Knowledge Organiser Booklet Year 6

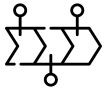
Autumn 1

Name		Class	

Contents

Page 3	Using Your Knowledge Organiser Guide
Page 4	Computing Knowledge Organiser
Page 5	Design Technology Knowledge Organiser
Page 6	Geography Knowledge Organiser
Page 7	Personal, Social, Health and Economic Education Knowledge Organiser
Page 8	Physical Education Knowledge Organiser 1
Page 9	Physical Education Knowledge Organiser 2
Page 10	Science Knowledge Organiser
Page 11	Spanish Knowledge Organiser
Page 12	School Values

Use your knowledge organisers to help you remember more.

	Test Yourself!	Only Connect!	Memory Cards	Order, Order! 	Phone a Friend!	Picture it!
1	Look at and study the definitions of the key vocabulary on your knowledge organiser.	Create a mind map, making connections and links with things that you remember without looking back.	Make your own information cards by writing questions about key vocabulary on one side of the card.	Using a simple line, sort information from your topic into chronological, sequential or hierarchical order.	Ask a friend or family member to have the knowledge organiser or memory cards in their hands.	Read over your knowledge organiser and the key vocabulary, remembering the definition.
2	Cover or hide the information on the knowledge organiser and write down everything that you remember.	Challenge yourself by covering or hiding the knowledge organiser, using what you can recall.	On the other side of the card, write the answer to your questions. You could add pictures to your cards.	Check these with a friend or family member, using data on your knowledge organiser, add more detail.	Get them to test you by asking different questions about the information on your knowledge organiser.	Using the information you remember, draw pictures or diagrams to represent words.
3	Check your notes! Correct your mistakes and add anything that you might have missed out.	Check what you have added to your mind map by using your knowledge organiser to correct any mistakes.	Ask a friend or family member to ask you the questions you created or to ask you new questions.	Challenge yourself by adding information you recall from previous topics which are related.	Write your own sentences using the key vocabulary to replace those on the knowledge organiser.	Showing your diagrams to friends or family, ask them to guess which word you have represented.

This is your Year 6 Computing Knowledge Organiser for Autumn 1 - **Communication and Collaboration**

Tier 2 Vocabulary

transfer

To move something or someone from one place to another.

You can **transfer** files, data and **media** through email.

You will explore how images, text, audio and video are **transferred** using an IP address.

The performance will **transfer** from the West End theatre to Hackney Empire.

Key Vocabulary

IP Address

An online device address used for connecting and communicating across the internet.

A numerical identifier for every device or network that is connected to the internet.

You will understand **IP Addresses** and the rules that computers have in order to communicate with each other.

Domain Name Server (DNS)

A **server** responsible for keeping the file that contains information about the **domain** name(s) and corresponding **IP addresses**.

A **DNS** turns **domain** names into **IP addresses**, which allows browsers to get to websites.

You will use a **Domain Name Server** to translate web addresses into **IP addresses**.

data packet

A unit of **data** made into a single **package** that travels along a given network path.

Data packets are used in IP transmissions for data that navigates the web.

You will learn the key parts of a **data packet**: the header and the data payload.

media

The main means of mass communication from broadcasts, publishing and the internet.

A type of **media** that involves content and a device for which it is to be seen.

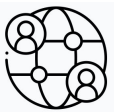
You will come across many forms of **media** on the internet including video, audio and images.

internet based communication

Means to share information over the **internet**.

From instant messaging to virtual calling, the **internet** offers many ways to **communicate**.

You will learn how **internet based communication** can be most effective.



How this connects with previous learning

In Year 3, you began to develop your understanding of digital devices, with a focus on inputs, processes, and outputs.

In Year 4, you learnt that the World Wide Web is part of the internet, and learnt who owns content and what is honest, accurate, or reliable information.

In Year 5, you learnt how information is **transferred** between systems and devices using networks and connected devices.

How this connects with future learning

In KS3, you will gain a stronger understanding of computer networks and how these communicate.

You will also learn more about how networks are used, the benefits of them and how data is transmitted across vast networks using protocols.

In everyday life you will begin to see how information and news is delivered to you and the impact of the

This is your Year 6 Design & Technology Knowledge Organiser for Autumn 1 - Pulleys

DT Themes

mechanisms

A device used to create movement in a product.

Mechanisms are used in in many everyday objects including analogue clocks and bikes.

A **mechanical system** is a set of related parts or components used to create movement.

Our moving vehicles will use a **mechanical system.**

Tier 2

construct

Something that limits or controls what you can do.

Time **constraints** mean that there is only a certain amount of time to complete a project.

A money **constraint** means that you are given a budget which you must stick to.

Limited resources can also be a **constraint** for a project.

accuracy

Something new and original.

The wheel was an **innovative** product because it made it much easier to transport items or people quickly.

Mobile phones were an **innovative** product as they allowed people to be contacted outside of the home.

Innovation enables us to solve new or existing problems.

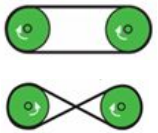
Key Vocabulary

pulley

A grooved wheel over which a drive belt can run.

Pulleys are often used to lift heavy items.

We will use **pulleys** to transfer power from the motor to the wheels.



driver

The pulley that provides the input movement to the system.

Our **driver** will be a small pulley attached to the motor.

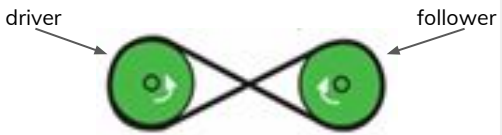
The small pulley is known as the **driver** because it provides all the power to the mechanical system.

follower

The pulley that provides the output movement to the system.

Our **follower** will be a large pulley attached to the wheels.

Our **follower** will move in the same direction as the driver.

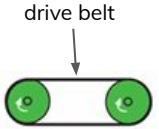


drive belt

The belt which connects and transfers movement between two pulleys.

The **drive belt** will transfer power from the driver to the follower.

We will use an elastic band as our **drive belt** .



How this connects with previous learning

In Year 1, you designed, made and evaluated a moving poster.

In Year 2, you designed, made and evaluated a vehicle using wheels and axles.

In Year 4, you used an electrical system when designing, making and evaluating a lamp.

How this connects with future learning

In Year 6, you will design, make and evaluate an electrical system, considering a range of constraints.

In Year 6, you will work accurately when making an electrical device case.

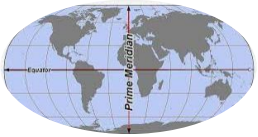
In Key Stage 3, you will explore how more advanced mechanical systems enable changes in movement and force.

This is your Year 6 Geography Knowledge Organiser for Autumn 1 - Map It

Tier 2 Vocabulary

enquiry	interpret
The process of seeking information.	To explain the meaning of information
In Year 2, you carried out an **enquiry** to find the safest route from school.	In Year 4, you **interpreted** data on the local area to find out why there were different levels of noise pollution.
We will by carrying out an **enquiry** on 3 contrasting regions.	We will **interpret** our research on the three regions to enable us to draw conclusions.
I **enquired** about the price of the drink in the shop.	I didn't understand the question so I asked my friend to **interpret** .

Key Vocabulary

time zones	Prime Meridian	strait	channel	canal
A geographic region where the same standard time is used.	The imaginary line that divides Earth into two equal parts which is also the basis for the world's **time zones.**	a narrow passage of water connecting two seas or two other large areas of water.	a length of water wider than a **strait** , joining two larger areas of water, especially two seas	an artificial waterway constructed to allow the passage of boats or ships inland
New York City in North America and Lima, Peru, in South America are in the same **time zone.**	The **Prime Meridian** intersect Algeria.	The **Straits** of Gibraltar separate Africa & Europe by only 8.1miles / 13km.	The English **Channel** is called the *Manche* by the French.	The Panama **Canal** was completed in 1914.
Australia and England are in different **time zones** .	The **Prime Meridian** runs through Greenwich in London.	The **Straits** of Gibraltar are an important trade route from Europe to the Atlantic Ocean.	The English **Channel** is 348 miles/560km long and 21 miles/ 34km wide at its narrowest point.	The Suez **Canal** connects the red Sea to the Mediterranean Sea
				

How this connects with previous learning

In Year 4, you learned how longitude can be used to describe the position of a place.	In Year 4, you learned about the link between climate zones, biomes and vegetation belts.	In Year 5, you learned about trade and natural resources.

How this connects with future learning

Throughout Year 6 will apply your data analysis skills to your scientific enquiries.	In Year 7 you will learn about the interdependence of trade relationships across the world	In Year 7 you will apply your analysis skills to more regions of the world.

Key Vocabulary

dental health

Dental hygiene means habits that keep the mouth clean and healthy, such as brushing and flossing.

Good dental hygiene such as brushing teeth twice a day with a toothpaste that contains fluoride, regularly flossing or using an interdental brush and visiting the dentist can help prevent tooth decay, which happens when teeth slowly become damaged and break down.

growth mindset

A **growth mindset** is believing we can achieve things if we work hard. "I can't do it yet, but if I practise, I will be able to!"

We can decide what type of person we want to be and we can develop skills and qualities to achieve this.

We can improve our resilience by reflecting on our failures, identifying our strengths and identifying our next steps.

habit

A **habit** is something done often, sometimes without thinking about it.

Habits develop when actions are repeated regularly.

A habit can affect health now and in the future. Small, regular actions, such as being active, eating a balanced diet and getting enough sleep, can support overall health.

nutrition

Nutrition means getting the right balance of nutrients from food. Packaged food often has an ingredients and nutrition label to help you make informed choices.

Food choices can have short-term and long-term effects on health. Not eating enough nutritious food during the day may leave someone feeling low on energy or finding it hard to concentrate. Regularly not getting the nutrients the body needs can affect growth, development, teeth, bones and general health.

resilience

Resilience is a willingness to keep trying even when things become hard.

When you experience a challenge and develop strategies to deal with it positively, you become more resilient.

It is normal to feel disappointment or frustration when things go wrong. Talking about these feelings and reflecting on what could have been done differently can be helpful.

regulate

Regulate means to manage thoughts, feelings and actions to stay balanced.

Regulating can involve noticing a feeling and choosing something that helps the body and mind feel calmer and more in control. Regulating feelings does not mean getting rid of them. It means recognising when feelings are becoming stronger and choosing a helpful response. You could: take deep breaths, count to ten, squeeze a stress ball, stretch, go outside or talk to a trusted adult or friend.

How this connects with previous learning

In Year 4, we explored growth mindsets and understood that mistakes are useful. We identified how to take responsibility for our own happiness.

In Year 5, we understood the importance of a balanced diet. We explored the benefits of different types of activities. We learnt about self-regulation and appropriate responses.

How this connects with future learning

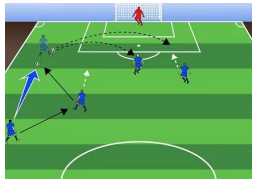
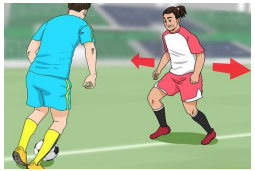
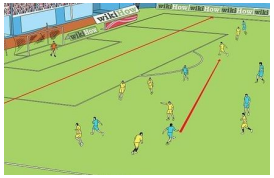
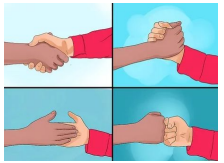
In KS3, we will learn that being healthy means having a positive state of physical, mental and social well-being and our health is linked to how we are physically, mentally and emotionally.

In KS3, we will learn about some mental health issues including stress, anxiety and depression. We will explore some of the causes of these issues and how we can look after our mental health.

In KS3, we will learn about the importance of being appreciated for who we are. We will learn about support networks and identify who we can turn to for support, encouragement and advice.

This is your Year 6 Physical Education Knowledge Organiser for Autumn 1 - Football

Key Vocabulary

covering	tactics	tracking	defensive	supporting	fair Play
To provide support to a teammate who is marking an opponent.	This refers to the strategies and plans used by a team to achieve their goals.	To follow an opposing player's movement and position of the field, in order to anticipate their actions and prevent them from gaining an advantage.	Play that is intended to prevent your opponent from scoring goals	This refers to the players ability to provide assistance to their teammate during a match. Supporting allows players to work together more effectively.	Refers to the principles of sportsmanship and ethical behaviour in sports. This includes treating opponents with respect and following the rules of the game.
The attacker dribbled past the first defender however the second defender was **covering** him and made the tackle just after.	The team was not following their managers **tactics** and lost the game	The midfielder made a run into the box to score but the defender was **tracking** him so he didn't receive the ball	The winning team was 2-0 up so they went into a **defensive** shape to protect their lead.	The midfielder had the ball at his feet, his other teammates made **supporting** runs so he could pass to them.	Fair play is important because it promotes healthy competition and helps to ensure that all players have a positive and enjoyable experience.
					

How this connects with previous learning

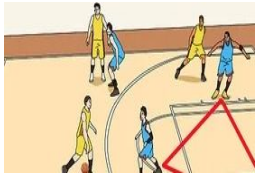
In year 4 you learned how to dribble showing good control and progress.	In year 5 you learned front and goal side marking techniques.

How this connects with future learning

In year 7 you will learn how to play by all rules used in professional game	In year 7 you will learn how to pass the ball successfully in a competitive situation.	In year 7 you will learn to use tactics successfully in game situations.

This is your Year 6 Physical Education Knowledge Organiser for Autumn 1 - Handball

Key Vocabulary

counter attack	jump shot	screening	dribbling	skill selection	offensive play
A **counter-attack** is a fast and direct attack that occurs from a moment of transition	This is an effective shooting technique in netball which requires the shooter to jump and shoot while they are in mid air.	This is when an offensive player stands beside or behind a defender in order to free a teammate to either shoot a pass or drive in to score	The action of a player bouncing the ball and catching it while moving forwards to attack the goal.	Is an athlete's ability to choose and perform the proper techniques at the right time, successfully, regularly, and with minimal effort	The action of attacking or engaging an opposing team with the objective of scoring points or goals.
A **Counter-attack** consist of minimal passes. They aim to create a goal-scoring opportunity before the opposition can recover their defensive shape.	The **jump shot** is thrown with power and speed downward into the opponent's goal. The angle and the steepness of the ball's trajectory make it hard for the opponent.	**Screening** is a great offensive move used to create space for the player in possession of the ball.	If a player takes more than three steps without **dribbling** (bouncing the ball) or holds the ball for more than 3 seconds without bouncing, shooting or passing then that is deemed 'travelling' and possession is lost.	The player chooses their **skill selection** for the task. They then perform this with the correct technique and with minimal effort.	This is when the team that has possession of the ball attack the oppositions area using **offensive play** with the intent to score. This is fast paced in order to prevent the defending team to recover and gain back possession.
					

How this connects with previous learning

In year 4 you learned how to pass and move with the ball to set up attacks.	In year 5 you learned Increase power and strength of passes, moving the ball over longer distances.

How this connects with future learning

In year 7 you will be looking at different defence tactics. You will also be learning the refereeing signals.	In year 7 you will be learning to develop your shooting technique and then apply this skill into a game situation.	In year 8 you will demonstrate tactical awareness and respond to changing situations by refining skills.

This is your Year 6 Science Knowledge Organiser for Autumn 1 - Classification

Scientific Enquiry

identifying and classifying

Identifying means knowing what something is and naming it. **Classifying** means grouping things together if they have something in common. We will use information about the characteristics of an unknown animal or plant to assign it to a group.

researching

We will **research using secondary sources** to learn about the formal classification system devised by Carl Linnaeus and why it is important. We will also use secondary sources to research the characteristics of animals that belong to a group.

Working Scientifically

Asking scientific questions
Planning an enquiry
Observing closely
Measuring (taking measurements)
Gathering and **recording** results
Presenting results
Interpreting results
Concluding (drawing conclusions)
Predicting
Evaluating an enquiry

Subject Specific Vocabulary

vertebrate

Vertebrates are animals with a backbone.
Vertebrates can be divided into five animal groups: fish, amphibians; reptiles, birds and mammals. Each group has common characteristics. For example, amphibians are cold-blooded, have lungs and lay eggs. When adult, they can live in water and on land. Mammals are warm-blooded with hair or fur. They give birth to live young. Reptiles have dry, scaly skin that lay soft-shelled eggs on land.

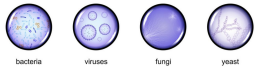
invertebrate

Invertebrates are animals without a backbone.
Invertebrates can be divided into a number of groups, including insects, spiders, snails and worms. Insects have bodies in 3 sections with a hard outer casing, 6 legs and 2 sets of wings.

Sp... They have 2 body parts, 8 legs, 6 or 8 eyes and spinnerets on their abdomens that produce silk.

micro-organism

Living things can be grouped according to characteristics. Plants and animals are two main groups but there are other livings things such as **microorganisms** .
Microorganisms are living things that are too small to be seen with the naked eye. They are normally viewed using a microscope. Viruses, bacteria and yeast as well as fungi: toadstools and mushrooms are the main



flowering plants

Flowering plants can make their own food whereas animals cannot. Plants can generally be divided into two main groups: **flowering plants** and non-flowering plants.
Flowering plants produce seeds, fruits and flowers in order to reproduce. Examples of flowering plants are: sunflowers, orchids, lavender, oak trees and potatoes.

non-flowering plants

Non-flowering plants are those that do not ever produce flowers. Like flowering plants, they make their own food. They can be divided into two main groups - those that reproduce with spores and those that reproduce with seeds.
Non-flowering plants that produce spores include mosses and ferns.
Non-flowering plants that produce seeds include conifers such as pines and firs.

Things you learnt in previous topics

In Year 4 you recognised that living things can be grouped in a variety of ways. You explored and used classification keys to help group, identify and name a variety of living things in my local and wider environment.
In Year 5 you described the differences in the life cycles of a mammal, an amphibian, an insect and a bird. You described the life process of reproduction in some plants and animals.

How this connects with future learning

Later in Year 6 you will learn to recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents. You will learn to identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution. In KS3, you will learn the differences between species.

Year 6 Spanish Knowledge Organiser
Todo sobre mí

Saludos
Greetings

Buenos días	Good morning
Buenas tardes	Good afternoon
Buenas noches	Good night

Preguntas
Questions

¿Cómo estás?	¿Cómo te llamas?	¿Cuántos años tienes?	¿Cuándo es tu cumpleaños?
Estoy	Me llamo.....	Tengo ..... años.	Mi cumpleaños es el ..... de .....

Enfermedades
Illnesses

Me duele la cabeza.	Tengo tos.
Me duele la tripa.	Tengo fiebre.

Sentimientos
Feelings

Estoy	
	bien / mal
	feliz / triste
	hambrient**o**/**a**
	cansad**o**/**a**
	aburrid**o**/**a**

Los números
The numbers

1	uno	11	once	21	veintiuno	31	treinta y uno
2	dos	12	doce	22	veintidos	32	treinta y dos
3	tres	13	trece	23	veintitres	...	...
4	cuatro	14	catorce	24	veinticuatro	40	cuarenta
5	cinco	15	quince	25	veinticinco	50	cincuenta
6	seis	16	dieciseis	26	veintiseis	60	sesenta
7	siete	17	diecisiete	27	veintisiete	70	setenta
8	ocho	18	dieciocho	28	veintiocho	80	ochenta
9	nueve	19	diecinueve	29	veintinueve	90	noventa
10	diez	20	veinte	30	treinta	100	cien

Preguntas
Wh- questions

Qué
What

Cuándo
When

Quién/Quiénes
Who

Cómo
How

Cuánto/a/os/as
How much/many

Por qué
Why

Dónde
Where

Cuál
Which

porque
because

At New Wave Federation, we demonstrate...

new wave federation

- Collaboration
- Creativity
- Focus
- Kindness
- Responsibility