



Collierley Primary and Nursery School

Summer Knowledge Organisers Year 2

Science – Plants and Feeding/Exercise
Geography – Holidays
History – The lives of significant individuals (a comparison)
Computing – Robots
Maths – Fractions, Length, Time, Capacity
Music – Friendship song





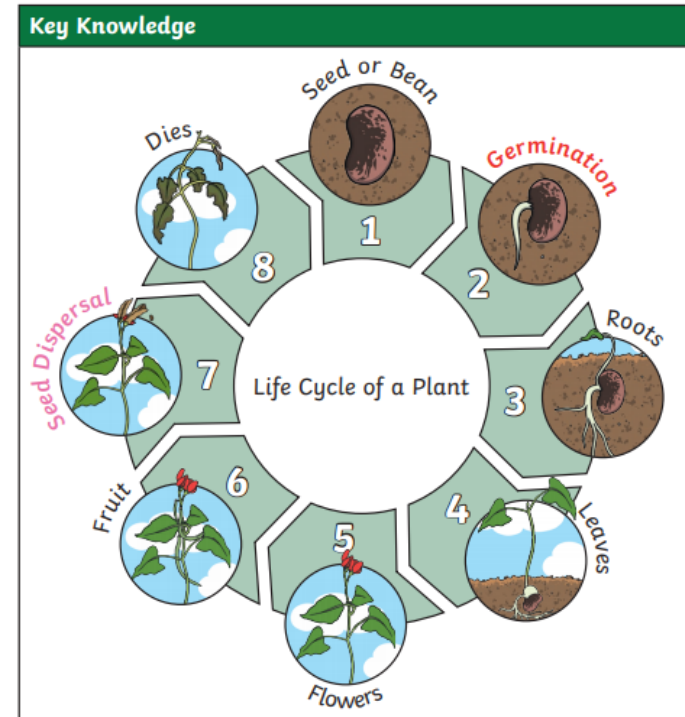
Year 2 Science Knowledge Organiser

Biology - Plants

Key Vocabulary	
germination	When the conditions are right, the seed soaks up water and swells, and the tiny new plant bursts out of its shell. This is called germination .
sprout	When a plant sprouts , it grows new shoots .
shoot	A shoot grows upwards from the seed or plant to find sunlight .
seed dispersal	Seed dispersal is when the seeds move away from the parent plant. They can be moved by the wind or animals.



What should I already know?
<ul style="list-style-type: none">Plants can grow.The names of some common garden plants (e.g. poppy, rose) and the names of some common wild plants (e.g. daisy, dandelion, nettle).Deciduous trees lose their leaves in the autumn every year.Evergreen trees have green leaves all year round.The parts of a plant including petals, fruits, roots, bulbs, seeds, stem, trunks and branches.



Key Vocabulary

What do plants need to grow well?

sunlight

All plants need light from the sun to grow well. Some plants need lots of **sunlight**. Some plants only need a little **sunlight**.

water

All plants need **water** to grow. Without **water**, seeds and bulbs will not **germinate**.

temperature

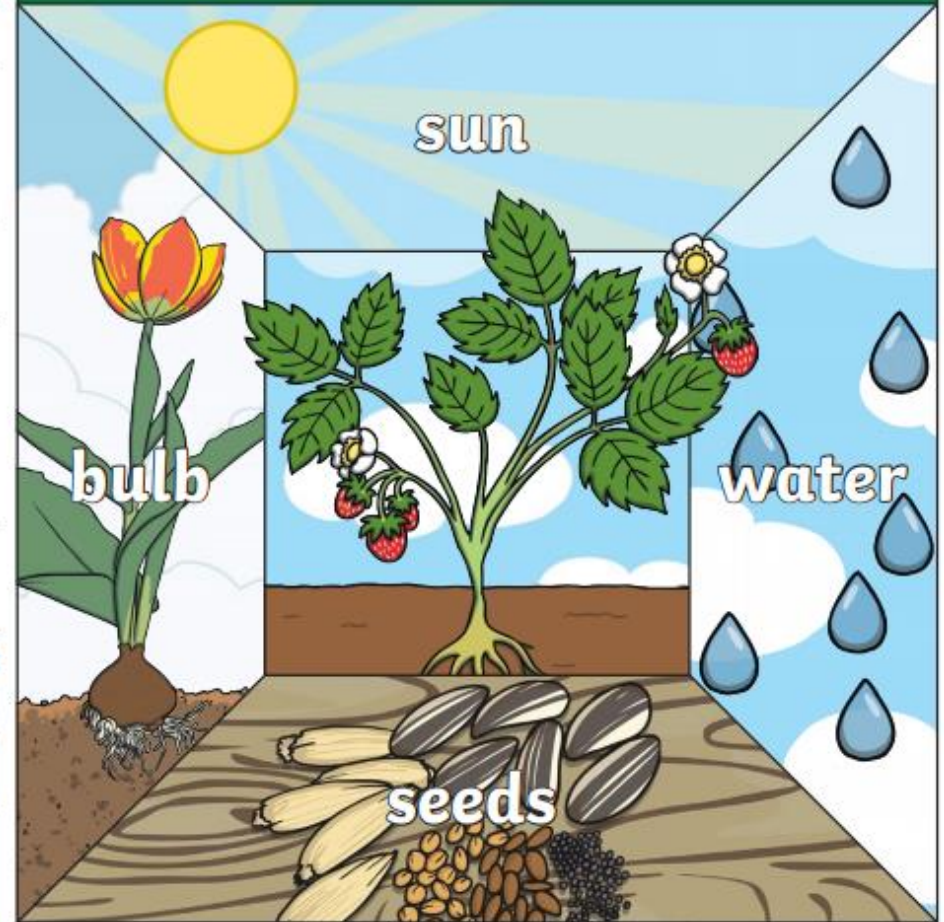
Temperature is how warm or cold something or somewhere is. Some plants like cooler **temperatures** and some like warmer **temperatures**.

nutrition

Food or nourishment. Plants make their own food in their leaves using **sunlight**.



Key Knowledge





Year 2 Science Knowledge Organiser

Biology - Animals Including Humans

Key Vocabulary	
adult	A fully grown animal or plant.
develop	To grow and become stronger.
life cycle	The changes living things go through to become an adult.
offspring	The child of an animal.
reproduce	When living things make a new living thing of the same kind.
young	Offspring that has not reached adulthood.
live young	Offspring that has not hatched from an egg.

All living things **reproduce** and have **offspring**.

Some animals give birth to **live young**. Their offspring normally look like them when they are born.



Some animals lay eggs which hatch into live young. This **young** then develops into an **adult**.

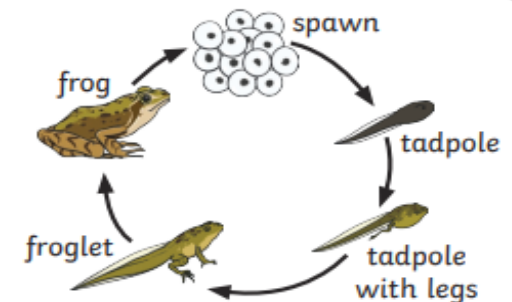
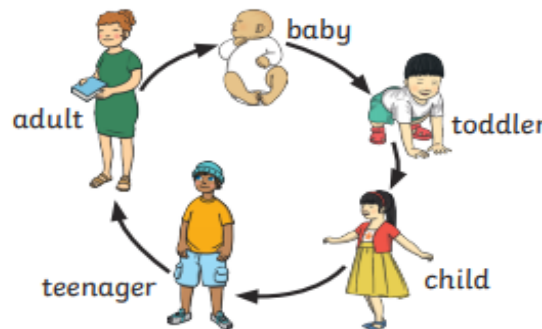
When these eggs hatch, some animals look like their adult, e.g. birds and reptiles.



Other animals have offspring which do not look like them, e.g. fish and amphibians.



All young animals change at different stages as they grow into adults.



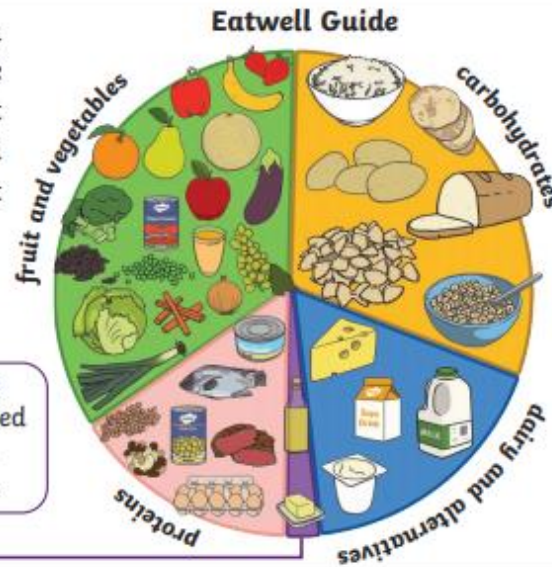
Key Vocabulary

dehydrate	To lose water (dry out).
diet	The food and water that an animal needs.
disease	Illness or sickness.
energy	The power needed to carry out a task.
exercise	A physical activity to keep your body fit.
germs	Bugs that cause disease and illness.
heart rate	The number of times a heart beats in one minute.
hygiene	How clean something is (to stay healthy and stop disease and illness spreading).
nutrition	Food needed to live.
pulse	The beating of the heart that can be felt in your neck and wrist.

To stay alive, all animals have 3 basic needs:



To grow into a healthy adult, we must eat the right types of food in the right amount and **exercise**.



oils and spreads
Choose unsaturated oils and use in small amounts.

Water, lower fat milk, sugar-free drinks including tea and coffee all count.



Eat less often and in small amounts.



To stop illness and infections spreading, we must be hygienic and keep ourselves clean.



What should I already know?

- There are five types of **vertebrates** (mammals, fish, reptiles, amphibians, birds)
- **Vertebrates** are animals that have a **backbone**.
- Some animals are suitable to be kept as pets but others are not.
- Some animals give birth to live young but others lay eggs.
- Doctors and nurses give us **medicine** when we are poorly.



COMPUTING: PROGRAMMING

Year 2 Summer

KNOWLEDGE ORGANISER



Overview

Robot Algorithms



- Programming is when we make a set of instructions for computers to follow.



- Robots are one type of machine that can follow programs - they follow what we instruct them to do.



- We use algorithms (a set of instructions to perform a task) to help robots to do things that we want them to do.
Debugging can help to correct algorithms and programs.

Using a Floor Robot

- **Robots:** Robots are machines that we can program to do human jobs.

- Robots help us to do things, for example to help us clean, mow and learn!

- Robots in factories make things, and in hospitals they help make us better.



-Turning on a Bee-bot:

Before we use a Bee-bot, we need to make sure it is charged. To turn it on, using the switch underneath. You can tell that the Bee-bot is on because its eyes light up.

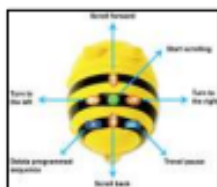


Remember to switch it back off again after you have finished using it.



- **Buttons:** Bee-bots have buttons on the top. They each make the Beebot do something different (see picture).

- The arrows move the Bee-bot in different directions. The GO button makes the Bee-bot start its program. The X button makes the Bee-bot forget the last set of instructions.



Algorithms and Instructions

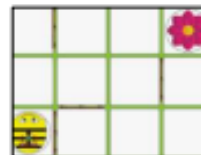
- **Algorithms:** Algorithms are precise set of instructions, that a computer can turn into a code. A floor robot has a computer inside of it.



- **Programs:** When we press the buttons of our floor robot, we are creating a program for it to follow. The program is how the algorithm is run as code on the robot.



- **Instructions:** It is important that our instructions to the floor robot are clear. If our sequence of instructions is in the wrong order, has anything missing, or has anything additional, the floor robot will end up in a different place! Plan the route to avoid obstacles and get to the right place.



Designing Algorithms

- We can buy or create mats for floor robots. We then need to design our algorithms so that the robot follows the given route.



- We should carefully consider the start point & end point that we want the robot to reach.

- Use symbols (e.g. arrows, crosses) to indicate the commands that will be inputted as a program.



Chunking and Debugging

- **Chunking:** With larger programs, we can break the task into chunks and create algorithms for each chunk.

- **Debugging:** Debugging is finding and fixing errors in our algorithms and programs. These errors can include:

- **Sequence errors:** An instruction in the sequence is wrong or in the wrong place.

- **Keying errors:** Typing in the wrong code.

- **Logical errors:** Mistakes in plan/thinking.

Important Vocabulary

Program

Robot

Algorithm

Direction

Route

Obstacle

Design

Error

Chunking

Debugging



KS1 Online Safety



Communicating	Online bullying	Privacy	Information online

- ✓ We can use electronic mail (known as e-mail) using the Internet.
- ✓ These can be sent around the world much quicker than a written letter.
- ✗ Don't open e-mails from people you don't know. Tell a trusted adult.
- ✗ Don't click on any links. Tell a trusted adult.

It's fun chatting with known friends 😊

- ✓ Be nice and friendly when online.
- ⊗ Some people can be unkind online.
- ⊗ This can make others feel unhappy, sad and lonely.
- ✓ **If we see this, then we must tell a trusted adult straight away.**

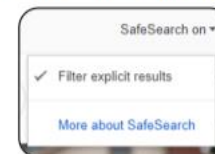
Some information is OK to share online.

- ✓ Only share with friends you know
- ✓ Favourite sports teams, movies or music.

Information that tells others who and where we are should be kept private.

- ✗ Remember: we **never** share our full name with anyone online.
- ✗ Things like where we live or where we go to school should **never** be shared with strangers.
- ✗ Never share your passwords with other people.

- ✓ Lots of people share pictures and information online. Because of this, we need to make sure we stay safe online.
- ✓ Use your web browser to access www.google.co.uk
- ✓ Make sure 'safe search' is on.



- ✓ Be careful not to click on any pop ups.
- ✓ Remember: all the information on the internet might not be true.
- ✓ Use YouTube Kids to help you find safe videos and media.



Some messaging apps are for older children only. Check at www.net-aware.org.uk

- ⊗ If someone is unkind **several times on purpose then this could be bullying (STOP!)**
- ✓ **If we see this, then we must tell a trusted adult.**



1 People you don't know are strangers. They're not always who they say they are.

2 Be nice to people like you would on the playground.

3 Keep your personal information private.

4 If you ever get that 'uh oh' feeling, tell a grown-up you trust.

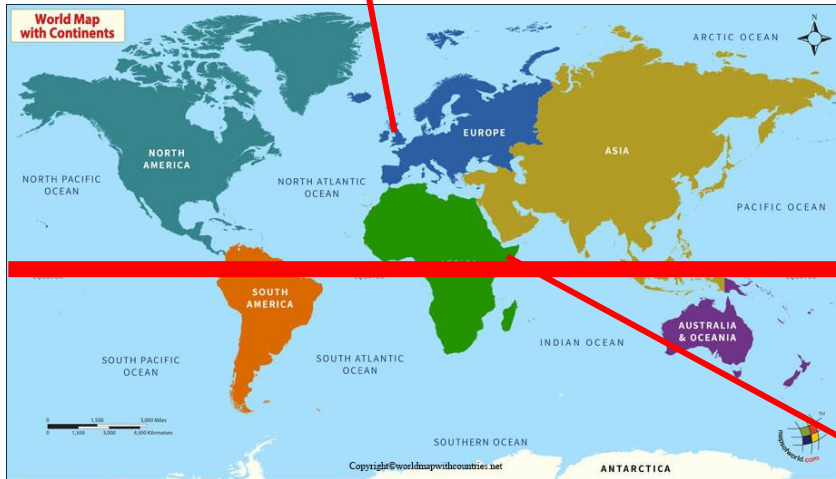




Year 2 – Holidays



Saltburn by the Sea

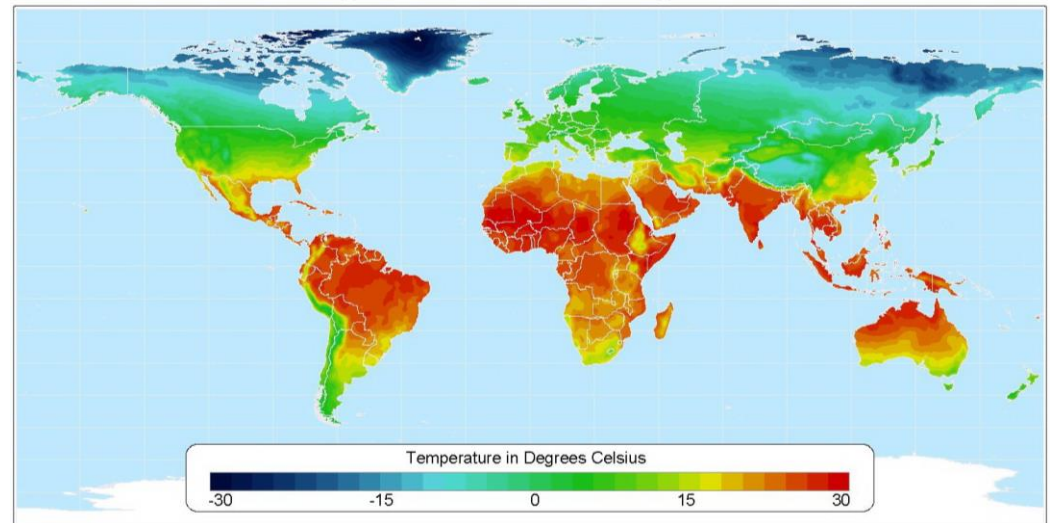


equator



Kenya

Earth,	poles	equator	continent
location	globe	physical	compass
West	South	weather	physical
East	ocean	North	climate



Human features

shanty towns
houses
roads
harbour
shops
pier



Physical features

grassland
sand
ocean
cliff
palm trees
weather





Knowledge Organiser – Friendship Song – Year 2, Unit 5

1 – Listening: Friendship Song

Find the pulse as you are listening to the music: Dance, move, sway with your friends

Instruments/voices you can hear: Keyboard, drums, bass, a female singer, a glockenspiel



2 – Musical Activities

Find the pulse!

- You can decide how to find the pulse!

Clapping Rhythms

- Clap the rhythm of your name
- Clap the rhythm of your favourite colour
- Make up your own rhythms

Singing in two-parts

Playing instruments using up to three notes

– C or E and G. *Which part did you play?*

Improvise using the notes C + D

- Challenge 1** Clap and Improvise
- Challenge 2** Sing, Play and Improvise
- Challenge 3** Improvise

Which challenge did you get to?

Compose a simple melody using simple rhythms, choosing from the notes C + D or C, D or E.

Which notes did you use?

3 – Perform & Share

A class performance of Friendship Song. Introduce your performance to your audience. Can you include some funky moves? Have a fantastic time; enjoy it! Talk about it together afterwards. How did it make you feel? Will you record it?



Have a think...

What did you like doing best?



Singing?



Playing?



Dancing?



Improvising?



Composing?



Listening?



This unit is about being friends

Words you need to know: Keyboard, drums, bass, glockenspiel, pulse, rhythm, pitch, improvise, compose, perform, audience, melody, dynamics, tempo