Unit 8: Waves  
**4 – Reflection**

When a wave travels into a new medium some is \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_.

The amount of reflection depends on…

Reflective Surface

Why can you not see your reflection in all flat surfaces?

Light reflected from a plane (\_\_\_\_\_\_\_) mirror follows the Law of Reflection

These angles are measured from the \_\_\_\_\_\_\_\_\_\_\_\_ a line \_\_\_\_\_\_\_\_\_\_\_\_\_ to the mirror

Ray Diagrams

When you look at your image in a plane mirror it is:

* The same \_\_\_\_\_\_\_\_\_ behind the mirror as you are in front of it.
* \_\_\_\_\_ \_\_\_\_\_\_ \_\_ and \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_.
* Also, the reflected light has the same speed, wavelength and frequency as the incident light.

When drawing ray diagrams we draw two rays of light coming from the object, reflecting of and heading to the observer.

1) The Sun is 1.50x108 km from Earth. How long does it take for the light from the Sun to reach us?

Since the surface is curved the normal is different at each point.

Curved Mirrors:

**Concave**:

**Convex**:

Convex Mirrors:

Concave Mirrors:

**Principle Axis:**

**Centre of Curvature ( ):**

**Focal Point ( ):**

**Focal length ( ):**

Consider the situation where an object is beyond the center of curvature:

**Remember:**

Now consider if the object were between C and F

Finally consider the case where the object is within the focal point, F.

Convex Mirror: