

Producing light

_____ objects produce their own light
_____ objects only reflect light

There are several ways that visible light can be produced

Unfortunately other forms of light are often created when we try to create visible light. Heat (_____) is one of the most common by products of visible light production.

Efficiency is a comparison of how much visible light is being produced compared to the total amount of electromagnetic radiation being produced

Inefficient energy use create _____ while producing visible light.

Percent Efficiency =

Ways to produce light:

Heating an object -

Chemical reactions -

Living organism have special enzymes and molecules that react to produce light

-

Friction (rubbing) or breaking crystals can produce light on impact

-

Electrons can absorb energy and release energy in the form of light

Electricity is moving electrons. We can use these moving electrons to hit other electrons produce light. -

Light can be absorbed by electrons and then released at different rates depending on the type of material -

When electrons jump from one location to another they produce light (sparks, lightning) -

Producing light

Luminous objects produce their own light

Non luminous objects only reflect light

There are several ways that visible light can be produced

Unfortunately other forms of light are often created when we try to create visible light.

Heat (Infrared light) is one of the most common by products of visible light production.

Efficiency is a comparison of how much visible light is being produced compared to the total amount of electromagnetic radiation being produced

Inefficient energy use create lots of heat while producing visible light.

$$\text{Percent Efficiency} = \frac{\text{Energy used to make light}}{\text{Total Energy used}} \times 100$$

Ways to produce light:

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Chemical reactions -

Living organism have special enzymes and molecules that react to produce light

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