



# Science Knowledge Organiser

## Year 3 Summer 1—Plant reproduction

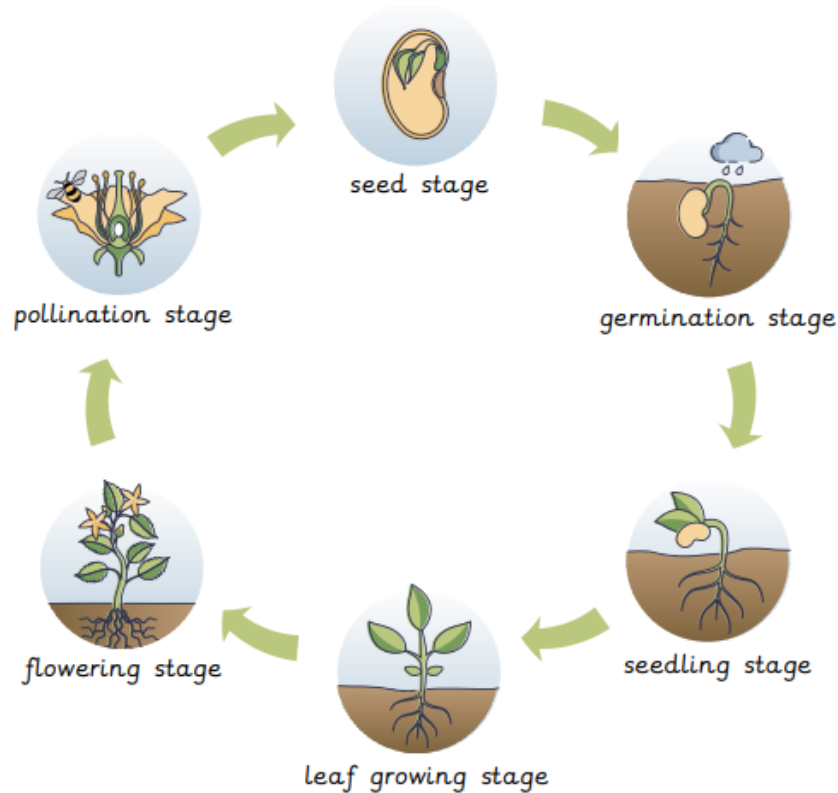





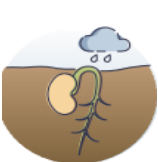
### Plants need:

- Air
- Water
- Light
- Nutrients
- Room to grow

### Key Vocabulary

### The life cycle of a flowering plant



	Key word	Definition
	Pollination	When pollen transfers from the male to the female part of the plant
	Seed dispersal	Seeds are carried away by the parent plant by the wind, animals or water
	Flowering plant	A plant with flowers and seeds
	Germination	When a new plant starts to grow from a seed

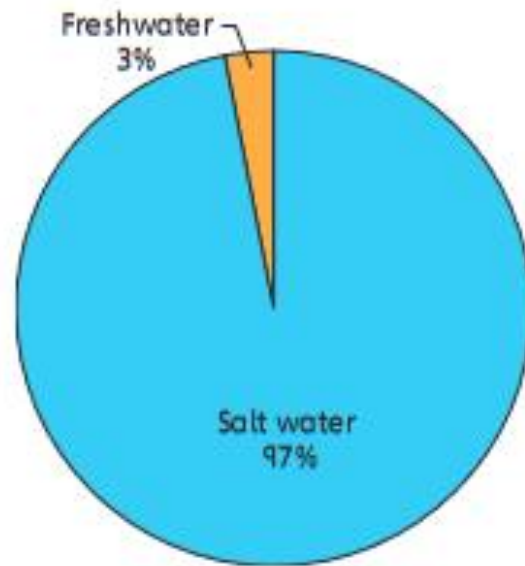
## Vocabulary

air masses	Huge areas of air that have the same temperature and the same amount of water vapour
condensation	When a gas turns into a liquid
evaporation	When a liquid turns into a gas
forecast	A prediction about what will happen in the future, based on evidence
gravity	An invisible force that pulls things towards the centre of the Earth
hemisphere	Half of the Earth: the top half is the northern hemisphere, the bottom half the southern hemisphere
rain shadow	The side of a mountain that does not get much rain
solar system	The Sun and everything that travels round it
water cycle	How water moves around the Earth, evaporating and condensing
water vapour	Water that is in the form of a gas

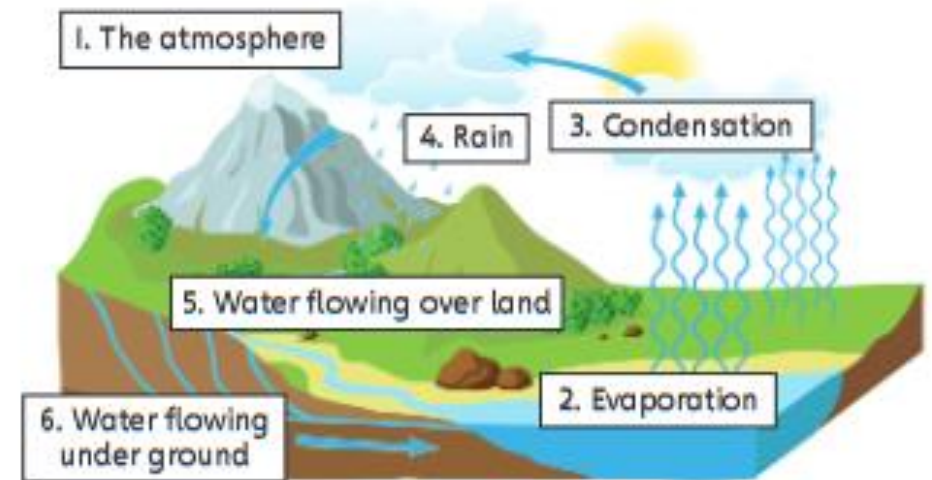
## Knowledge organiser

### Earth's water

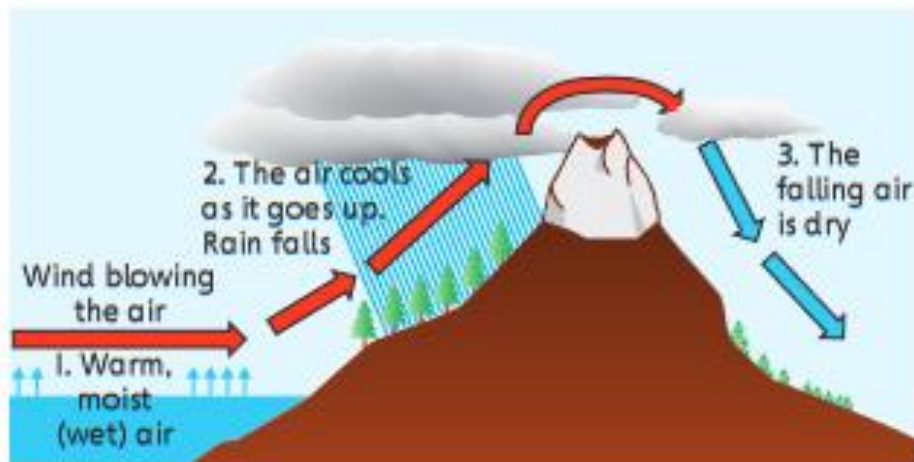
This pie chart shows the percentage of salt water and freshwater on Earth.



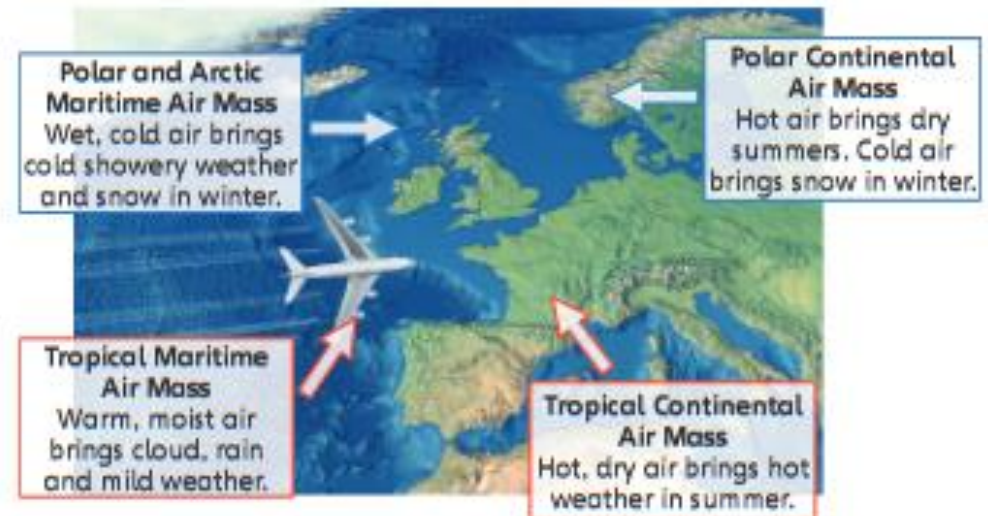
### The water cycle



### Why does it rain?




### Why is the weather in the UK unpredictable?





# Les glaces


phonics

sound in:  
**on** • citron 

sound in:  
**ch** • pistache 

&

**guttural 'r'**  
The 'r' sound in French is guttural from the back of the throat like in the words 'fraïse'  and 'ciron'. 

**silent letters**  
There are many last consonant silent letters in French. The final letter 't' is silent in the word 'chocolat'. 

vocabulary

10 ice-cream flavours in French.



How to ask for a pot, cone and the number of scoops in French.



Je voudrais une glace s'il vous plaît. Je voudrais deux boules à la vanille s'il vous plaît.

*I would like an ice-cream please.  
I would like 2 scoops of vanilla please.*

grammar

In French there are 2 words for the English determiner 'a'. These are often referred to as indefinite articles:

**un**

**une**

*Singular determiner 'a/an'*

The high frequency verb 'je voudrais' means (I would like) in French.

**Je voudrais...**

*I would like...*

## What I will learn:

- Objective 1: I will learn and become more familiar with 5 ice-cream flavours in French.
- Objective 2: I will learn and become more familiar with 5 more ice-cream flavours in French.
- Objective 3: I will learn how to use the first person high frequency verb 'je voudrais' (I would like) in French.
- Objective 4: I will learn how to ask for a cone or a pot of ice-cream and say the number of scoops I would like.
- Objective 5: I will learn how to use all my new knowledge to perform a short role-play to order an ice-cream.

analyse	Look at something in detail.
annotate	Labels on a drawing which help to explain it.
concept	An idea; in this unit, a drawing with labels.
control	To command something to change, such as lighting up or flashing.
evaluate	To decide if the design is the best it can be.
function	What something does.
initiate	To start a program.
program	A script of code that instructs a device to do something.
simulator	A computer-generated imitation of something.
user	A person who uses something.

### product concept

An image with annotations, explaining ideas for the shape of a product (form) and how it works (function).

### computer-aided design (CAD)

Software that enables the user to create digital images.

### Digital revolution

Began in the 1980s and is still happening today. Computer-based (digital) technology has become how many products function. Digital products make life easier for us all.

### wearable technology

Technology you can wear to help with day-to-day activities. It has developed over time.

## Flashing LEDs

```

on button A pressed
  repeat 10 times
    do
      show leds
      pause (ms) 200
      clear screen
      pause (ms) 200
  
```

## Add a flashing pattern

```

on button B pressed
  repeat 10 times
    do
      show icon
      pause (ms) 200
      clear screen
      pause (ms) 200
  
```

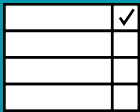
## Light sensor

```

forever
  if light level > 100 then
    show leds
  else
    clear screen
  
```

## Tips for a good evaluation

Check your design against the design criteria.



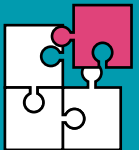
Note down something you have done well.



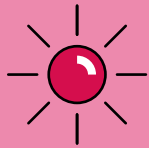
Get feedback from someone else.



Suggest a change.



Designed for children.



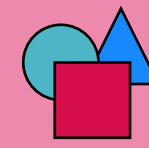
Should light up and flash.



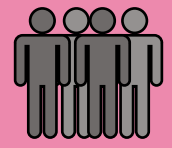
Must be wearable.



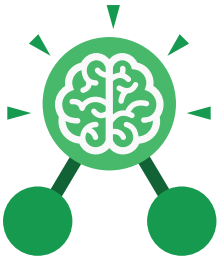
Must use computer technology.



Must use CAD to sell the technology.



Use a focus group to evaluate the product.



## Unit: 3.2 Online Safety

### Key Learning

- To know what makes a safe password.
- To learn methods for keeping passwords safe.
- To understand how the Internet can be used in effective communication.
- To understand how a blog can be used to communicate with a wider audience.
- To consider the truth of the content of websites.
- To learn about the meaning of age restrictions symbols on digital media and devices.

### Key Resources

**purple  
mash**



2Dos



2Connect



2Publish Plus



2Blog



2Write

### Key Questions

#### What is a password and why should we keep them safe?

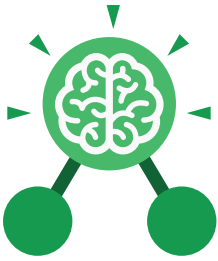
A password is a secret word or phrase that allows a user to access a website. Passwords are like toothbrushes in that they should not be shared with anyone else.

#### Is everything I read on the Internet true?

Just because something is on the Internet doesn't mean that it is true. Some people create spoof websites that pretend to be something else such as a bank website or to provide misleading information.

#### How do I know if I am old enough to play a computer game?

Computer games, like films, are often not suitable for children. PEGI ratings will show how old a person must be to play a game.



## Unit: 3.2

### Online Safety

#### Key Vocabulary

##### Appropriate

When using online services such as blogging or sharing information. It's important that users behave appropriately. Users should be truthful, respectful, kind, seek any permissions and report anything they feel uncomfortable with.

##### Password

A secret word, phrase or combination of letters, numbers and symbols that must be used to gain admission to a site or application such as a website.

##### Spoof

An imitation of something that appears to look genuine.

##### Vlog

A personal website or social media account where a person regularly posts short videos.

##### Blog

A regularly updated website or web page, typically one run by an individual or small group, that is written in an informal or conversational style.

##### Personal Information

This is information that is personal to someone. For example, their favourite food, their name and age.

##### Reputable source

Reputable sources are known places or sites that have accurate information. For example, well known news sites or encyclopaedias.

##### Reliable Source

A source of information that provides thorough, well-reasoned details based on valid evidence.

##### Website

A set of related web pages located under a single name.

##### Inappropriate

Behaviour or content online that is upsetting, rude, unkind or makes someone feel unsafe or concerned.

##### Internet

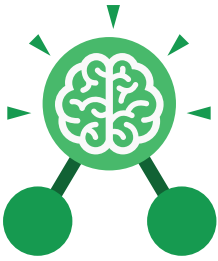
A global computer network providing a variety of information and communication facilities, consisting of interconnected networks and computers.

##### Permission

When someone shares or accesses content online, it's important that permission is given if it belongs to someone else or has information about them.

##### Verify

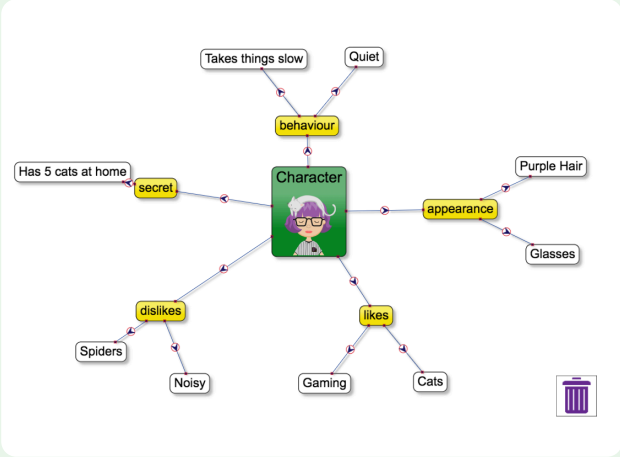
When seeking content online, it is important that a user verifies the information. They can do this by checking other sources and looking for signs that may indicate inaccuracy in the information.



# Unit: 3.2

## Online Safety

### Key Images

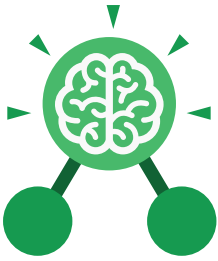


2Connect screen with nodes added



2Blog header

Username and Password screen



## Unit: 3.6

# Branching Databases

### Key Learning

- To sort objects using just 'yes' or 'no' questions.
- To complete a branching database using 2Question.
- To create a branching database of the children's choice.

### Key Resources



### Key Vocabulary

#### Binary Tree

Another name for a branching database.

#### Database

A collection of data organised in such a way that it can be searched, and information found easily. Database usually refers to data stored on computers.

#### Branching database

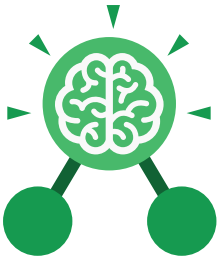
Used to classify groups of objects. It is used to help identify the objects by answering questions with either 'yes' or 'no'. Branching databases can also be called binary trees.

#### Data

A collection of information, especially facts or numbers, obtained by observation, questions or measurement to be analysed and used to help decision-making.

#### Debugging

The process of identifying and removing errors from computer hardware or software.



## Unit: 3.6

# Branching Databases

### Key Questions

#### What is meant by data?

Facts about something; data can be words, numbers or pictures. For example, the class register contains data about the names, addresses and attendance of the children in the class.

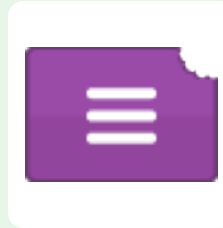
#### What is a database?

A collection of data organised in such a way that it can be searched, and information found easily. Database usually refers to data stored on computers.

#### What is a branching database?

Used to classify groups of objects. It is used to help identify the objects by answering questions with either 'yes' or 'no'. Branching databases can also be called binary trees.

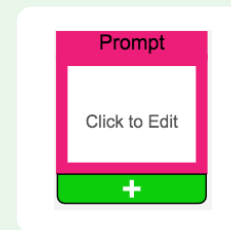
### Key Images



Open, close or share a file



Give the database a name



Add a question to begin to sort the information