

Plants

How they grow

All plants need **water**, **warmth** and **light** to grow strong.

If plants do not have enough water, they **wilt** and die. They get most of their water through their roots, then up through the stem. It is like drinking through a straw!

Seeds and bulbs do not need light. Over winter, they stay **dormant** underground or in packets.



Encourage your child to join in as many nature activities as possible so that they learn through first-hand experience.

Bulbs

How does a bulb grow?

- 1 When the bulb feels warmth from the Sun and moisture from the rain, roots begin to grow from the base of the bulb.
- 2 Green leaves begin to grow inside.
- 3 They push up through the soil into the light.
- 4 Leaves grow longer and a shoot grows in the centre of the plant.
- 5 The shoot grows longer and becomes a stem.
- 6 A bud grows on the stem.
- 7 This bud becomes the flower.

Some vegetables are bulbs.



leek



garlic

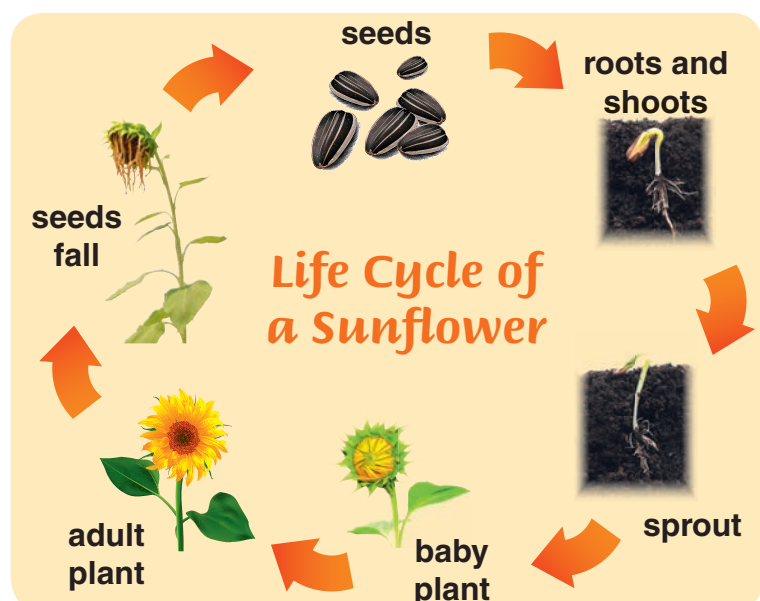


onion

Seeds

Seeds also store food for the plant that will grow from them. When they feel warmth and moisture, they send out roots and shoots and begin to grow.

The picture shows the life cycle of a seed:



Trees

Trees are plants. Trees grow from seeds. The seeds have different names, for example:

- an **oak tree** grows from an **acorn**
- a **pear tree** grows from a **pear pip**
- a **peach tree** grows from a **peach stone**
- a **horse chestnut tree** grows from a **conker**
- a **pine tree** grows from **pine nuts** that grow inside **pine cones**.



Some trees have roots that stretch as wide and deep underground as the branches do above ground.

Working scientifically

Seed experiment

Plant sunflower seeds in your garden in spring. See how tall they grow. Measure them regularly and record your measurements. Count the seeds that grow in the sunflowers – you will be amazed at how many there are!

OR

- 1 Plant some seeds in a tray. Leave them in the sunlight but do not water them.
- 2 Plant some seeds in another tray. Water them but keep them in the fridge.
- 3 Look at the two trays every day.
- 4 Record how well the seeds grow.



Keywords

Wilt ➤ Become limp and droop, often turning yellow and then brown

Dormant ➤ Asleep and ready to be active when the time is right



Collect seeds from fruit in your home and from outside. Examples include apple and orange pips, melon seeds, peach stones, conkers, acorns and beech nuts.

Draw and label the seeds. Order them from smallest to largest.



- 1 What is the seed of an oak tree called?
- 2 What three things do plants need to grow?
- 3 How do plants get moisture?
- 4 What does dormant mean?

The seasons



There are **four seasons** each year: **spring**, **summer**, **autumn** and **winter**. The world goes through many changes as the seasons change. Those changes make a difference to the lives of humans and other living things.

Spring

In spring, the weather slowly becomes warmer. The days get longer and plants begin to come to life.

During spring:

- different flowers appear, such as snowdrops, primroses and crocuses (the snowdrop is usually the first flower to appear)
- catkins hang from hazel trees
- leaves sprout from buds on trees and bushes
- birds make nests, lay eggs and their chicks hatch
- hedgehogs wake up from **hibernation** and look for food
- frogs, toads and newts wake up and return to their pond to lay eggs (spawn).



Summer

In summer, the days are long and the nights are short. The weather is at its warmest and the Sun is at its highest in the sky. People wear light clothing and children play outside.

During summer:

- plants flower and give fruit
- trees are full of leaves and give shade from the Sun
- many birds, such as swallows, **migrate** here from other countries
- animals and birds can find plenty of food to eat
- there are lots of butterflies, ladybirds, bees and other insects.



Parent tip!

Make sure your child knows that they must never look directly at the Sun, even through sunglasses. The Sun can burn the retina at the back of the eye.



Autumn

In autumn, the days get shorter. The weather is cooler and people need to heat their houses and wear more clothes.

During autumn:

- flowers die and develop seeds
- some plants die
- leaves of deciduous trees change colour and fall to the ground
- some birds **migrate** to warmer countries
- animals and birds eat as much as they can before the winter comes
- frogs, toads and newts leave their ponds and look for a sheltered place, such as under a log, to sleep.



Keywords

Hibernate ➤ A deep sleep which some animals fall into during winter

Migrate ➤ Birds fly long distances from one country to another, according to the seasons

Winter

In winter, the days are short and the nights are long. It gets dark in the middle of the afternoon. People wear warm clothes, such as hats, gloves and scarves. Sometimes it is cold enough for snow!

During winter:

- seeds and bulbs lie under the ground, waiting for the warmer weather
- deciduous trees have bare branches; evergreen trees stay green
- many people feed robins, blackbirds and other birds that take shelter in bushes on colder days
- animals like hedgehogs **hibernate** because there is less food for them to eat
- frogs, toads and newts **hibernate** too
- animals such as the badger and rabbit do not hibernate but they stay in their underground homes most of the time and sleep a lot because it is warmer there.



Make a weather chart that shows rain, Sun, cloud, snow and wind. For each type of weather, write or draw what you would wear.



- 1 Put the seasons in the right order, starting with spring:
winter summer spring autumn
- 2 In which season do hedgehogs hibernate?
- 3 In which season do leaves change colour and fall to the ground?
- 4 In which season are the days shortest?



The weather



1 Fill in each gap with the correct word:

hail sleet snow rain

- a.** Water droplets fall as in warm weather. **(1 mark)**
- b.** is pieces of frozen rain. **(1 mark)**
- c.** When rain contains some ice or snowflakes,
it is called **(1 mark)**
- d.** The word describes tiny ice crystals
that fall as white flakes. **(1 mark)**

2 Tick the box next to the correct statement. **(3 marks)**

- a.** A reservoir is a large lake where water is stored.
A reservoir is part of the sea where we can swim.
- b.** A hurricane is a gentle breeze.
A hurricane is a strong wind that causes damage.
- c.** A rainbow appears when the Sun shines and it rains.
A rainbow always appears in a heavy rain storm.

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3 Fill in the gaps with the correct words to complete these sentences all about rain: **(7 marks)**

hands watering grow drink humans drought floods

Plants need rain to help them

Animals and birds need rain to

..... need water for drinking, washing

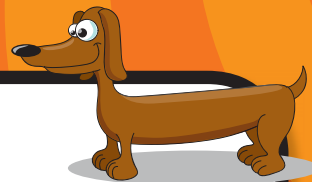
bathing, washing clothes and the garden.

If there is too much rain, there might be If there is

no rain for a long time, there will be a

Total 14

Identifying and naming



- 1** Draw and label five mammals you could keep as a pet.

(5 marks)

- 2** Name three amphibians you might find in a pond.

(3 marks)

.....

- 3** Complete each sentence by writing the correct animal group:

mammal bird reptile amphibian fish insect

a. A mole is a

(1 mark)

b. A dolphin is a

(1 mark)

c. A toad is an

(1 mark)

d. An eagle is a

(1 mark)

e. A snake is a

(1 mark)

f. A bear is a

(1 mark)

g. A butterfly is an

(1 mark)

h. A shark is a

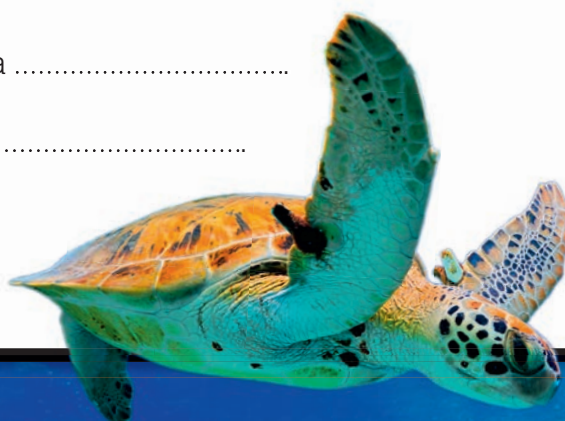
(1 mark)

i. An ostrich is a

(1 mark)

j. A turtle is a

(1 mark)



Total
18