



Year 2

Knowledge Organisers





KS1 - Cycle A

Spring

Science - Living things and their habitats

Geography - Our Wonderful World

History - Important Women through time

PSHE - Health and Wellbeing, Safety and the Changing Body

Maths - Addition and Subtraction, Money, Multiplication/Division, Statistics, Shape

Music - I wanna play in a band





Year 2 Science Knowledge Organiser

Biology - Living Things and Their Habitats



- What should I already know?**
- Which things are living, dead and things which have never been alive.
 - The names of some common **plants** and types of **trees**.
 - Some animals are suitable to be kept as pets but others are not.
 - All animals need water, air and food to **survive**
 - Animals can be grouped into **vertebrates** and **invertebrates**
 - Animals can be grouped into **carnivores**, **herbivores** and **omnivores**
 - Animals, including humans, have **offspring** which grow into adults.
 - Different **vegetation belts** and **biomes** around the world.

Key Vocabulary	
life processes	These are the things that all living things do. They move, breathe, sense, grow, make babies, get rid of waste and get their energy from food.
living	Things that are living have all the life processes .
dead	Things that are dead were once living . They did have all the life processes but don't now.
never living	Things made out of metal, plastic or rock were never living . They never had the life processes .
food chain	A food chain shows how each animal gets its food. Food chains are one of the ways that living things depend on each other to stay alive.
food sources	This is the place a living thing's food comes from.

Key Knowledge



Food chains. The arrows mean 'is eaten by'.



Key Vocabulary

habitat	A habitat is the natural place something lives. A habitat provides living things with everything they need to survive such as food, shelter and water.
microhabitat	A microhabitat is a very small habitat in places like under a rock, under leaves or on a branch. Minibeasts live in microhabitats . The microhabitats have everything they need to survive .
depend	Many living things in a habitat depend on each other. This means they need each other for different things.
survive	This means to stay alive.

Examples of **microhabitats**:



short grass



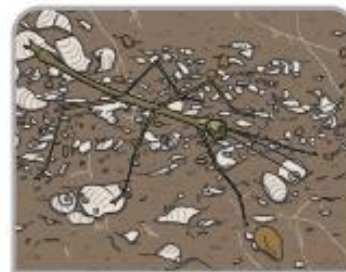
flowers



inside rotting wood



under leaves



in and on soil

Key Knowledge

Examples of **habitats**:



woodland



urban



coastal



rainforest



arctic



desert



ocean



river



mountain



Year 2 – Why is my world wonderful?



Where would you find these major rivers?

River Mississippi
Murray Darling River
River Amazon

River Danube
Yangtze River
River Nile

Where would you find these major mountain ranges?

Andes
Rocky Mountains

Alps
Pyrenees

Himalayas
Karakoram

Physical Features



Human Features



Earth	land	continent	ocean	sea	river	city
continents						
Antarctica	Europe	Asia	Africa	North America	South America	Australasia
oceans						
Arctic	Atlantic	Indian	Pacific	Southern	equator	annotate



COMPUTING: PROGRAMMING

KNOWLEDGE ORGANISER



Overview

Moving a Robot



- **Programming** is when we make a set of instructions for computers to follow.
- **Robots** are one type of machine that can follow programs. Floor robots include Bee-bots and Blue-bots.
- Floor robots have **buttons** which help us to direct them. We can use algorithms (a set of guidelines to perform a task) to program floor robots along **routes**.

Robots and Floor Robots

- **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.



- **Bee-bots:** Bee-bots are a type of floor robot.
- We can programme Bee-bots to move around.



- **Turning on a Bee-bot:** Before we use a Beebot, we need to make sure it is charged.



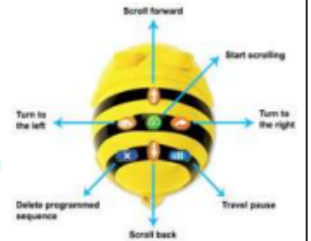
To turn it on, using the switch underneath. You can tell that the Bee-bot is on because its eyes light up. Switch it back off again after you have finished using it.



Bee-bots should only be used on the floor, and not tables etc. They can be damaged if they fall from high surfaces. (Other floor robots, e.g. Blue-bot, can also be used).

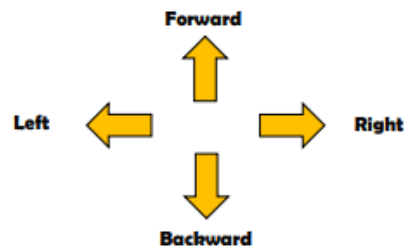
Buttons and Programs

- **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. (on some models, it also pauses the Beebot in-program).
- **Programs:** A program is a series of instructions. We can program the Bee-bot by pressing the direction buttons (in order) that we want it to move in, followed by GO.
- The X button makes the Bee-bot delete the program and make a new program. Switching the Bee-bot off and on again also deletes the program.



Directions

- In order create clear routes for our Bee-bots, we need to be sure of our directions.



Make sure that you stand **behind** Bee-bot.

Routes and Algorithms

- A **route** is the course that we travel to get somewhere. We use **algorithms** (a set of guidelines to complete a task) to program our floor robot to take a route to where we want it to go.



- We should think carefully about how to avoid obstacles. We should also consider how many times we need to press each button to travel the correct distance.

Important Vocabulary

Programmed

Robot

Algorithm

Button

Direction

Forward

Backward

Left

Right

Route



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.



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



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.

⊗ 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.

Some information is OK to share online.

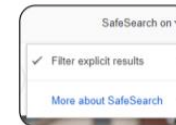
- ✓ Only share with friends you know
- ✓ Favourite sports teams, movies or music.

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.

3 Keep your personal information private.

- ✓ 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.

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

Year 1 - Health and wellbeing

Allergy	A strong reaction to something which does not affect most people.
Emotions	The range of feelings that someone can have, such as happiness or anger.
Feelings	Emotions that a person can feel.
Germ	A very small living thing which can make us ill.
Ill	Not feeling well because of an illness or disease.
Qualities	The personality traits that make someone who they are.
Relax	To rest or take a break.

Health tips



Washing our hands gets rid of germs which can make us ill. We should wash our hands regularly.



The sun can be good for us but we need to take care to look after our skin. In the sun, remember the 5 S's: Slip, Slop, Slap, Shade, Sunglasses.

Getting help

If you are worried about anything, talk to an adult you trust at home or at school.

Key facts

Some emotions we can feel are happiness, sadness, anger and worry.

Different situations make us feel different emotions.



We are all good at different things.

Some people can be allergic to some foods.

Doctors



Nurses



Dentists



Some people have jobs which help us to keep healthy, for example: doctors, nurses and dentists.



Get the right amount of sleep every night to keep healthy and well.



Use relaxation techniques such as muscle relaxation and laughter.

Year 2 - Health and wellbeing

Diet	The food that we eat.
Emotions	The range of feelings that someone can have, such as happiness or anger.
Exercise	Movement of the body for our health and fitness.
Goal	Something you want to achieve.
Growth mindset	Believing that we can achieve things if we work hard. 'I can't do it YET!'
Healthy	Being well, both physically and mentally.
Physical activity	Something that requires someone to move their body.
Relaxation	Doing calming activities such as having a bath or reading a book.
Skill	The ability to do something well.
Strengths	The things we are good at.

Key facts



We can have more than one feeling at the same time.



How we are feeling can affect our bodies inside and out.



Physical activity helps to keep our body and mind healthy.



Relaxation helps our bodies but also helps us deal with difficult situations.

Health tips



Breathing exercises can help us to relax.



Only eat foods which are high in fat, sugar and salt occasionally.



Brush your teeth at least twice a day to keep them healthy.

We can practise and set goals to get better at something.



We sometimes need to keep trying to achieve a goal.



We need to eat a variety of foods to be healthy.



Some foods are bad for our teeth.

Getting help

If you are worried about anything, talk to an adult you trust at home or at school.

Year 1 - Safety and the changing body

emergency

When someone is badly hurt or very ill or there is danger and urgent help is needed.

medicine

Something you take into your body to make you better if you are ill.

hazards

Things or situations that are likely to be dangerous.



physical contact



Key concepts

In an emergency the police, fire service or ambulance can help.



Getting help

Safety tips



In an emergency, use a phone to call 999 and ask for the emergency service you need.



When you are out, stay close to the adult you are with.

If you get lost, look for an adult you trust, such as a police officer or someone who works in a local shop.



Different people like different physical contact. If someone touches you in a way you do not like, you can say no.

Some people have jobs that help to keep us safe, such as school crossing patrol and the police.



We should only take medicines that an adult we trust gives us.



Strangers are people we do not know.

Year 2 - Safety and the changing body

medicine

Something you take into your body to make you better if you are ill.



We must only take medicine if we have been given it by an adult we trust.

pedestrian

A person who is travelling by walking.



We need to take care when we are near roads and we should find safe places to cross.

private

Something that is personal to us that we do not want to share with everybody.

secret

Something which nobody is meant to see or know about.

surprise

Something nice that people might not know about straight away.

Safety tips

If someone is unkind to you online, talk to an adult you trust.

When we cross the road we need to remember to:

Stop ⓪, **Look** 👁 and **Listen** 👂.

The private parts of our bodies are those that are covered by our underwear.

Our bodies belong to us and no one should touch us without our permission.

Never take medicines that have been given to someone else to take.

Key concepts

The internet helps us in lots of ways, such as keeping in touch with people and finding out information.



We need to be careful what we share with people online.

Remember the **PANTS** rule:

P - Privates are private.

A - Always remember your body belongs to you.

N - No means no.

T - Talk about secrets that upset you.

S - Speak up - someone can help.

Getting help



If you are unhappy or worried about anything, speak to an adult you trust, either at home or at school.

1 – Listening: I Wanna Play In A Band

Find the pulse as you are listening to the music: You can be a rockstar and play air guitar, or just dance, clap hands and stamp your feet!

Instruments/voices you can hear: keyboard, drums, bass, electric guitar, singers.



2 – Musical Activities

Find the pulse!

- You decide what you will be.

Clapping Rhythms

- Copy and clap back rhythms
- Clap the rhythm of your name
- Clap the rhythm of your favourite food
- Make up your own rhythms

Singing in all the different styles!

Playing instruments using up to three notes – F or D and C. *Which part did you play?*

Improvise using the notes F + G:

- 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 F + G or F, G + A.

3 – Perform & Share

A class performance of I Wanna Play In A Band. 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?



Being a rock star?



This unit is about playing together in a band and rock music

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

Y2 - Important women in history

International Women's Day – March 8th.

There have been many incredible events in history led by women. Some of the most famous were: doctors, scientists, pilots and explorers.

Emmeline Pankhurst and the Suffragettes



Florence Nightingale



Mary Curie



Amy Johnson



Junko Tabei



Important dates

1855	Florence Nightingale helps to save soldiers in Crimean War.
1903	Marie Curie wins the Nobel Prize for science.
1918	Women are allowed to vote.
1930	Amy Johnson flies by herself from England to Australia.
1975	Junko Tabei is the first woman to reach the top of Mount Everest.

Key words

- Change
- Voting
- Explorer
- Scientist
- Pilot