Lenses

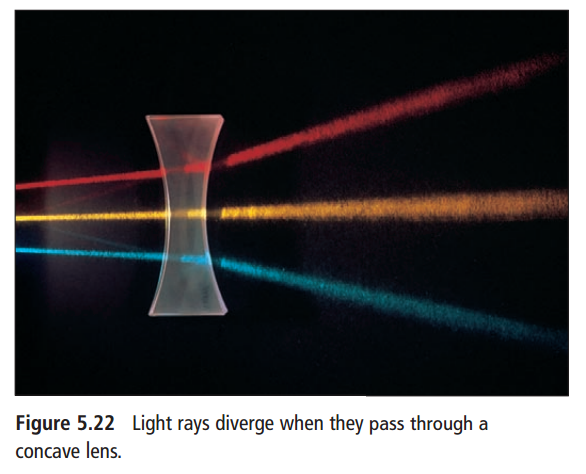
Focus:

1. To be able to describe the difference between a lens and a mirror
2. To be able to describe the difference between a concave and convex lens
3. To be able to describe the image formed through a concave and a convex lens

* A lens is a curved \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ material that refracts (\_\_\_\_\_\_\_\_\_) light.

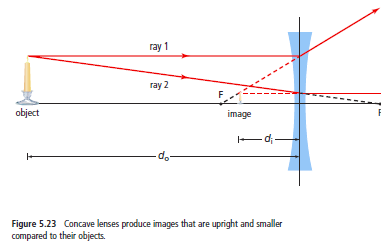
Concave Lenses

* Concave lenses are lenses that are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in the middle than at the edges. Light rays that pass through a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ lens diverge (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_)
* The image formed is always \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and smaller than the actual object.

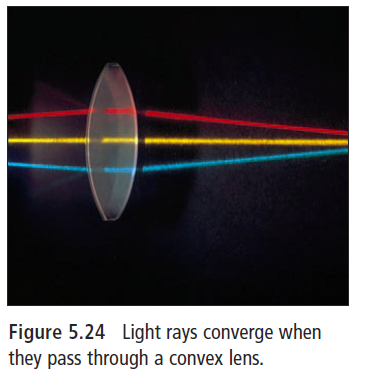


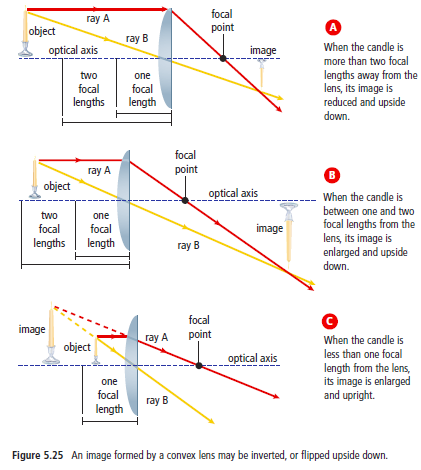
In Summary

|  |  |
| --- | --- |
| Distance of Object from Lens | Type of Image Formed |
| Any location |  |



Convex Lenses

* Convex lenses are lenses that are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in the middle than at the edges. Light rays that pass through a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ lens will converge (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_)
* The image from a convex lens can be \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or upright depending on the position of the object.
* Whether an image is upright or upside down will depend on how close it is to the lens
  + Focal length: The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from the centre of the \_\_\_\_\_\_\_\_\_\_\_\_ or mirror to the focal point

In Summary:

|  |  |
| --- | --- |
| Distance of Object from Lens | Type of Image Formed |
| More than two focal lengths |  |
| Between one and two focal lengths |  |
| Object at focal point |  |
| Less than one focal length |  |