



# English

## Writing Mat Expected Year 4

Spellings... I need to know <b>almost all</b> of these:					
accident	centre	experience	important	ordinary	reign
accidentally	century	experiment	interest	particular	remember
actual	certain	extreme	island	peculiar	sentence
actually	circle	famous	knowledge	perhaps	separate
address	complete	favourite	learn	popular	special
although	consider	February	length	position	straight
answer	continue	forwards	library	possess	strange
appear	decide	fruit	material	possession	strength
arrive	describe	grammar	medicine	possible	suppose
believe	different	group	mention	potatoes	surprise
bicycle	difficult	guard	minute	pressure	therefore
breath	disappear	guide	natural	probably	though
breathe	early	heard	naughty	promise	thought
build	earth	heart	notice	purpose	through
busy	eight	height	occasion	quarter	various
business	eighth	history	occasionally	question	weight
calendar	enough	imagine	often	recent	woman
caught	exercise	increase	opposite	regular	women

Does it All Agree?	
Check through your work for:	
was/were	is/are
Is your writing in the correct tense?	

**Don't forget your paragraphs!**

Which is Witch?	
Don't Muddle Your Homophones	
there/their/they're	your/you're
our/are	accept/except
two/too/to	whether/weather

Know your Prefixes
un- means not
pre- means before
mis- means wrong
super- means above
re- means again
sub- means under
inter- means between
anti- means against
auto- means self
im/ir/in/il- mean not

**Top Tip:** Use pronouns like **he, she, them** or **they** instead of repeating a name or names.

Front it Out!	
Use fronted adverbials with a comma.	
After the storm,	Running for his life,
Behind the clouds,	All of a sudden,
Before lunch,	Waiting anxiously,

Super Suffixes!		
-ation		
preparation	sensation	
-ous		
courageous	curious	serious
-ly		
gently	angrily	frantically

Punctuation Power!	
<b>A</b>	Capital letters for the start of sentences, names and places.
.	A full stop at the end of a sentence.
!	Exclamation marks for exclamations or surprise.
?	Question marks for questions.
'	Apostrophes for showing something belongs to someone and to mark missing letters in contracted words, e.g. didn't..
,	Commas to separate items on a list.
“ ”	Inverted commas around speech.

Expanded Noun Phrases: Get Descriptive!	
the hideous, fire-breathing dragon with green scales	a magnificent, sparkling necklace with priceless diamonds

# Maths

## Number and Place Value

Number and Place Value		Knowledge Organiser																												
<b>Key Vocabulary</b>	<b>Counting</b>																													
thousands	Counting in 6s																													
hundreds	<table border="1"> <tr> <td>0</td><td>6</td><td>12</td><td>18</td><td>24</td><td>30</td><td>36</td><td>42</td><td>48</td><td>54</td><td>60</td> </tr> </table>			0	6	12	18	24	30	36	42	48	54	60																
0	6	12	18	24	30	36	42	48	54	60																				
tens	Counting in 7s																													
ones	<table border="1"> <tr> <td>0</td><td>7</td><td>14</td><td>21</td><td>28</td><td>35</td><td>42</td><td>49</td><td>56</td><td>63</td><td>70</td> </tr> </table>			0	7	14	21	28	35	42	49	56	63	70																
0	7	14	21	28	35	42	49	56	63	70																				
zero	Counting in 9s																													
place value	<table border="1"> <tr> <td>0</td><td>9</td><td>18</td><td>27</td><td>36</td><td>45</td><td>54</td><td>63</td><td>72</td><td>81</td><td>90</td> </tr> </table>			0	9	18	27	36	45	54	63	72	81	90																
0	9	18	27	36	45	54	63	72	81	90																				
greater than	Counting in 25s																													
less than	<table border="1"> <tr> <td>0</td><td>25</td><td>50</td><td>75</td><td>100</td><td>125</td><td>150</td><td>175</td><td>200</td><td>225</td><td>250</td> </tr> </table>			0	25	50	75	100	125	150	175	200	225	250																
0	25	50	75	100	125	150	175	200	225	250																				
order	Counting in 1000s																													
round	<table border="1"> <tr> <td>0</td><td>1000</td><td>2000</td><td>3000</td><td>4000</td><td>5000</td><td>6000</td><td>7000</td><td>8000</td><td>9000</td><td>10 000</td> </tr> </table>			0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10 000																
0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10 000																				
rounded to	<b>Compare and Order</b>		<b>1000 More or 1000 Less</b>																											
negative number	<table border="1"> <tr> <th>Th</th><th>H</th><th>T</th><th>O</th></tr> <tr> <td>●●●</td><td>●●</td><td>●●●</td><td>●●●●</td></tr> </table> $4324 > 3243$ greater than		Th	H	T	O	●●●	●●	●●●	●●●●	<table border="1"> <tr> <th>Th</th><th>H</th><th>T</th><th>O</th></tr> <tr> <td>●●●</td><td>●●</td><td>●●●</td><td>●●●●</td></tr> </table>	Th	H	T	O	●●●	●●	●●●	●●●●											
Th	H	T	O																											
●●●	●●	●●●	●●●●																											
Th	H	T	O																											
●●●	●●	●●●	●●●●																											
partition	<table border="1"> <tr> <th>Th</th><th>H</th><th>T</th><th>O</th></tr> <tr> <td>●●●</td><td>●●</td><td>●●●</td><td>●●●●</td></tr> </table> $879 < 2126$ less than		Th	H	T	O	●●●	●●	●●●	●●●●	<table border="1"> <tr> <th>Th</th><th>H</th><th>T</th><th>O</th></tr> <tr> <td>●●●</td><td>●●</td><td>●●●</td><td>●●●●</td></tr> </table>	Th	H	T	O	●●●	●●	●●●	●●●●											
Th	H	T	O																											
●●●	●●	●●●	●●●●																											
Th	H	T	O																											
●●●	●●	●●●	●●●●																											
digit	<table border="1"> <tr> <td>2497</td><td>2508</td><td>3012</td><td>3521</td><td>3530</td><td>4002</td> </tr> </table>		2497	2508	3012	3521	3530	4002	<table border="1"> <tr> <td>1000 Less</td><td></td><td>1000 More</td></tr> <tr> <td> <table border="1"> <tr> <td>1000</td><td>100</td><td>10</td><td>1</td></tr> </table> </td><td> <table border="1"> <tr> <td>1000</td><td>100</td><td>10</td><td>1</td></tr> </table> </td><td> <table border="1"> <tr> <td>1000</td><td>100</td><td>10</td><td>1</td></tr> </table> </td></tr> <tr> <td>1212</td><td>2212</td><td>3212</td></tr> </table>	1000 Less		1000 More	<table border="1"> <tr> <td>1000</td><td>100</td><td>10</td><td>1</td></tr> </table>	1000	100	10	1	<table border="1"> <tr> <td>1000</td><td>100</td><td>10</td><td>1</td></tr> </table>	1000	100	10	1	<table border="1"> <tr> <td>1000</td><td>100</td><td>10</td><td>1</td></tr> </table>	1000	100	10	1	1212	2212	3212
2497	2508	3012	3521	3530	4002																									
1000 Less		1000 More																												
<table border="1"> <tr> <td>1000</td><td>100</td><td>10</td><td>1</td></tr> </table>	1000	100	10	1	<table border="1"> <tr> <td>1000</td><td>100</td><td>10</td><td>1</td></tr> </table>	1000	100	10	1	<table border="1"> <tr> <td>1000</td><td>100</td><td>10</td><td>1</td></tr> </table>	1000	100	10	1																
1000	100	10	1																											
1000	100	10	1																											
1000	100	10	1																											
1212	2212	3212																												
Roman numeral	smallest		greatest																											

Number and Place Value		Knowledge Organiser																																															
<b>Negative Numbers</b>																																																	
<table border="1"> <tr> <td>-10</td><td>-9</td><td>-8</td><td>-7</td><td>-6</td><td>-5</td><td>-4</td><td>-3</td><td>-2</td><td>-1</td><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td> </tr> </table>				-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10																									
-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10																													
<b>Represent 4-Digit Numbers</b>		<b>Roman Numerals</b>																																															
<p>3487</p> <p>three thousand, four hundred and eighty-seven</p> <table border="1"> <tr> <th>1000s</th><th>100s</th><th>10s</th><th>1s</th></tr> <tr> <td>   </td><td>    </td><td>     </td><td>    </td></tr> </table>		1000s	100s	10s	1s					<table border="1"> <tr> <td>one</td><td>1</td><td>I</td></tr> <tr> <td>five</td><td>5</td><td>V</td></tr> <tr> <td>ten</td><td>10</td><td>X</td></tr> <tr> <td>fifty</td><td>50</td><td>L</td></tr> <tr> <td>one hundred</td><td>100</td><td>C</td></tr> </table> <p>XVIII = 18 XXIX = 29 LXXXIV = 84</p>		one	1	I	five	5	V	ten	10	X	fifty	50	L	one hundred	100	C																							
1000s	100s	10s	1s																																														
one	1	I																																															
five	5	V																																															
ten	10	X																																															
fifty	50	L																																															
one hundred	100	C																																															
<table border="1"> <tr> <th>Thousands</th><th>Hundreds</th><th>Tens</th><th>Ones</th></tr> <tr> <td>●●●</td><td>●●●</td><td>●●●</td><td>●●●</td></tr> </table>		Thousands	Hundreds	Tens	Ones	●●●	●●●	●●●	●●●	<b>Rounding</b>																																							
Thousands	Hundreds	Tens	Ones																																														
●●●	●●●	●●●	●●●																																														
<table border="1"> <tr> <th>Thousands</th><th>Hundreds</th><th>Tens</th><th>Ones</th></tr> <tr> <td>●●●</td><td>●●●</td><td>●●●</td><td>●●●</td></tr> </table>		Thousands	Hundreds	Tens	Ones	●●●	●●●	●●●	●●●	<p>Look at the place value column to the right of the value you are rounding to. If this digit is a 4 or less, round down. If the digit is a 5 or more, round up.</p> <p><b>Rounding to nearest 10</b></p> <table border="1"> <tr> <td>20</td><td>21</td><td>22</td><td>23</td><td>24</td><td>25</td><td>26</td><td>27</td><td>28</td><td>29</td><td>30</td> </tr> <tr> <td colspan="5">← round down</td> <td colspan="6">round up →</td> </tr> </table> <p><b>Rounding to the nearest 100</b></p> <table border="1"> <tr> <td>200</td><td>249</td><td>250</td><td>300</td> </tr> <tr> <td colspan="2">← round down</td> <td colspan="2">round up →</td> </tr> </table> <p><b>Rounding to the nearest 1000</b></p> <table border="1"> <tr> <td>2000</td><td>2499</td><td>2500</td><td>3000</td> </tr> <tr> <td colspan="2">← round down</td> <td colspan="2">round up →</td> </tr> </table>		20	21	22	23	24	25	26	27	28	29	30	← round down					round up →						200	249	250	300	← round down		round up →		2000	2499	2500	3000	← round down		round up →	
Thousands	Hundreds	Tens	Ones																																														
●●●	●●●	●●●	●●●																																														
20	21	22	23	24	25	26	27	28	29	30																																							
← round down					round up →																																												
200	249	250	300																																														
← round down		round up →																																															
2000	2499	2500	3000																																														
← round down		round up →																																															
<table border="1"> <tr> <td>0</td><td>1000</td><td>2000</td><td>3000</td><td>4000</td><td>5000</td><td>6000</td><td>7000</td><td>8000</td><td>9000</td><td>10 000</td> </tr> </table>				0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10 000																																			
0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10 000																																							



# Maths

## Addition and Subtraction

### Addition and Subtraction

### Knowledge Organiser

#### Key Vocabulary

Add

Total

Plus

Sum

More

Altogether

Difference

Subtract

Less

Minus

Take away

Mentally, Orally

Column Addition

Column Subtraction

Exchange

Estimate

Inverse operation

Solve problems

Number facts

#### Addition and Subtraction Methods

#### Add 4-digit numbers

No exchange

$$\begin{array}{r} 5162 \\ +3427 \\ \hline 8589 \end{array}$$

Starting with the ones, add each column in turn.

One exchange

$$\begin{array}{r} 5162 \\ +3497 \\ \hline 8659 \\ 1 \end{array}$$

Starting with the ones, add each column in turn. When adding 6 tens + 9 tens = 15 tens = 1 hundred + 5 tens. Place 1 hundred under the hundreds answer and 5 tens in the answer.

Multiple exchanges

$$\begin{array}{r} 5864 \\ +3497 \\ \hline 9361 \\ 111 \end{array}$$

Starting with the ones, add each column in turn. Exchange tens, hundreds and/ or thousands as required.

#### Subtract 4-digit numbers

No exchange

$$\begin{array}{r} 5789 \\ -3421 \\ \hline 2368 \end{array}$$

Starting with the ones, subtract each column in turn.

One exchange

$$\begin{array}{r} 61 \\ 5749 \\ -3471 \\ \hline 2278 \end{array}$$

Starting with the ones, subtract each column in turn. When subtracting 4 tens - 7 tens, exchange 1 hundred to make: 14 tens - 7 tens = 7 tens

Multiple exchanges

$$\begin{array}{r} 6131 \\ 5742 \\ -3476 \\ \hline 2266 \end{array}$$

Starting with the ones, subtract each column in turn. Exchange tens, hundreds and/ or thousands as required.

#### Efficient subtraction

Calculate  $6000 - 3617 = 2383$



# Maths

## Multiplication and Division

Multiplication and Division		Knowledge Organiser																																
<b>Key Vocabulary</b>	<b>Multiplication and Division Facts</b>	<b>Use Place Value to Multiply and Divide Mentally</b>																																
multiply		 $5 \times 1 = 5$ $5 + 1 = 5$																																
groups of		 $5 \times 10 = 50$ $50 + 10 = 5$																																
lots of		 $5 \times 100 = 500$ $500 + 100 = 5$																																
times																																		
divide																																		
share																																		
remainder																																		
<b>factor</b>	<b>Factor pairs and Commutativity</b>	<b>Multiply Using Formal Written Methods</b>																																
<b>multiple</b>	 The factors of 20 are 1, 2, 4, 5, 10 and 20. The factor pairs are: 1 and 20   2 and 10   4 and 5	<table border="1"> <thead> <tr><th>Th</th><th>H</th><th>T</th><th>O</th></tr> </thead> <tbody> <tr><td></td><td>5</td><td>4</td><td>3</td></tr> <tr><td><math>\times</math></td><td></td><td></td><td>4</td></tr> <tr><td></td><td></td><td>1</td><td>2</td></tr> <tr><td></td><td>1</td><td>6</td><td>0</td></tr> <tr><td></td><td>2</td><td>0</td><td>0</td></tr> <tr><td></td><td>2</td><td>1</td><td>7</td></tr> <tr><td></td><td>2</td><td>1</td><td>7</td></tr> </tbody> </table>	Th	H	T	O		5	4	3	$\times$			4			1	2		1	6	0		2	0	0		2	1	7		2	1	7
Th	H	T	O																															
	5	4	3																															
$\times$			4																															
		1	2																															
	1	6	0																															
	2	0	0																															
	2	1	7																															
	2	1	7																															
<b>product</b>		<table border="1"> <thead> <tr><th>Th</th><th>H</th><th>T</th><th>O</th></tr> </thead> <tbody> <tr><td></td><td></td><td>5</td><td>4</td></tr> <tr><td><math>\times</math></td><td></td><td></td><td>4</td></tr> <tr><td></td><td></td><td></td><td>4</td></tr> <tr><td></td><td>2</td><td>1</td><td>7</td></tr> <tr><td></td><td></td><td>1</td><td>1</td></tr> </tbody> </table> Remember to move any regrouped numbers into the next column. After the next multiplication, add the regrouped number to the answer.	Th	H	T	O			5	4	$\times$			4				4		2	1	7			1	1								
Th	H	T	O																															
		5	4																															
$\times$			4																															
			4																															
	2	1	7																															
		1	1																															

Multiplication and Division		Knowledge Organiser
<b>Mental Calculations for Solving Problems</b>	<b>Integer Scaling Problems</b>	
$(2 \times 3) \times 4 = 24$ 	<b>10 pencils</b> 	$10 \times 4 = 40$ pencils 
$(2 \times 4) \times 3 = 24$ 	<b>75g</b> 	$75g \times 2 = 150g$ 
$(3 \times 4) \times 2 = 24$ 		
 $16 \times 3$ $10 \times 3$ $6 \times 3$ $30 + 18 = 48$		

Short Division with Exact Answers							
There are 69 tennis balls packed in tubes of 3.							
There are 23 tubes altogether.							
$69 \div 3 = 23$							
<table border="1"> <tr><td colspan="3">69</td></tr> <tr><td>23</td><td>23</td><td>23</td></tr> </table>	69			23	23	23	
69							
23	23	23					

# Art and design

## Sculptures and 3D Mega Materials

<b>Ceramics</b>	Things made from clay which are hardened using heat
<b>Form</b>	Three dimensional shapes in art
<b>Found objects</b>	Objects not considered art materials being used to make art
<b>Organic shape</b>	Irregular natural shapes
<b>Scale</b>	The size of an artwork
<b>Sculpture</b>	Three dimensional art made by carving, modelling, casting or constructing
<b>Typography</b>	The art of designing and arranging letters to make them look appealing

**Constructing**

Using techniques like folding, stitching, tying, weaving and balancing to join materials together and make art.

**Carving**



Hard materials such as wood or stone can be carved to change their shape. Cut or scrape away pieces of the material to make a sculpture

**Modelling**



Soft materials such as clay or wire can be shaped by hand to make sculptures.

**Found objects**



Materials not usually thought of as art materials can be used to make sculptures, e.g. scrap metal, old toys, pieces of furniture.

**Artists**

Magdelene Odundo

Barbara Hepworth

Jaume Plensa

Sokari Douglas Camp

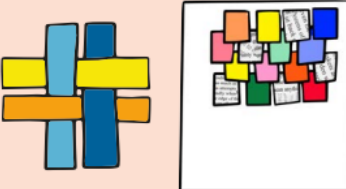
El Anatsui

**Carving soap**




- Draw the outline
- Remove large unwanted areas of soap
- Use a smaller tool to get close to the outline
- Add detail like surface texture

**Constructing**




- Layering recycled materials to look like a weaving
- Cutting, tearing and overlapping shapes
- Creating pattern and contrast


**Modelling with wire**



Bend to form shapes





Twist or fold over to join



Make loops to add details

**Planning sculpture**

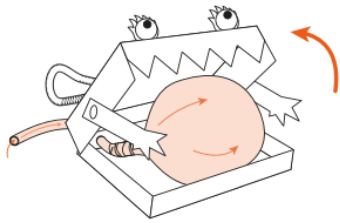
- Sculptors sometimes draw to help them visualise the finished sculpture.
- Use your whole arm to draw on a big scale.

# Design Technology

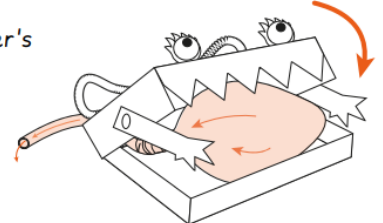
## Pneumatic Toys

cross-sectional diagram	A drawing that shows the inside of an object as if it has been cut through.
exploded diagram	A diagram that shows all of the parts of a product by separating the inside and outside parts.
input	The movement used to start a mechanism.
linkage	Lengths of a material (like wood or card) that are joined together by pivots so that the links can move as part of a mechanism.
mechanism	A set of parts of a machine that work together to make something move.
output	The movement that happens as a result of starting a mechanism.
pivot	The central point, pin or shaft where a mechanism turns or swings.
pneumatic system	A mechanism that uses squashed air to cause a movement.
sustainable	Materials that do not harm the planet and can be reused or recycled.
thumbnail sketch	A simple drawing to get ideas down on paper quickly.

When air enters the balloon, the monster's mouth opens.

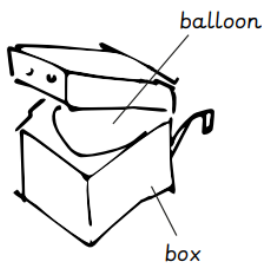


When air exits the balloon, the monster's mouth closes.

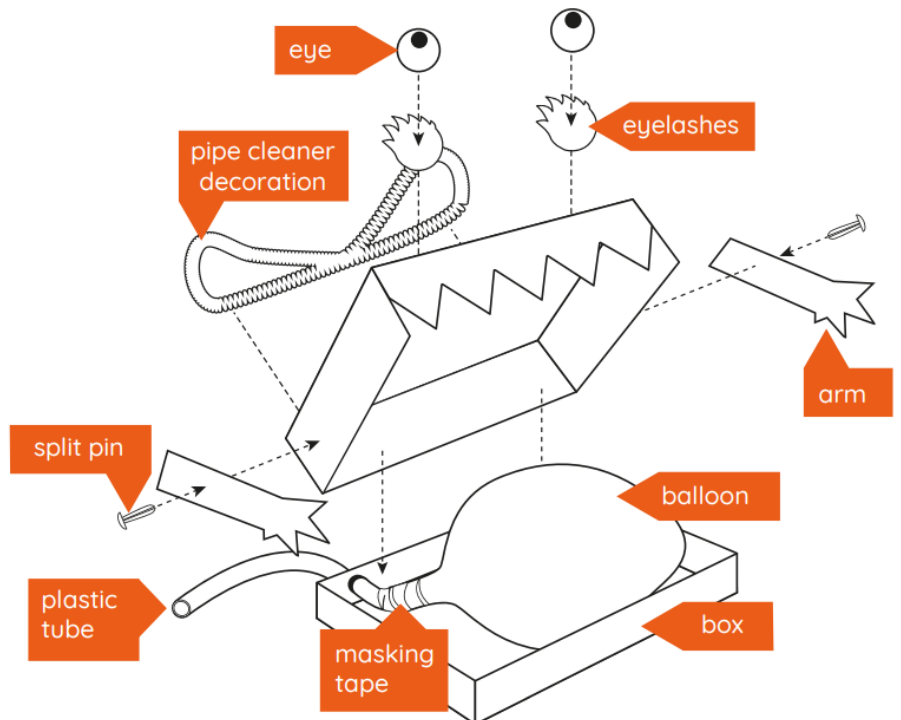


Diagrams are simple pictures that show how something works or what it looks like.

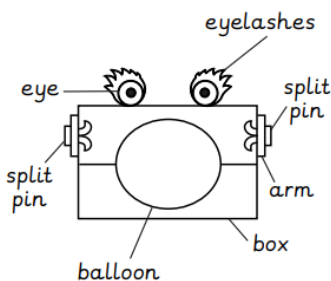
Thumbnail sketch



Exploded diagram



Cross-sectional diagram



# Design Technology

## Adapting a recipe

<b>adapt</b>	To change something to make it suitable for a new purpose.	<b>hygiene</b>	Keeping things clean.
<b>budget</b>	A plan of how to spend money.	<b>ingredients</b>	The foods used in a recipe.
<b>combine</b>	Mixing two or more ingredients together.	<b>market research</b>	Gathering information from the target audience.
<b>construct</b>	To build something.	<b>sieve</b>	A piece of kitchen equipment often used to remove lumps.
<b>cuboid</b>	A 3D shape with six rectangular sides.	<b>sift</b>	The process of removing lumps and adding air.
<b>design</b>	A plan for a recipe or product.	<b>target audience</b>	Groups of people that a product is made for.
<b>evaluate</b>	To decide how good something is.	<b>taste</b>	The flavour of a food.
<b>fold</b>	To bend something for a purpose.	<b>texture</b>	The feel of a food when eaten.



Adapting a recipe is making a simple recipe unique by thoughtfully adding or removing ingredients.



Working to a budget is spending a certain amount of money so the final product is affordable for the people who want to buy it.

A target audience is who will enjoy the product the most. Having a target audience makes it easier to choose how the product is designed.



family



people at work



tourists

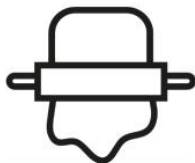


gift givers

### Skills



measuring



shaping



cutting out



sifting

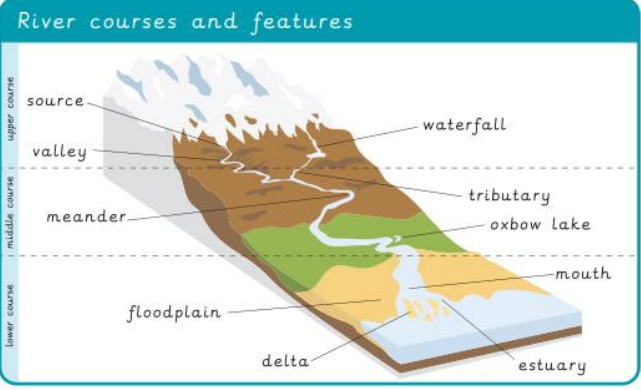


mixing or stirring

# Geography

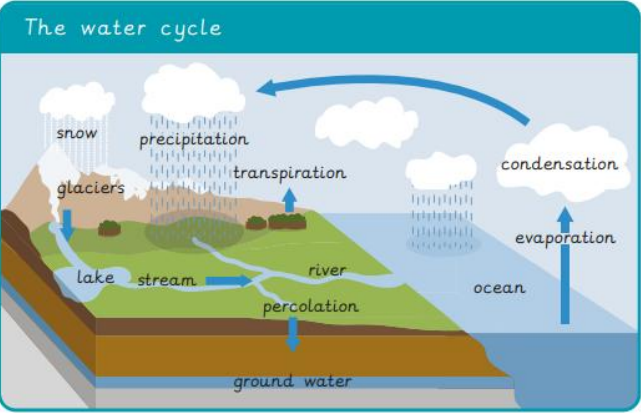
## What are rivers and how are they used?

### What are rivers and how are they used?



### How are rivers used?

- Rivers are important habitats for plants and animals.
- They provide a supply of food and drink for humans and animals.
- Rivers can help crops grow by dispersing nutrients and making soil more fertile.
- Rivers contain valuable minerals such as gold and diamonds which people can find and sell.
- They offer transport routes for people and goods.
- Rivers can be used for leisure activities such as boating, swimming, fishing and many other fun activities.
- Many settlements and communities are built along rivers.
- Some people live on rivers in houseboats.
- Water from rivers can be used for irrigation on farmland.
- Renewable energy, called hydroelectric power, can be generated by moving water.

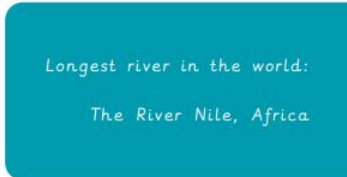


### What are rivers and how are they used?

evaporation	The process in which warm water turns from a liquid to a gas in the air (water vapour).
condensation	The process in which water vapour rises in the air, cools down and turns into small water droplets.
precipitation	The process in which water falls from clouds to the ground, in the form of rain, sleet, snow or hail.
delta	A wide area near where a river meets the sea which features a build-up of sand and sediment.
estuary	The area where fresh water from a river meets salt water from the sea.
floodplain	Areas of flat land on either side of a river that can become flooded if the river gets too full.
meander	A bend or curve in a river.
oxbow lake	A bend in a river that has been separated from the main river.
river mouth	The place where a river flows into the sea.
source	The place where a river starts.
tributary	A stream that flows into a larger stream or river.
valley	An area of low land between two hills or mountains, usually with a river running through it.



Longest river in the UK:  
The River Severn.



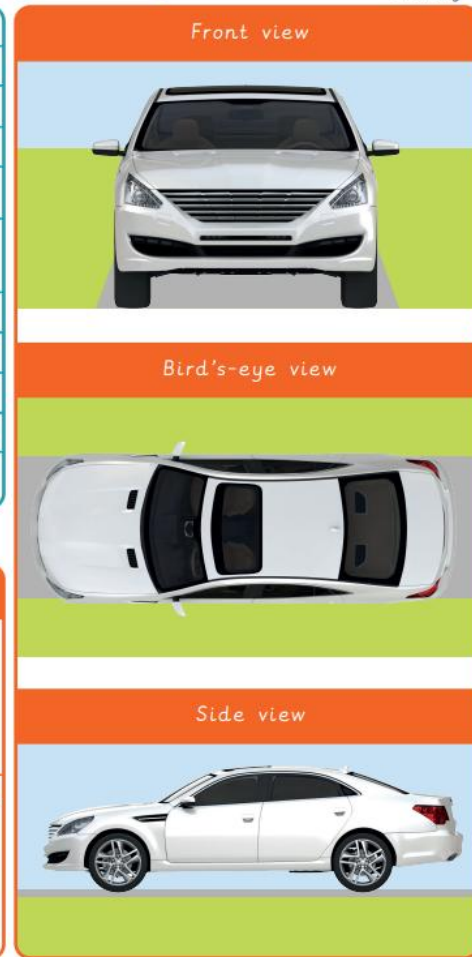
Longest river in the world:  
The River Nile, Africa.



# Design Technology

## Santa Sleigh

<b>Aesthetic</b>	How an object or product looks.
<b>Air resistance</b>	The level of drag on an object as it is forced through the air.
<b>Chassis</b>	The body of a car.
<b>Design</b>	To make, draw or write plans for something.
<b>Design criteria</b>	A set of rules to help designers focus their ideas and test the success of them.
<b>Function</b>	The purpose of an object (for example a chair needs to hold a person when sitting down); or how the product works (for example a torch needs to provide light in a dark space).
<b>Graphics</b>	Images which are designed to explain or advertise something.
<b>Kinetic energy</b>	The energy that causes an object to move.
<b>Mechanism</b>	The parts of an object that move together as part of a machine.
<b>Net</b>	A flat 2D shape, that can become a 3D shape once assembled.
<b>Structure</b>	Something that has been made and put together and can usually stand on its own (eg a building, a bridge, a chair).



### Did you know?



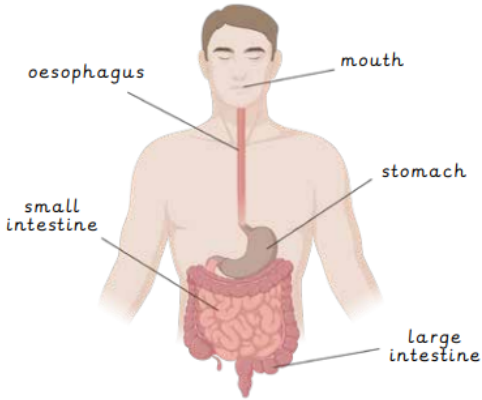
Some of the first toy cars were made in 1901, that's over 100 years ago!

Which vehicle has the least air resistance?



## How do we digest food?

### The human digestive system



**Mouth:** teeth are used for cutting and grinding and saliva softens and breaks up food.

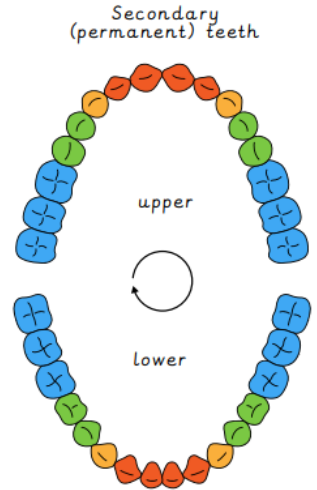
**Oesophagus:** carries food from the mouth to the stomach.

**Stomach:** breaks up food using acid.

**Small intestine:** breaks up food and absorbs nutrients into the blood.

**Large intestine:** absorbs water into the blood.

### Human teeth



**Incisor:** a tooth at the front of the mouth, useful for cutting.

**Canine:** a pointed tooth, useful for tearing.

**Premolar:** a tooth in front of the molars, useful for grinding.

**Molar:** a tooth at the back of the mouth, useful for grinding.

### Teeth in different animals

Animals have different shaped teeth depending on their diet.

**Carnivores** tend to have much larger canines to help catch and tear their prey.  
**Herbivores** tend to have larger, flatter molars to grind and crush the plants they eat.



### Evidence scientists use



**X-rays** are used to produce images of inside the body. They help doctors and dentists to find and treat problems.

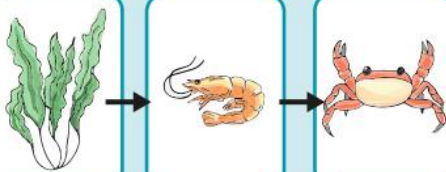
**Fossils** are the remains or traces of an animal or plant that lived long ago. Fossilised teeth can give clues about an animal's diet by comparing their teeth to those of modern animals.

**Faeces** are the solid waste from the **digestive system**. The contents of the faeces can show what an animal has eaten and if it is living nearby.

### Further vocabulary

absorb	To take in or soak up.
digest	To break up food into smaller pieces.
predator	Something that hunts and kills its food.
prey	Something that is hunted and killed for food.
producer	A living thing that makes its own food.
saliva	The liquid added to the mouth to help chewing, swallowing and digestion.

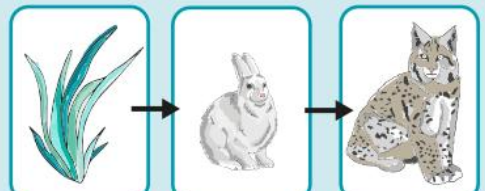
### Food chains show the energy being passed between living things in a habitat



seaweed → shrimp → crab

**Food chains** usually contain three or four living things.

Food chains always start with a **producer** (plant), followed by an animal that eats the plant (**herbivore** or **omnivore**) and an animal that eats other animals (**carnivore** or **omnivore**).



grass → snowshoe hare → lynx

## Why are nature and the seasons significant for religion and worldviews?



### Important Substantive Knowledge:

- Nature and the seasons can be important in both religious and non-religious worldviews
- The Christian festivals of the nativity (Christmas) and Easter (Pascha) are based on lunar cycles and special times of the year.
- Darkness can be as important as light, especially when it comes to festivals in religious worldviews.
- Pesach (Passover) is a special time for those with Jewish worldviews and is calculated by the cycles of the moon.
- Ramadan is a special month in the Islamic calendar when those with Muslim worldviews will often fast before celebrating Eid-al-Fitr at the end of the fast.
- Shabbat is a weekly celebration for many with Jewish worldviews and is a time of rest and family.
- Kala is the Hindu concept of time and offers an explanation for different periods of time in world history.

Nature and the seasons are central to pagan worldviews and are celebrated through rituals and festivals, as well as the belief of 'living in circle' with all of nature.



Get Set 4 Education

## Knowledge Organiser Ball Skills Year 3

### About this Unit

You can move a ball in lots of different ways using lots of different parts of your body. In this unit you will learn how tracking helps you to improve all of your ball skills. Tracking is like having a built-in radar for the ball, it helps you predict where the ball is going next, useful whether you are dribbling, catching, or passing to another teammate.



Do you know which of these sports uses each of these movement skills?

### Examples of games that use ball skills:

Target Games	Invasion Games	Striking & Fielding Games	Net & Wall Games
Boules Boccia New Age Kurling Dodgeball	Netball Football Tag Rugby Handball Basketball	Rounders Cricket Baseball	Tennis Volleyball Badminton

### Key Vocabulary



**accurate:** successful in reaching the intended target  
**block:** to prevent a movement or pathway of an object  
**opponent:** someone not on your team  
**personal best:** a target outcome of an individual  
**possession:** when a team has the ball they are in possession  
**power:** speed and strength combined  
**receive:** to collect or stop a ball that is sent to you  
**technique:** the action used correctly  
**track:** to move your body to get in line with a ball that is coming towards you

### Ladder Knowledge



**Sending:**  
Pointing your hand/foot to your target as you release will help you to send a ball accurately.

**Catching:**  
Moving your feet to the ball will make you more successful at catching.

**Tracking:**  
Use a ready position to help you to react to the ball.

**Dribbling:**  
Dribbling is an attacking skill used in games which helps you to move towards a goal or away from defenders.

### Movement Skills

- track
- throw
- catch
- dribble
- kick

This unit will also help you to develop other important skills.

- Social:** respect, co-operation, communication
- Emotional:** perseverance, motivation, self-regulation, concentration, independence
- Thinking:** comprehension, select and apply, feedback, make decisions

### Tactics

Being closer to the target may bring you more success.  
Moving the ball will make it harder for your opponents to track.  
Spreading out will make it harder for your opponents to see the space and score.

### Healthy Participation

Make sure unused balls are stored in a safe place to stop them rolling.

Make sure you work in a safe space and show an awareness of others as you send a ball.

If you enjoy this unit why not see if there is a ball game e.g. a football club in your local area.



### How will this unit help your body?

agility, balance, co-ordination, speed

### Home Learning

Find more games that develop these skills in the Home Learning Active Families tab on [www.getset4education.co.uk](http://www.getset4education.co.uk)

### Ballers

What you need: 1 ball, 1 wall, 4 markers and 2 players, a timer

#### How to play:

- **Throwing:** throw the ball against a wall and catch the rebound. How many can you catch in 1 minute?
- **Catching:** Stand opposite a partner. Each successful catch earns a point. How many points can you earn in 1 minute?
- **Dribbling:** Dribble around markers placed in a zigzag pattern. Time how long it takes to complete the course without touching the markers. Can you beat your own time with each attempt?
- **Kicking:** Set up a goal using two markers and practise kicking into the goal from different distances. Take turns to be the goal keeper. How many goals can you score in 1 minute?

Head to our youtube channel to watch the skills videos for this unit. @getset4education136

# Cricket



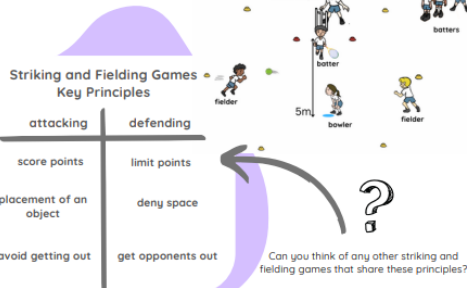
Get Set 4 Education

## Knowledge Organiser Cricket Year 3

### About this Unit

Cricket is a striking and fielding game. The game has one fielding and one batting team.

In cricket, players use their hands to catch balls, swing the bat to hit the ball, and field the ball while it's in motion. These actions require hand-eye coordination, which is essential for many other activities both in sports and daily life.



### Key Vocabulary



**accuracy:** how close the object is to the given target  
**bowl:** when the bowler sends the ball to a batter  
**caught out:** when a player catches an opponent's ball deeming them out  
**no ball:** a bowled ball deemed to be outside of the rules  
**runs:** what points are called in cricket

**strike:** to hit  
**tactics:** a plan or strategy  
**technique:** the action used correctly  
**tournament:** a competition of more than two teams  
**track:** to follow  
**umpire:** a person who referees the game making sure the rules are followed  
**wicket:** the three upright sticks and base

### Ladder Knowledge



**Striking:**  
Striking to space away from fielders will help you to score.

**Fielding:**  
Communicate with teammates before throwing them a ball.

**Throwing:**  
Being balanced before throwing will help to improve the accuracy of the throw.

**Catching:**  
Move your feet to the ball.

### Movement Skills

- underarm and overarm throwing
- underarm bowling
- batting
- catching

This unit will also help you to develop other important skills.

- Social:** communication, support, collaboration, respect
- Emotional:** honesty, perseverance, determination
- Thinking:** select and apply skills and tactics, make decisions

### Rules

#### BOWLING

- Underarm, only one bounce allowed or deemed a no-ball.

#### RUNS

- 1 point for each run between the wickets.
- 4 runs for a hit past the boundary which bounces first.
- 6 runs for a hit past the boundary which doesn't bounce first.
- If a 4 or 6 is scored, the runs between wickets do not count.

#### Fielders

- Spread out close to boundaries to prevent 4's and 6's.
- More fielders on one side based on the batter's dominant hand.

### Tactics

### Healthy Participation

Always keep a safe distance between yourself and a batter. Ensure you handle the racket/bat in the way suggested by the teacher at all times.

If you enjoy this unit why not see if there is a cricket club in your local area.



### How will this unit help your body?

Balance, speed, strength, co-ordination, agility.

### Home Learning

Find more games that develop these skills in the Home Learning Active Families tab on [www.getset4education.co.uk](http://www.getset4education.co.uk)

### Score Runs

What you need: two or more players, a ball or rolled up pair of socks and two markers.

#### How to play:

- One player is the umpire and one the batter.
- Umpire counts how many runs the batter can complete in one minute (swap roles).
- Then:**
  - The batter collects a ball, the umpire is now a fielder.
  - The batter throws the ball and completes as many shuttle runs as they can.
  - The fielder collects the ball and touches it on a marker to stop the batter.

How many runs did the batter score? Switch roles.

Head to our youtube channel to watch the skills videos for this unit. @getset4education136



## Knowledge Organiser

Get Set 4 Education

### About this Unit

Netball is an invasion game where two teams compete against each other. In an invasion game, you enter the other team's space to try to score goals while defending your own area. Netball helps develop teamwork, co-ordination, and strategic thinking. You'll learn how to pass, catch, and shoot. Unlike basketball, players cannot dribble the ball. They must pass it to their teammates to move it down the court.

Netball is played in over 80 countries and is especially popular in England, Australia, South Africa, Jamaica and New Zealand.

#### Invasion Games Key Principles

attacking	defending
score goals	stop goals
create space	deny space
maintain possession	gain possession
move the ball towards goal	

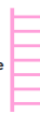
Can you think of any other invasion games that share these principles?

### Key Vocabulary

**attack:** a team in possession of the ball  
**control:** to move with balance  
**court:** the space netball is played  
**defend:** to mark an opposing player  
**intercept:** to gain possession of the ball  
**invasion:** a game of two teams who invade each other's space to score goals  
**opposition:** the other team

**possession:** to have  
**receive:** take hold of  
**technique:** the action used correctly  
**teammate:** a player on your team  
**tournament:** a competition of more than two teams  
**umpire:** a person who makes sure the rules are followed

### Ladder Knowledge



**Sending & receiving:**  
Point your hands to your target when throwing to help to send the ball accurately.

**Space:**  
Spreading out as a team will help to move the defenders away from each other.

**Attacking:**  
As an attacker you need to maintain possession and score goals.

**Defending:**  
As a defender you need to stop the opposition scoring and gain possession.

### Movement Skills

- throw
- catch
- run
- jump
- change direction
- change speed
- shoot

#### Social

communication, collaboration, sporting behaviour

#### Emotional

honesty, perseverance, confidence

#### Thinking

select and apply skills, apply tactics, observation, apply rules

### Rules

- **Footwork:** first foot to touch the ground when receiving a ball is the landing foot. The landing foot cannot be lifted and put back down. You may pivot on the landing foot.
- **Held ball:** a player has 4 seconds to pass or shoot.
- **Obstruction:** defenders are allowed one jump to mark the ball and must be 1m from the ball carrier.

**Free pass:** is awarded to the non-offending team if a rule is broken.

### Tactics

Using tactics will help your team to maintain possession and score goals or deny space, gain possession and stop goals.

### Healthy Participation



- Make sure any unused equipment is stored in a safe place.

If you enjoy this unit why not see if there is a netball club in your local area.



How will this unit help your body?  
agility, balance, co-ordination, speed, stamina

### Home Learning

Find more games that develop these skills in the Home Learning Active Families tab on [www.getset4education.co.uk](http://www.getset4education.co.uk)

#### Colour Command

What you need: 4 - 6 different coloured socks or items

##### How to play:

- Lay out 4-6 different coloured pairs of socks in a circle formation and stand in the middle.
- Ask a helper to call out 2 colours and see if you can use your speedy feet to get quickly to the correct colours in turn.
- Return to the middle of the circle and repeat with a new call.

##### Top tips:

- Start in the ready position, feet shoulder width apart and knees bent, ready to react.
- Head and shoulders facing forwards.
- Turn your hips and move your feet to each colour.

[www.getset4education.co.uk](http://www.getset4education.co.uk)

Head to our youtube channel to watch the skills videos for this unit. @getset4education136

# Dance



## Knowledge Organiser

Get Set 4 Education

### About this Unit

This unit is inspired by lots of different themes. Here are some that you may explore...

#### Machines

There are an estimated 32 million factories in the world.

Industrial factories use big machinery to build things such as aeroplanes, cars, computers and electrical goods (like toasters, microwaves and washing machines).

Machines are made up of different parts that make them work and control their movements... such as levers, cogs, pistons, pumps and chains.

#### A trip to...

#### Dance Actions

#### LINE DANCING STEPS

**Step 1: The Fan** 2 4 6 8  
counts: 1,2,3,4,5,6,7,8

**Step 2: Kick, Step Touch**  
counts: 1,2,3,4,5,6,7,8

**Step 3: Heel, Toe** counts: 1,2,3,4,5,6,7,8

**Step 4: Grapevine** counts: 1,2,3,4,5,6,7,8

### Key Vocabulary

**action:** the movement a performer uses e.g. travel, jump, kick  
**canon:** when performers complete the same action one after the other  
**create:** to make  
**dynamics:** how an action is performed e.g. quickly, slowly, gently  
**explore:** to try out and discover ideas  
**expression:** actions or gestures used to share thoughts or feelings  
**extend:** to make longer

**feedback:** information given to make improvements  
**formation:** where performers are in the space in relation to others  
**interact:** to communicate with others  
**pathway:** designs traced in space (on the floor or in the air)  
**perform:** to present to an audience  
**pose:** a position, usually still  
**timing:** moving to the beat of the music  
**unison:** two or more people performing the same movement at the same time

### Ladder Knowledge



**Actions:**  
If you share ideas with other people in your group and work collaboratively, you can try ideas before deciding on the best actions for your dance.

**Dynamics:**  
All actions can be performed differently to help to show effect.

**Space:**  
Use space to help your dance to flow.

**Relationships:**  
'Formation' means the same in dance as in other activities such as football, rugby and gymnastics.

### Movement Skills

- actions
- dynamics
- space
- relationships

#### Social

share ideas, respect, collaboration, inclusion, leadership, work safely

#### Emotional

confidence, acceptance, sensitivity, perseverance

#### Thinking

select and apply actions, creativity, observe and provide feedback

### Strategies

Use canon and unison to create different effects in your dance. Listen carefully to the music you are dancing to. Dancing with an awareness of the music will make your dance look more complete.

### Healthy Participation



- You should be bare foot for dance.
- Ensure you always work in your own safe space when working independently.

If you enjoy this unit why not see if there is a dance club in your local area.



How will this unit help your body?  
balance, co-ordination, flexibility.

### Home Learning

Find more games that develop these skills in the Home Learning Active Families tab on [www.getset4education.co.uk](http://www.getset4education.co.uk)

#### Name Dance

##### How to play:

- Imagine that your body is a paint brush.
- Move as though your body is writing your name in space.
- Once you have created a movement for each letter, join them all together so that it becomes one dance.
- Add music to your dance and try to move in time to it.

Show your dance to a family member or friend.

[www.getset4education.co.uk](http://www.getset4education.co.uk)

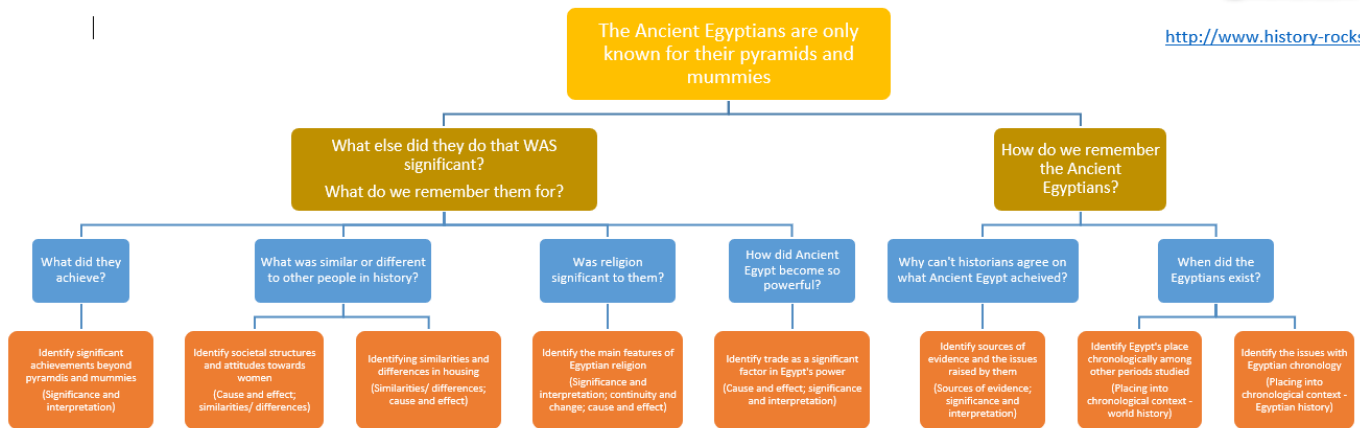
Head to our youtube channel to watch the skills videos for this unit. @getset4education136

# History

The ancient Egyptians are only known for their pyramids and mummies... agree or disagree

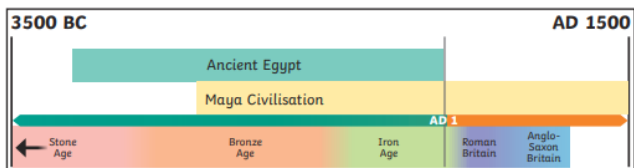


<http://www.history-rocks.com>



By asking what they did that WAS significant, children will understand that the Ancient Egyptians achieved much more than just pyramids and mummies, leading to the worldwide interest in them from historians. By identifying what was similar and different from other periods of history that they have learnt about, the children will be able to understand the different contexts of the old and new learning, identifying the significance of both and the reasons for their similarities and differences. By identifying the significance of religion, the children will engage with a variety of key disciplinary skills, understanding how religion changed in Egypt and its impact. By identifying the significance of trade, the children will understand the central role of the Nile and agriculture in helping Egypt become so powerful. It will also help re-establish why the Romans and Greeks (plus others) wanted control of Egypt for their own empires, helping to engage with substantive concepts such as trade and empire.

By identifying when Ancient Egypt existed in a world context, the children will understand why Ancient Egypt is considered so significant to history due to its scale and duration whilst also making relevant links to prior learning in terms of relationships. By identifying the issues of Egyptian chronology, the children will understand how Egypt's dating system differed from others and why that makes it hard to accurately piece some of their history together. By identifying different sources of evidence and the debates around them, the children will understand how claims and arguments are constructed by evidence and how our interpretations of the same piece of evidence can differ from each other.




Historical Skills Vocabulary	
<b>BC</b>	Used to show that a date is before the year AD 1. This is counted backwards so 200 BC is before 100 BC.
<b>AD</b>	Used to show that a date is after the year AD 1. This is counted forwards so AD 100 is before AD 200.

Key Vocabulary	
<b>ancient</b>	Something from a very long time ago.
<b>civilisation</b>	A human society with well-developed rules and government, often where technology and the arts are considered important.
<b>Egypt</b>	The country on the continent of Africa where the <b>ancient</b> Egyptian civilisation was created.
<b>hieroglyphics</b>	A system of writing that consists of pictures and symbols ( <b>hieroglyphs</b> ) instead of letters.
<b>irrigation</b>	A system of canals or channels dug by the <b>Egyptians</b> to supply water to grow crops over a larger area than the water would naturally reach.
<b>the Nile</b>	A river that runs through <b>Egypt</b> . It was essential to life in <b>ancient Egypt</b> .
<b>pharaoh</b>	A ruler of <b>ancient Egypt</b> .
<b>tomb</b>	A sealed room where a person was placed after death.

**The Ancient Egyptian Empire**  
 In c. 3000 BC, King Menes united two **Egyptian** kingdoms to build the empire of **ancient Egypt**. It lasted until 30 BC when the Romans took over.

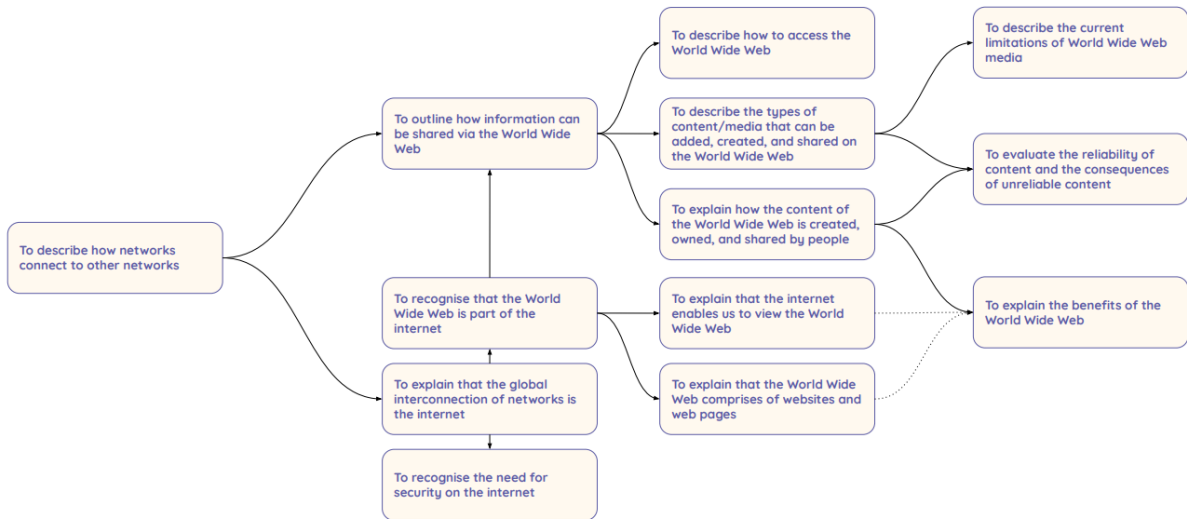
**The Nile**  
 Life revolved around **the Nile**. Every year, it flooded and left behind a black silt that enriched the soil for growing crops. The river was also used to **irrigate** fields in other areas.  
**The Nile** was used for water, fishing and trade. Mud from the river banks was used to make bricks and papyrus plants were used to make paper.  
 Most people lived along and around **the Nile**. This is still true in **Egypt** today.

**A Pharaoh's Death**  
  
 The **ancient Egyptians** built the pyramids as resting places for the **pharaohs**.  
 When a **pharaoh** died, priests would prepare their bodies with a process called mummification.  
 The **pharaoh** was then placed in a **tomb**, often under a pyramid, with their most treasured possessions. The **ancient Egyptians** believed that these treasures would help them in the afterlife.



# Computing

## Computing systems and networks – The internet



# Music

## Hear it, play it! Exploring rhythmic patterns

	ARTICULATION	DYNAMICS	PITCH	RHYTHM/DURATION	STRUCTURE	TEMPO	TEXTURE	TIMBRE	SINGING & PERFORMING	ADDITIONAL MUSICAL WORDS	INSTRUMENT NAMES
TERM 1: HEAR IT! PLAY IT! EXPLORING RHYTHMIC PATTERNS		Dynamics Forte <b>f</b> Getting louder (Crescendo) Getting softer (Decrescendo/Diminuendo) Loud/Louder Piano <b>p</b> Quiet/Quieter Silence Soft Strong	Melody	Bar Beat Crotchet Duration Minim Note value Pulse On/Off the beat Quaver Rest Rhythm pattern Semibreve 3 beats in a bar 4 beats in a bar	Call and response Chorus Echo Introduction Instrumental Ostinato Repeat Time signature Verse	Adagio Allegro Fast/Faster Slow/Slower Tempo	Musical layers Ostinato	Metal/Metallic Soft/Hard Timbre Wood/ Wooden	Body percussion Copy Ensemble Leader Listen Solo	Conductor Disco Gamelan Gospel Graphic score Improvise Instrumentation Lyrics Notation Rock 'n' Roll Style Waltz	Bass drum Bamboo flute Cymbal Drum-kit Gong Hi-hat Kick drum Maraca Piano Saxophone Snare drum Tambourine Xylophone