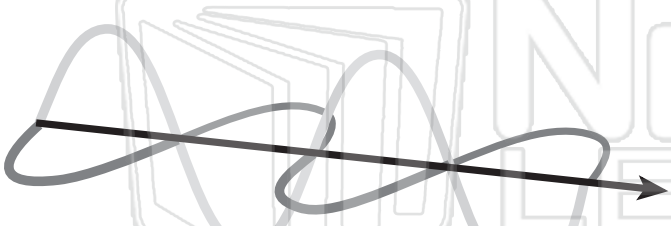
Light

Name _____ Class _____ Date _____

Light is everywhere. It is produced by **luminous** objects, such as fires, light bulbs and the Sun. Unlike sound, light does **not** require matter through which to travel, and it can travel through a **vacuum** such as space. Light travels at **300 million m/s**, faster than anything scientists have yet to discover.



Light is an **electromagnetic wave** that is made of vibrating **electric** and **magnetic** fields which are at right angles to each other. The light that we can see is called **visible light**, but there is also light that we cannot see, including **ultraviolet light** and **infrared light**.

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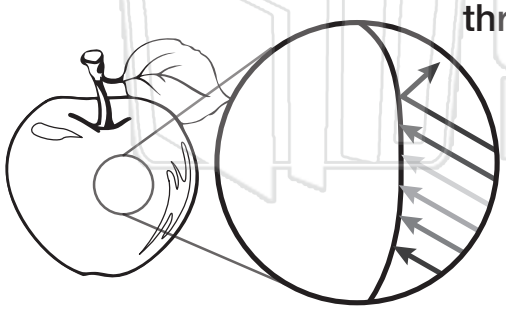

Visible light makes up just a small part of the electromagnetic spectrum, but it too can be broken up into different **wavelengths**. When passed through a glass prism, an ordinary light beam **refracts** into the many different colors or wavelengths of light.

The **color** of an object is determined by the **wavelengths** of light that reach our eye. A **red-colored** object appears red because **only red light** is **reflected** while the other colors of light are **absorbed**.

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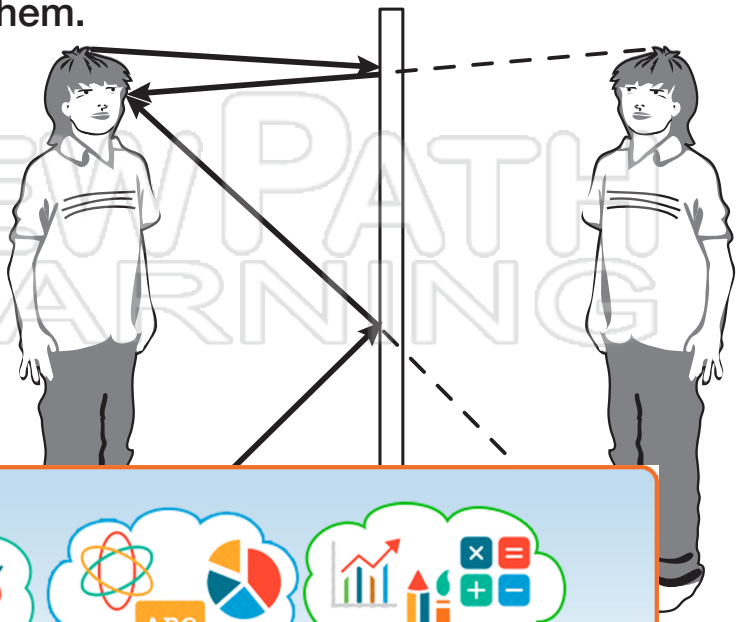
Reflection of Light

Light that bounces off surfaces is called **reflection**. Because **mirrors** reflect light evenly, we can see an image in them.

A mirror with a **flat surface** is called a **plane mirror**. It is usually made from a sheet of flat glass, with a thin coating of aluminum or silver on the back to reflect the light.



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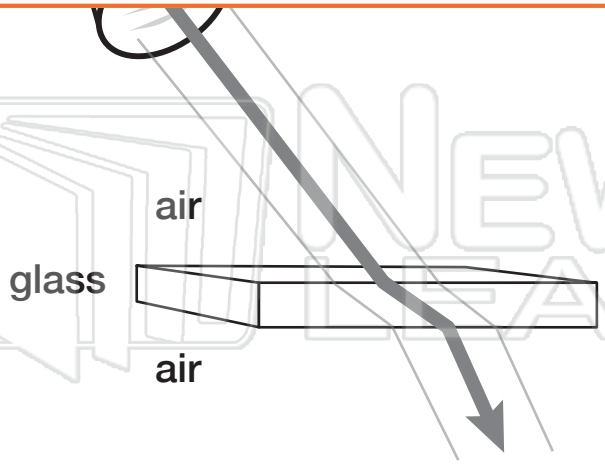
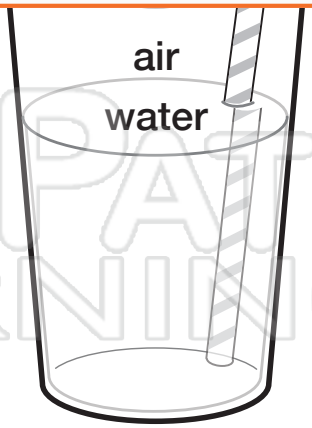
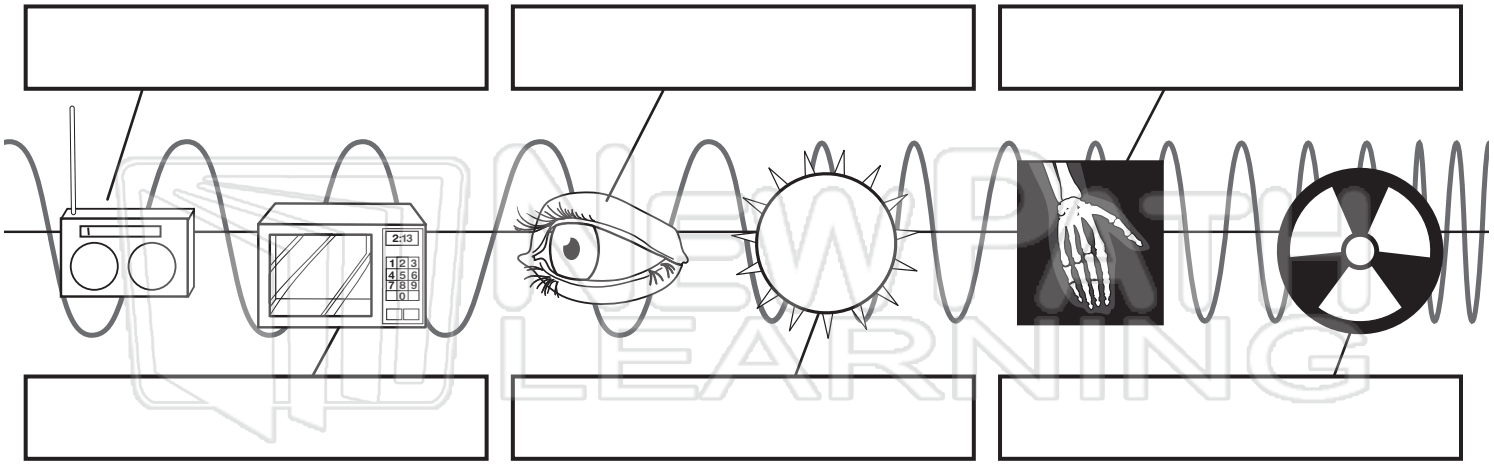




Light

Name _____ Class _____ Date _____

Label the different wavelengths on the **electromagnetic spectrum**.



We can only see wavelengths and frequencies of colors in the **visible spec**

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PREVIEW

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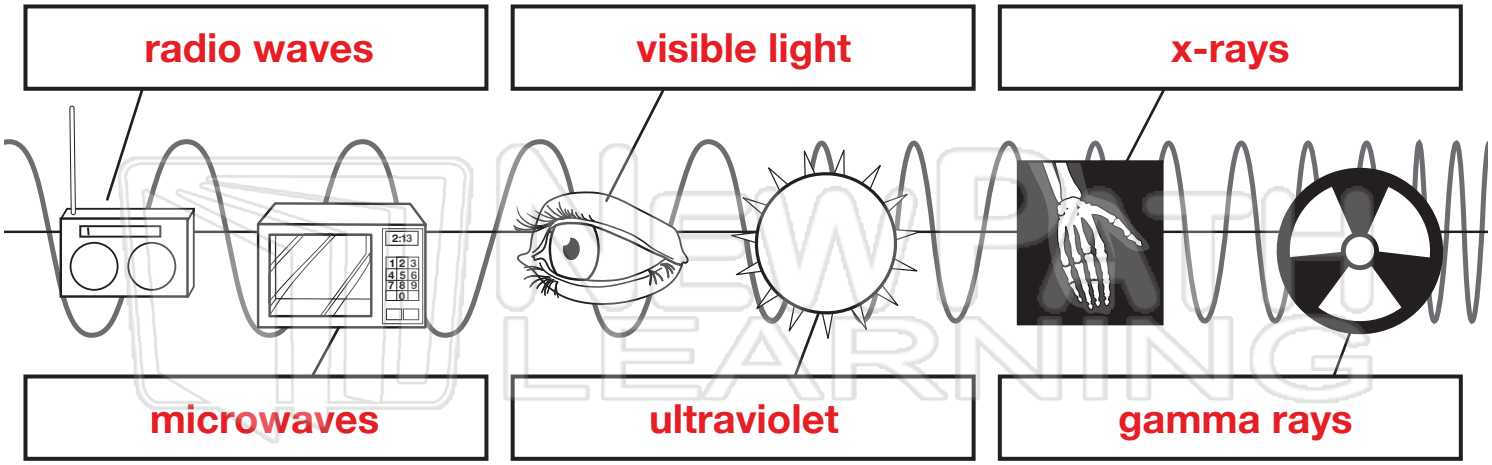
Light that **bounces off** surfaces is called _____. Because _____ reflect light evenly, we can see an image in them.

Although **light** normally travels in **straight lines**, it can bend at the **boundary** between two materials with different _____. This is called _____.

Light

Answer Key

Label the different wavelengths on the **electromagnetic spectrum**.



We can only see wavelengths and frequencies of colors in the visible spec
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Light that **bounces off** surfaces is called _____reflection_____. Because _____mirrors_____ reflect light evenly, we can see an image in them.

Although **light** normally travels in **straight lines**, it can bend at the **boundary** between two materials with different _____densities_____. This is called _____refraction_____.