

Autumn Term Knowledge Organisers Year Three



What are these?

The following knowledge organisers are developed based on the progression documents for the subjects.

Every effort has been made to provide the learners with support for learning and understanding the essential skills in each aspect of the subject.

Children should learn to and understand the key vocabulary and should be utilising this in varying contexts.

The children should use opportunities to link these facts to other areas of learning and other areas of the curriculum.

Simply providing the children with these organisers will not support them in their learning. Their use will be specifically taught in school and the children must see these as a learning aid.

The knowledge organisers are developed to be double sided with each child having their own copy, which they annotate to help support them further and or use to track their progress.

Why use them?

Working memory - This is where thinking actually happens. It has a very finite capacity; it can only hold and process about four different items at a time. If it receives too much it fails.

Long-term memory - Long-term memory has huge – almost infinite – capacity. It is here that we store our knowledge of facts and procedures. The goal is to stock our long-term memories with knowledge in a well organised, easily retrievable way and make recall of key aspects automatic. This frees up the working memory for new information.

Cognitive load - This is the term used in cognitive science to describe how much capacity something takes up in the working memory. Cognitive overload is what happens if too many demands are placed on working memory at once.

The aim of the knowledge organisers is to improve the speed with which information is stored in the long term memory, thus improving the learners ability to develop deep learning in more areas of the curriculum.

How can these be used at home?

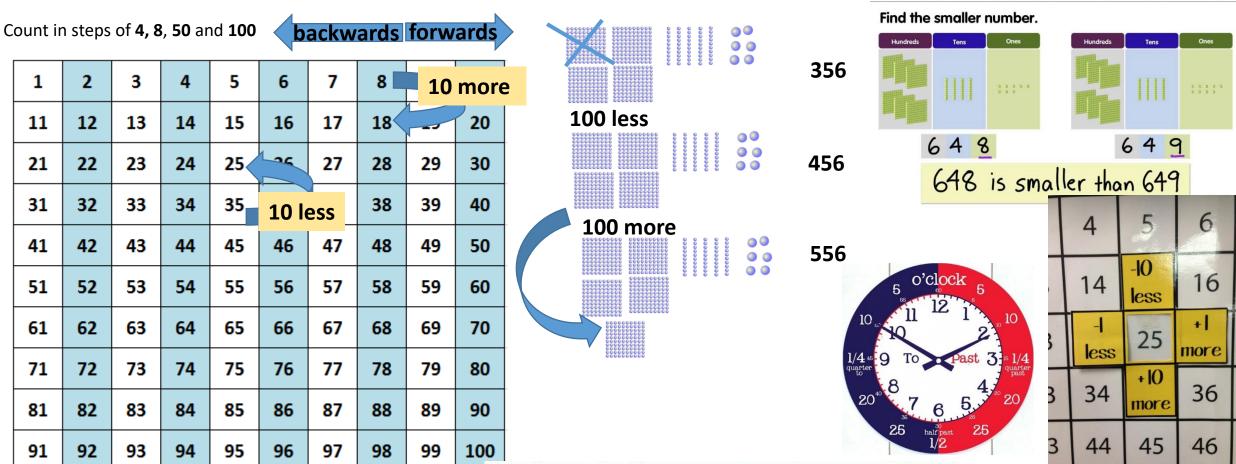
There are several ways that you can use knowledge organisers with children.

- 1. Look at the previous knowledge organiser to see how their learning is growing and se where there are links to what has already been learned.
- 2. Use it to look at what your child will be learning and share what you know about that topic.
- 3. Have the knowledge organisers on the fridge/appropriate place at home and use it to prompt discussion around the topic at home.
- 4. Help your child to research the topic and bring information in to school to share with their class.
- 5. Areas of the knowledge organisers are purposely blank so children can add information to support them further eg starring any aspects that they find tricky, adding any key sentences which they struggle with.
- 6. Vocabulary prompts use the vocabulary bank to support children in utilising the correct topic related vocabulary.
- 7. Parents can challenge children to recall the appropriate information and explain what it means but should be aware that the children will not know this from the start of the term.

How are they not to be used?

These provide a brief overview of what the children should securely know by the end of that year group. They should NOT be utilised as an end point assessment and links must be made to other areas of learning.

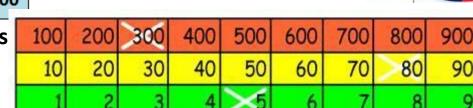
These knowledge organisers, are a starting point and will need to be adapted over time in response to the needs of the children.



How can I use this information to find ten or one hundred more or less than any number?

104

hundreds tens ones



hundreds tens ones

Vocabulary

equal to
more than - greater than
less than (fewer)
digit
hundreds

tens

ones estimate



103

101

102

Counting	Counting	Counting	Counting	Counting	Carretina	Counting	Counting
in 4s	in 4s	in 8s	in 8s	Counting	Counting	in 100s	in 100s
0	92	0	176	in 50s	in 50s	0	2,300
	88			0	1,150		
4		8	168	50	1,100	100	2,200
8	84	16	160	100	1,050	200	2,100
12	80	24	152	150	1,000	300	2,000
16	76	32	144	200	950	400	1,900
20	72	40	136	250	900	500	1,800
24	68	48	128	300	850	600	1,700
28	64	56	120	350	800	700	1,600
32	60	64	112	400	750	800	1,500
36	56	72	104	450	700	900	1,400
40	52	80	96	500	650	1,000	1,300
44	48	88	88	550	600	1,100	1,200
48	44	96	80	600	550	1,200	1,100
52	40	104	72	650	500	1,300	1,000
56	36	112	64	700	450	1,400	900
60	32	120	56	750	400	1,500	800
64	28	128	48	800	350	1,600	700
68	24	136	40	850	300	1,700	600
72	20	144	32	900	250	1,800	500
76	16	152	24	950	200	1,900	400
80	12	160	16	1,000	150	2,000	300
84	8	168	8	1,050	100	2,100	200
88	4	176	0	1,100	50	2,200	100
92	0			1,150	0	2,300	0

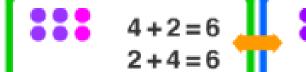
inverse operations

Opposite operations.

Addition

inverse

Subtraction



$$6 - 4 = 2$$

6 - 2 = 4

Vocabulary

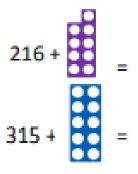
- + add, addition, plus, more, make, sum, total
- take away, subtract, minus, leave, less, difference between
- equals, makes, totals, balances

Inverse - inverse operations - opposite, reverse operations.



Three - Addition and Subtraction

I can solve these mentally

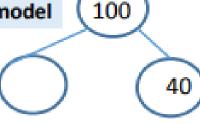


675

567

I can use a bar model to help solve missing number questions

Part whole model



Addition and subtraction

789 + 642 becomes

Answer: 1431

8 7 4 - 5 2 3

5 1

874 – 523 becomes

Answer: 351

932 – 457 becomes 9 3 2 – 4 5 7 4 7 5

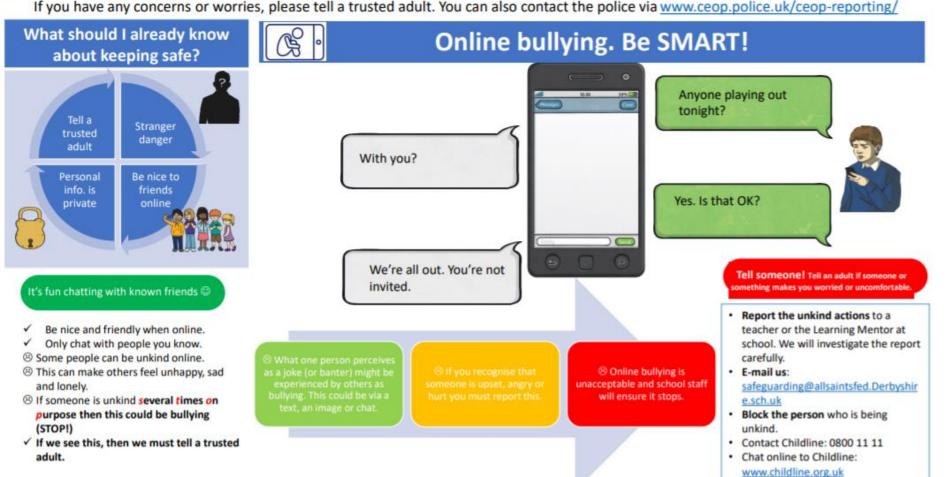
Answer: 475



LKS2 Online Safety



If you have any concerns or worries, please tell a trusted adult. You can also contact the police via www.ceop.police.uk/ceop-reporting/







COMPUTING SYSTEMS AND NETWORKS KNOWLEDGE ORGANISER





Overview



Digital Devices

- -You should already know that Technology is something that has been made by people to help us.
- You should also know that Information technology (I.T.) includes computers and things that work with computers.
- Digital devices are things made for a particular purpose, that use processing.

Digital devices have an input, process, and output (IPO).



 Information and data can be shared across networks. Many devices are used to create networks.

Digital Devices - Input, Process Output (IPO)

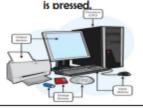
-A device is something that has been made for a particular purpose (it has a special use). -Digital devices use processing (have a process) There is more than just an on-off function. Digital devices have an input, process, output (IPO)

Input: Something that sends a message to the device. E.g. You press a button on the keyboard.



Input Devices: Keyboard, joystick, mouse, web cam, microphone, touch screen, track ball, digital camera.

Process: The device acts on the message, E.g. The computer follows a program that tells it what to do when the keyboard



Output: Something that is sent out by the device. E.g. The letter that you have typed on the screen.



Output Devices:

Screen/monitor, printer, headphones, projector, speaker, smartboard.

Networks and Network Devices

Connections and Networks

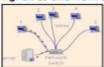
- In Computing, a connection describes a link between the computer and something else.
- -For example, a computer may be connected to the internet through wires, a mobile data system, or WiFi.
- A computer network is a set of connections that joins computers together.
- -The computers in the network can send and receive information to one another.



Network Devices

- -Network switch: a device that helps different devices on a network to be connected with each other.
- -Server: a computer that manages the network and stores files

Wireless access point (WAP): a device, connected to a wired network, that sends and receives wireless signals to and from devices.



Why Networks Are Useful

- Computer networks allow us to send and receive information between computers that are in different places.
- Networks can help us to communicate quickly and easily.
- -Networks can also join computers to shared devices, like scanners and printers.
- The internet is a global network of computers, Imagine how different life would be without the internet!
- If information is shared on a network, it helps to reduce the risk of data being lost, e.g. if one computer breaks.



Important Vocabulary

Digital Device

Network

Server





COMPUTING: CREATING MEDIA KNOWLEDGE ORGANISER



Overview

Desktop Publishing

-Desktop publishing is when we create documents using page layout software.

 We can use desktop publishing to make things like newsletters, brochures, magazines and newspapers.

- Some examples of software that we can use for desktop publishing are Microsoft Publisher, Adobe Spark and Canva.

-When using desktop publishers, we consider how images and text are laid out the page in an eyecatching and appropriate format.

Layout of A Page

When desktop publishing, we consider how we can lay out a page in the most interesting, eye-catching, and appropriate ways, to suit our purpose and audience.

The title should be large, bold and clear. It is normally the largest text on the page.

Consider which font you will use - different fonts create different ideas and feelings.

What is the main story of the magazine? How can you sum the story up in a few words?



Think about how different colours make us think and feel.

Think about where you will put the date and price of the magazine this is important information!

Magazines are normally in portrait orientation. Think about how you lay out text and images.

Text Tools

The toolbar is the set of icons and buttons that are at the top of the page in a desktop publisher. You should already know some of these from your earlier study:

These tools can change the text.

BIU

The B makes the text Bold.

The I writes the text in Italics.

The U underlines the text.

Clicking on this icon allows you to change the font (style) of the text. Most desktop publishers have many styles

to choose from.



Clicking on this icon allows you to change the size of the text. After pressing the icon, you will see a list of numbers. The larger the number selected, the bigger your text will be.



Clicking on this icon opens the text colour tool. It allows you to change the colour of the text. There are often many colours to choose from.



Berlin Sans FE V

The undo tool reverses the last thing that you did. If you make a mistake, the undo tool can help you to get it back to how it was.

Image and Layout Tools



Templates have a pre-arranged layout, colour scheme and style that you can adapt for your needs!

-Text boxes allow you to type

The box itself can be coloured.

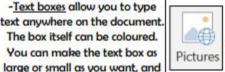
You can make the text box as

large or small as you want, and

rotate it using this symbol.



-The styles tool is a real time saver. You get to choose a number of different features, e.g. fonts and colours, and it will apply the rules to the whole document.



 This tool lets you insert pictures into your document. You can select pictures already on your computer, or search the internet for pictures. Pixabay contains lots of pictures that you can legally use in publications.

Important Vocabulary

Publishing

Text

Images

Font

Templates

Draw

Text Box

Orientation

Placeholders

Software

Purpose

Audience



Year 3 Science Knowledge Organiser Chemistry - Rocks



The role of Mary Anning in palaeontology and the discovery of fossils. Soil contains nutrients and these help plants to grow. The meaning of the word absorb. That magma is molten rock that is formed in very hot conditions inside the earth.
Why some materials are used for certain purposes because of their

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Key Vocabula	ry
igneous rock	Rock that has been formed from magma or lava.
sedimentary rock	Rock that has been formed by layers of sediment being pressed down hard and sticking together. You can see the layers of sediment in the rock.
metamorphic rock	Rock that started out as igneous or sedimentary rock but changed due to being exposed to extreme heat or pressure.
magma	Molten rock that remains underground.
lava	Molten rock that comes out of the ground is called lava.
sediment	Natural solid material that is moved and dropped off in a new place by water or wind, e.g. sand.
permeable	Allows liquids to pass through it.
impermeable	Does not allow liquids to pass through it.

Key Knowledge		
There are three types of na	turally occurring rock.	2015-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-
Igneous	Sedimentary	Metamorphic

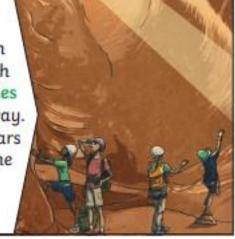
Sedimentary Chalk	Metamorphic Marble	Rocks Brick
Chalk	Marble	Brick
		NAME OF STREET OFFICE OF STREET, SQUARE, SQUAR
Sandstone	Quartzite	Concrete
Limestone	Slate	Coade Stone
N. A.		
	RY	

Some words you might use to discuss the properties of a rock:

hard, soft, permeable, impermeable, durable (meaning resistant to weathering), high density, low density. Density measures how 'bulky' the rock is (how tightly packed the molecules are).

Key Vocabulary	A
fossilisation	The process by which fossils are made.
palaeontology	The study of fossils.
erosion	When water, wind or ice wears away land.

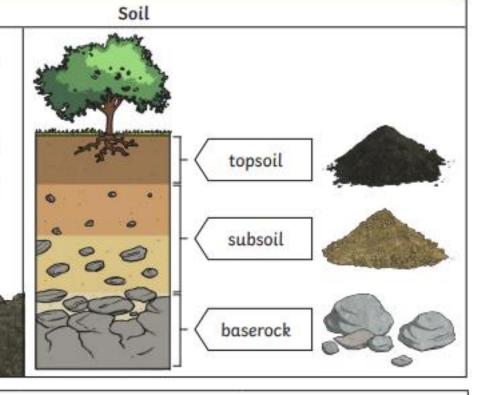
Caves are formed when water permeates through the base rock and erodes some of the rock away. Over thousands of years these caves can become very large.



Key Knowledge

Soil is the uppermost layer of the Earth. It is a mixture of different things:

- minerals
 (the minerals in soil
 come from finely
 broken-down rock);
- · air:
- water;
- organic matter (including living and dead plants and animals).



Fossilisation

An animal dies. It gets covered with sediments which eventually become rock.

More layers of rock cover it. Only hard parts of the creature remain, e.g. bones, shells and teeth.

Over thousands of years, sediment might enter the mould to make a cast fossil. Bones may change to mineral but will stay the same shape.

Changes in sea level take place over a long period.

As erosion and weathering take place, eventually the fossil becomes exposed.













usually by burning (e.g. the Sun) or

- certain materials block

Year 3 Science Knowledge Organiser Physics - Light

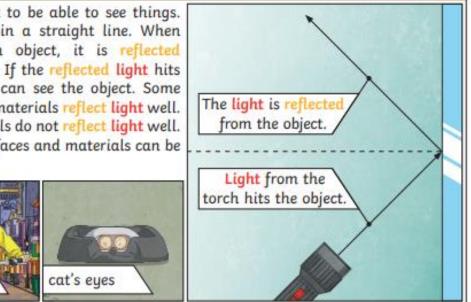
Key Vocabulary	
light	A form of energy that travels in a wave from a source.
light source	An object that makes its own light.
dark	Dark is the absence of light.
reflection	The process where light hits the surface of an object and bounces back into our eyes.
reflect	To bounce off.
reflective	A word to describe something which reflects light well.
ray	Waves of light are called light rays. They can also be called beams.

	Key Knowledg
	We need light
	Light travels i
-	light hits an
	(bounces off).
5	our eyes, we
	surfaces and m

If the reflected light hits can see the object. Some naterials reflect light well. Other materials do not reflect light well. Reflective surfaces and materials can be very useful...



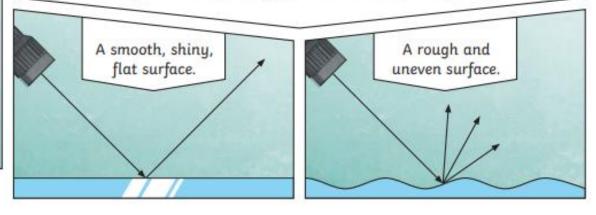




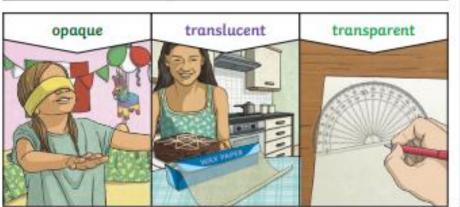
Mirrors reflect light they create a clear image. An image in a mirror appears to be reversed. For example, if you look in a mirror and raise your right hand, the mirror image appears to raise its left hand.

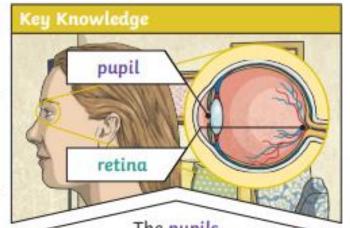


The surfaces that reflect light best are smooth, shiny and flat.



pupil	The black part of the eye which lets light in.
retina	A layer at the very back of the eye. The retina takes the light the eye receives. It then changes it into nerve signals to send to the brain.
shadow	An area of darkness where light has been blocked.
opaque	Describes objects that do not let any light pass through them.
translucent	Describes objects that let some light through, but scatter the light so we can't see through them properly.
transparent	Describes objects that let light travel through them easily, meaning that you can see through the object.

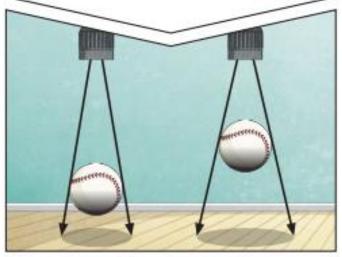


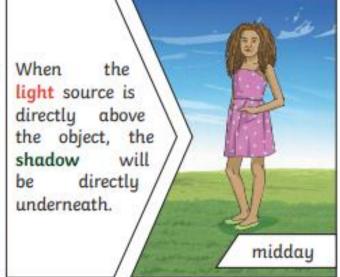


The pupils

control the amount of light entering the eyes. If too much light enters, then it can damage the retina. To help protect the eyes, you can wear a hat with a wide brim and sunglasses with a UV rating.

A shadow is caused when light is blocked by an opaque object. A shadow is larger when an object is closer to the light source. This is because it blocks more of the light.





When light source is to one side of an object, the shadow will appear on the opposite side. The shadow will also be longer. sunset

History – Stone Age to Iron Age

Many things have changed in Britain in history including the materials we use. Starting with stone, then bronze and then iron, tools and technologies have changed. This is why we live the way we do now.



Skara Brae

Key words

- Stone Age
- Bronze Age
- Iron Age
- Source
- B.C. (Before Christ)
- A.D. (Anno Domini)

- Hunter-gatherer
- Settlement











Year 3 Science Knowledge Organiser Chemistry - Rocks



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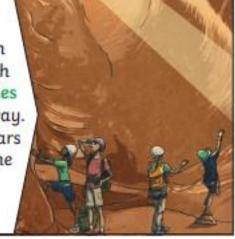
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NA.		
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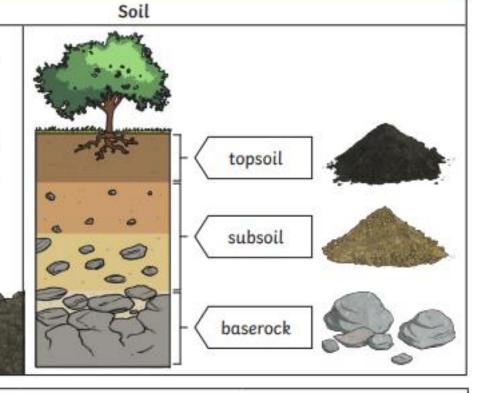
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Over thousands of years, sediment might enter the mould to make a cast fossil. Bones may change to mineral but will stay the same shape.

Changes in sea level take place over a long period.

As erosion and weathering take place, eventually the fossil becomes exposed.

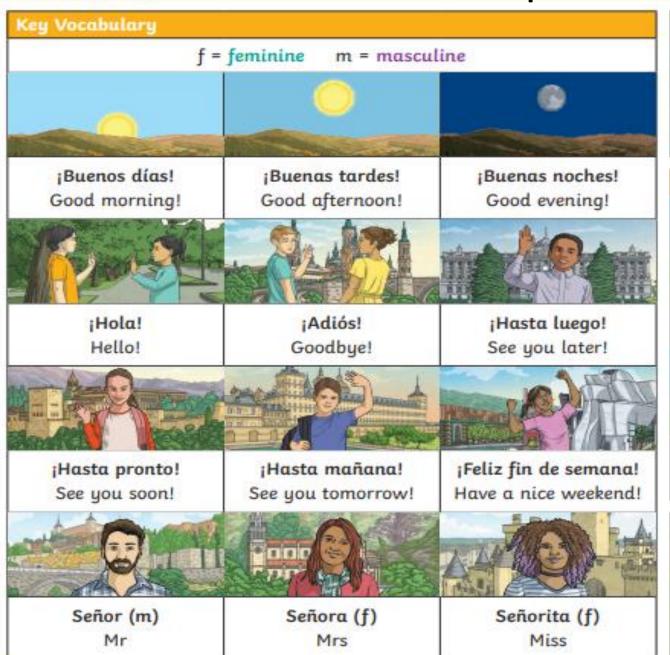




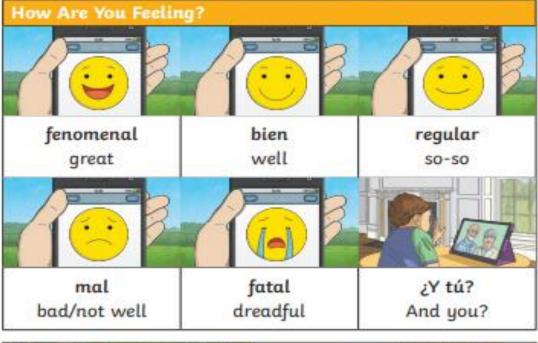


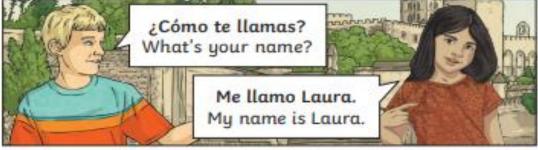












PSHCE Knowledge Organiser

vocabulary:

assertive

aggressive

leader

pick-me-ups

put-downs

making amends

sorry

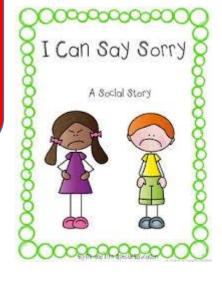
confidential

boundaries

working together

Essential skills	Key questions
self-reflection	How do other people show their feelings?
self-management	Can we tell what people are saying even if they don't say anything?
empathy	What can we do to help other people?

¹**Definitions:** a *surprise* is something everyone will know and will make someone feel good or happy; a *secret* is something that someone is told not to share with anyone, and that makes someone feel uncomfortable, anxious or worried.





PSHCE Knowledge Organiser



Houses of Parliament

vocabulary

House of Lords

House of Commons

Monarch

MP

Government

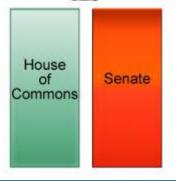
Election

Debate

Law



The UK Parliament has devolved (given away) some of its powers to other national and regional bodies.



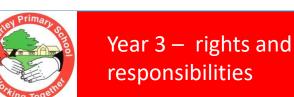
The Queen

Parliament is made up of three parts: the House of Commons, the House of Lords and the king or queen – known as the Monarch.





Debating is when people formally argue over an



An election is a vote to choose a person for a



particular role.

PSHCE Knowledge Organiser

Vocabulary:

spending

saving

donating

choices

influence

advertisement

persuade

temptation

customer

fundraiser

Advertisers

How do they try to influence us?













influences	Definition
friends	People who like you and who you like
family	A group of adults and children who love each other
promotions	Publicity campaigns
culture	Ideas and behaviour of a particular group of people
affordability	Being able to buy something because it does not cost too much

Knowledge Organiser – Let Your Spirit Fly – Year 3, Unit 1

1 – Listen & Appraise: Let Your Spirit Fly (RnB)

Structure: Introduction, verse, chorus.

Instruments/voices you can hear: Male and female voices, bass, drums, guitar, keyboard, synthesizer.

charanga"

Let Your Spirit

Fly

Find the pulse as you are listening: Dance, clap, sway, march, be an animal or a pop star.

2 – Musical Activities using glocks and/or

recorders

Warm-up games play and copy back using up to 2 notes – C + D.

Bronze: no notes | Silver: C, sometimes D | Gold: C + D challenge.

Which challenge did you get to?

Singing in 2 parts.

Play instrumental parts with the song by ear and/or from notation using the easy or medium part. You will be using up to 3 notes – C, D + E.

Which part did you play?

Improvise using up to 3 notes – C, D + E.

Bronze: C | Silver: C, sometimes D | Gold: C, D + E challenge.

Which challenge did you get to?

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

3 — Perform & Share

Decide how your class will introduce the performance. Perhaps add some funky dance moves? Tell your audience how you learnt this song and why. Record the performance and talk about it afterwards.

The performance will include one or more of the following:

Improvisations • Instrumental performances • Compositions



About this Unit

Theme: RnB and other musical styles.

Facts/info: RnB is a mixture of Soul, Hip Hop and Gospel music. Other RnB singers include Beyoncé, Usher, Rihanna and Stevie Wonder.

Listen to 4 other songs/pieces:

- Colonel Bogey March by Kenneth Alford (Film)
- Consider Yourself from the musical 'Oliver!' (Musicals)
- Ain't No Mountain High Enough by Marvin Gaye (Motown)
- You're The First, The Last, My Everything by Barry White (Soul)

Vocabulary: Structure, introduction, verse, chorus, improvise, compose, pulse, rhythm, pitch, tempo, dynamics bass, drums, guitar, keyboard, synthesizer, hook, melody

Reflection

What did you like best about this Unit? Why? Was there anything you didn't enjoy about it? Why?

Did you have any strong feelings about it? Were you proud of yourself, happy or annoyed?

What are the 'style indicators' of RnB music? How do you know this is RnB music?

Knowledge Organiser - Glockenspiel Stage 1 - Year 3, Unit 2



1 - Musical Activities using glocks

Learn to play and read the notes C, D, E+F.

Learn to play these tunes:

- Easy E
- Strictly D
- Play Your Music
- Drive
- Dee Cee's Blues
- What's Up
- D-E-F-initely
- Roundabout
- March of the Golden Guards
- Portsmouth

Improvise with Dee Cee's Blues using the notes C + D.

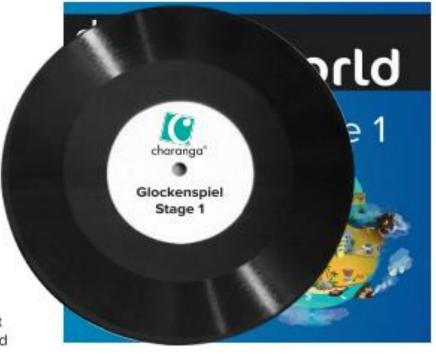
Compose using the notes C, D, E + F.

2 - Perform & Share

Decide how your class will introduce the performance. Tell your audience how you learnt the music and why. Record the performance and talk about it afterwards.



Improvisations • Instrumental performances • Compositions



About this Unit

Theme: Exploring and developing playing skills using the glockenspiel.

Vocabulary: Improvise, compose, pulse, rhythm, pitch, tempo, dynamics, texture structure, melody

Reflection

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