

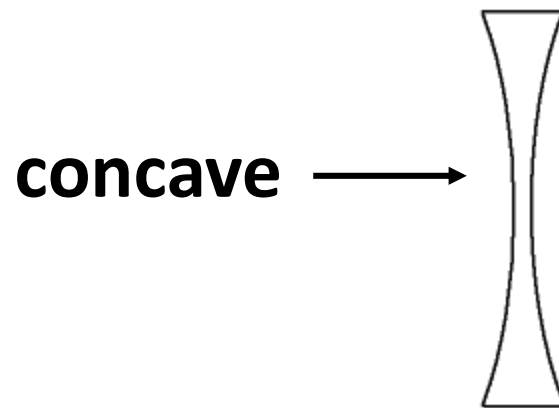
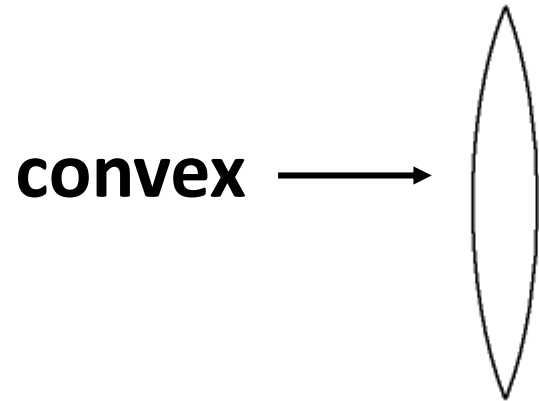
# Activity

1. Get a ray box and a set of lenses.
2. Plug the ray box in and use the 5-slit baffle to produce 5 parallel light rays.
3. Put a lens in front of the light and observe any change of the rays.
4. For each lens, answer the following questions on a piece of paper.
  - What happens to the rays when they go through the lens?
  - Think about 2 real life examples of using this type of lens.

# Lenses

A lens is a curved piece of transparent material that causes light to refract.

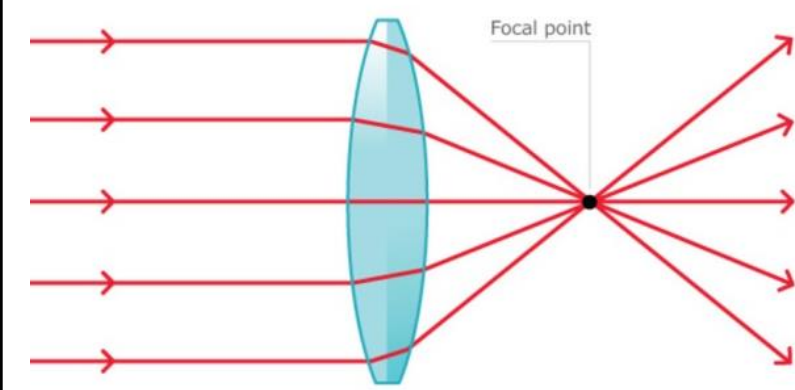
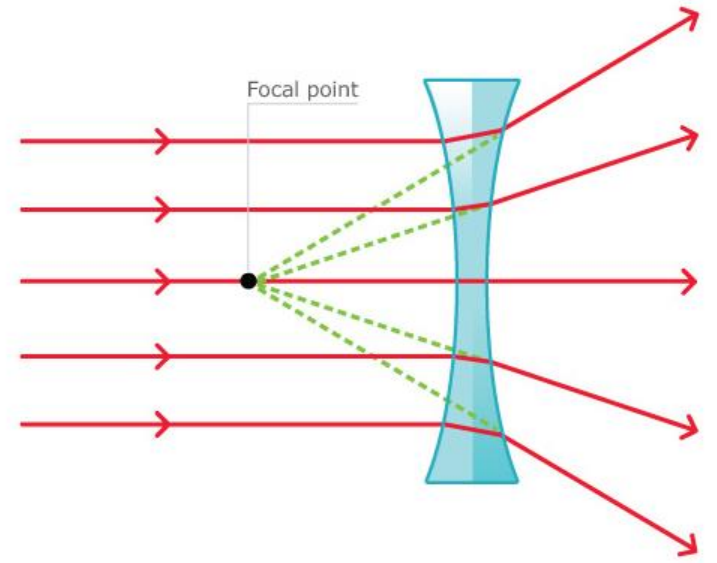
Types of lenses:



# Lenses

	<b>Convex</b>	<b>Concave</b>
<i>Shape</i>	The middle is <b>thicker</b> than the edges	The middle is <b>thinner</b> than the edges
<i>What happens to the light rays when they go through the lens?</i>	The rays <b>come together</b>	The rays <b>spread apart</b>
<i>Scientific term to describe this kind of lens</i>	<b>Converging</b>	<b>Diverging</b>
<i>Real life examples</i>	Eyeglasses (farsighted), microscope, magnifying glass, telescope	Eyeglasses (nearsighted), door viewing hole

# Lenses

	Convex	Concave
<i>Path of light rays</i>	 <p>A diagram of a convex lens, which is thicker in the middle and thinner at the edges. Six parallel red arrows representing light rays enter from the left. After passing through the lens, the rays converge and meet at a single point on the right. A black dot marks this point, and a label 'Focal point' with a line pointing to it is positioned above the dot.</p>	 <p>A diagram of a concave lens, which is thinner in the middle and thicker at the edges. Six parallel red arrows representing light rays enter from the left. After passing through the lens, the rays diverge away from each other. Dotted green lines are drawn backwards from the diverging rays to a single point on the left. A black dot marks this point, and a label 'Focal point' with a line pointing to it is positioned above the dot.</p>

# Lenses vs mirrors

	<b>Mirrors</b>	<b>Lenses</b>
<i>Process that causes images to be formed</i>	Reflection	Refraction
<i>No. of sides</i>	<b>1</b>	<b>2</b>
<i>No. of focal points</i>	<b>1</b>	<b>2</b>