



Knowledge Organiser Booklet

Year 2

Spring 1



Name		Class	
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Use your knowledge organisers to help you remember more.

1

Check it!

Write down the key words and definitions.



2

Try doing this without the help of your knowledge organiser.

3

Check your work and make any corrections using your green pen.

Link it!

Create a mind map with all the information you can remember from your knowledge organiser.



Check your knowledge organiser to see if there are any mistakes on your mind map.

Try to make connections, linking the information together.



Test it!

Use your knowledge organiser to write down key facts or information onto cards.

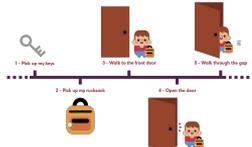
Add pictures to help support you to remember things. Use the cards to make up questions.

Ask a friend or a member of your family to quiz you on what you remember!

This is your **Computing** Knowledge Organiser for Spring 1: Robot Algorithms

Tier 2 Vocabulary

Key Vocabulary

observe	algorithm	program	sequence	predict	design
To notice or see	A set of steps in order.	A set of commands that complete a task.	A specific order of events.	A sensible guess about what might happen.	A drawing that shows what something will look like.
We should observe how a robot moves before changing the code	A set of steps in order to be followed by a computer.	A set of commands that can be run by a computer to complete a task.	A sequence of commands in an algorithm are in the correct order.	We can predict what happens when we write an algorithm .	A design can be a drawing or plan for an algorithm .
We can observe changing seasons by watching how the weather changes.	A set of steps in order that makes the Bee-bot move.	A set of commands that is run by the Bee-bot to make it do what you want it to do.	Making a mistake in the sequence can cause the Bee-bot to malfunction.	We can predict what the Bee-bot will do after we give it instructions.	To design an algorithm for the Bee-bot to follow.
Observing another person's code in action can help shape our approach.					

How this connects with previous learning

How this connects with future learning

In Reception, you used Bee-bots to explore directional language and instructions.

In year 1, you learned to write **algorithms** to move a floor robot.

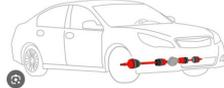
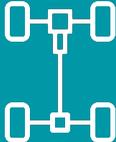
In year 1, you learned to write **algorithms** to **program** animations.

In Year 2 Summer 2, you will learn to write **algorithms** to **program** quizzes.

In year 3, you will learn to **design** and code a maze tracing **program**.

In year 3, you will **design** a **program** to **sequence** sounds.

This is your **Design Technology** Knowledge Organiser for Spring 1: Wheels and Axles

DT Themes		Tier 2		Key Vocabulary			
mechanisms	assemble	criteria	vehicle	wheel	axle	chassis	
A device used to create movement in a product.	To put together.	A standard by which to judge or decide.	Something that is used to carry and move people or things.	A round frame that enables an object to move.	A rod on which one or more wheels can rotate.	The frame or base on which a vehicle is built.	
Mechanisms are used in in many everyday objects including bikes and scooters.	In Year 1, you assembled your sliders and levers posters.	We use design criteria so we know what our finished product must do.	Cars, buses and aeroplanes are all examples of vehicles .	A bike has two wheels and a car has four wheels .	In a fixed axle , only the wheels move.	The axle attaches the wheels to the chassis .	
We can create a simple mechanism using wheels and axles.	We will assemble our vehicles.	The design criteria for our sliders and levers poster was if it had a moving part.	We will decide how big our vehicles will be.	We will decide how many wheels to use on our vehicle.	In a free axle , the axle moves with the wheels.	We will make our chassis from a cardboard box.	
Our mechanisms will make our vehicle move.	When assembling an item, we have to fix materials together.	The design criteria for our vehicles will include making sure it can carry and move things.					
How this connects with previous learning			How this connects with future learning				
In Reception you assembled your own soft toys.	In Year 1, you used a mechanism when making your sliders and levers poster.	In Autumn 1, you designed, made and evaluated a freestanding structure.			In Summer 1, you will use design criteria when making a simple bag.	In Year 3, you will design, make and evaluate a greetings card with a moving mechanism.	In Year 4, you will design, make and evaluate a moving creature.

This is your **Geography** Knowledge Organiser for Spring 1: London & Alexandria

Tier 2 Vocabulary

locate

To find the exact place or position of something.



We can locate the United Kingdom, England, London, Egypt and Alexandria on a map and on a globe.

contrast

To show the differences between two or more things.



In this topic, we are contrasting the physical and geographical features of the cities of London and Alexandria by finding out what is the same and what is different between them.

Key Vocabulary

city

A large settlement with lots of people living there. Cities are often centres of business with museums, parks, universities, shops and offices.



London is a city in England and Alexandria is a city in Egypt.



In Year 1, you learnt about human and physical features across the United Kingdom, including seas, ports and harbours in the United Kingdom.

port

A town or city by the sea or by a river where ships load or unload goods and people.



The Port of London was once the largest port in the world. It is not located in one area but stretches along the river, including Central London.

Alexandria has four ports. The main port is called Alexandria or Western Port.

harbour

A harbour is an area of the sea at the coast which is partly surrounded by land or strong walls, so that boats can be left there safely.



Alexandria Port has two harbours, East Harbour and West Harbour.

London does not have a harbour. It has wharfs, docks and terminals where ships can load and unload goods and people.

farm

An area of land and its buildings, used for growing plants for food and rearing animals for food.



There are very few farms in cities. Most farms are found on the edges of cities or in the countryside.

City farms provide green spaces for wildlife but are not often used to provide food for people in cities.

How this connects with previous learning

In Reception, you carried out fieldwork in your local area and located landmarks.

In your Year 1 'Map It', topic, you identified the countries and capital cities of the United Kingdom and located London on a map of the United Kingdom.



How this connects with future learning

Later in Year 2 in your 'Weather' unit, you will explore the differences between hot and cold countries.

In Year 3 in your 'Rivers' unit, you will explore the importance of rivers including Egypt's River Nile and London's River Thames.

This is your Physical Education Knowledge Organiser for Spring 1: Gymnastics

Key Vocabulary

shape	sequence	speed	music	pattern	power
An outline of someone or something.	A particular order in which related things follow each other.	The rate at which someone or something moves.	Vocal or instrumental sounds which produce a song.	A repeated set of actions or movements.	The ability to perform strength based movements quickly
I can use my body to make many different shapes .	My partner and I are performing a short sequence of moves.	Some of the movements in gymnastics are performed at a high speed .	We are moving our bodies in time with the music .	In small groups we are using our bodies to make word patterns .	I need to use lots of power to jump high
					

How this connects with previous learning

In reception you learnt how to jump and roll safely.

In year 1 you learnt how to link different actions together.



How this connects with future learning

In year 3 you will learn how to modify actions independently using different pathways.

In year 4 you will learn how to perform in time with a partner and a group.

In year 4 you will use compositional ideas in sequences.

This is your Physical Education Knowledge Organiser for Spring 1: Fitness

Key Vocabulary

stamina	core stability	strength	balance	coordination	jumping
The ability to maintain longer periods of physical effort.	The ability to keep your spine from moving during physical activity, such as walking, running, swimming, etc	The quality of being physically strong.	When someone or something is able to remain upright and steady.	The ability to use different parts of the body together smoothly and efficiently.	Using your legs to launch your body into the air and land successfully.
To run a marathon takes a lot of stamina .	I use my core stability to stay balanced whilst exercising	Cycling can help you build your strength .	When I run I need to display good balancing skills to avoid falling over.	Running requires coordination as I have to use both my legs and arms.	I jump when I shoot in basketball in order to get me closer to the net.
					

How this connects with previous learning

In reception you learnt how to change direction at speed through both choice and instructions.

In year 1 you learnt how to describe what happens to your body during exercise.



How this connects with future learning

In year 3 you will learn how to develop strength in a range of exercises.

In year 4 you will learn how we benefit from exercise and ways people enjoy it.

In year 4 you will understand how to target specific muscle groups when exercising.

This is your Religious Education Knowledge Organiser for Spring 1: Jewish Beliefs

Tier 2 Vocabulary

Key Vocabulary

describe	Jewish	mezuzah	Shabbat	Hanukkah	Jerusalem
To write or tell about something.	Connected with people whose traditional religion is Judaism.	A small parchment scroll inscribed with words for the Torah (the Jewish sacred text).	The Jewish day of rest and religious worship that is celebrated on a Saturday.	A festival in Judaism that happens in December.	An ancient holy city in the Middle East that is very important to Jews, Christians and Muslims.
In Year 1 you learnt to describe religious places of worship, symbols, ceremonies and events.	Many Jewish people speak Hebrew. Judaism is one of the oldest religions in the world.	The mezuzah is placed in a case and fixed to the doorpost by some Jewish families as a sign and reminder of their faith.	On every shabbat , Jews have three meals. The first is at night, after the Friday night prayer service. The second is at noon, after the Saturday morning prayer service. The third is late Saturday afternoon, just before Shabbat ends.	Hanukkah is the Jewish Festival of Light. The word Hanukkah means dedication in Hebrew. It celebrates a miracle that happened in Jerusalem over 2,000 years ago.	Jerusalem is a city located in Israel and is one of the oldest cities in the world. Jews consider Jerusalem a holy city.
In Year 2 you will describe the various beliefs, traditions and celebrations of the Jewish faith by exploring these aspects of the religion.	Jews believe that there is only one God . Jews promise to obey God's laws to say thank you to him for looking after them.	A mezuzah is a small box that is placed on the right doorpost of Jewish homes. Inside the box is a parchment scroll with verses from the Torah inscribed on it.		Hanukkah (or Chanukah in Hebrew) is celebrated in November or December every year. It lasts for eight days.	People from various religious faiths often take a special journey, called a pilgrim, to visit Jerusalem .
In this unit we will ask you to to describe the different aspect of you Judaism you see, hear and read.					

How this connects with previous learning

In Reception you visited places of worship and listened to the experiences of visitors from different religious communities.

In Year 1 you explored the ways in which Jewish people show their faith through Shabbat.



How this connects with future learning

In Year 3 you will discuss why it makes a difference to people's lives to believe in God.

In Year 4 you will examine how and why some people see life as a journey.

In Year 5 you will make comparison of different religious celebrations and festivals.

This is your Science Knowledge Organiser for Spring 1: Use of Everyday Materials



Scientific Enquiry



comparative & fair testing

Comparative tests compare things in order to rank them. **Fair tests** look for changes when one variable is changed. We will test the properties of materials such as wood, metal, plastic, fabric, paper and cardboard for a particular use, such as comparing the stretchiness of fabrics for Elastigirl's suit and choosing the best material for a rain hat.



identifying & classifying

Identifying means knowing what something is and naming it. **Classifying** means grouping things together if they have something in common. We will **identify** and **classify** materials based on different properties for example grouping opaque or absorbent materials together.

Working Scientifically

Asking scientific questions
Planning an enquiry
Observing closely
Taking measurements

Gathering and recording results
Presenting results
Interpreting results



Subject Specific Vocabulary

suitable

Suitable means appropriate for a specific purpose. All objects are made of one or more materials that are chosen specifically because they have **suitable** properties for the task. For example, some water bottles are made of plastic because it is transparent allowing you to see the drink inside and waterproof so that it holds the water.



Objects made of some materials can be changed in shape by bending, stretching, squashing and twisting.

flexible

Flexible means a material is able to bend easily without breaking. Rubber is flexible and is **suitable** for tubes or wire casing that need to bend.



rigid

Rigid means the opposite of **flexible** - a material that does not bend easily and cannot be reshaped without using a lot of force.



absorbent

An **absorbent** material is a material that is able to soak up liquid easily, such as a sponge.



waterproof

A **waterproof** material keeps water and other liquids out.



Plastic and rubber are examples of waterproof materials and may be **suitable** for making items such as umbrellas and rain jackets.

opaque

An **opaque** material does not let any light through. Materials such as stone and wood can be opaque. They would be **suitable** for making a garden fence. It can't be seen through.



transparent

Transparent means the opposite of opaque. All of the light is let through the object. Windows are usually made of **transparent** glass so people can see out.

translucent

Translucent means allowing some of the light through an object. A **translucent** material would be **suitable** for items such as sunglasses, which need to keep some light out to protect our eyes.



Other examples of **translucent** objects include some windows, thin tissue paper and cooking oil.



Things you learnt in previous topics

In Year 1, you distinguished between an object and the material from which it is made. You identified and named a variety of everyday materials, including wood, plastic, glass, metal, water and rock. You also described the simple physical properties of a variety of these materials. You compared and grouped together a variety of everyday materials on the basis of their simple physical properties.



How this connects with future learning

In Year 3, you will compare and group together different rocks on the basis of their appearance and simple properties. You will notice that some forces need contact between two objects, but magnetic forces can act at a distance. In Year 5, you will compare and group together everyday materials based on their properties such as solubility, conductivity and transparency. You will give reasons for the particular uses of everyday materials based on evidence from fair and comparative tests.



To help you remember and recall key information, you can make your own additional notes here.

At New Wave Federation, we demonstrate...



new wave
federation

Collaboration

Creativity

Focus

Kindness

Responsibility