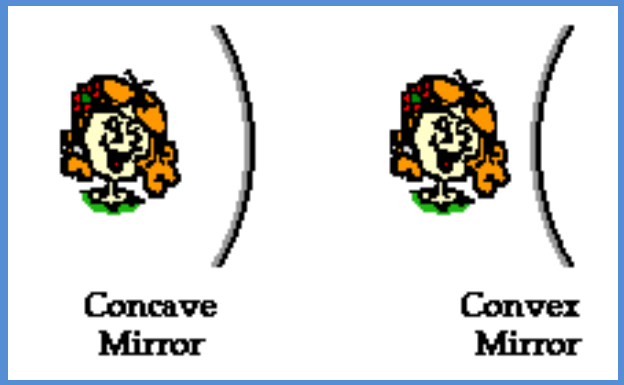
Curved Mirrors

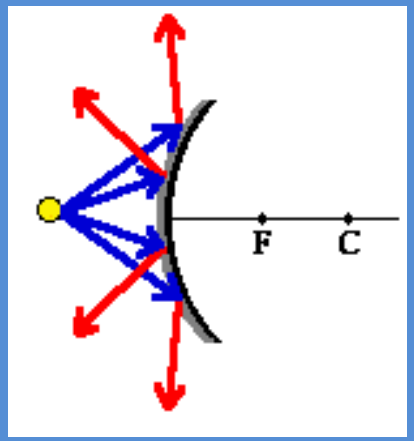
Curved Mirrors

- A **curved mirror** is a mirror with a curved reflective surface, which may be either
- *convex* (bulging outward)
- *concave* (bulging inward).



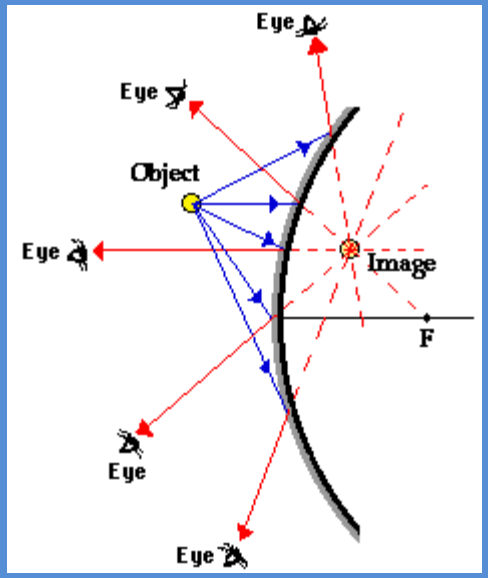
Convex Mirrors

- **A convex mirror is sometimes referred to as a diverging mirror due to the fact that incident light originating from the same point and will reflect off the mirror surface and diverge**



Convex Mirrors

- It appears that all of the light rays come from a point behind the mirror
- This is called the principal focus



Convex Mirrors

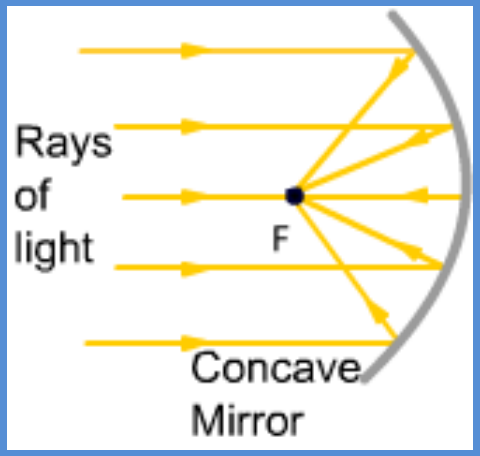
- Produce an image that is upright and virtual
- They cannot be captured on a screen
- Smaller than the object
- Give a wider field of view

Concave Mirrors

- Mirror curved inward
- Often used to magnify an image

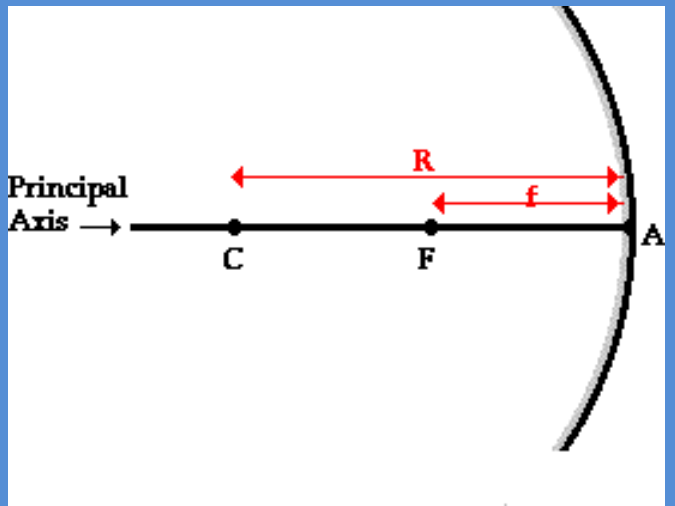
Concave Mirror

- Concave mirrors reflect light inward to one focal point, therefore they are used to focus light



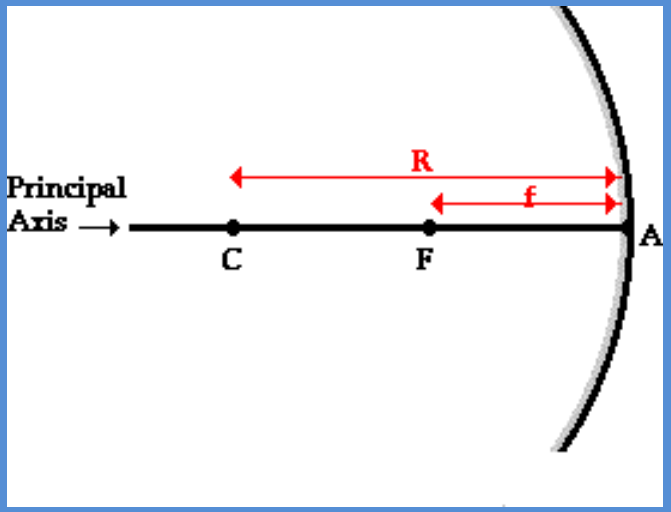
Concave Mirror

- A concave mirror is a slice of a sphere
- A line passing through the centre of the sphere and attaching to the mirror in the exact centre of the mirror is known as the principal axis



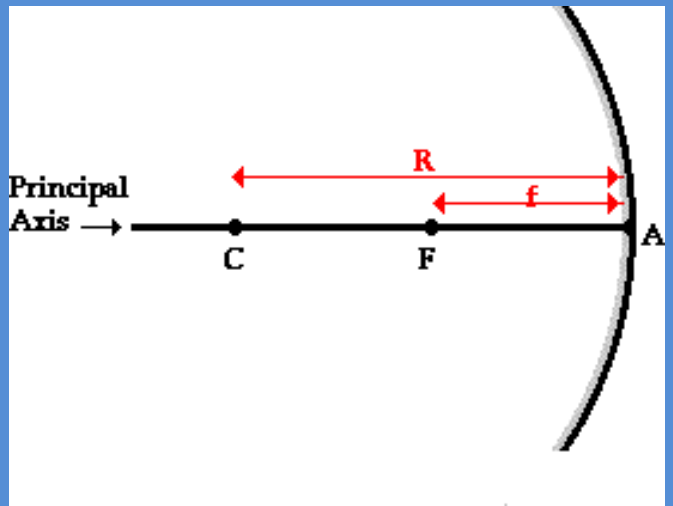
Concave Mirror

- The point in the centre of the sphere from which the mirror was sliced is known as the **centre of curvature** and is denoted by the letter **C**



Concave Mirror

- Midway between the mirror and the centre of curvature is a point known as the **focal point**
- The distance from the mirror to the focal point is known as the **focal length**



Concave Mirror

- The image in a concave mirror depends on where the object is in relation to the focal length
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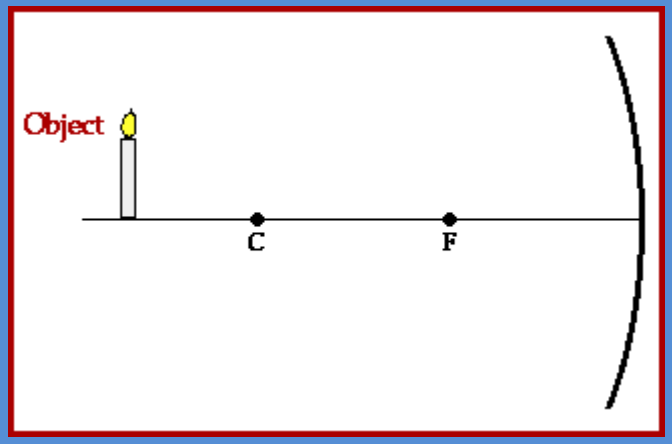
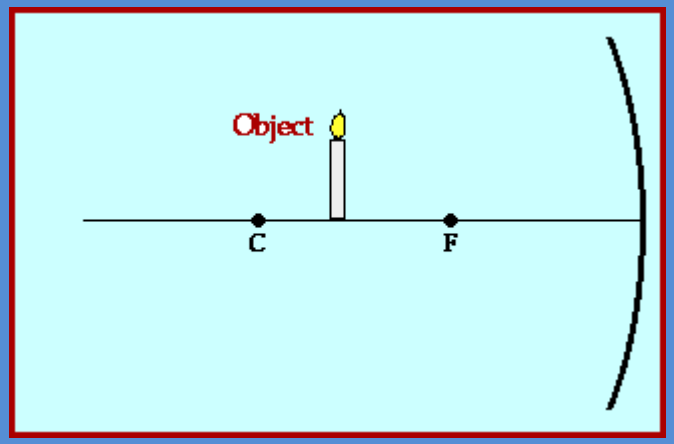


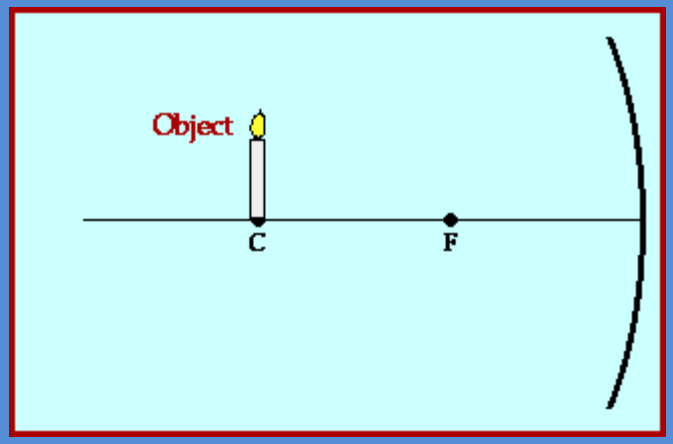
Concave Mirror

- If the object is closer to the mirror that the focal length the image is upright and magnified



Concave Mirror

- If the object is farther to the mirror than the focal length then the image is upside down and small



Concave Mirror

- Rays of Incidence