



Year 3 - Cycles in Nature Reading Booklet

1. The Four Seasons (prior learning)
2. Seasonal Cycles in Plants
3. Life Cycle of a Plant
4. Animal Migration
5. Life Cycle of a Frog
6. Assessment

Name: _____

Class: _____

Lesson 1 - The Four Seasons

Over the course of the year, we encounter different seasons; spring, summer, autumn and winter. We get these seasons because the Earth is slightly tilted, so as it orbits the sun, some parts of the earth lean towards the sun, but some lean away.

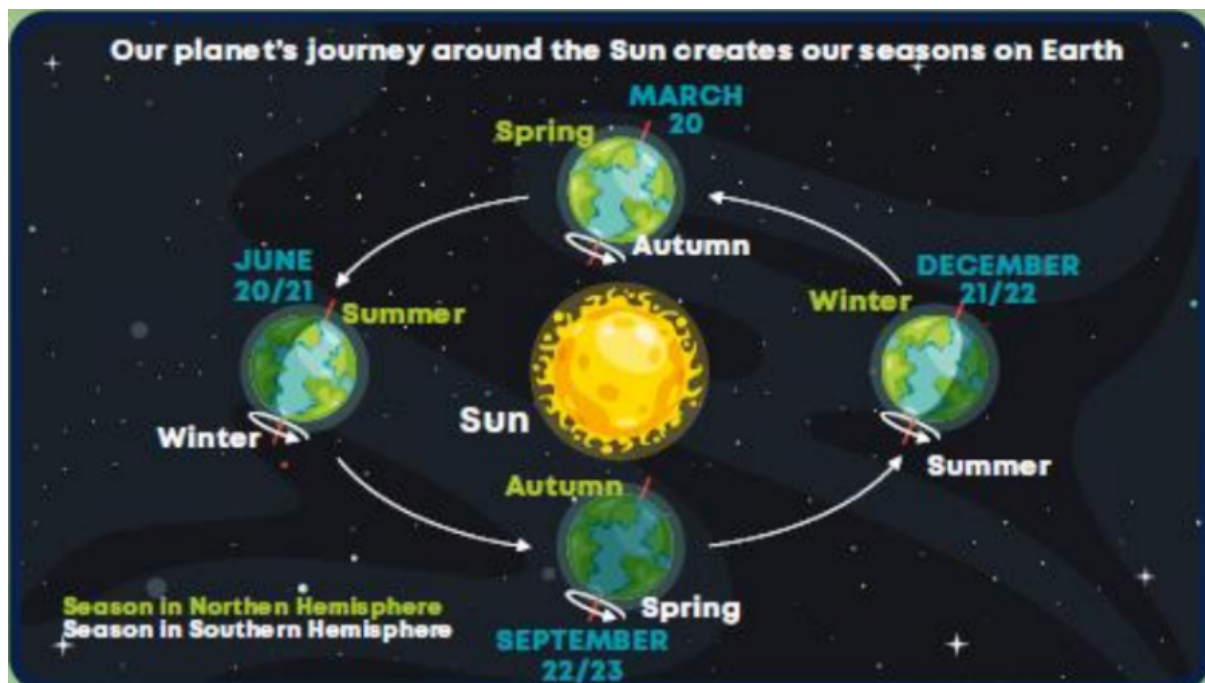
Read this

During our spring, when our part of the Earth is beginning to tilt towards the sun, we start to notice growth in nature because there is more sunlight and the sun's rays bring warmth. During summer, our part of the Earth tilts towards the sun and we experience warmer temperatures, plants receive long hours of sunlight. During autumn, as the earth begins to tilt away from the sun, days become shorter, plants receive less sunlight and temperatures begin to fall. During winter, when our part of the earth is tilting away from the sun, temperatures are at their lowest, so some animals migrate or hibernate, plants retreat into the ground and deciduous trees are bare. The cycle continues into Spring.

Useful links:

<https://www.bbc.co.uk/bitesize/topics/zkvv4wx/articles/zcx3gk7>

<https://www.bbc.co.uk/teach/class-clips-video/science-ks1-ks2-wonders-of-nature-the-changing-seasons/zh4rkmn>

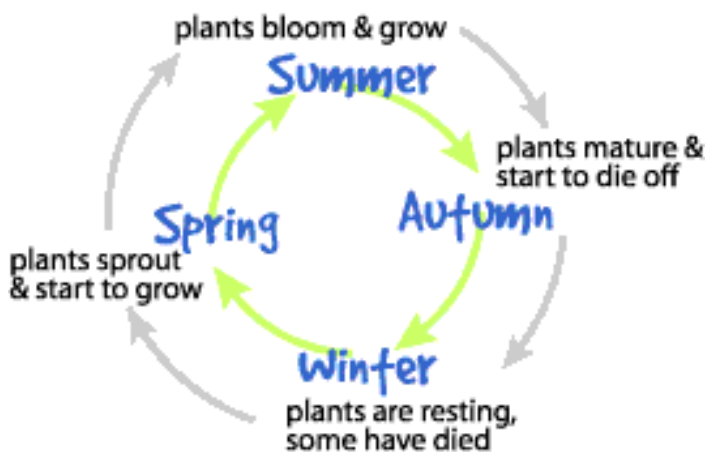


Lesson 2 - Season Cycles In Plants

We know that plants grow in spring, ripen in summer and begin to die in autumn. But why does this happen? Plants take energy from the sun. In the winter, the sun's rays are weaker as the earth is tilting away from the sun and our days of sunlight are short. Many plants don't receive enough energy to grow and make flowers. Some plants and seeds remain dormant through the winter.

Read this

Spring brings more sunlight and therefore more energy from the sun. In the summer plants ripen and mature (ripen means develop until ready to eat, mature means to grow and fully develop) because they have enough energy from the sun to do so. During autumn, the sun's rays become weaker and our days begin to shorten. Plants drop seeds and leaves and begin to die or become dormant for the winter.



Lesson 3 - Life Cycle of a Plant

Plants are able to reproduce in two different ways - sexual reproduction and asexual reproduction. Sexual reproduction involves pollen from one flower fertilising the egg of another to produce a seed.



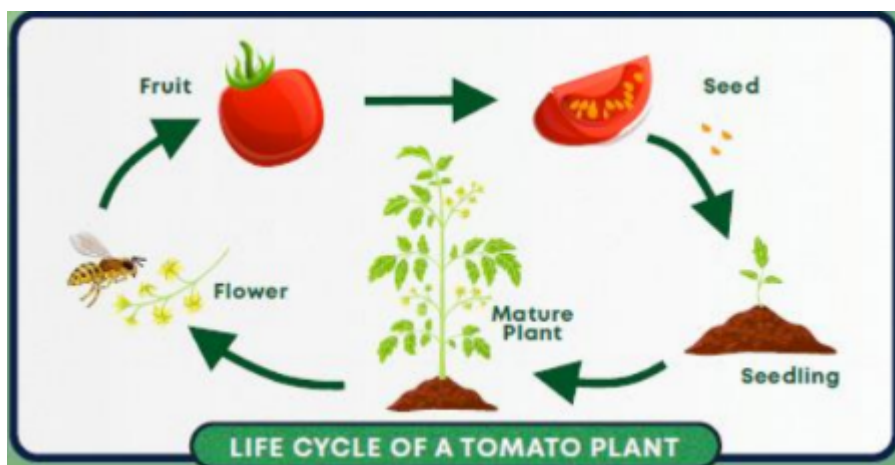
Sexual reproduction in plants happens in a cycle-like pattern. Flowers come from seeds, and they create seeds too. All flowering plants go through the following life cycle.

1. Germination is the process by which a plant begins to grow from a seed. Roots form under the soil. The stem, leaves and flower emerge above the soil.
2. Pollen produced by a flower is carried by insects or blown by the wind to another flower. This process is called pollination.
3. When the pollen reaches another flower, it travels to the ovary where it fertilises the egg cells to make seeds. This process is called fertilisation.
4. These seeds are scattered by animals or the wind. This process is called dispersal. Some of the seeds will grow into new plants.

Useful links:

<https://www.bbc.co.uk/bitesize/topics/zxfrwmn/articles/z7jk8xs>

https://www.youtube.com/watch?v=djPVgip_bdU



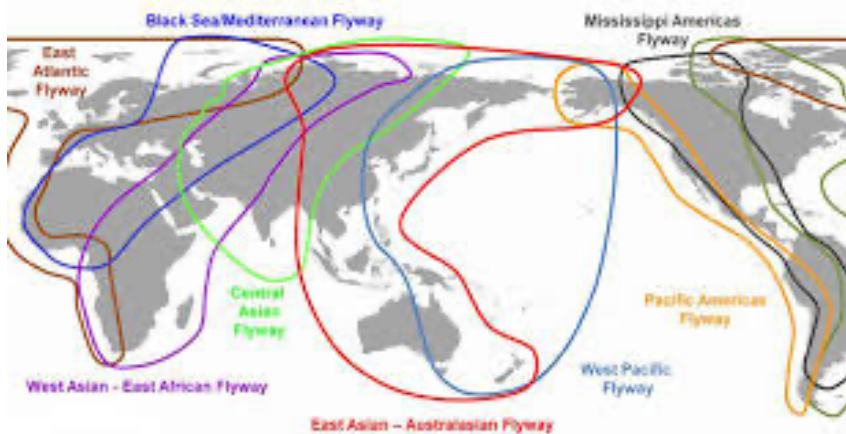
Lesson 4 - Animal Migration

Plants have adapted to the seasonal cycle in this country, animals have done so too. Some animals can hibernate to survive a cold winter. Other animals travel to a warmer region, this is called migration. Migration is one of nature's cycles.



Some animals travel thousands of miles to reach suitable locations that are the right temperature for them. Cuckoos travel over 5,000 miles from sub-Saharan Africa to the UK to breed in the spring, Painted Lady butterflies travel from North Africa, over 800 miles to the UK. Their caterpillars feast on plants in the spring. Some animals migrate from northern areas to the UK during our winter, as nearer the arctic circle, winters are much colder.

Useful link: <https://www.bbc.co.uk/bitesize/articles/zrt66g8>



Lesson 5 - The Life Cycle of a Frog

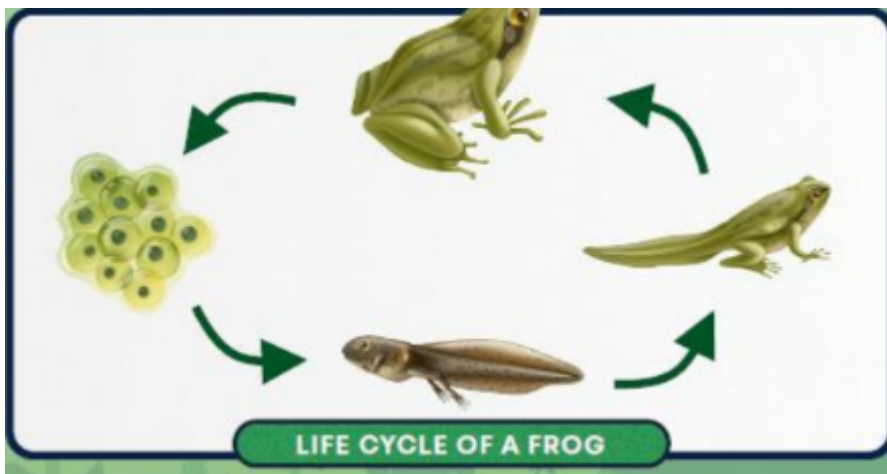
Female frogs lay many eggs in a jelly-like mass called frogspawn. Some of these eggs will not survive long enough to become frogs as other animals like to eat the eggs. Those that do survive will hatch and tadpoles will emerge.

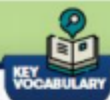
Read this

Tadpoles have no legs, but they have a tail. Tadpoles must stay in water, but as they mature, they grow lungs and will eventually be able to breathe above water. Tadpoles absorb their tails as they mature. Tadpoles don't look anything like frogs, and this change is known as 'metamorphosis'.

Useful link:

<https://www.bbc.co.uk/teach/class-clips-video/science-ks1-animal-life-cycles/zrg9kmn>





Cycle

A series of events that **repeats in the same order**

Seasonal Cycle

The **repeating of the seasons**; spring, summer, autumn and winter

Deciduous

A type of tree that **loses its leaves during autumn** and grows new leaves in spring

Evergreen

A type of tree that **keeps its leaves all year long**

Dormant

Alive but **not actively growing**, appears to be resting or in a deep sleep

Nutrients

A substance that provides food, **essential for life and growth**

Decay

To rot or **break down after death**

Metamorphosis

A huge or **complete change** in a living thing

Frogspawn

A soft, jelly like substance that **contains the eggs of frogs**

Tadpole

The **offspring of a frog**. Tadpoles have a round head and a tail

Pollen

A **fine powder produced by flowering plants** essential for reproduction

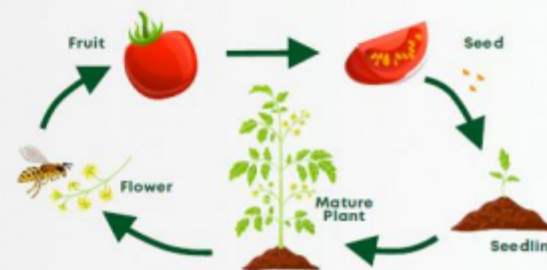
Seed

A **tiny developing plant**, covered in a protective coating

Our planet's journey around the Sun creates our seasons on Earth



LIFE CYCLE OF A FROG



LIFE CYCLE OF A TOMATO PLANT