**The Life Cycle of a Plant**

Plants have a life cycle, just like humans and other animals. The plant life cycle describes the stages the plant goes through from the beginning of its life until the end when the process starts all over again.

**Seeds**

The life cycle of a plant begins with a seed. Some non-flowering plants, such as ferns, begin with spores. You are probably familiar with seeds and may have even eaten a few, such as sunflower or pumpkins seeds.

A seed has a protective coating called the shell. The shell contains everything needed to start a new plant. Inside the seed coating is an embryo, which will become the new plant, and the endosperm, which provides the nutrients for the embryo.

Seeds are dispersed, or spread, in a variety of ways. Some are blown by the wind. Others float on water. Still, others are carried by birds, bees, other insects, or on the fur of animals. Some are even eaten by animals and spread through their waste. And, of course, humans plant seeds for their fruit or to make their lawns attractive.

Once a seed reaches its destination, the next stage of the life cycle begins.

**Germination**

Seeds need four things to grow: oxygen, moisture, sunlight, and the right temperature. When the proper conditions are met for the seed, it will begin to sprout. The roots push their way through the seed coating and begin growing into the soil. This process is called germination.

***Seedlings***

A small, fragile young plant called a seedling will then poke its way out of the ground and start growing towards the sunlight. The seedling gets many of the nutrients it needs to grow from the soil through its roots.

The seedling also gets nutrients from the sun. A plant’s leaves contain a green pigment called chlorophyll. This pigment uses sunlight, water, and carbon dioxide to produce energy for the plant in a process called photosynthesis.

***Adult Plant***

Photosynthesis helps the seedling grow into a mature plant. The mature plant produces flowers, which ensure that the life cycle continues.

A mature plant has leaves, roots, and a stem. The roots extract nutrients and water from the soil. These are carried to the plant by the stem, which also serves to support the plant. The leaves create energy through photosynthesis.

The flower is the part of a plant needed for reproduction. It is made up of many different parts. The petals are usually bright and colourful for attracting insects to help with the pollination process.

The stamen is the part of the plant that produces pollen. Pollen is a powdery substance, often yellow, that contains half of the genetic material needed to create a new plant.

The stigma is the part of the flower the receives the pollen. It contains the ovules of the plant. The ovules will become seeds when they are fertilized by the pollen.

**Pollination**

The process of getting the pollen from the stamen of one plant to the stigma of another is called pollination. Pollen may be carried by the wind, but it is often transported from one flower to another by insects. Some types of bats even help with the pollination process.

Bees, butterflies, and other insects (or bats) are attracted to flowers by the colourful petals. The insects drink the nectar (a sweet liquid) that flowering plants produce. While the insect crawls around the plant drinking the nectar, it gets pollen on its legs and body. When the insect flies to another plant to drink more nectar, some of the pollen from the first plant is deposited onto the second plant.

Remember, pollen contains half of the genetic material needed to produce a new plant. The ovules, located in the stigma, contain the other half. When the pollen reaches the ovules of a plant, they are fertilized and become seeds.

Then, the plant's fertilized seeds are dispersed by wind, water, or animals, and the whole process begins again.