HILL WEST Primary

FOUR OAKS

Home Learning Pack

Year 6

Spring Term Week 3

Home Learning Links

Oak National Academy
Oak National Academy is an online classroom and resource hub. It provides high-quality video lessons and resources to support teachers, parents and pupils.
www.thenational.academy

BBC Bitesize
With BBC Bitesize it is easy to keep learning at home. You can access regular daily lessons in English, maths and other core subjects.
https://www.bbc.co.uk/bitesize

Read Works.org
Read Works offers access to 3000+ comprehension for all age groups. Just sign up for a free account to access fantastic texts.
https://www.readworks.org/

Education Quizzes
A series of short quizzes for children to complete related to the National Curriculum subjects. Just select KS1 for Reception, Year 1 & Year 2 and select KS2 for Years 3-6.
https://www.educationquizzes.com/ks2/

Top Marks
A range of activities here but especially good interactive activities for maths.
https://www.topmarks.co.uk/

Classroom Secrets
The platform is aimed at primary aged children and covers subjects such as maths, reading, grammar and spelling. The platform is really child-friendly so that they're able to access it on their own. There are a load of games and interactive activities from phonics to SATs
https://kids.classroomsecrets.co.uk/

National Geographic
National Geographic is a great platform for learning and it's totally free. There are online games, resources and competitions, too.
https://www.natgeokids.com/uk/teacher-category/primary-resources/

Reading Eggspress
https://readingeggs.co.uk/

Top Marks
A website for great interactive maths games.
https://www.topmarks.co.uk/

Times Tables Rockstars
This is a great times tables game, practice all of the tables up to 12 x 12. Your child's username and password can be found in their Homework Book.
https://ttrockstars.com/

Monster SATs
On-screen and paper-based resources, including curriculum-based games for primary schools.

https://www.monstersats.co.uk/group-login-page/

White Rose Maths Hub
Daily 'home learning' lessons for Years 1-9. Every lesson comes with a short video showing you clearly and simply how to help your child complete the activity successfully.
https://whiterosemaths.com/homelearning/

Khan Academy
A great website for learning, with all activities and videos for every topic. A favourite of Mr Ellison.
https://www.khanacademy.org

Codeclub
Fancy something a bit different. Try out the Code Club website for free tutorials and guides no creating code in a range of platforms.
https://projects.raspberrypi.org/en/codeclub

Duolingo
Fancy something a bit different. Try out the Code Club website for free tutorials and guides no creating code in a range of platforms.

Handwriting

Please spend time each day practising the join as modelled below.

Remember:

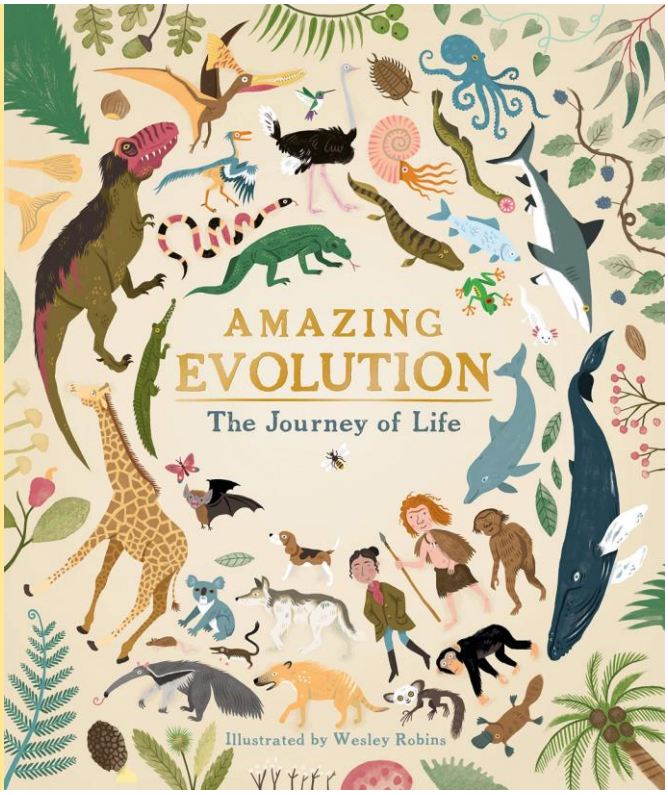
- To hold your pencil/pen correctly.
- To sit on a chair and a desk with a straight back whilst practising your handwriting.

Once you are confident with the join, please practise writing the following words, ensuring that all joins within the word are carefully followed.

Monday

English

Amazing Evolution: The Journey of Life



Monday 17th January 2022

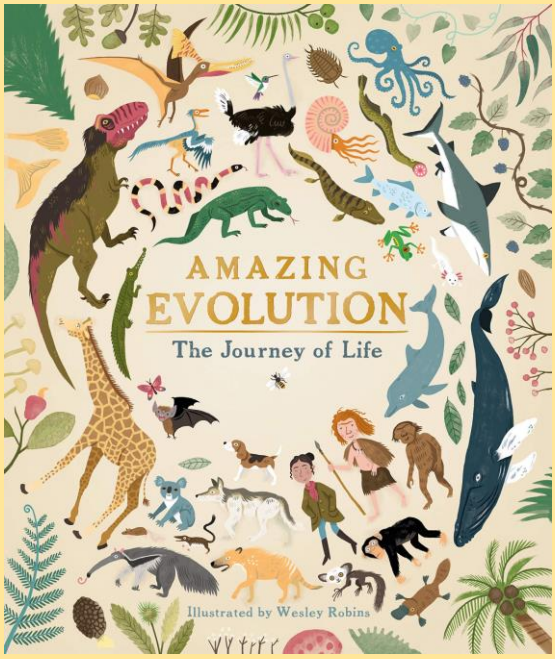
Handwriting

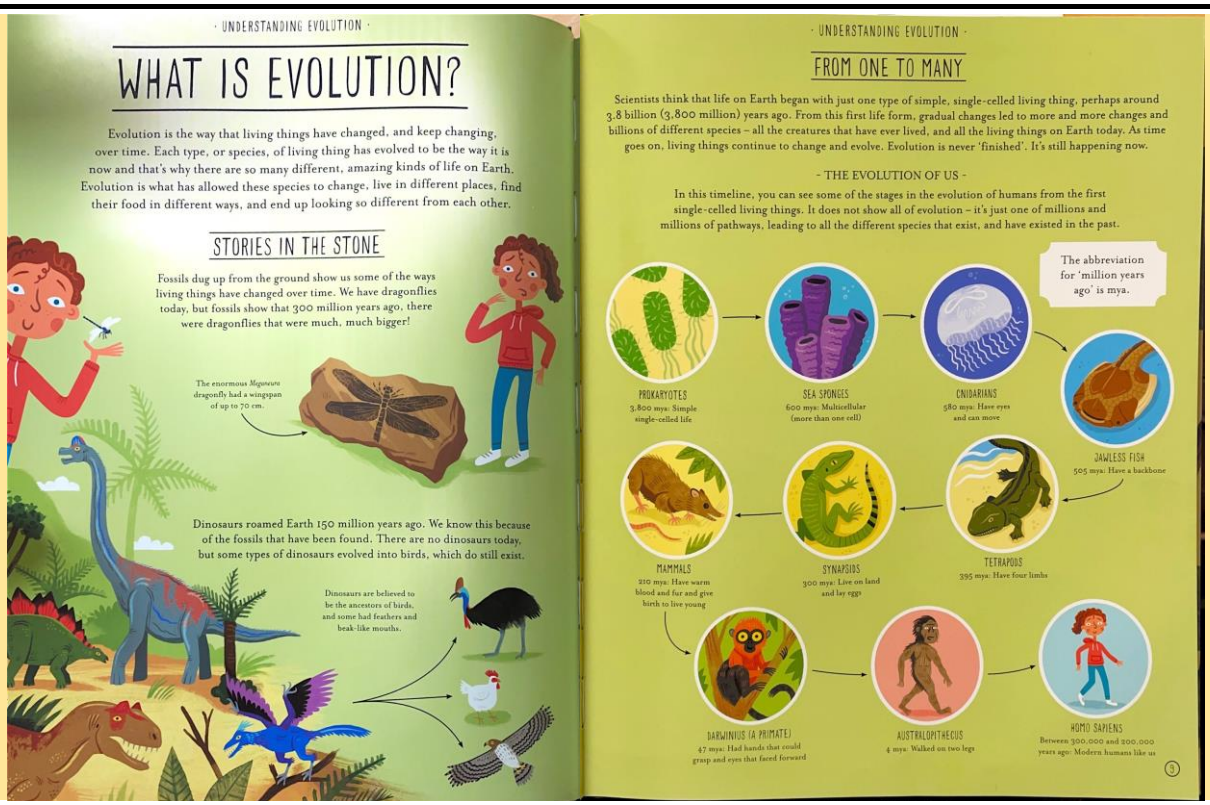
Complete 2 lines of handwriting, following the joins carefully.

To retrieve and record information from non-fiction.

Our planet is bursting with life. From the deep oceans teeming with plankton, fish, jellyfish, whales and dolphins, to the vast green grasslands and forests stretching across continents, to the biggest modern cities, home to millions of human beings - there are living things almost everywhere. But if you could travel four billion years back in time, there wouldn't be any of this.

Between then and now, something amazing happened: life somehow began, and evolved into many different forms For a long time, no one really knew how this could have happened, and how it worked. It was only in the 1800s that scientists began to understand the evolution of living things, what causes it, and how it works. Ever since, it has been one of the most important topics in science.





Skim and scan

Fast Finders

ancestor

Homo sapiens

fossils

wingspan

gradual

scientists

Read and discuss vocabulary

1. How do we know evolution happened?
2. Which animal did birds evolve from?
3. How did life on Earth begin – how long ago?
4. What is the Latin name for humans?
5. How long ago did tetrapods exist?

Summarise the extract in 100 words

GPS: Features of an explanation text

1. What is the title of the page?
2. Give an example of a heading.
3. Give an example of a sub-heading.
4. What is the purpose of titles, headings and sub-headings?
5. Find and copy and example of a caption.
6. Why does the timeline use images and arrows?

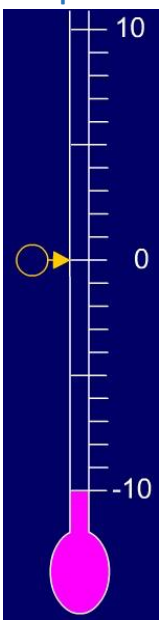
Maths

LO: To use negative numbers in the context of temperature to calculate rises and falls.

17.01.22

Complete the sequence… 4, 2, ……, -2, ……..	What is 3 more than -7?
What is 5 less than 3?	What is 15 less than -5?
Jake says that -7°C is warmer than -3°C because 7 is more than 3.	

Day 1: **Use negative numbers in the context of temperature: Calculate rises and falls in temperature.**

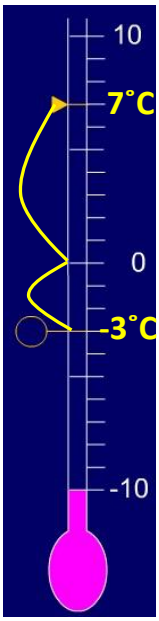


At what sort of temperature might we get ice outside? Why?

As water freezes at 0 degrees Celsius, the temperature will be less than this, e.g. minus 1, minus 2, etc

Which of the temperatures on this thermometer is the coldest?

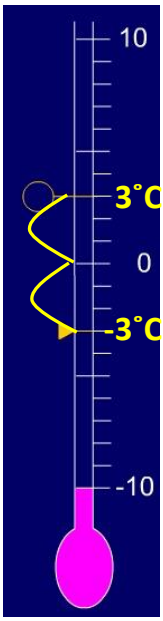
Day 1: Use negative numbers in the context of temperature: Calculate rises and falls in temperature.



During one day it was 7 °C.
At night the temperature fell to minus 3 °C.
How many degrees has the temperature fallen?

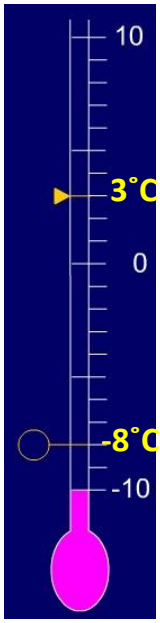
How many degrees had it fallen when it got to zero?
And then?

Day 1: Use negative numbers in the context of temperature: Calculate rises and falls in temperature.



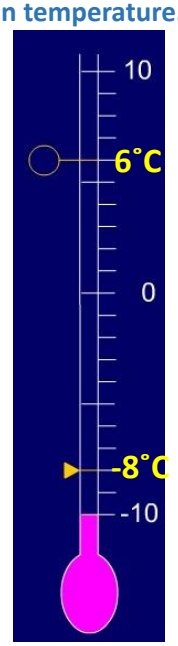
In the morning the temperature rose to 3°C.
How much did the temperature rise between night and morning?

Day 1: **Use negative numbers in the context of temperature: Calculate rises and falls in temperature.**



Overnight the temperature dropped to -8˚C.
How much has the temperature fallen?

Day 1: **Use negative numbers in the context of temperature: Calculate rises and falls in temperature.**



In the morning the temperature rose to 6°C. How much did the temperature go up between night and morning?

Temperature

Sheet 1

Day	Maximum day temperature	Minimum night temperature
Monday	5°C	-3°C
Tuesday	4°C	-2°C
Wednesday	2°C	-3°C
Thursday	-1°C	-6°C
Friday	-2°C	-4°C

1. Which was the coldest night?
2. Which was the mildest night?
3. What was the fall in temperature on Monday?
4. What was the fall in temperature on Friday?
5. Which day had the biggest drop in temperature?
6. What is the difference between the mildest temperature recorded during the week and the coldest?

Challenge

Make up two more questio… …swer. Remember you must have worked out the a… …s as well!

Challenge

1a. Jim is learning about negative numbers.

He says,

-5 + 4 = 9

Is Jim correct? Explain why.

1b. Mai is learning about negative numbers.

She says,

-5 – 5 = 0

Is Mai correct? Explain why.

Tuesday

English

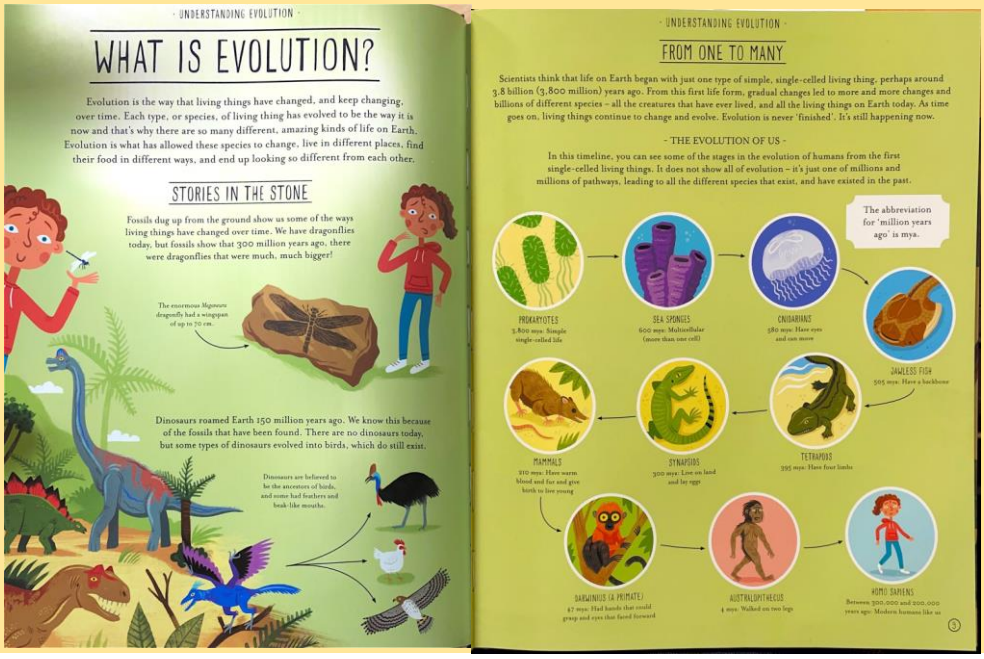
Tuesday 18th January 2022

Handwriting

Complete 2 lines of handwriting, following the joins carefully.

mutter

To present information from non-fiction sources.



· UNDERSTANDING EVOLUTION ·

WHAT IS EVOLUTION?

Evolution is the way that living things have changed, and keep changing, over time. Each type, or species, of living thing has evolved to be the way it is now and that's why there are so many different, amazing kinds of life on Earth. Evolution is what has allowed these species to change, live in different places, find their food in different ways, and end up looking so different from each other.

STORIES IN THE STONE

Fossils dug up from the ground show us some of the ways living things have changed over time. We have dragonflies today, but fossils show that 300 million years ago, there were dragonflies that were much, much bigger!

The enormous *Meganeura* dragonfly had a wingspan of up to 70 cm.

Dinosaurs roamed Earth 150 million years ago. We know this because of the fossils that have been found. There are no dinosaurs today, but some types of dinosaurs evolved into birds, which do still exist.

Dinosaurs are believed to be the ancestors of birds, and some had feathers and beak-like mouths.

· UNDERSTANDING EVOLUTION ·

FROM ONE TO MANY

Scientists think that life on Earth began with just one type of simple, single-celled living thing, perhaps around 3.8 billion (3,800 million) years ago. From this first life form, gradual changes led to more and more changes and billions of different species – all the creatures that have ever lived, and all the living things on Earth today. As time goes on, living things continue to change and evolve. Evolution is never 'finished'. It's still happening now.

- THE EVOLUTION OF US -

In this timeline, you can see some of the stages in the evolution of humans from the first single-celled living things. It does not show all of evolution – it's just one of millions and millions of pathways, leading to all the different species that exist, and have existed in the past.

The abbreviation for 'million years ago' is mya.

PROKARYOTES
3,800 mya: Simple single-celled life

SEA SPONGES
600 mya: Multicellular (more than one cell)

CNIDARIANS
580 mya: Have eyes and can move

JAWLESS FISH
505 mya: Have a backbone

TETRAPODS
395 mya: Have four limbs

SYNAPSIDS
300 mya: Live on land and lay eggs

MAMMALS
210 mya: Have warm blood and fur and give birth to live young

DARWINIUS (A PRIMATE)
47 mya: Had hands that could grasp and eyes that faced forward

AUSTRALOPITHECUS
4 mya: Walked on two legs

HOMO SAPIENS
Between 300,000 and 200,000 years ago: Modern humans like us

3

Using your answers and summary from yesterday, write up your own paragraph about
'What is Evolution'

Limit yourself to 100 words.

Include technical language.

Use the glossary to help.

GPS: Vocabulary

Antonyms:	Prefix:	Root word:	Suffix:

Synonyms:	Word: inheritable	Etymology:

Definition:

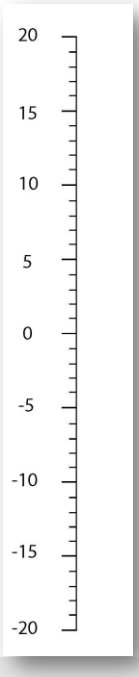
Sentences:

Maths

LO: To calculate differences across 0. **18.01.22**

Complete the sequence… -4, -1, ……, ……., 8	What is 10 more than -2?
Order these temperatures from coldest to warmest. 0 -2 2 -4 1 -3	What is 30 less than 6?
Jake says you can't do the calculation **5 – 25 =** because 25 is the bigger number compared to 5.	

Day 2: Calculate differences across 0.

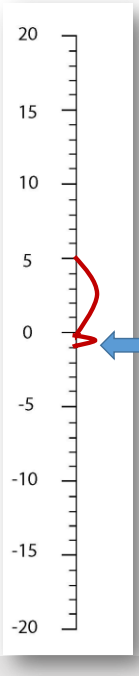


This number line has both positive and negative numbers. We can have numbers less than 0! For example, if the temperature is less than 0 or a bank account is 'overdrawn', or we are at a height/depth below sea level.

Let's count on from –20 through 0 to 20.

We can read -20 as *negative 20*. What do you think will be the next whole number, counting on in 1s? And the next?

Day 2: Calculate differences across 0.



If we have 5 subtract 6, we'd normally say we can't do it, but we can if we use negative numbers.
What do you think 5 subtract 6 is?

5 - 6 = -1

Work in pairs to make up some other subtractions with a negative answer.

Working with positive and negative numbers

Sheet 1

1. Calculate:
   a. −3 + 4
   b. −3 − 8
   c. −3 + 9
   d. 3 − 11

2. Calculate:
   a. −6 + 6
   b. −6 − 6
   c. −6 + 11
   d. 6 − 17

3. Calculate:
   a. −10 + 2
   b. −10 − 6
   c. −10 + 13
   d. 10 − 19

4. There were four cold winter nights in Warsaw, each followed by a warmer day. Complete the number sentences in your book calculating the temperature rises. Give answers in °C.
   a. Monday: −10 + ... = 4, which is a rise of .....°C.
   b. Tuesday: −12 + ... = 5, which is a rise of .....°C.
   c. Wednesday: −11 + ... = 7, which is a rise of .....°C.
   d. Thursday: −7 + ... = 11, which is a rise of .....°C.

5. Lenny has no money, and he owes Kieran £5.
   a. Write a positive or a negative number to show how much money Lenny has.
   b. Lenny is given £11. Write a number sentence showing how much Lenny has now.

Challenge

Mariam owes £65 on the gas and ...een paid £955 for her monthly pay.

a. Write a number sentence for how mu... money Mariam has left after paying her bill.

b. Mariam's other monthly spending comes to £908. Write a number sentence, using your answer to question a, to show how much money Mariam has by next pay day.

Challenge

Challenge

Problem solving and reasoning questions

The temperature at 6pm is given first and then the fall during the night until 5am. Write the night temperatures for each weekday.

Monday: 5°C Falls 9°

Tuesday: 3°C Falls 8°

Wednesday: 8°C Falls 10°

Thursday: 3°C Falls 7°

Friday: 2°C Falls 3°

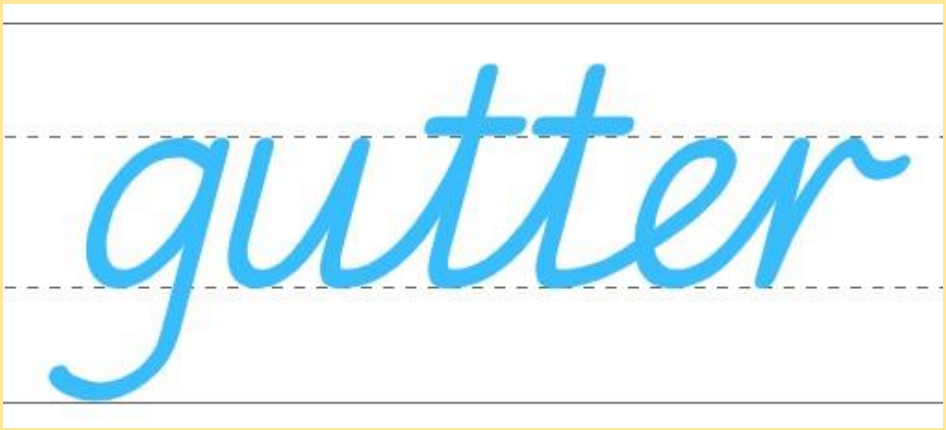
Wednesday

English

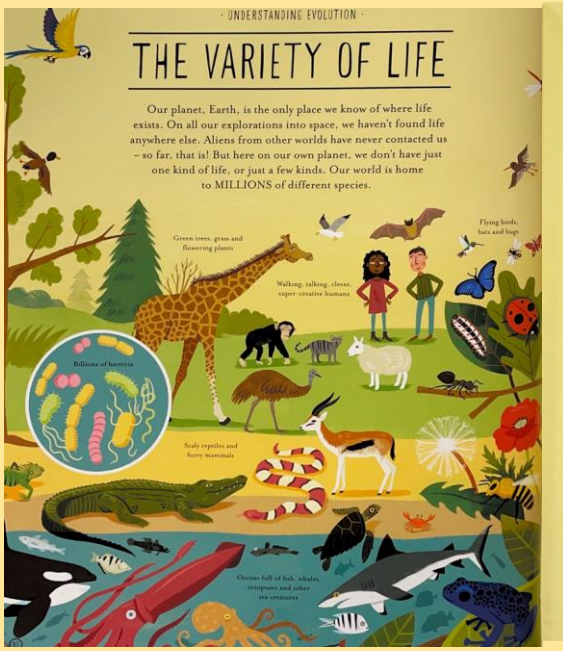
Wednesday 19th January 2022

Handwriting

Complete 2 lines of handwriting, following the joins carefully.



To identify how language, structure and presentation contribute to meaning



Skim and scan

Fast Finders

mammals

camouflage

explorations

trilobite

well-suited

lure

Read and discuss vocabulary

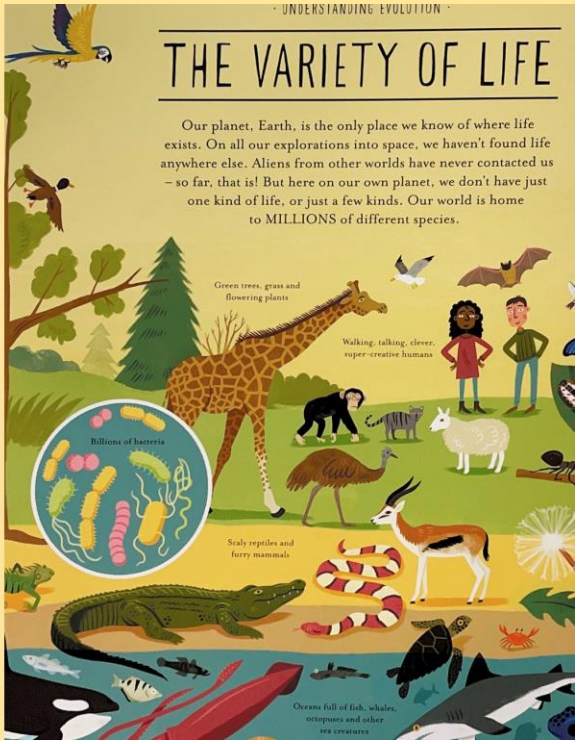
1. Using the text, name 5 living things that live on Earth.

2. What does the word well-suited mean?

3. How has the anglerfish adapted to the dark depths of the ocean?

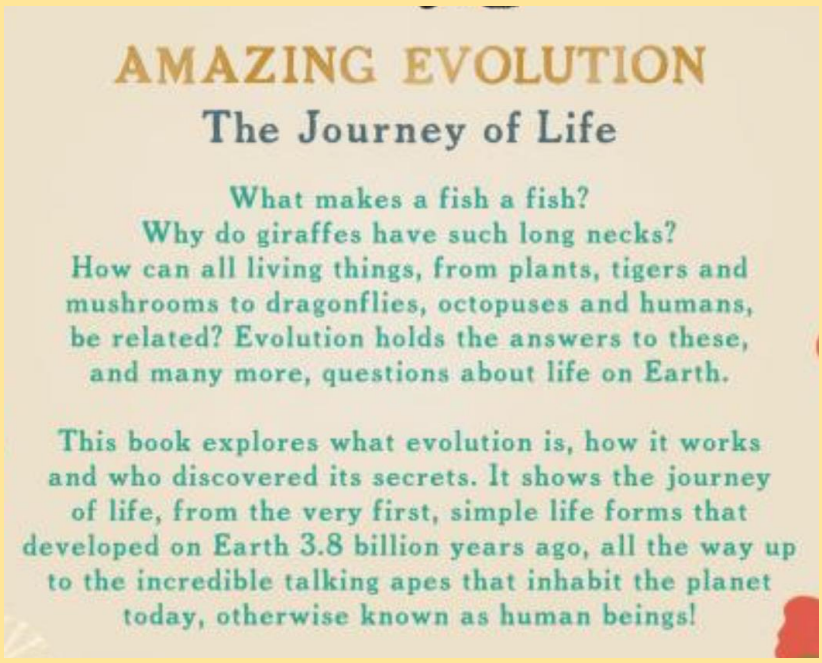
4. What does the word camouflage mean

5. Who were the great tinkers of the mid 1800s?



Summarise the extract in using 10 keys words (+glossary) and 10 phrases.

GPS: Rhetorical questions



AMAZING EVOLUTION

The Journey of Life

What makes a fish a fish?
Why do giraffes have such long necks?
How can all living things, from plants, tigers and mushrooms to dragonflies, octopuses and humans, be related? Evolution holds the answers to these, and many more, questions about life on Earth.

This book explores what evolution is, how it works and who discovered its secrets. It shows the journey of life, from the very first, simple life forms that developed on Earth 3.8 billion years ago, all the way up to the incredible talking apes that inhabit the planet today, otherwise known as human beings!

Why are rhetorical questions used?

What is the effect of these rhetorical questions?

Write your own rhetorical questions to be used in your explanation texts.

Who, What, When, Where, Why, How
Use the text to help.

Maths

LO: To use knowledge of the order of operations and brackets to carry out calculations.

19.01.22

What operation should you do first in a calculation? **Multiplication, Division or Addition?**	Solve 5 + 2 x 6 =
Solve 2 x 15 ÷ 3 =	Where would the brackets go in this equation? 2 + 5 x 9 =

Jake says that because addition and multiplication are commutative (can be done in any order giving the same answer).

Day 1: Use knowledge of the order of operations and brackets to carry out calculations.

$$4 + 3 \times 12$$

Half of the class to work out the calculation working from left to right.

84

Half of the class to work out the calculation working from right to left.

40

This clearly isn't helpful!
So we have a rule in maths: multiplication and division should be done first in a calculation before addition and subtraction.

If we want the addition or subtraction to be done first we need to add brackets, because brackets are always worked out before anything else: (4 + 3) × 12.

Day 1: Use knowledge of the order of operations and brackets to carry out calculations.

$$6 \times 8 \div 4$$

Half of the class to work out the calculation working from left to right.

12

Half of the class to work out the calculation working from right to left.

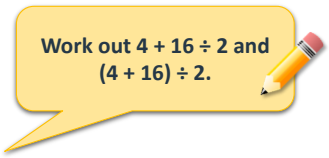
12

This time the order doesn't matter.

Work out (6 + 4) – 3 and 6 + (4 – 3).

The order doesn't matter if we only have addition and subtraction *or* only multiplication and division, but as soon as we mix addition/subtraction with multiplication/division the order does matter.

Day 1: Use knowledge of the order of operations and brackets to carry out calculations.



4 + 16 ÷ 2 = 12
(4 + 16) ÷ 2 = 10

The order is:

1. **Brackets**
2. **Multiplication/division**
3. **Addition/subtraction**

Sheet 2

Solve the following, making sure that you work out the answers to the calculations in brackets first, and then multiplication or division before addition or subtraction.

1. (20 + 3) x 10
2. 20 + 3 x 10
3. 20 x 3 + 10
4. 20 x (3 + 10)
5. 20 x 3 + 20 x 10
6. (20 - 3) x (20 + 10)
7. 20 - 3 + 20 ÷ 10
8. 100 x 5 + ☐ = 1000
9. ☐ + 60 ÷ 2 = 100
10. 50 + 250 ÷ ☐ = 100

Challenge

Put a pair of brackets in three different places in this calculation to give three different answers.

$4 + 5 \times 12 - 7 =$

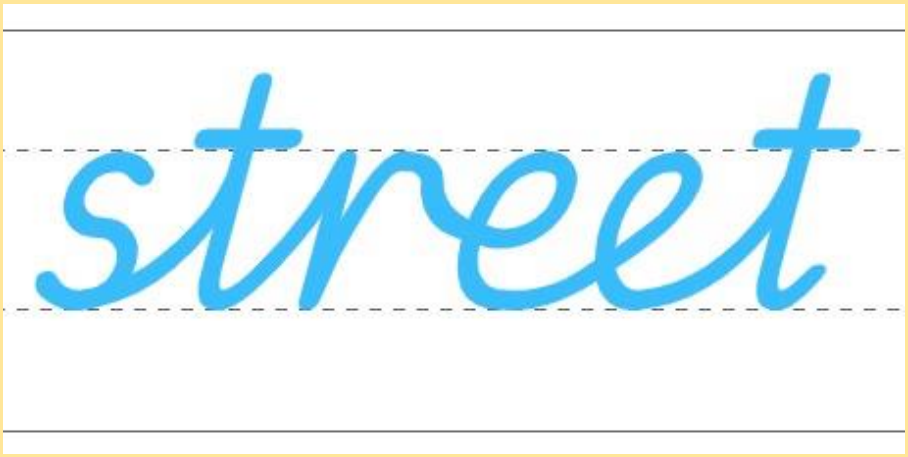
Thursday

English

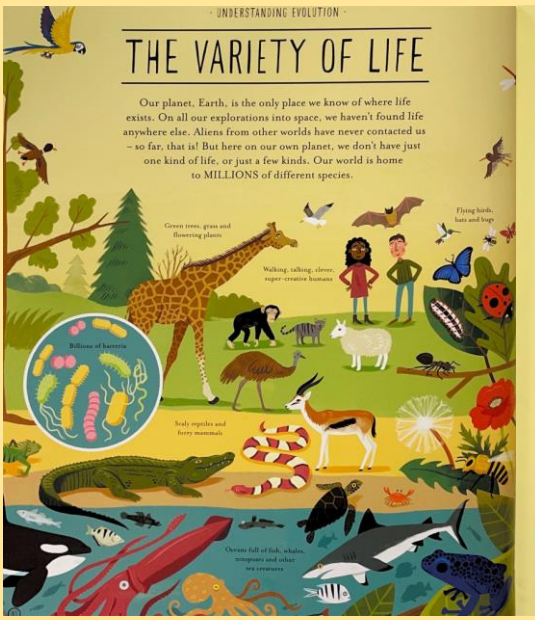
Thursday 20th January 2022

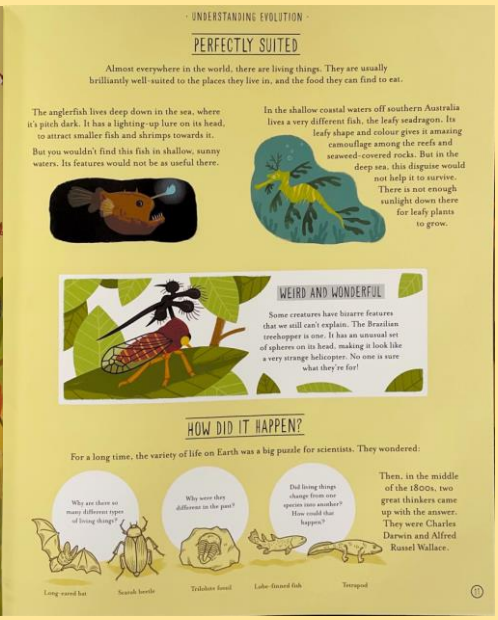
Handwriting

Complete 2 lines of handwriting, following the joins carefully.



To show understanding through writing and use of notes where necessary.





Using your answers and summary from yesterday, write up your own paragraph about
'Is variety the spice of life?'

Limit yourself to 100 words.

Include technical language.

Use the glossary to help.

GPS: Semicolons in a list

https://www.bbc.co.uk/bitesize/topics/zr6bxyc/articles/z6w6cqt

Add the semicolons to the list.

Darwin proposed and developed key ideas such as natural selection, which is the the process whereby organisms better adapted to their environment tend to survive and produce more offspring genetic inheritance, in which heritable traits are transmissible from parent to offspring and variation, which is a change or slight difference in those offspring.

Maths

LO: To explore the order of operations using brackets, for example, 2 + 1 × 3 = 5 and (2 + 1) × 3 = 9.

20.01.22

What operation should you do first in a calculation? **Subtraction or Addition?**	**Solve** 15 + 5 x 6 =
Solve 20 ÷ 5 + 6 - 10 =	Where would the brackets go in this equation? 5 x 45 ÷ 9 = 25

Jake says he finds it difficult to balance several operations in his head while solving equations such as this. Do you have any advice?

Day 2: Explore the order of operations using brackets.

(12 + 3) × 4 = 60 12 + (3 × 4) = 24

Do you think the answers will be the same?

If not, which will have a greater answer?

Work out the answer to each to check.

Day 2: Explore the order of operations using brackets.

$$12 + 8 \div 4 - 2$$

Work in pairs to find the answer without brackets.

Now put brackets in different places. How many different answers can you find?

Remember that the order matters if we are mixing ×/÷ and +/–.

$(12 + 8) \div 4 - 2 = 3$

$12 + (8 \div 4) - 2 = 12$

$12 + 8 \div (4 - 2) = 10$

$12 + (8 \div (4 - 2)) = 16$

This is the same answer as without brackets, because the division needs to be done first anyway.

More practice with order of operations and brackets

Sheet 1

Solve these.
Remember the order of operations!

1. 33 + 28 ÷ 4 − 22 =
2. 72 − 5 × 7 + 13 =
3. (12 + 16) ÷ 4 × 5 + 1 =
4. (7 + 13) × (17 − 9) =

Rewrite these number sentences. Add brackets in a different colour to make them correct.

5. 7 + 17 ÷ 2 − 1 = 11
6. 5 + 56 ÷ 4 + 4 = 12
7. 11 + 9 ÷ 4 = 54 ÷ 6 − 4
8. 73 − 27 ÷ 3 = 11 + 5 × 4

3. (12 + 16) ÷ 4 × 5 + 1 =

4. (7 + 13) × (17 − 9) =

Challenge

Problem solving and reasoning questions

In relation to multi-part calculations, agree if these statements are true or false:

- We leave the part in brackets until last.
- It does not matter which order you do the parts of the calculation not in brackets.
- We should always do the easiest parts of a calculation first.
- 12 + (3 x 4) gives the same answer if the brackets are removed.

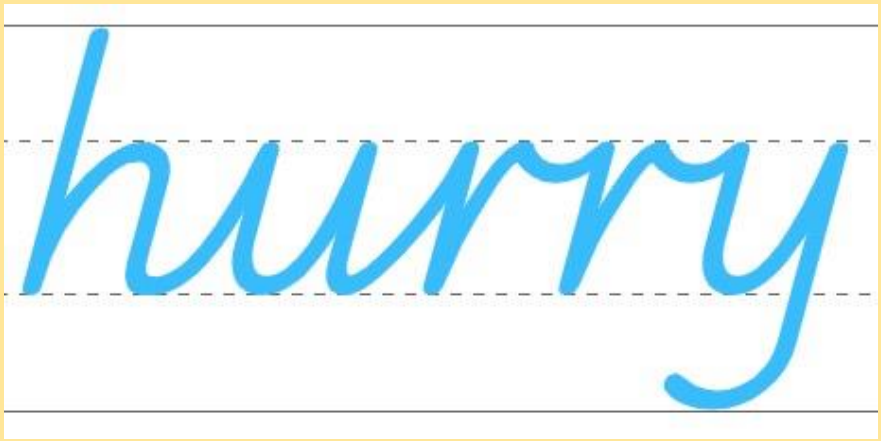
Friday

English

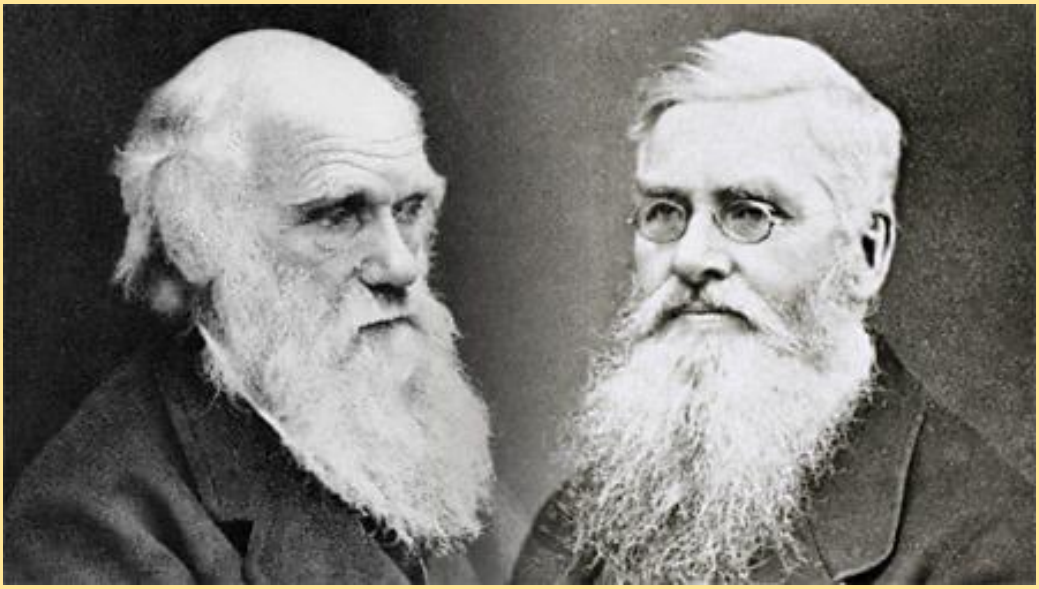
Friday 21th January 2022

Handwriting

Complete 2 lines of handwriting, following the joins carefully.



To read books that are structured in different ways.



Skim and scan

Fast Finders

naturalist

archipelago

finch

fanatical

voyage

Ecuador

· UNDERSTANDING EVOLUTION ·

DARWIN AND WALLACE

The early 1800s was a boom time for science. Batteries, motors and steam trains were invented. People began to dig up fossils and ancient ruins, and became very interested in the past. Scientists also discovered how Earth had changed over time.

DARWIN'S ADVENTURE

In 1809, Charles Darwin was born in Shrewsbury, England. Though his father wanted him to become a doctor, his real passion was nature. He spent his time spotting and collecting wildlife. When he was 22, thanks to a friend's recommendation, Darwin began a five-year, round-the-world voyage, as the naturalist on a survey ship, the HMS *Beagle*. His job was to observe and collect wildlife specimens. Along the way, he studied thousands of plants, animals and fossils. This made him think about how species changed over time, and where new species came from.

In the Galápagos Islands off Ecuador in South America, Darwin found slightly different species of finch living on different islands. They seemed to have developed in different ways – but how had this happened?

Darwin saw the world's largest species of tortoise in the Galápagos Islands.

MARY ANNING

Starting in 1811, when she was only 12 years old, famous fossil hunter Mary Anning unearthed several important new fossils. Her discoveries made other scientists think more and more about living things, and why some of them seemed to have been so different in the past. Anning lived in Lyme Regis, on the English coast, where many fossils are still found to this day. She spent her life as a fossil hunter and expert. Her dog Tray helped her on her fossil-hunting trips.

This 200-million-year-old fossil of a plesiosaur (a kind of sea reptile) was one of Mary Anning's most important finds.

· UNDERSTANDING EVOLUTION ·

WALLACE'S WANDERINGS

Alfred Russel Wallace was born in Wales, UK, in 1823. Though he worked as a surveyor and teacher, Wallace, like Darwin, was a fanatical nature collector. As soon as he could, he set off to the Amazon rainforest to collect plant and animal specimens. Later he explored the Malay Archipelago in Southeast Asia. Like Darwin, his discoveries made him think about how species began, and how they changed. He noticed that different species seemed to be separated by an invisible line across the Malay Archipelago. Wallace realized this was due to the Earth's landmasses breaking up millions of years ago. Asian and Australasian species, separated by ocean, developed differently. But how did these species change over time?

East of the line were tree kangaroos, cockatoos and other species found in Australia.

ASIA

West of the line were tigers, elephants and other animals found in Asia.

The Wallace Line

AUSTRALIA

GREAT MINDS THINK ALIKE!

After his journey, Darwin continued to study living things. In 1837, he wrote in his notebook: 'One species does change into another.' By about 1840, he had a theory of how this worked. He planned to write a book about it, but spent years collecting more notes and evidence. By 1856, Darwin and Wallace had heard about each other's interests, and were writing to each other. In 1858, while in Asia, Wallace hit upon his own explanation for how species could change. He quickly wrote it down and sent it to England. Darwin and Wallace had both come up with the same theory: natural selection.

DARWIN

WALLACE

Although Darwin is the person most associated with the theory of natural selection, the paper describing the theory was published jointly by Darwin and Wallace in 1858.

13

Read and discuss vocabulary

1. . Using the text, name 3 inventions.

What ship did Darwin sail aboard?

3. Where did Darwin first notice the variation in animals – which animal?

4. Why might the information about Mary Anning's be included?

5. What did Wallace noticed about the distribution of animals?

GPS: Bullet points

Using bullet points to make your writing clearer.

https://www.bbc.co.uk/bitesize/topics/zvwwxnb/articles/z2yydxs

Summarise the extract in 5 bullet points

-
-
-
-
-

Maths

LO: To solve multi-step word problems. **21.01.22**

What operation should you do first in a calculation? **Subtraction, Brackets or Division?**	**Solve** 15 + 32 ÷ 4 – 17 =
Add Brackets to make this correct 5 + 28 ÷(2 + 2 = 12	**Solve** 5.4 x 100 – 32 =
Jake says that calculating this string of calculations is difficult, 4 x 5 + 3 – 4 = 4 x 5 = 20 + 3 = 23 – 4 = 19. What advice could you give him?	

Day 3: Solve multi-step word problems: Use brackets to record the necessary calculations.

$78 \times 100 - 42$ $78 \times (100 - 42)$

Discuss both these calculations with your partner. Remember that we find the answers to calculations in brackets first.

Which do you think will have the bigger answer?

Which number sentence goes with which problem?

There are 78 sheets of stamps. Each originally had 100 stamps but 42 on each sheet have been sold. How many stamps are left? $78 \times (100 - 42)$

There are 78 sheets of 100 stamps. In all, 42 stamps have been sold. How many are left? $78 \times 100 - 42$

Using brackets can help us to record what calculations are necessary to solve a problem and the order in which they need to be carried out.

Day 3: Solve multi-step word problems: Use brackets to record the necessary calculations.

Magda orders three books.
Each costs £3.95 and the postage and packing for each book is £1.95.
What is the total cost?

Write a number sentence using brackets to show what needs to be done.

$3 \times (£3.95 + £1.95)$

Note that $3 \times £3.95 + £1.95$ would mean that £1.95 would be the postage and packing for all three books!

Word problems

Sheet 1

1. Matt the baker has 8 packs of buns. He's baked 40 more and puts these into packs of 4. How many packs does he have now?
2. Sasha the baker has 8 buns left. She bakes 40 more and then puts all the buns into packs of 4. How many packs does she have?
3. Five books priced £11.99 are ordered from an internet site. Postage and packaging costs £3.95 for the total order. What is the total cost?
4. Five books are ordered from an internet site. The original price was £11.99 but they have been discounted by £3 each. The postage and packaging is free. What is the total cost?
5. Zak, his brother and his sister clean their Mum's car. She gives them £7.50 to share equally between them. He also mows the lawn and is

© hamil

Challenge

Write a word problem involving the numbers 5, 6, and 12 and the answer 132.
(Hint, you will need to use brackets in the final calculation.)

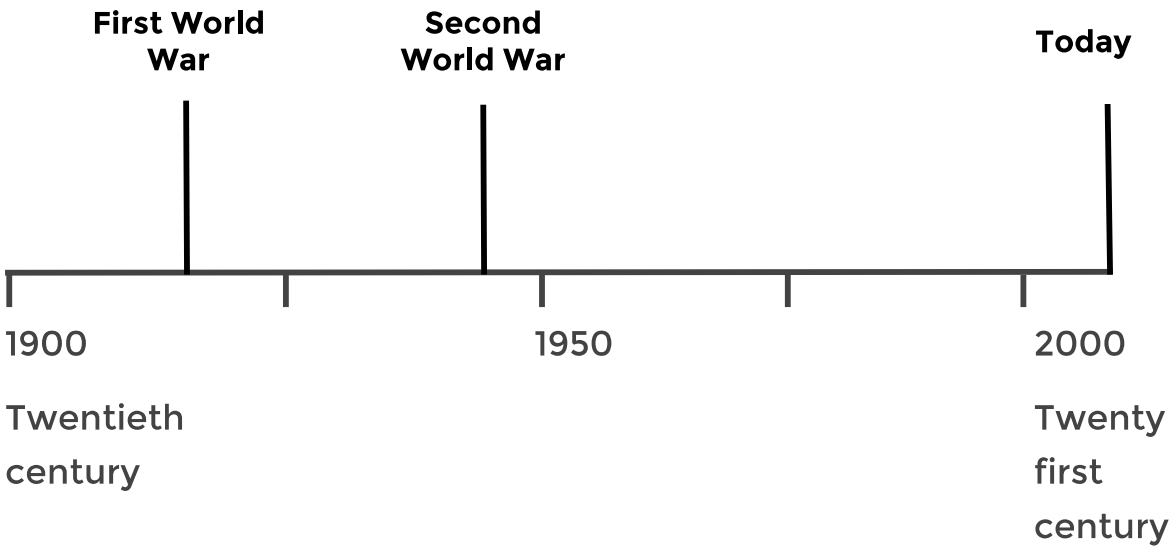
History

Date
The Western Front: the Battle of the Somme

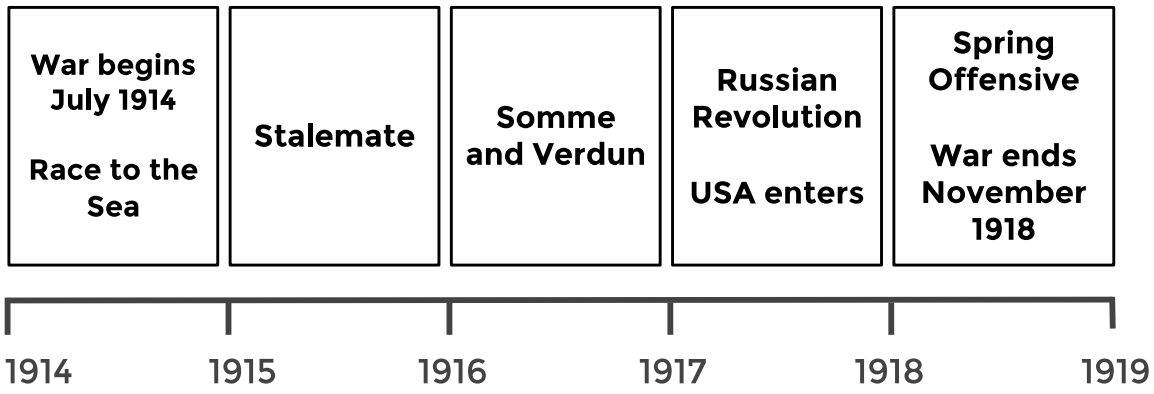
Key points.

- At the start of World War One, the UK launched a huge recruitment campaign, recruiting soldiers from all around the UK and the British Empire.
- Life in the trenches was extremely difficult, uncomfortable and dangerous.
- Soldiers in the trenches were supported by labourers and medics.
- New weapons and technology changed how wars were fought, prolonging World War One for four years, until 1918. It resulted in the deaths of millions of people.
- The first day of the Battle of the Somme was the deadliest day in the history of the British army.

Timeline of the twentieth century



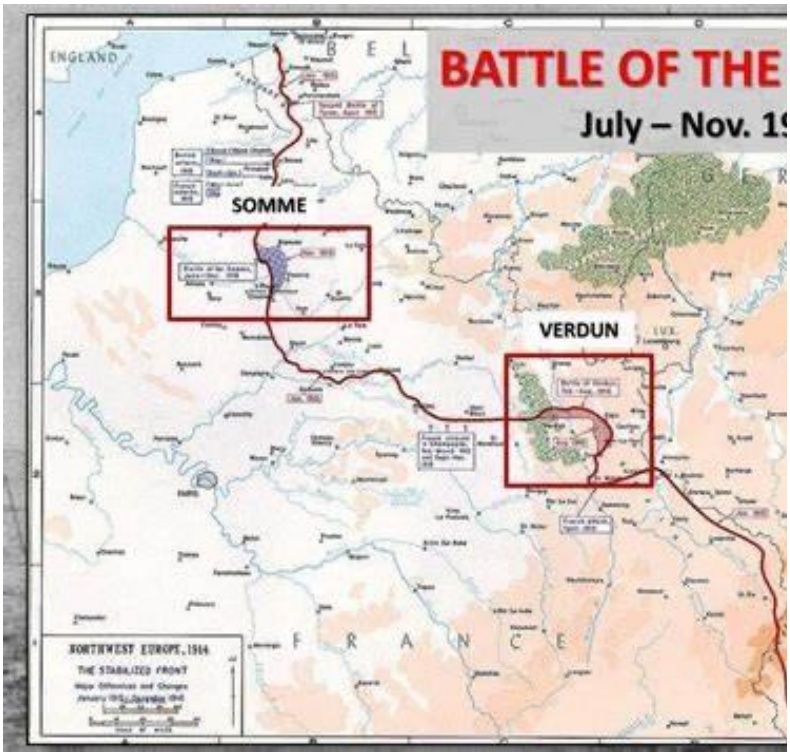
Timeline of the First World War



The Western Front was a major **theatre of war** during the First World War.

It was in northern France and southern Belgium.

Some of the key battles were fought around **Verdun**, The **Somme** and Vimy Ridge



Credit: Miss Cusworth

Soldiers were encouraged to wash their feet regularly and often had their feet inspected.

Battle of the Somme

https://www.bbc.co.uk/newsround/36646412

Battle of the Somme

- In 1916, the French army was under heavy attack from German soldiers in a town called Verdun. Verdun was a key location in the French defences. It had defensive forts and would have been a huge psychological loss to France if it had been captured.
- The British army started an offensive in the trenches near the river Somme, forcing the German army to divert some of their troops away from Verdun.
- For seven days, the British fired 3 million shells at the German trenches, aiming to destroy their defences. British miners had also tunnelled under no man's land and set huge explosives to detonate on the morning of 1 July, just before British soldiers crossed no man's land.

Battle of the Somme

- On 1 July 1916, British soldiers were ordered to walk across no man's land to capture the German trenches as their own. This was incredibly dangerous for the soldiers, but they thought they had already sufficiently damaged the German trenches.
- Their plan had failed. The German soldiers had taken shelter in underground bunkers made of concrete, protecting themselves from the shellfire. When the British soldiers went over the top into no man's land, German machine guns opened fire.
- By the end of the first day of the battle, 19,240 British soldiers had been killed, and 38,230 were injured. It was the deadliest day in the history of the British army.

Battle of the Somme

- **New tactics**
- As the battle went on, new tactics were developed that helped the British army to be more successful. These included:
- **The creeping barrage**: Soldiers crossed no man's land behind shell fire, so they were masked by smoke and debris. This made it harder for German soldiers to see them.
- **Tanks**: These were used for the first time at the Somme, providing protection and support for soldiers crossing no man's land.
- **Aerial reconnaissance**: Pilots flew over German trenches to gather information about their defences and number of soldiers.
- **Timing of attacks**: Rather than attacking early in the morning, as they had done on 1 July, the British began attacks late in the morning. This meant there was less time in the day for the German army to launch a counterattack.

Questions

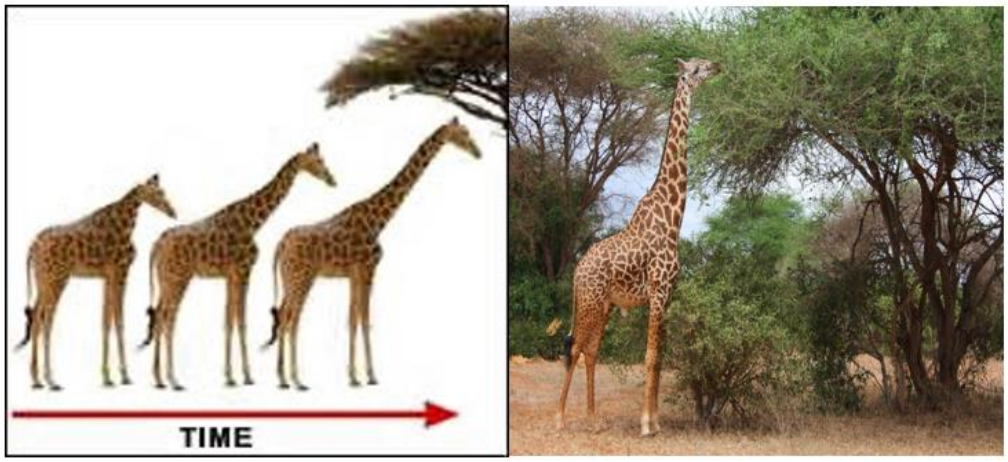
1. Where was the First World War mostly fought?
2. What is the Western Front?
3. In which continents did fighting take place during the First World War?
4. What is 'No Man's Land'?
5. What new tactics did the British Army use at the battle of the Somme?
6. Opinion: Was is right to send so many young adults to war?

Science

Science

Lesson 1

LO: To understand how variations can make an animal more or less able to survive in a particular environment



Adaptations...

Most environments, however extreme, have some form of life in them – living things that have evolved to survive in those conditions against the odds (and often monopolise them).

Today's survival challenge is to explore extreme survival and the adaptations that enable living things to thrive in such conditions.

How has a cactus adapted to its environment?

They can store water within them (as rain is rare).

They swell after a rainstorm and can store water for months!

It has a large, shallow root system which collects water as soon as it drop from the upper layers of the ground.

Spines which protect the cactus from animals and reduce water loss from transpiration (sweating).

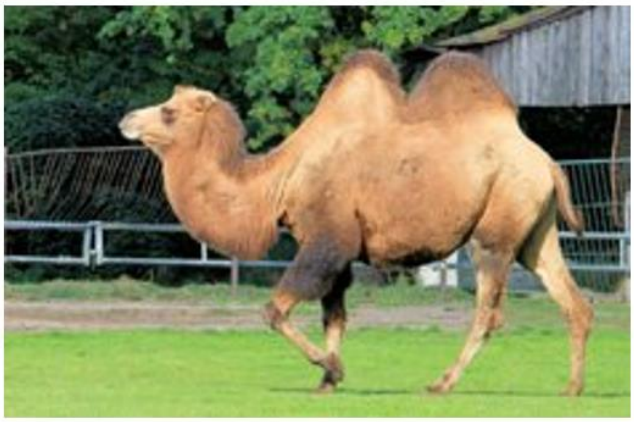
http://www.bbc.co.uk/education/clips/z8sjxnb

Q1: How have plants adapted to extreme cold temperatures?

How has a camel adapted to its environment?

Double row of long eyelashes to keep sand out of eyes.

Nostrils which can close entirely shut to help breathe in sandstorms.



They can store fat and water in their humps.

Strong legs to move around on uneven and unsteady ground.

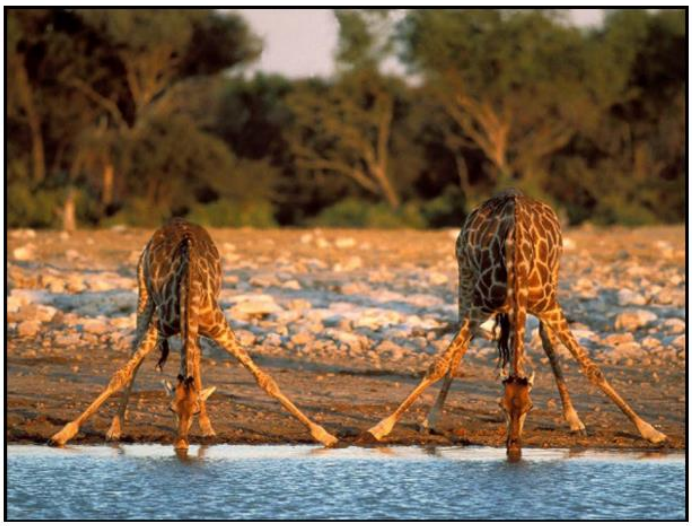
https://www.bbc.co.uk/bitesize/clips/z8fpyrd

Q2: How have camels adapted to their environments?

Sheikh Hamdan bin Mohammed bin Rashed al

Sheikh Hamdan bin Mohammed bin Rashed al-Maktoum, crown prince of the United Arab Emirates of Dubai, purchased the female camel for 10 million dirhams (2.72 million dollars) at a camel beauty pageant in the UAE capital of Abu Dhabi.

Poor/ Perfect design?



Giraffes have to use that position because of their long legs – despite having a long neck!

This is dangerous because giraffes are quite vulnerable in this position if suddenly attacked by a predator.

So, while height is an advantage for finding food and a good view of its surroundings, it is a disadvantage for drinking water.

Q3 – Are giraffes necks a good/ bad adaptation? Explain your reasoning...

Final Task

Q4: Are all adaptations good? Explain..

Q5: What does variation mean?

Q6: What would be a good adaptation for humans in the future?

Science

Lesson 2

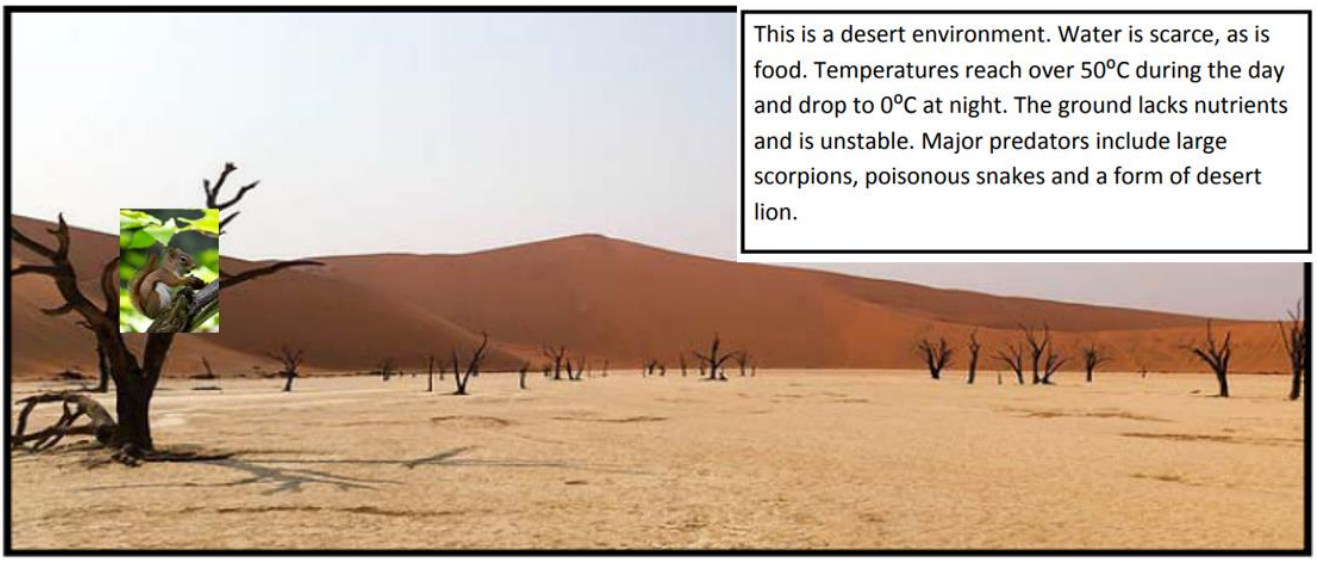
LO: To understand how animals might adapt to their environment

Watch BBC Bitesize clip...

https://www.bbc.co.uk/bitesize/clips/zbp6n39

https://www.bbc.co.uk/bitesize/clips/zbp6n39

(Groups of 4-6)Main Task: How might your chosen animal adapt to life in its new environment?



How would a Lion survive in the watery Environment?

This is a watery environment. Solid land that doesn't flood is scarce, but food is abundant in the form of fish and vegetation. Temperatures remain fairly constant at a comfortable 18-20^{o}C. Major predators include a small species of shark, bears and boa constrictors. There are also small poisonous frogs and highly toxic tarantulas. Watch out for the lethal shrubs that contain paralysing toxins when eaten.

Computing

https://scratch.mit.edu/

Objectives

Lesson 4: Designing a game

To design a project that builds on a given example

- I can choose the artwork for my project
- I can explain my design choices
- I can create algorithms for my project

Introduction

Analysing a game

ncce.io/pg6a-4-a0-ra

In this game...

- How do you play the game?
- How many sprites are there?
- What do the sprites do?
- How do you know how well you have done?

Record your answers on the activity sheet.

Game template

In this version, the apples and the spider have been removed.

ncce.io/pg6a-4-a1-ca

This will be the basis for your game.

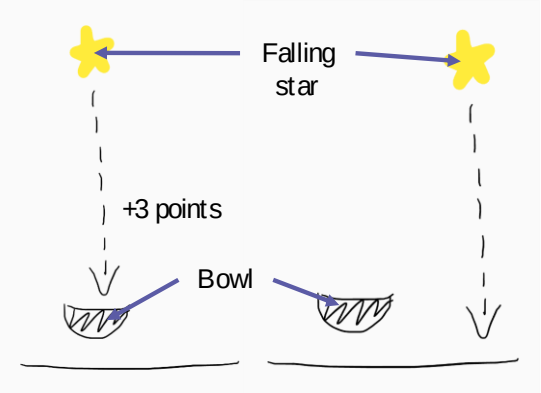
Choose your artwork

- Choose two more ‘falling’ sprites
- Choose a background

Sprite 1	Sprite 2	Sprite 3:	Background:
Name: Falling star	Name:	Name:	Name:

An algorithm is a precise sequence of instructions, or set of rules, for performing a task.

Algorithm for the falling star



The falling star moves down from a random x position at the top of the screen. If the star falls onto the Bowl, add 3 to the score. When the star touches the Bowl or the Screen Bottom, it falls again from a random x position at the top of the screen.

Design your algorithms

Add algorithms for the additional 2 sprites to the design template. Each algorithm should include a **drawing** and a **description**.

Design suggestions:

- Each sprite should change the score by a different amount (you could use a negative number)
- Each sprite can move at a different speed
- Sprites can be different sizes

Make sure that any design choices are included in your algorithms.

Lesson 03

What are the 5 Ks of Sikhism?

Retrieval Practice

1. The Sikhs worship their Gurus

   True / False

2. Put these three Gurus in the correct order:

   • Guru Angad • Guru Arjan • Guru Hargobind

3. What was the name of the Golden Temple?

4. What does the word 'Guru' mean?

5. Which Empire attacked the Sikhs?

Your design

Can you explain your design to a partner?

- How does each sprite fall down the screen?
- How does the bowl move?
- What happens when a sprite is caught by the bowl?
- What happens when a sprite reaches the bottom of the stage?
- What artwork have you chosen?

Plenary

Other algorithms

This lesson has focused on the algorithm designs for the falling sprites.

Which other algorithms can you identify in this project?

ncce.io/ pg6a-4-a1-ca

Religious Education

The tenth and final Guru in the form of a person was Guru Gobind Singh, who became the Guru at only nine years old following his father's execution by the Mughals. When he was 30, Gobind Singh brought all of the Sikhs together in a big festival called Vaisakhi. Once they were all gathered, Gobind Singh asked them who was prepared to die for Sikhism.

1. What is the word that is used to describe someone who dies in defence of something they believe in?

m_____

One man put his hand up, and Gobind Singh took him into a tent. When the Guru emerged his sword was dripping with blood. He asked for another volunteer, who followed him into the tent. Again, he emerged with fresh blood on his sword. Blood was running out of the tent along the floor. Three more volunteers all offered themselves up to die for the faith.

The crowd waited to see what would happen next. After a few moments, all five men walked out of the tent, unharmed. The Guru blessed them all and declared them Panj Pyare, which means 'brotherhood of the pure'. They became the first members of a special community within Sikhism known as the Khalsa.

The Guru himself then asked to be initiated into the Khalsa. The men took a heavy, iron bowl and mixed water and sugar together, stirring it with their swords. This mixture is known within Sikhism as amrit. The Guru drank the mix, and the men sprinkled his eyes and hair with it. This is the same ceremony that Sikhs today follow before they are initiated into the Khalsa. Following the Amrit ceremony, Sikhs share a sweet pudding called karah parshad.

2. Complete these sentence

The tenth Guru of Sikhism was called

_____

3. When did the festival of Vaisakhi take place?

a. 169 BCE

b. 169 CE

c. 1699 BCE

d. 1699 CE

4. What was special about the first men who became members of the Khalsa?

_____

_____

_____

_____

After joining the Khalsa, the male Sikhs all took the same surname as the Guru: Singh (which means Lion). This showed that all Sikhs were equal. Female Sikhs all took the surname Kaur (which means princess).

After becoming members of the Khalsa, all Sikhs must wear or carry five special items. Each begins with the letter K. They are: uncut hair (known as kesh); a wooden comb (kangha); a small sword (kirpan); cotton underwear (kachera); and a simple, steel bracelet (kara). It is important to Khalsa Sikhs that each of these items has a practical use, and are not simply symbols or items used for worship.

Carrying the 5 Ks wasn't the only rule that Khalsa Sikhs must follow. Guru Gobind Singh also forbid alcohol, smoking and taking drugs. Any kind of piercings are banned, and the clothes that the Khalsa wear should be simple and plain. They were also commanded to give to charity and do good deeds, especially for the poor and needy.

6. What does the name Singh symbolise?

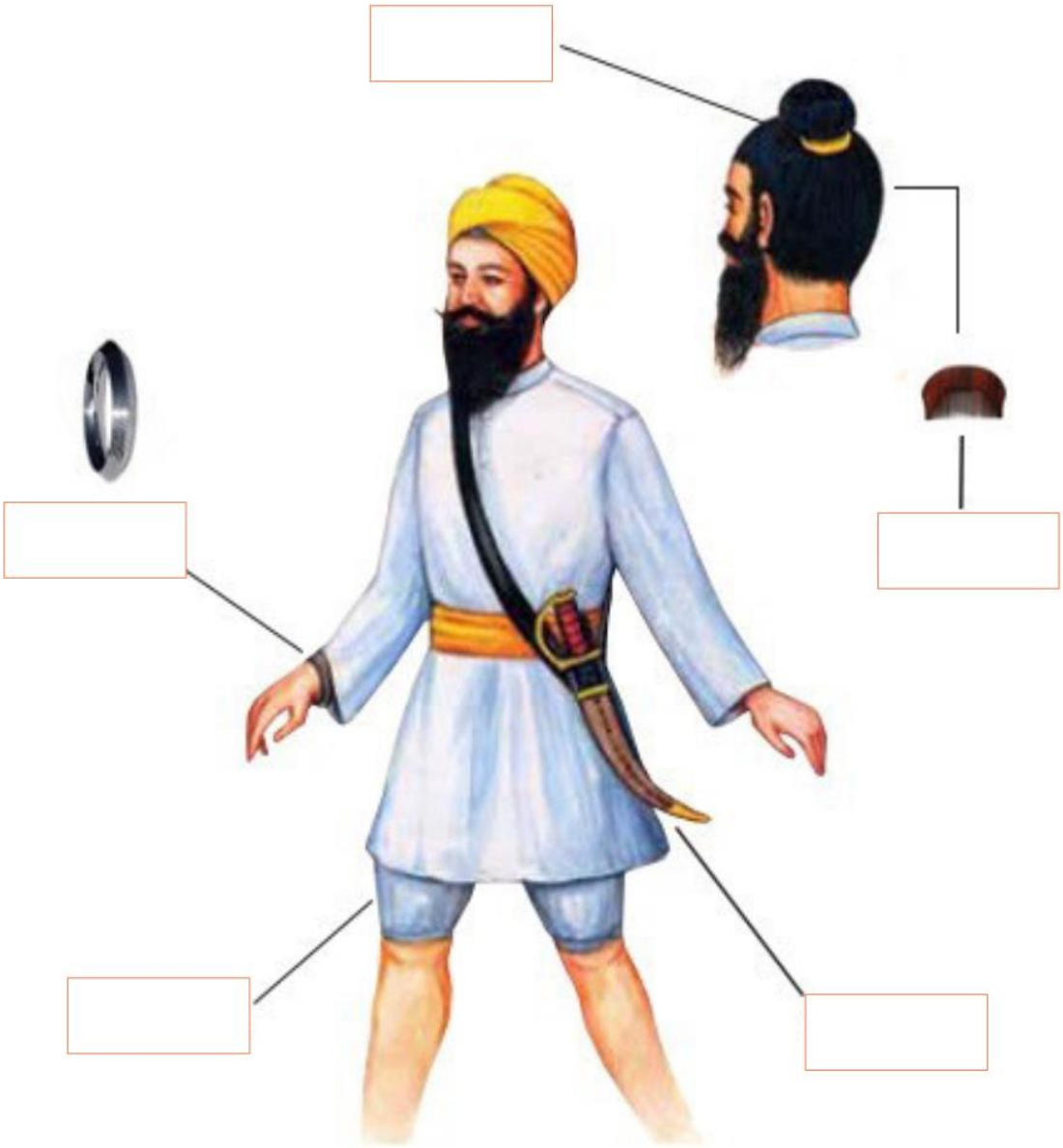
_____

_____

7. Match the names of these items with their descriptions.

kirpan	Throughout history hair has been regarded as a symbol both of holiness and strength. One's hair is part of God's creation. Keeping hair uncut indicates that one is willing to accept God's gift as God intended it. Uncut hair symbolizes adoption of a simple life, and denial of pride in one's appearance. Not cutting one's hair is a symbol of one's wish to move beyond concerns of the body and attain spiritual maturity. A Sikh should only bow his head to the Guru, and not to a barber. It is a highly visible symbol of membership of the group. It follows the appearance of Guru Gobind Singh, founder of the Khalsa. Sikh women are just as forbid/en to cut any body hair or even trim their eyebrows, as Sikh men are forbidden to trim their beards.
kachera	A symbol of restraint and gentility. A symbol that a Sikh is linked to the Guru. It acts as a reminder that a Sikh should not do anything of which the Guru would not approve. A symbol of God having no beginning or end. A symbol of permanent bonding to the community-being a link in the chain of Khalsa Sikhs (the word for link is 'kari'). It is made of steel, rather than gold or silver, because it is not an ornament or decoration.
kesh	This symbolises a clean mind and body; since it keeps the uncut hair neat and tidy. It symbolises the importance of looking after the body which God has created. This does not conflict with the Sikh's aim to move beyond bodily concerns; since the body is one's vehicle for enlightenment one should care for it appropriately.
kara	This is a pair of breeches that must not come below the knee. It was a particularly useful garment for Sikh warriors of the 18th and 19th centuries, being very suitable for warfare when riding a horse. It's a symbol of chastity.
kangha	There is no fixed style of this sword and it can be anything from a few inches to three feet long. It is kept in a sheath and can be worn over or under clothing. This sword can symbolise: •Spirituality •The soldier part of the Soldier-Saints •Defence of good •Defence of the weak •The struggle against injustice •A metaphor for God

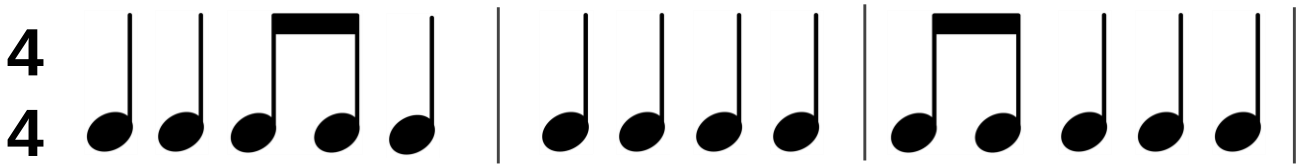
8. Label this image of a Khalsa Sikh,
adding as much information and detail as you can.



Music

To understand how to create rhythm through music notation

Reading rhythms: name the notation



= 1 beat

= 1/ 2 beat

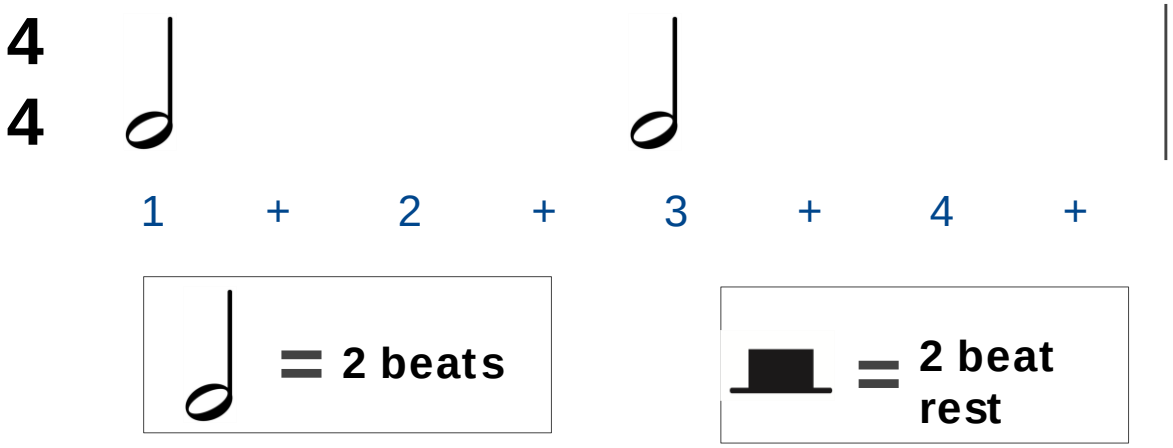
Reading rhythms – semibreve (why can't we clap this? What can we use instead?)

1 + 2 + 3 + 4 +

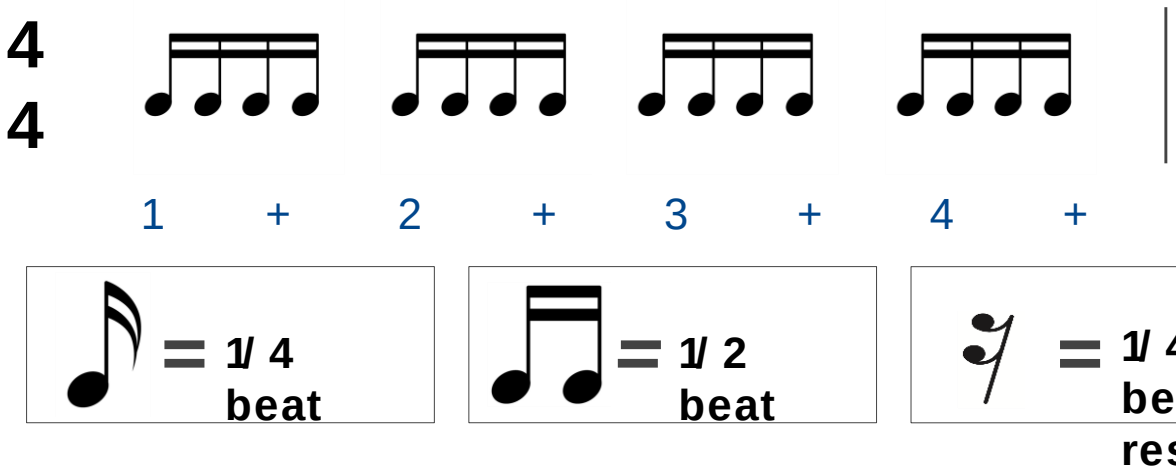
= 4 beats

= 4 beat rest

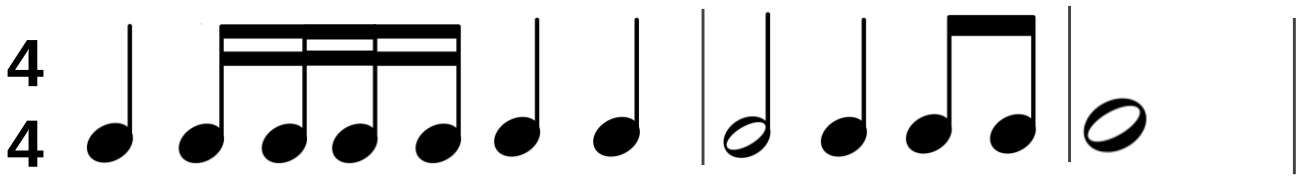
Reading rhythms - minim

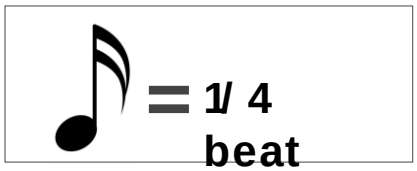


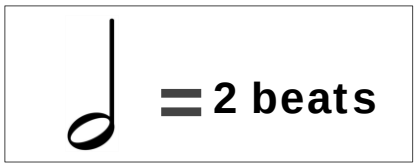
Reading rhythms - semiquaver



Reading rhythms

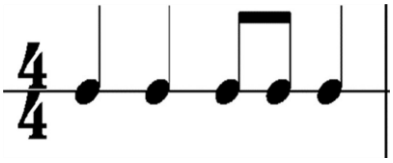




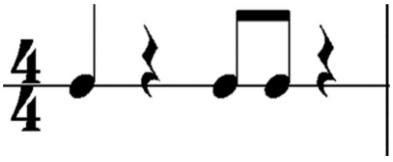


Performing rhythm tiles...

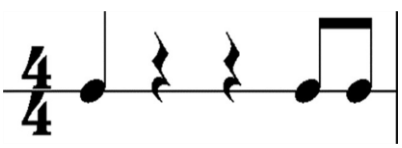
Rhythm 1



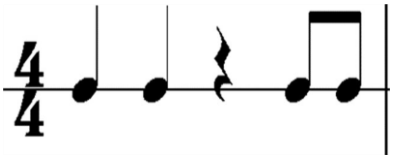
Rhythm 2



Rhythm 3

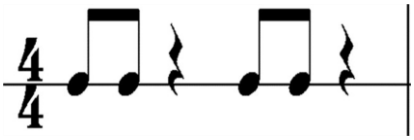


Rhythm 4



Rhythm 5

Rhythm 6



Composing a structured rhythm piece...

Structuring your performance

A Section	B Section	A Section