

# The Life Cycle of a Plant

All living plants have a life cycle. They begin as a seed, grow into a mature plant and produce new seeds. However, not all plants produce seeds like lower plants like mosses produce different cells called spores. These plants too have a life cycle but don't use seeds.

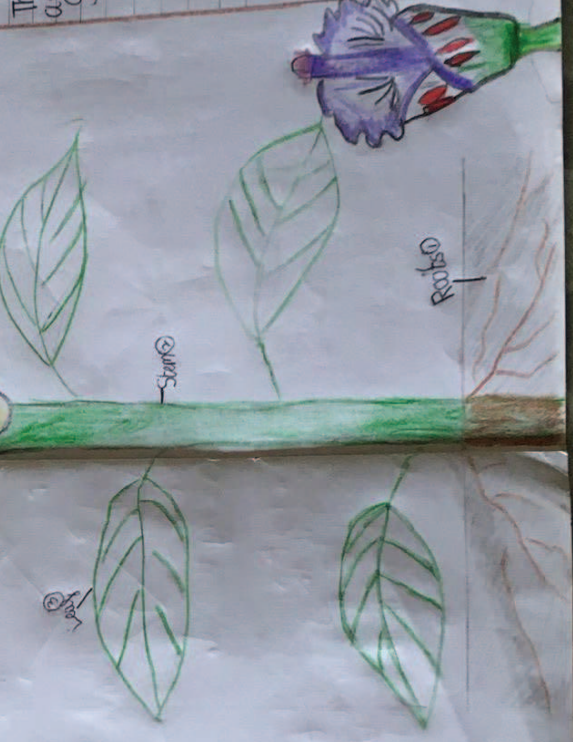
The life of a plant begins with a seed. A seed is a young plant that contains nutrition to start a life of a plant.

Seeds can survive for many years! Seeds come in all different shapes and sizes. They can be covered in shells, fruits and skins.

The next stage is germination. Germination is when a plant begins to grow. Its seeds when they get water and warm air, the seed doesn't germinate with these.

After germination plants start to get to the ground or to grow. The soil plants need sunlight and air to survive and to grow.

From seeds get dispersed away to new places and the life cycle starts again. Seeds get dispersed by wind, water or animals.



The functions of the different parts of the flower are:  
 1. **Roots** is part of the plant that grows at first as the plant grows. The roots hold the plant steady and absorb water and nutrients from the soil.  
 2. **Stem** is the part of the plant that carries water and nutrients from the roots to the leaves and other parts of the plant.  
 3. **Leaves** are the part of the plant that make food for the whole plant. They use sunlight and carbon dioxide to make food through photosynthesis.  
 4. **Flower** is the part of the plant that produces seeds. It is the part of the plant that is responsible for reproduction.

## What is a Rainforest?

There are many types of rainforests. Tropical rainforests are found in warm, wet areas. They have a lot of different types of plants and animals. The plants are very tall and have many leaves. The animals are very diverse. Rainforests are important because they help to keep the Earth's climate stable. They also provide many different types of products that we use every day.

The rainforest is also known as the lungs of the Earth. It produces a lot of oxygen that we breathe. It also absorbs a lot of carbon dioxide that we put into the air. Rainforests are home to many different types of plants and animals. Some of the plants are very tall and have many leaves. Some of the animals are very colorful and beautiful. Rainforests are important because they help to keep the Earth's climate stable. They also provide many different types of products that we use every day.



## Source of Light

Natural sources of light include sun, stars, fire and electricity in storms. There are also animals and plants that create their own light. Such as fireflies, jellyfish and mushrooms. This is called bioluminescence. Artificial light is created by humans.



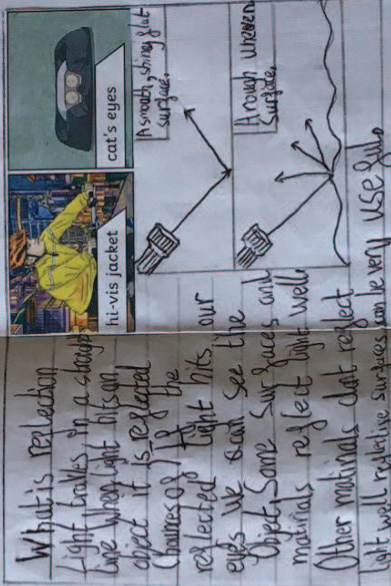
## How do we see things?

We see things when light enters our eyes. The pupils in our eyes can change size to let more light in when it is dark or less light when it is bright. This is important because too much light is not good for our eyes. All objects give off light. Reflects of surfaces and into our eyes. Sun produces its own light so it can be seen as long as we are facing it. The moon does not make its own light we only see it when the sun's light reflects

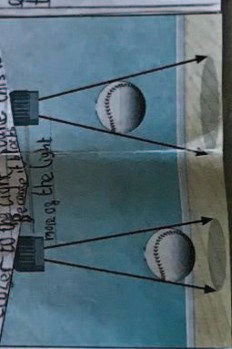
# Light socks



William or Sir P. called and connected to the patent office. Although the patenting described several ways of creating the carbon filament including using cotton and linen thread and wood splines paper covered in various ways. If his patent was granted, Edison would have lost over 200 hours. This discovery stopped the company of commercially manufacturing light bulbs until in 1880 Thomas Edison's company brought out its new product.



A shadow is caused when light is blocked by an opaque object. The shadow is longer when the object is closer to the light source.



How are shadows formed?

When a light source is to one side of an object, the shadow will appear on the opposite side. The shadow will also change.



## Thomas Edison and The First Light Bulb

In 1878 Thomas Edison began his serious research into the incandescent lamp and in October 1879 he patented his first incandescent lamp. However, he continued to test several designs to improve upon his original design and in November 1880 he was granted a patent for his electric lamp using a carbon filament. Although the patenting described several ways of creating the carbon filament including using cotton and linen thread and wood splines paper covered in various ways. If his patent was granted, Edison would have lost over 200 hours. This discovery stopped the company of commercially manufacturing light bulbs until in 1880 Thomas Edison's company brought out its new product.

The evolution of the light bulb  
 • 1880 Edison improved his lightbulb until it could last 2000 hours.  
 • Used bamboo derived filament.  
 • 1915 Willis Whitney invented a filament that would make inside of a light bulb turn completely dark.  
 • 1916 The General Electric Company patented the use of a tungsten use in the lightbulbs. These filaments were expensive.  
 • 1940 William David Coolidge invented an improved filament. Tungsten filaments produced longer-lasting lightbulbs.  
 • The first lightbulbs were produced by Edison's company.  
 • Philips Company a lightbulb that lasts 60,000 hours.

When the light source is directly above the object, the shadow will be directly underneath.