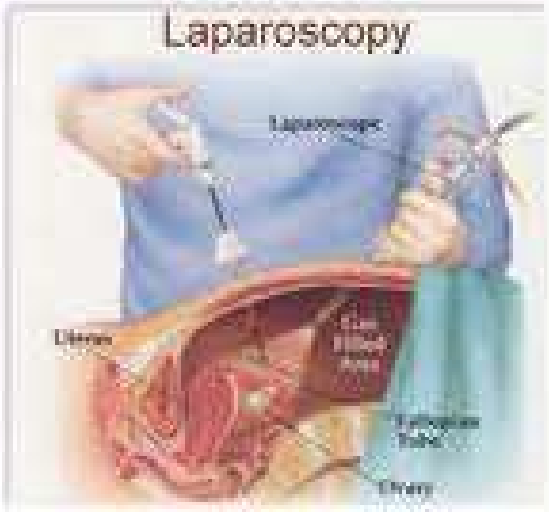
- Refraction is the name given to the Bending of Light.
- Without refraction, we wouldn't have Broadband Internet, or Key Hole Surgery.







Refraction At Work



Light Refraction Through Glass and Water

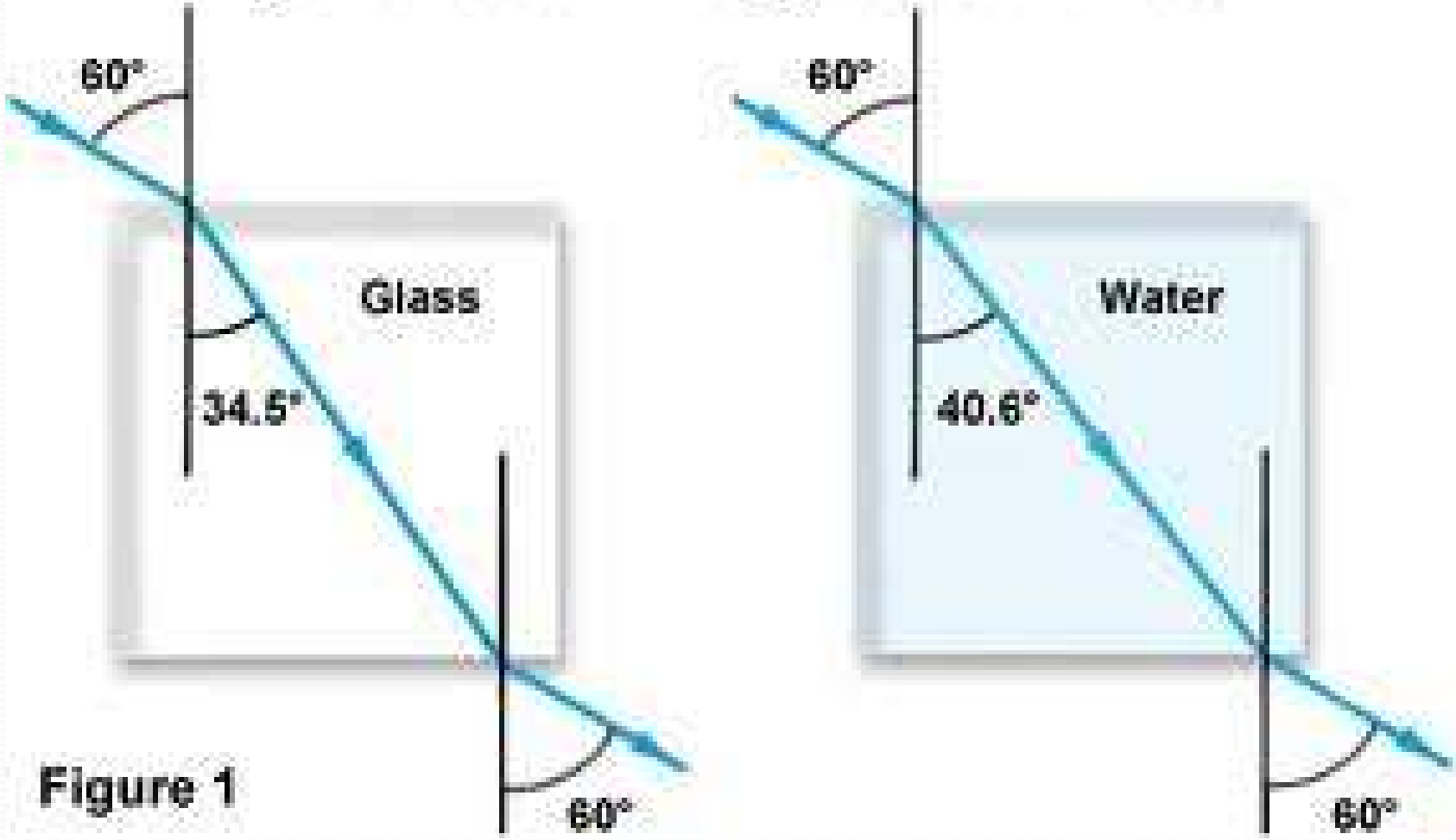
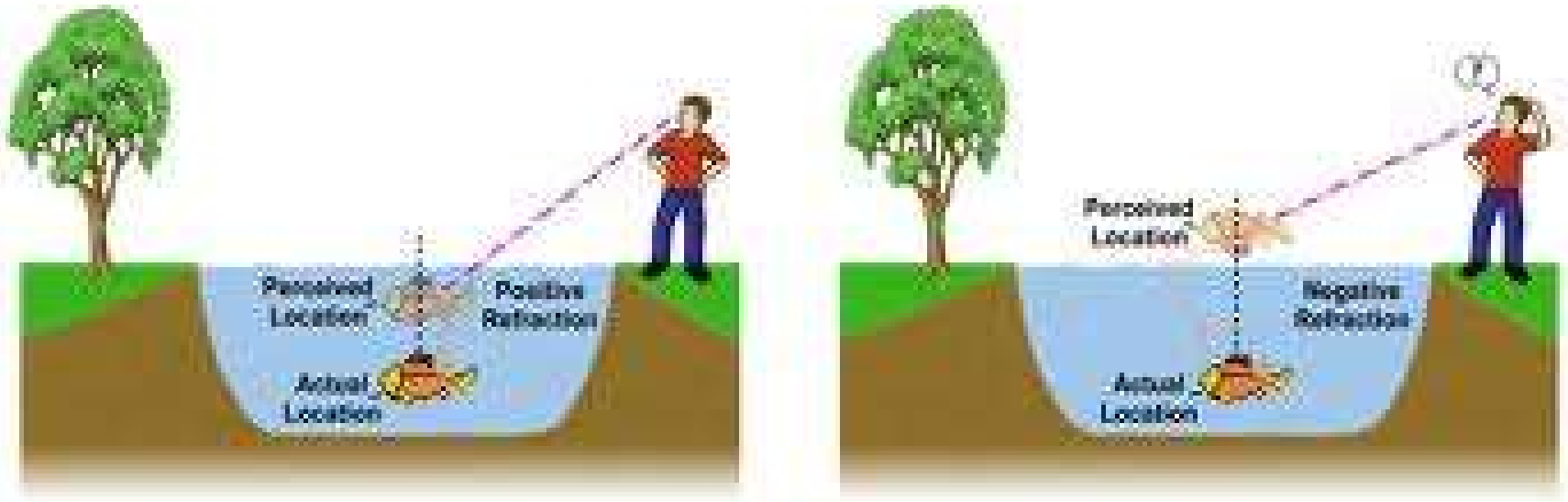


Figure 1

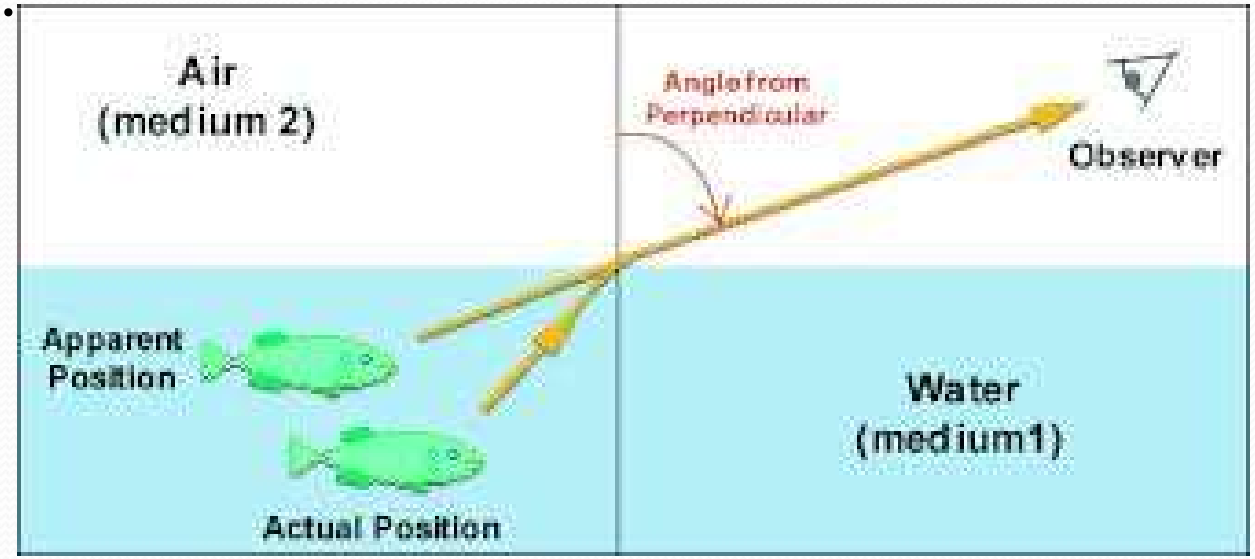
Refraction

Search the internet for a video about light refraction



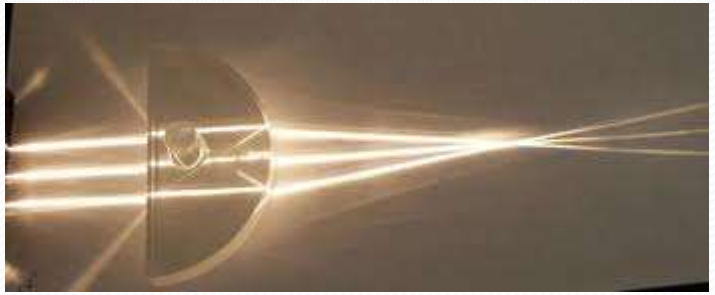
Refraction

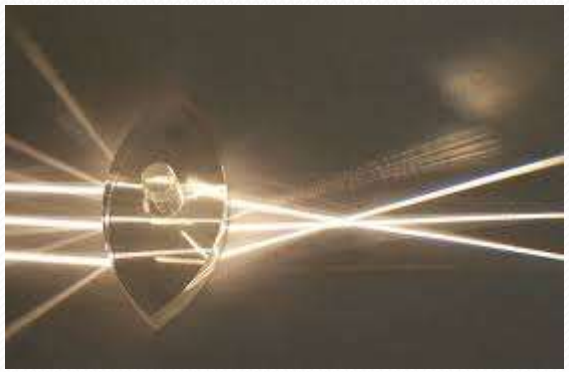
- Notice how the Light Ray bends (changes direction) towards the Normal Line when it enters the water, but bends away again (from the Normal) when it leaves the water.



Lenses

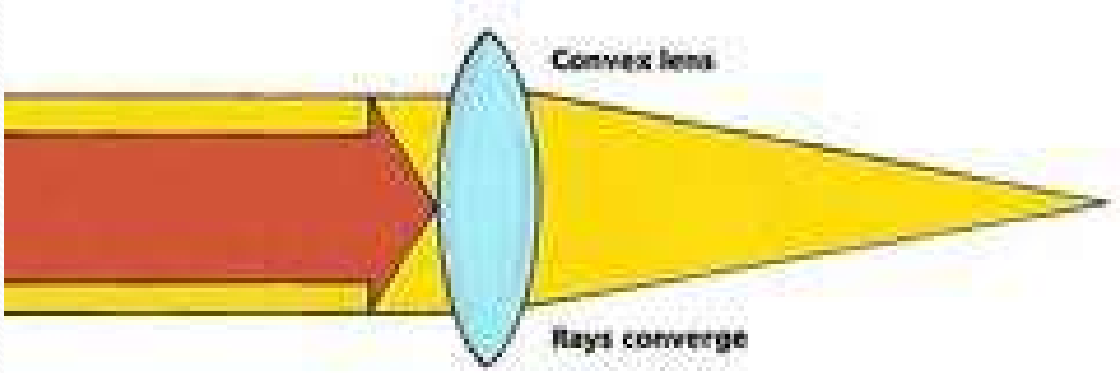
- There are two types of lenses that you will need to remember.
- Both are equally important!



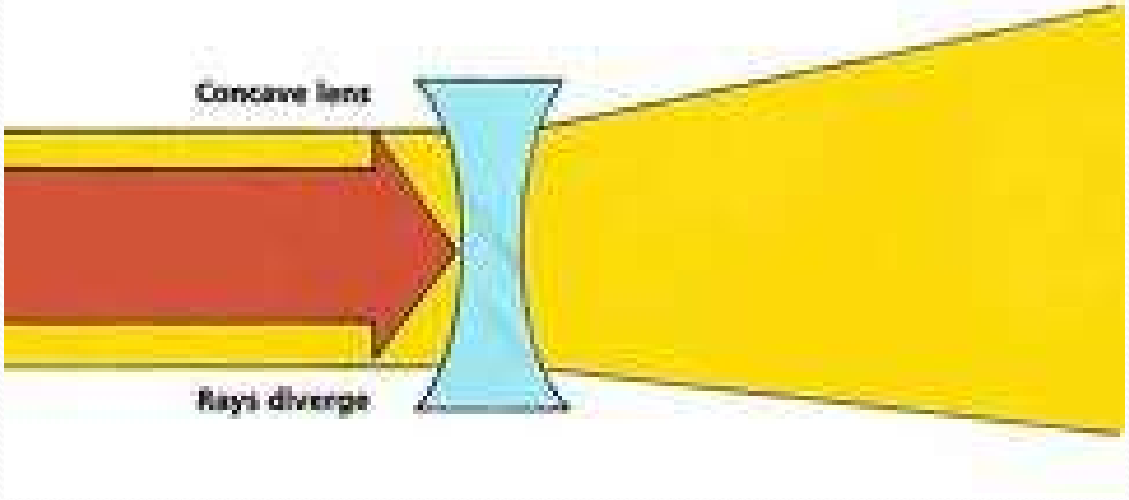


Lenses

Convex Lens

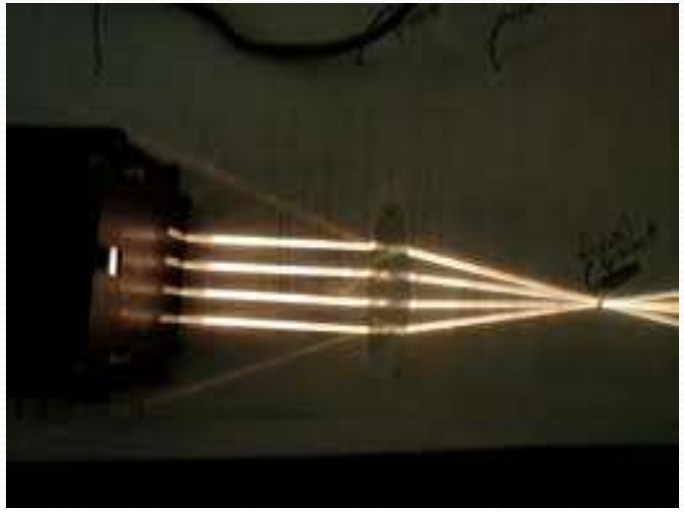


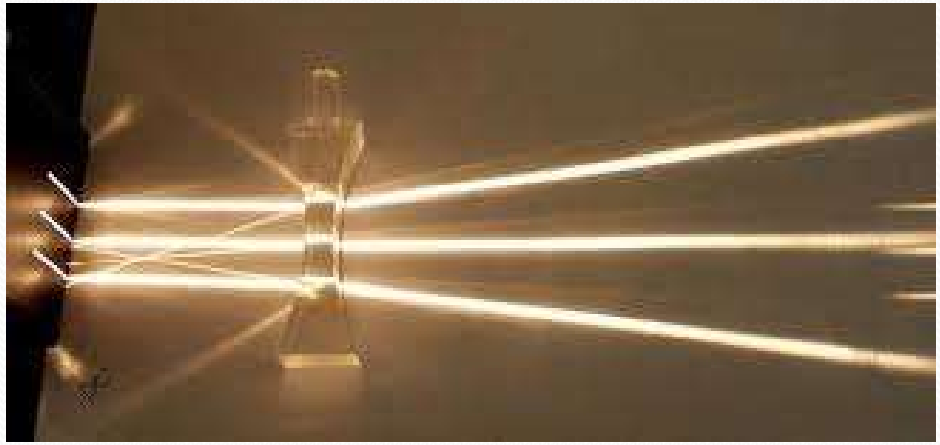
Concave Lens



Lenses

- Notice the triple slits shine parallel rays of light through each lens.
- Copy the lens diagrams showing the path that the light rays take when going into and out of each lens.





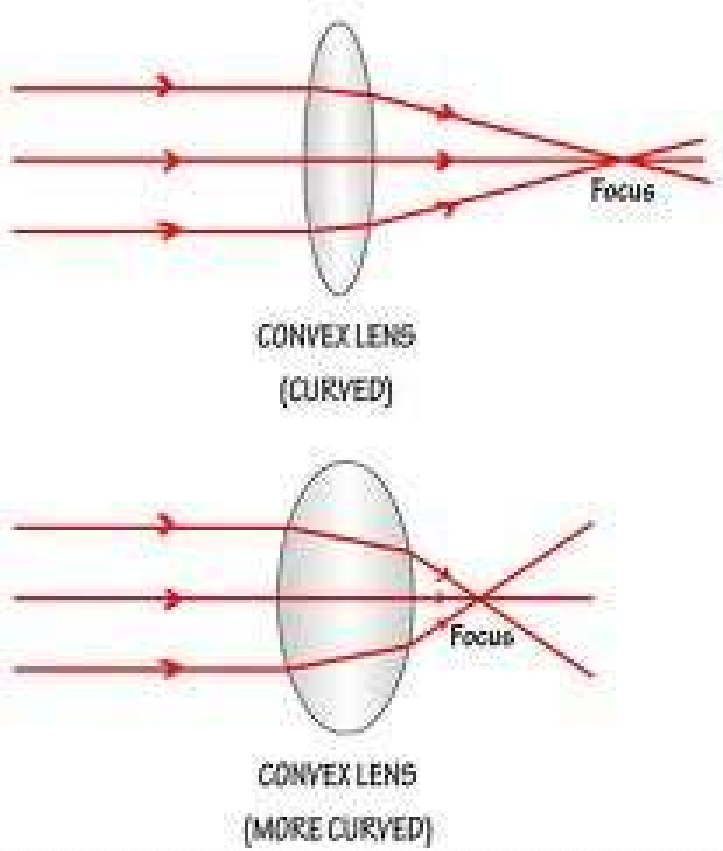
Convex Lenses

Notice how the thicker the lens the more the light bends.

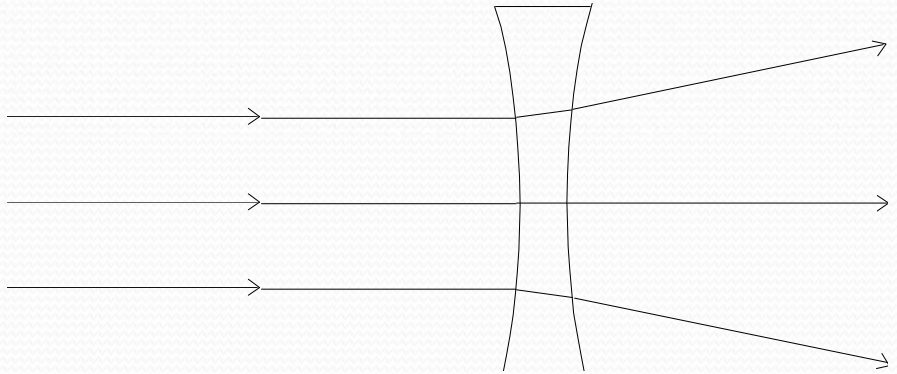
The point were the rays Come together is called the focus.

Convex lenses cause light to converge.

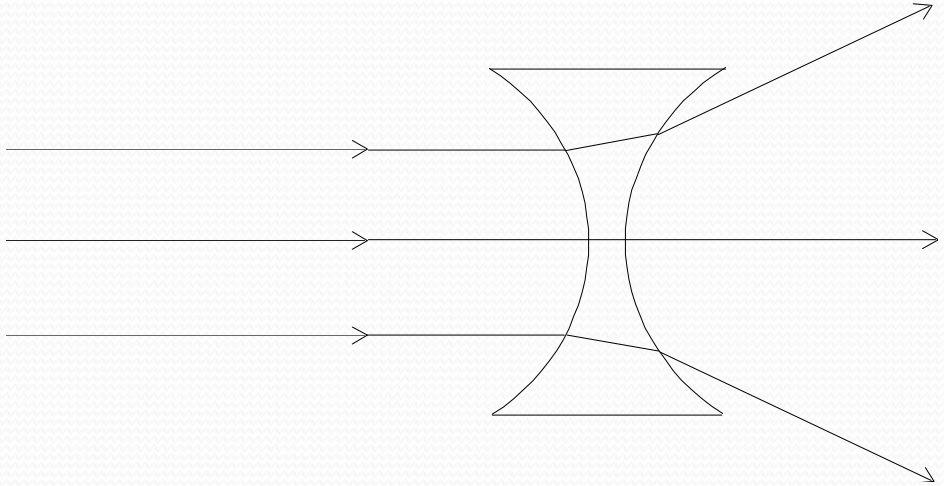
Copy these ray diagrams into your notes.



Concave Lenses



Concave lenses cause light rays to diverge.



Copy these ray diagrams into your notes.

Uses Of Lenses Poster

- Choose two of the examples below and research them on the internet.
- Draw a poster including ray diagrams to explain how they work.

- Cameras.
- Binoculars.
- Magnifying Glass.
- Telescope.
- Microscope.
- Spectacles.