




Key Stage 2 Weekly Learning



Year 5 Pine and Fir	Theme: China and Shang Dynasty Science: Materials and Their Properties	Week beginning: 29/06/2020
Daily Activities		
Wake up & Shake up	Exercise with Joe Wicks (online videos), go for a walk, run or dance and BBC super movers. Don't forget the Daily Mile- how many laps of your garden is a mile?	
Reading 10-20 Min	Continue to enjoy reading book from home, school or online. Can you create your own book or questions to write about the book you have been reading? Complete the "Take 5" comprehension sheet, using good quality reading comprehension techniques.	
Maths 20-30 Min	Use a Maths website to practise Year 5 shape recognition, identifying Roman Numeral, Properties of Shapes, Symmetry, Reflection as well as continuing to work on your addition, subtraction, multiplication and division skills. Log on to Mathletics/Prodigy or practice a key skill from the box below	
BREAK	Eat a healthy snack, exercise or relax with some mindfulness. Take some time to reflect on your morning.	
Times Tables 10-15 Min	Log on to Time Tables Rock Stars or a similar Maths website to practise your tables.	
Spelling 5 - 10 Min	Choose 10 Common Exception Words from the list below to practise this week. What are the definitions of each one? Then write 10 creative sentence using each spelling in turn.	
Handwriting 5 - 10 Min	Use your book to practise your 10 spellings. Make sure it's neat, joined and on the line.	
Writing 15 - 20 Min	For your task you need to pretend that you are someone's pet, dog, cat, rabbit etc. Write a short descriptive passage from the view of that animal. What can you see and hear? What is your life like as a pet?	
Value for the Term		This term our value is Cooperation . Make your own poster to show what this word means and why it is so important to cooperate.


These are the Key Skills that we are teaching in Year 5. They are the skills we work with across the school year. Please continue to help and support your child at home with their learning and choose any of these key skills. Some of these will change from week to week and it is important to try and do some different one's every time.

Key Mathematical skills	Key Reading skills	Key Writing skills
<ul style="list-style-type: none"> • Times tables up to 12x12 • Knowing the multiplication and division facts fluently • Add and subtracting numbers with more than 4 digit • Multiplying 3/2-digit numbers by 1digit numbers • Converting different metric units eg g ,Kg, cm, M, ml, L, p to £ • Telling the time to the nearest minute. • Reading a range of time tables to find start and finish times 	<ul style="list-style-type: none"> • Use phonics to decode new words. • Summarise what has been read • Predicting what will come next • Sharing opinions using the text • Retrieving facts • Identify the meaning of new words • Make comparisons between two different pieces of information • To arrange facts into chronological order • To use a spelling aid to identify meanings and definitions of new words. • Can you read the start of a new book and then predict what might 	<ul style="list-style-type: none"> • Capital letters at the start of a sentence and for proper nouns • Neat, joined handwriting • Conjunctions to join ideas (and/but/so/because/which) • Adjectives to describe • Using past or present tense • Using 1st person (I) or 3rd person (he/she/they) • Adverbs (then/next/after) • Prepositions (below/in front of/under) • Use of bullet points, sub headings and paragraphs

<ul style="list-style-type: none"> Number of seconds in a minute, minutes in an hour, hours in a day, days in a month, months in a year. 	<p>happen next? Was your prediction correct?</p> <ul style="list-style-type: none"> Identify key words and clues that show the emotions that different characters might be feeling. 	<ul style="list-style-type: none"> Use of diagrams and images to help support the writing.
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Weekly Activities

<p>Geography</p> <p>Our new topic this term is China. We are going to be looking into the Ancient History of China from the Willow Pattern Story, along the Great Wall of China, and into the Dynasty standing in line with the Terracotta Army.</p> <p>This week we are going to explore the Terracotta Army. Use the website below to create a fact file all about the army.</p> <p>Include lots of interesting facts about them- why are they all facing the same way? How and why were they buried like that? Who are they protecting?</p> <p>https://www.chinahighlights.com/xian/terracotta-army/ https://www.travelchinaguide.com/attraction/shaanxi/xian/terra_cotta_army/ https://www.nationalgeographic.com/history/archaeology/emperor-qin/</p> <p>You can present in your information in a way that you choose. Look very careful at each soldier- every single one is completely different from another and they are ready for battle. Remember to make your information exciting and include lots of did you know statements.</p>	<p>Science</p> <p>Our Science theme this term is Materials and Their Properties.</p> <p>For the past 3 months we have continuously washed our hands with soap- but have you ever wondered how soap actually works?</p> <p>Complete the experiment below to see how soap cleans put hands and why it is so important to use soap.</p> <p>Your challenge after is to design your own soap. What colour would you use- does it have an appealing smell? What important features do you think that your soap would need to be the best seller and the most effective to keep your hands clean and fight against different germs?</p> <div style="display: flex; justify-content: space-around;">   </div>
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<p>RE</p> <p>This term in RE we are learning about the different creation stories of in a variety of Religions. We will explore: Christianity, Hinduism, Islam and Sikhism. Within each religion is a different story about how the world was created and by who, which is found in their Holy Book. What is creation? Why is it important? Discuss this with your family. Share your views and ideas.</p> <p>This week you will explore the religion Buddhism. Buddhist don't follow a set creation story instead they take their teachings from the Buddha instead. Used the two powerpoints attached to complete some research about the Buddha and the different teachings that they follow. Re-write it in your own words. You can do this through pictures, Comic Strip, drama or song or simply write it down on the page. You can draw a picture or decorate your page.</p>	<p>Art</p> <p>To link with the topic of China and our geography/ history this week- we would like you to have a go at creating your own Terracotta Army Soldier. You can make it out of any materials that you like from clay/playdough-junk modelling. You can always sketch or draw your soldier if you prefer to. Will your soldier have a weapon or a horse? Do they have long hair or short hair? What type of armour are they wearing? Please ask an adult to Tweet them @MsBowderyCTS1 @MissMonCTS1 or send them via email. We both know how creative you all are and would love to see them.</p> 
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<p>Jigsaw</p> <p>This week we would like you to reflect on the important of equality and understanding that everyone should be treated fairly and equally regardless of their appearance, religion etc. Have a discussion with your parents about how it makes you feel when you see others being treated unfairly- what would you say to those who</p>
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have been hurt by others. Think about the things that you can do to make a difference to how you speak and treat those around you who are different. We should always treat others how we expect them to treat us.











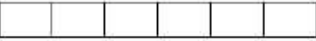
Extra Activities for the Half Term

- Reread the Willow Pattern story. T'so Ling sent his soldiers to kill Koong-se and Chang. Make up a new ending, one in which the family escapes. How? Where did they go? What happened next? Write a happy ending to the story.
- Look at books which help to identify common trees. Find pictures of the weeping willow. Why do you think the tree is so named? Make a scrap book of trees which you can identify. Draw the tree in summer and winter. Some trees are deciduous. Others are evergreen. Which kind of tree is the weeping willow?
- We will be making money containers this half term but how would you keep your money safe? Design your own piggy bank - be creative and label the features.
- This half term we will be developing different printing techniques. Research work by Brice Marden (String printing) and have a go at your own version!

Spelling Key Words List

accommodate	category	determined	forty	marvellous	programme	soldier
accompany	cemetery	develop	frequently	mischievous	pronunciation	stomach
according	committee	dictionary	government	muscle	queue	sufficient
achieve	communicate	disastrous	guarantee	necessary	recognise	suggest
aggressive	community	embarrass	harass	neighbour	recommend	symbol
amateur	competition	environment	hindrance	nuisance	relevant	system
ancient	conscience	equipment	identity	occupy	restaurant	temperature
apparent	conscious	equipped	immediate	occur	rhyme	thorough
appreciate	controversy	especially	immediately	opportunity	rhythm	twelfth
attached	convenience	exaggerate	individual	parliament	sacrifice	variety
available	correspond	excellent	interfere	persuade	secretary	vegetable
average	criticise	existence	interrupt	physical	shoulder	vehicle
awkward	curiosity	explanation	language	prejudice	signature	yacht
bargain	definite	familiar	leisure	privilege	sincere	
bruise	desperate	foreign	lightning	profession	sincerely	

Destination Questions

<p>1 </p> <p>A shape has a perimeter of 48cm</p> <p>What will be the perimeter of a shape where each length is five times longer?</p>	<p>2 </p> <p>Sue and Danny planned to run 8km.</p> <p>40% through their run, they stopped for a break.</p> <p>How many metres had they run when they stopped?</p> <p>What fraction of their run did they have left to complete?</p>	<p>3 </p> <p>Complete the statements below using $<$ $>$ or $=$.</p> <p>$2.7 \square 27$ tenths</p> <p>$3\frac{1}{5} \square 3.5$</p> <p>$150\% \square \frac{100}{200}$</p> <p>23 thousandths \square 25%</p>
<p>4 </p> <p>Which is more:</p> <p>$\frac{2}{3}$ of £6.90 or 70% of £6?</p> <p>Prove it.</p>	<p>5 </p> <p>Percy has 35 sweets and Faye has 36 sweets.</p> <p>Percy eats a fifth of his and Faye eats 25% of hers.</p> <p>Who has most left?</p>	<p>6 </p> <p>50% of children who visit a park one day are given a balloon.</p> <p>$\frac{1}{2}$ of the adults who visit the same park on the same day are given a leaflet.</p> <p>Will the people giving out balloons and leaflets need the same number of each?</p> <p>Explain your answer.</p>
<p>7 </p> <p>A chocolate bar usually weighs 39g.</p> <p>Two new versions of the bar are being sold.</p> <p>One says it has 10% extra.</p> <p>The other says it has an extra $\frac{1}{12}$.</p> <p>Which new bar is heavier? What is the difference between the weight of the two new bars?</p>	<p>8 </p> <p>A shop is having a sale. Everything has been reduced by 25%.</p> <p>What is the sale price for each item?</p> 	<p>9 </p> <p>A house was priced at £315,000 until it was reduced by one sixth.</p> <p>Use the model to show where the original price and the new price for the house would be labelled.</p>  <p>What is the new price?</p>

Nombre:

Fecha:

Watch the video - <https://www.youtube.com/watch?v=PvPh6-9BgQU> I do love Señor Jordan!

Telling the time

¿Qué hora es?

Son las..... (Es la ...)

menos

cinco

diez

cuarto

veinte

veinticinco

y

cinco

diez

cuarto

veinte

veinticinco

y media

Draw the correct times onto the clocks.



Son las ocho.



Son las dos.



Es la una.



Son las cuatro
y media.



Son las diez y
media.

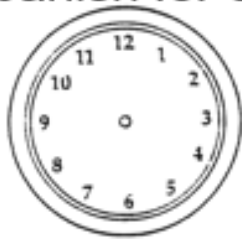


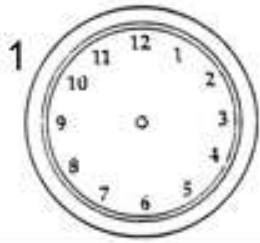
Son las seis y
media.

A Write the correct time in Spanish for each clock.

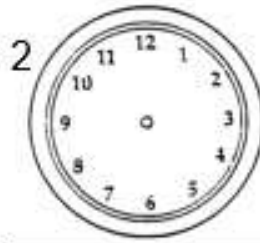


B Draw your own times and write the correct time in Spanish for each clock.

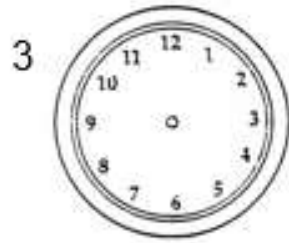




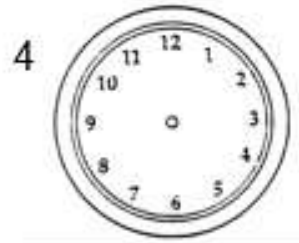
Son las cuatro
y cuarto.



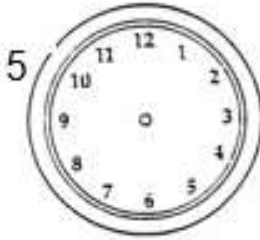
Son las diez
menos cuarto.



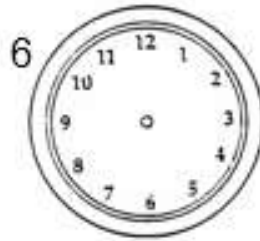
Son las siete y
veinticinco.



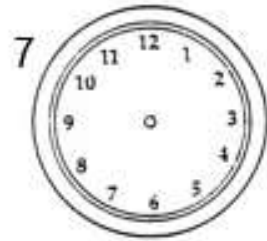
Son las dos
menos veinte.



Es la una y
media.



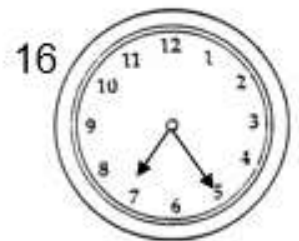
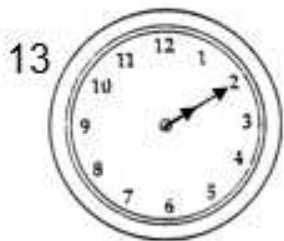
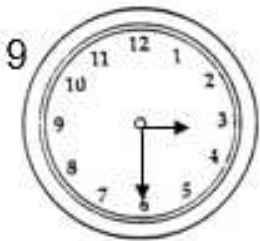
Son las doce
menos cinco.



Son las tres
y cuarto.



Son las once
menos veinte.

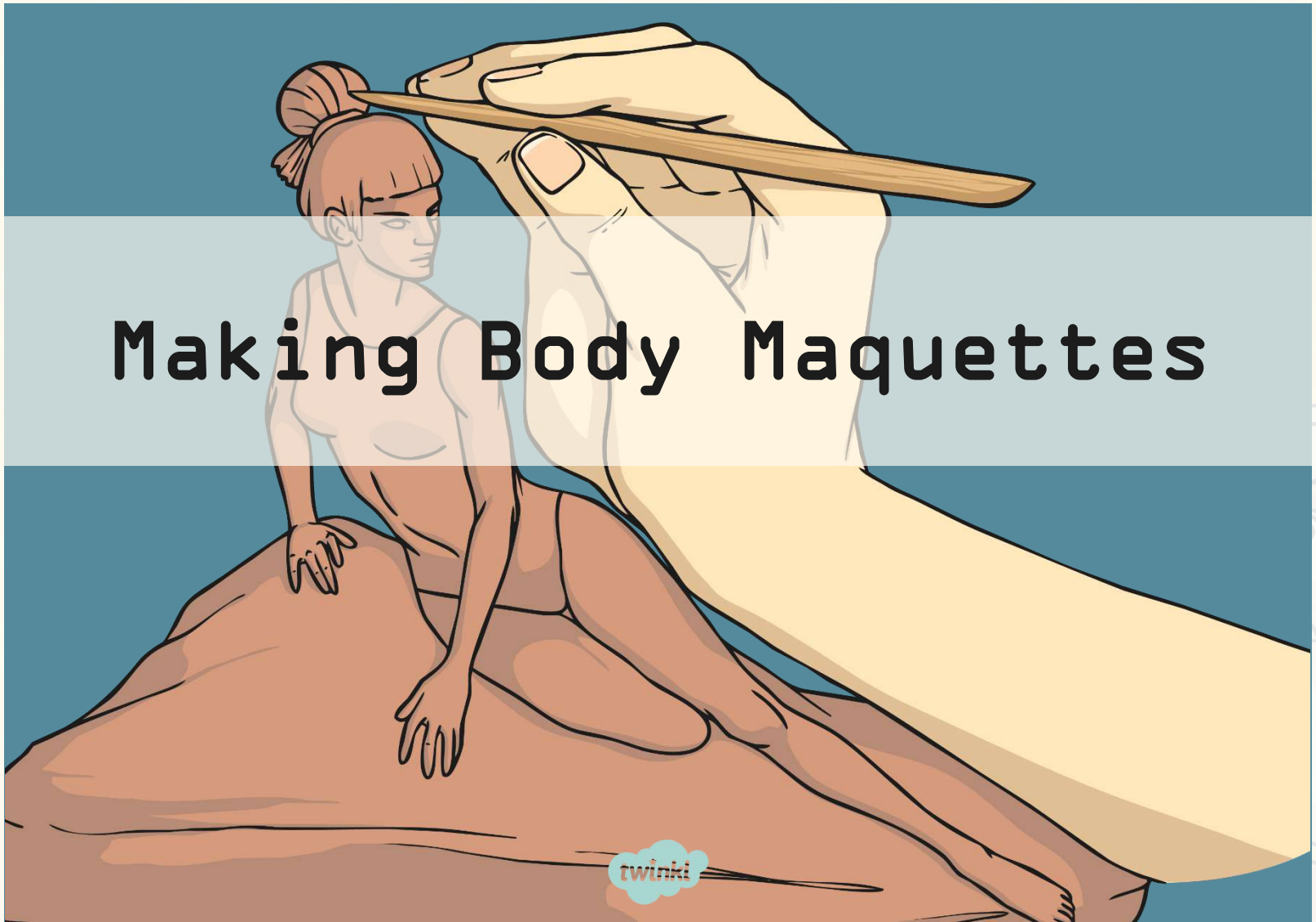




Art and Design

Bodies

Making Body Maquettes



Aim

- I can make a maquette.
- I can use my sketchbook.

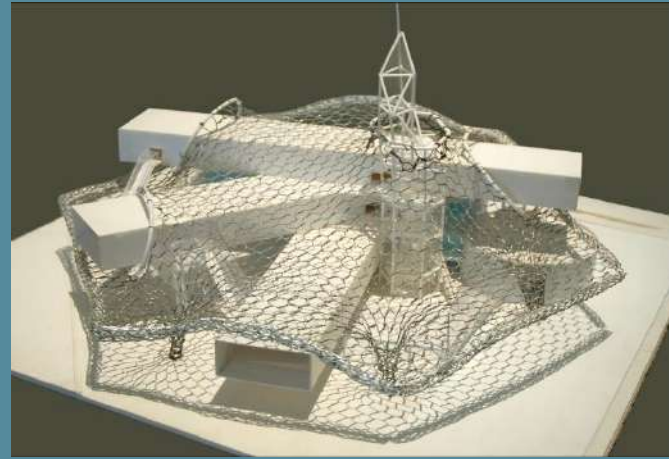
Success Criteria

- I can make a model which stands up.
- I can draw a person for the maquette.
- I can look back at my drawings and discuss my ideas.
- I can use a drawing from my sketchbook.

What Are Maquettes?



Look at the photographs and write a sentence about what you think a maquette is.





A Maquette is...

A model of something that **will** be made. It is usually smaller than the future object that is going to be made. It is a mini model, or a practice for the real object.



Photos courtesy of Jean-Pierre Dalbera and Yann Caradec (@flickr.com) - granted under the creative commons licence - attribution

The Terracotta Army



Photo courtesy of Richard Fisher (@flickr.com) – granted under the creative commons licence - attribution

The Terracotta Army

...is an army of figures that show the army of Qin Shi Huang, the first Emperor of China. It dates from 210-209 BC and they were buried with the Emperor to protect him in the afterlife.



Photo courtesy of Bitrob (@flickr.com) – granted under the creative commons licence - attribution

There are more than 8,000 soldiers there – that's definitely more than the number of children in your class!

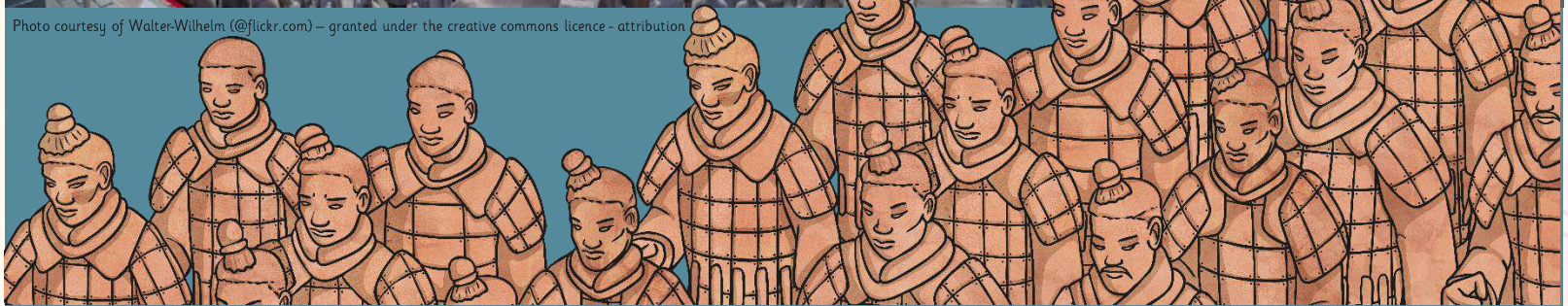
The army sculptures were only discovered in 1974 by some farmers.

The Terracotta Army

Can you make some maquettes of yourselves and stand them so that they look like this little army?



Photo courtesy of Walter-Wilhelm (@flickr.com) – granted under the creative commons licence - attribution



Making Your Maquette



Things you will need to make your maquette:

- Sellotape
- Card
- Felt tips/oil pastels
- Sketchbooks
- Your adult will have sharp scissors or a knife for cutting

Can you think of any more materials or equipment?

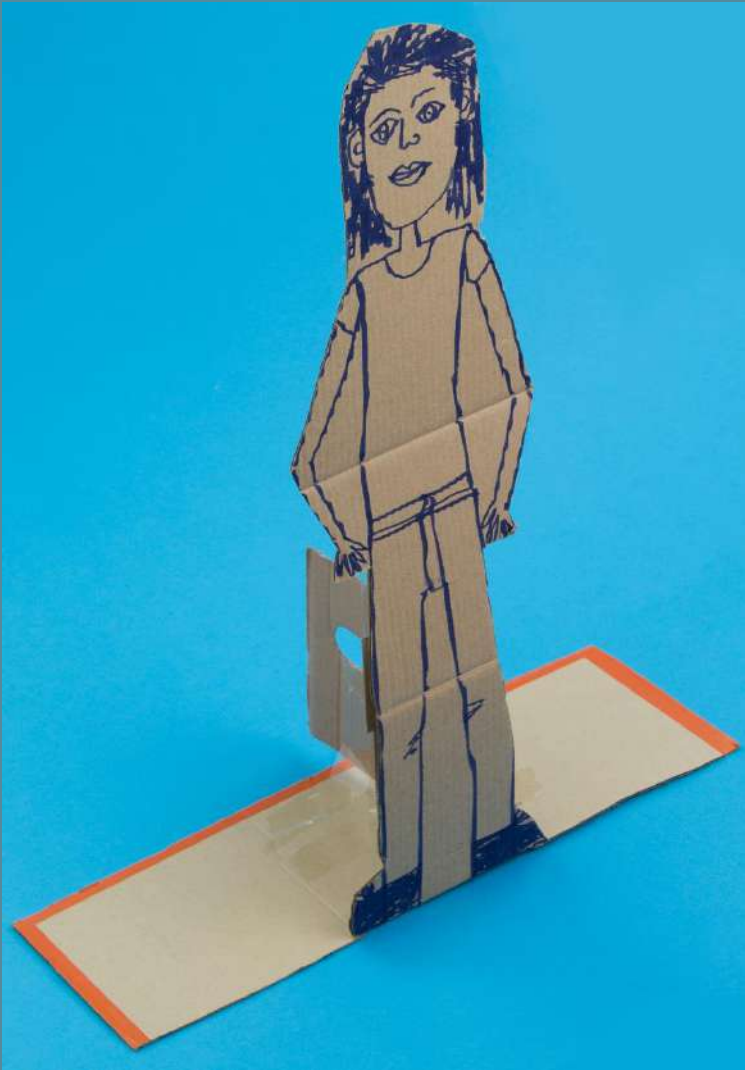
Your maquette person can be drawn on a flat surface but must be able to stand up by itself.

How will you do this?

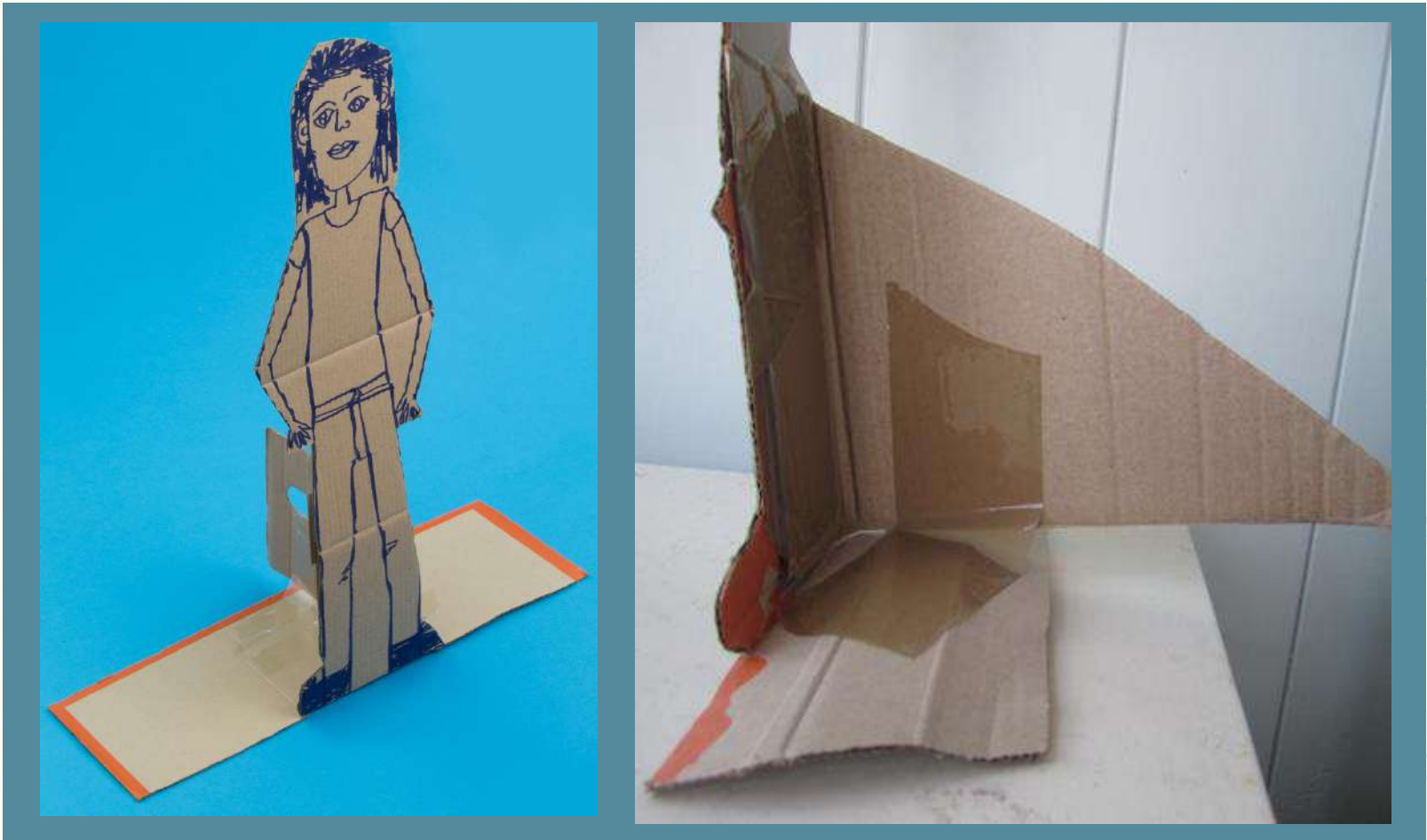




What a Good Maquette Looks Like...



A Maquette with its Stand



Field for the British Isles



Antony Gormley is a famous British artist. He saw the Terracotta Army and then made this:



On your whiteboard, make a list of how Antony Gormley's artwork is the same or different to the Terracotta Army.

Aim



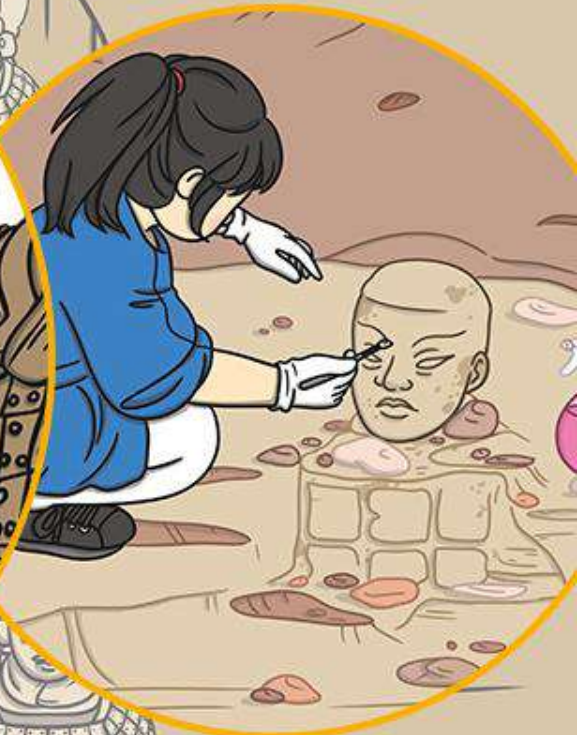
- I can make a maquette.
- I can use my sketchbook.

Success Criteria

- I can make a model which stands up.
- I can draw a person for the maquette.
- I can look back at my drawings and discuss my ideas.
- I can use a drawing from my sketchbook.



The Terracotta Army



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The First Emperor

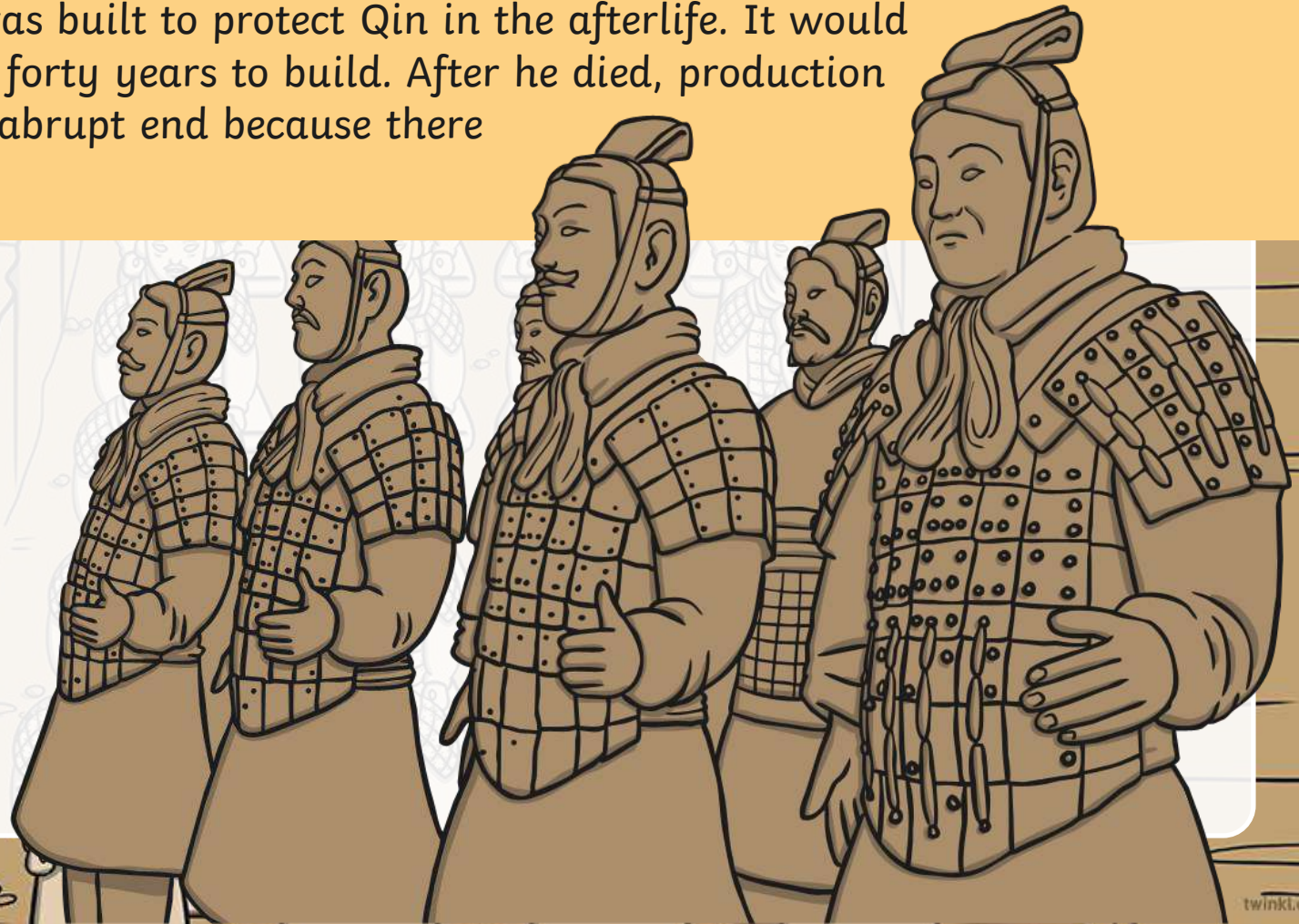
Qin Shi Huang ruled until his death in 210 BC.



Click on the points of the timeline.

Protection After Death

The army was built to protect Qin in the afterlife. It would take almost forty years to build. After he died, production came to an abrupt end because there was a war.

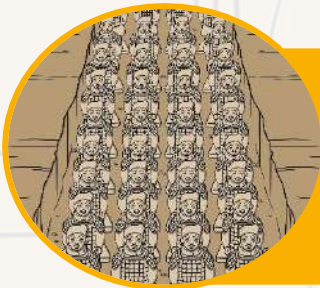


Discovery of the Terracotta Army



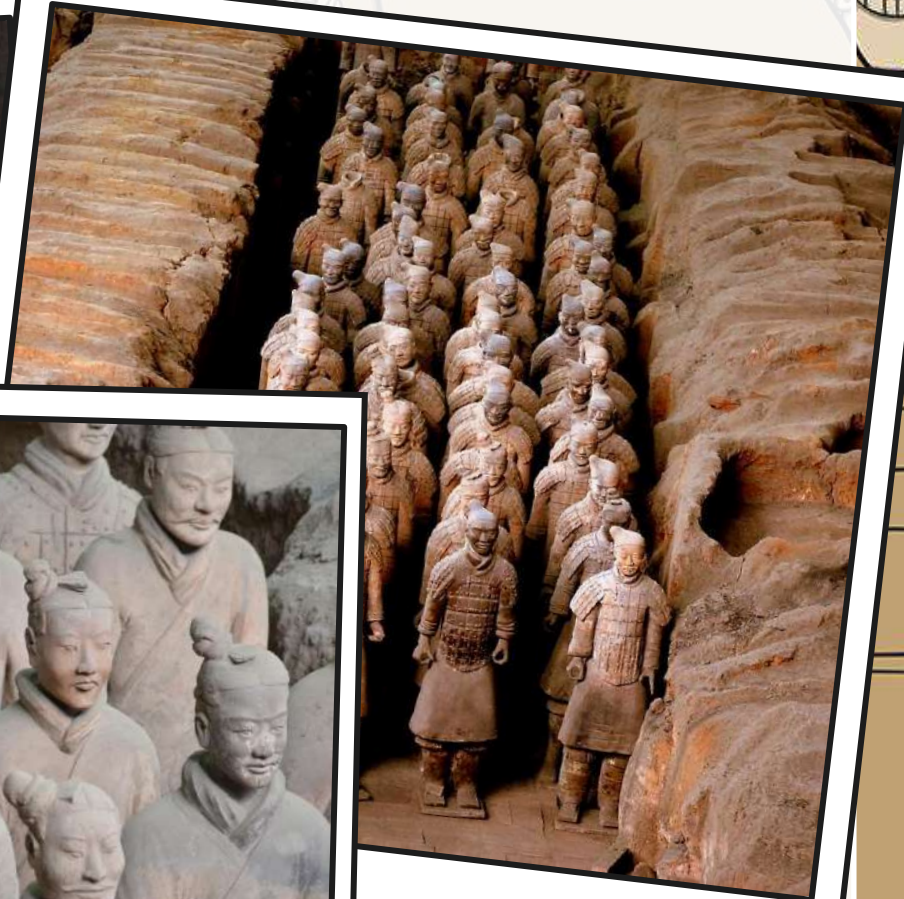
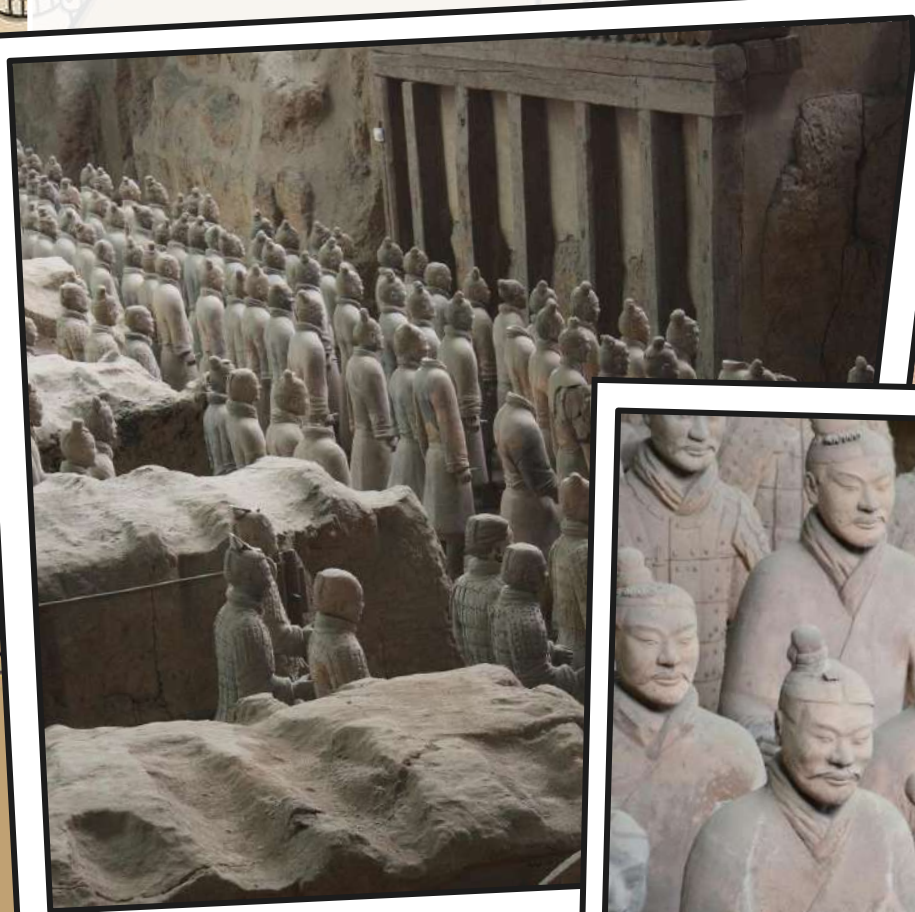
In March 1974, farmers in Xian, China, were digging a well. While digging they discovered a life-size model of a warrior made from clay.

The farmers told the Chinese government and they sent officials to come and inspect the area.



After more exploring, three huge vaults were found. Inside they found around 8000 lifesize models of warriors. These models were made of clay.

The Terracotta Army



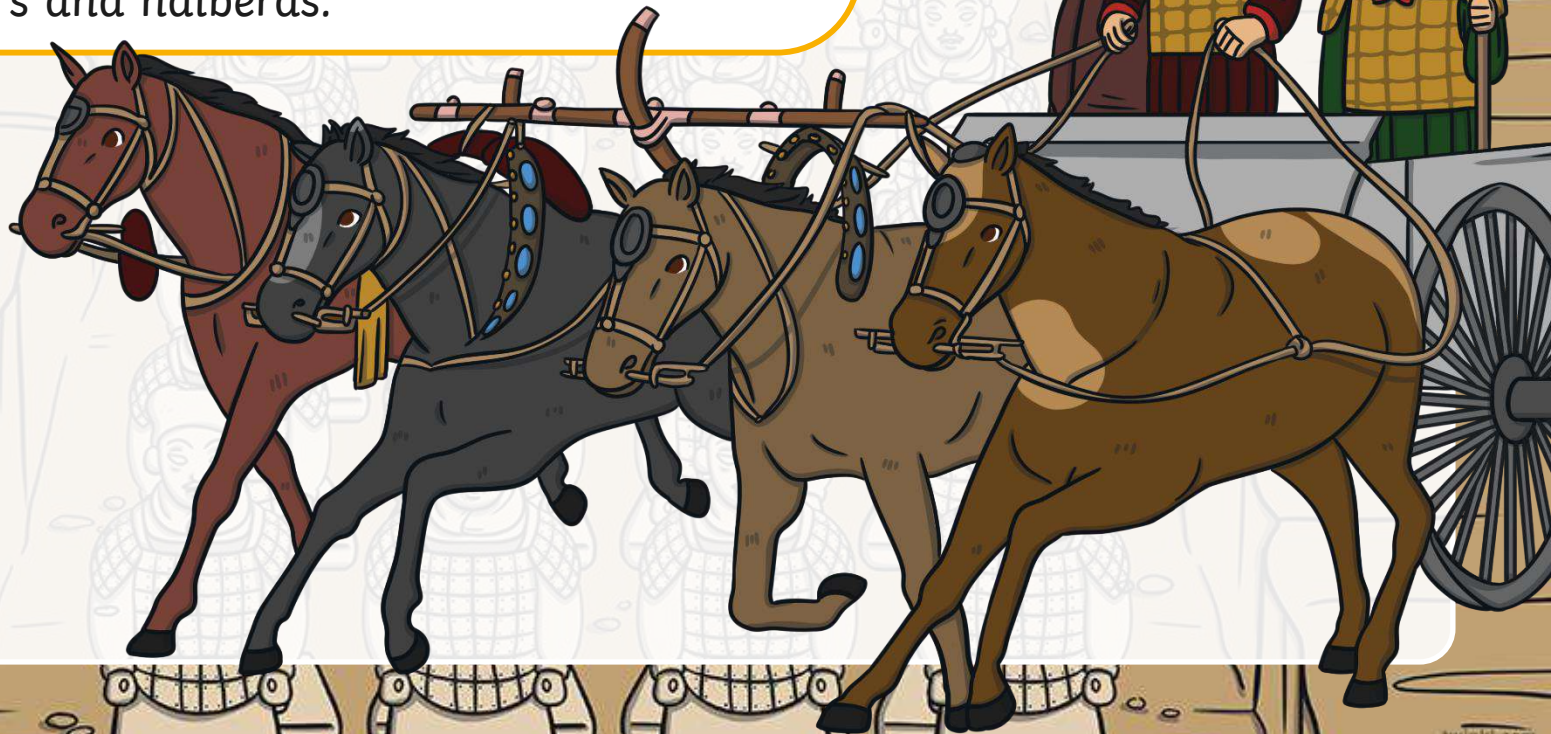
What are your thoughts?

A Formidable Army


The warriors were lined up in order according to their rank.

There were charioteers, cavalry, armoured warriors, officers and generals.

They used different types of weapons, like long spears, daggers and halberds.



The Making of a Warrior



It took 700 000 workers to make the warriors. Each part would have been made in separate moulds. Then fired in a huge kiln before being assembled into a life-size warrior.

Each model has a different expression.

The rivets on their armour stand out.

The kneeling warriors even have tread marks on the soles of their boots.

The Making of a Warrior



Each warrior weighs around 300kg.

Patches of paint have been found on the warriors. It is believed that they were once painted in bright colours.

Each warrior is stamped with the name of the person who created it.

Conservation



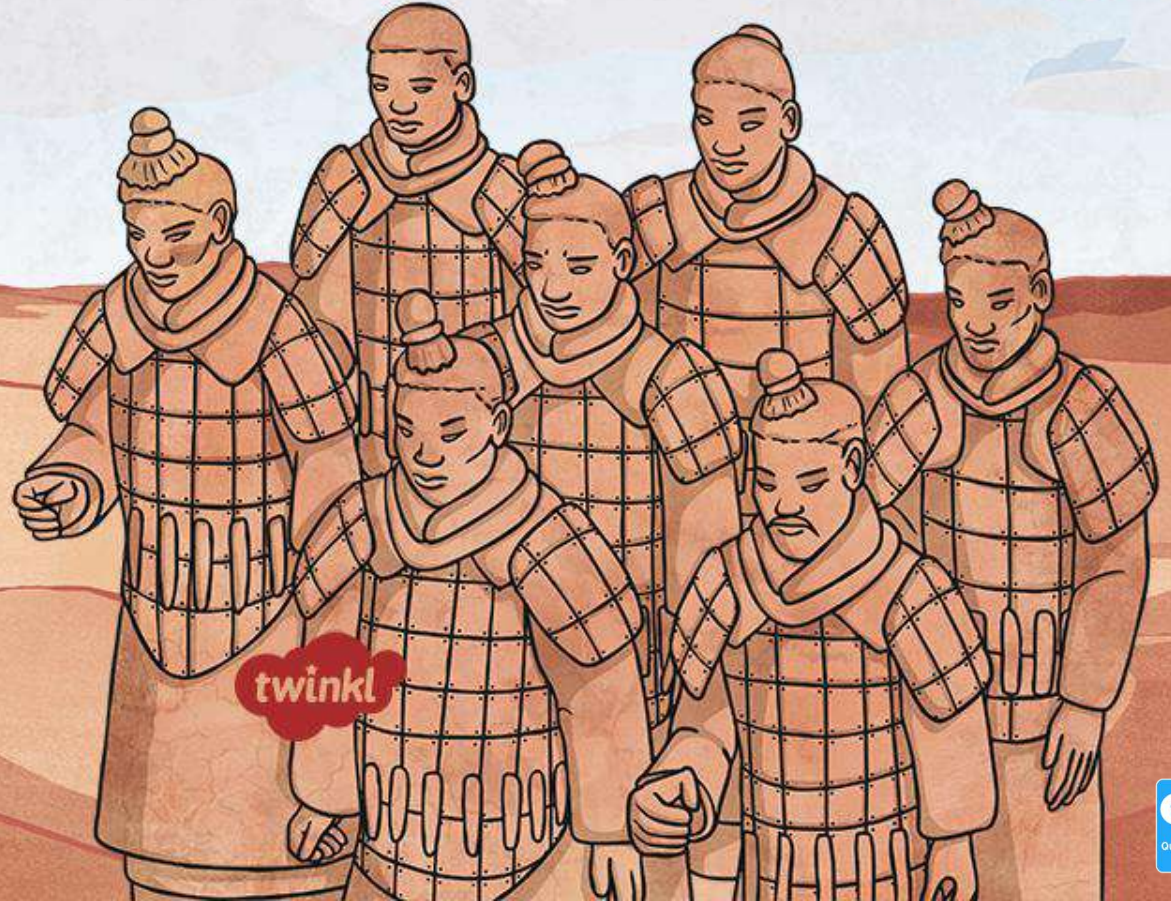
In 1979, the Terracotta Army was opened to the public.

In 1987, it became a United Nations Educational, Scientific and Cultural Organisation (Unesco) World Heritage Site and it was given special protection.



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The Terracotta Army



The First Emperor

Qin Shi Huang became the first emperor of a united China, in 220 BC.

Qin Shi Huang ruled until his death in 210 BC.

Qin Shi Huang, was afraid of death and wanted to discover the secret of immortality. For this reason, he ordered the construction of the Terracotta Army soon after he became the king of the Qin State, at the age of 13, in 246 BC.

During his reign, he was responsible for the first version of the Great Wall of China.

Protection after Death

The army was built to protect Qin in the afterlife. It would take almost forty years to build.

After he died, production came to an abrupt end because there was a war.

40 years later...



Discovery of the Terracotta Army

In March 1974, farmers in Xian, China, were digging a well.

They unintentionally uncovered a huge pit and discovered a life-size model of a warrior made from clay. They informed the Chinese government, who sent officials to inspect the area.

After further excavations, three huge vaults were found. The vaults were filled with around 8000 life-size models of warriors. These models were made entirely from clay.



The Terracotta Army



The Terracotta Army



The Terracotta Army



What are your thoughts?

A Formidable Army



The warriors were positioned and created according to their rank.



There were charioteers, cavalrymen, armoured warriors, officers and generals.



They held different types of weapons, such as long spears, daggers or halberds.



The Making of a Warrior

It took 700 000 labourers to make the warriors.

Each part would have been made in separate moulds, fired in a huge kiln and assembled into a life-size warrior.

Each model has a different expression; the rivets on their armour stand out and the kneeling warriors have tread marks on the soles of their boots.

Each warrior weighs around 300kg.

Patches of paint indicate they were once painted in bright colours.

Each warrior is stamped with the name of the person who created it so any mistakes could be traced.



Conservation

In 1979, the Terracotta Army was opened to the public.

In 1987, it became a UNESCO World Heritage Site and it was given special protection.





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The Eightfold Path

Buddhism



What is the Eightfold Path?



The Eightfold Path consists of eight areas of life that people focus on towards the path of Buddhism. They can be worked on in any order and some are more difficult to achieve than others depending on the situation or the person.

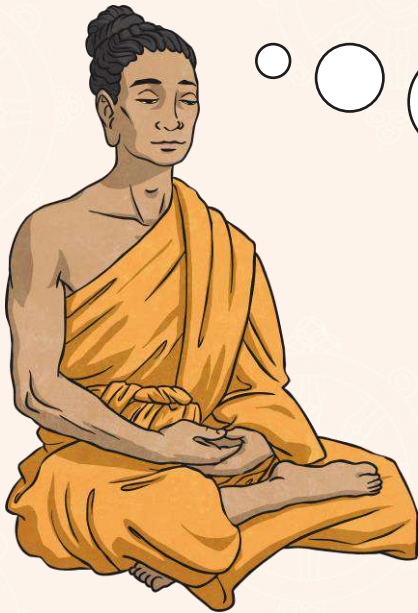
It is designed to relieve suffering.

Buddhism works on promoting learning and self discovery rather than 'blind faith'.

Blind faith is when a person accepts something without really thinking it through for themselves.

Right Understanding

Having right understanding is when you see the world as it really is and not how you want it to be. Sometimes we try to change things that are outside of our control and we can get upset or not understand things clearly.

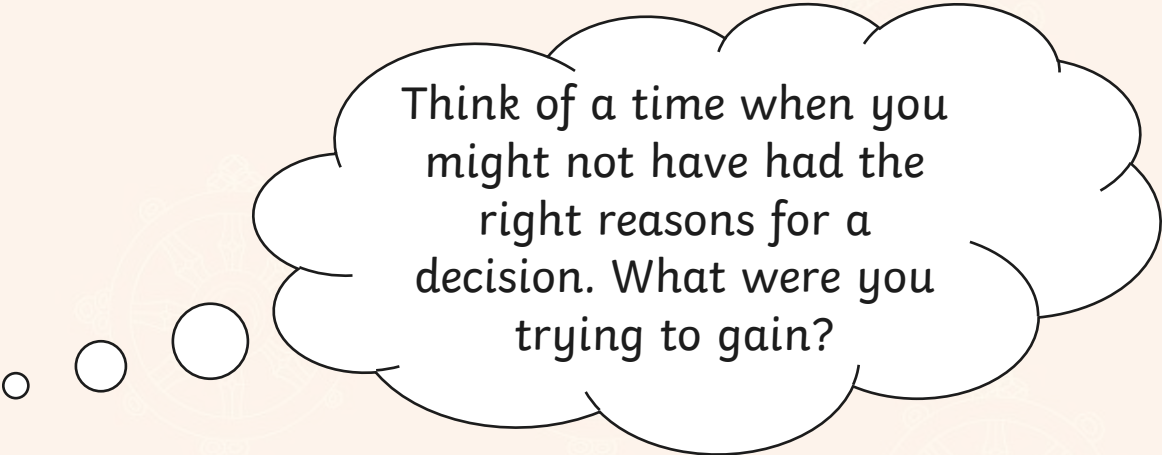


Think of a time when you have been upset because you have misunderstood a situation and something seems out of your control. You wanted it to be different to how it really was.

Right Intent

Right Intent means we can commit to a decision or action for the right reasons, once we understand things properly by looking at what is really there and not what we want it to be like.

We need to ask ourselves if we are just being selfish, or are we thinking of others with care and compassion?



Think of a time when you might not have had the right reasons for a decision. What were you trying to gain?

Right Speech

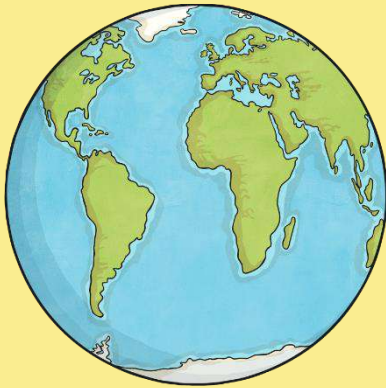


Often things we say in anger or gossip behind people's backs can cause upset and hurt, and take a long time to sort out. Having Right Speech is deciding never to speak unkindly or in anger.

Have you hurt someone's feelings by something you have said to them or about them?

Reflect on a time you could have said something differently or not at all.

Right Action



Right action means behaving in a thoughtful way, considering others and the world we live in. Through our actions, it is a chance to keep the world safe for future generations to live in.

Has there been a time that you have done something that has affected someone else?

Right Livelihood

Our livelihood, how we choose to work and earn money, can have an effect on the world at large. Buddhists do not agree that people should work in a job that might cause harm to others. They would not agree with being a gun seller, butcher or any job that involved harming animals. They believe that we should work for the good of the community and benefit the world as a whole.



What job would you like to do in the future? Is it something that will help someone or will it harm them?

Right Effort



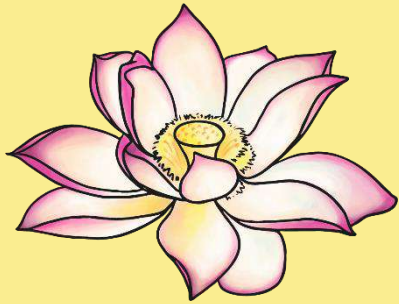
Sometimes we put a lot of effort into the wrong things. Like wanting to be the best, the prettiest or the wealthiest. Right Effort is concerned with developing a positive attitude and cheerful determination in a balanced way. This involves putting effort in to avoid feelings like greed and jealousy, and the right effort into developing feelings of compassion and consideration of others.

Think of something you put a lot of effort into. Is it worthy? Are you encouraging the right sort of feelings and skills?

Are you developing negative feelings with the effort you are putting in?

Right Mindfulness

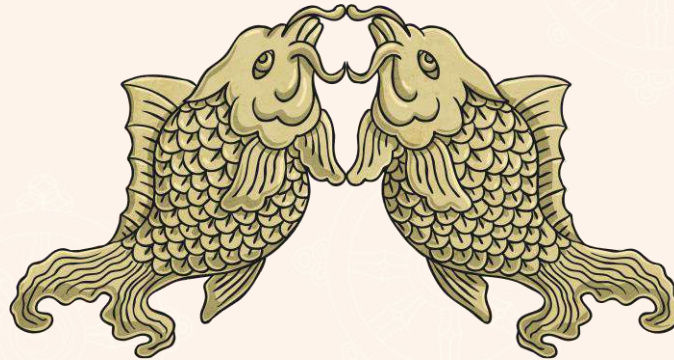
Sometimes we are caught in a moment that takes our breath away, or we get so completely focused on something, we do not notice what is going on around us.



This is an awareness of a moment and our actions in that moment. We suddenly notice old habits that have controlled us and can focus on changing ourselves.

Think about the times you have been completely involved in an activity or moment. Did you suddenly see yourself differently? Did you like what you saw?

Right Concentration



Concentrating is sometimes hard because we allow ourselves to get distracted. The Eightfold Path step of Right Concentration encourages us to focus the mind on something so completely, we see it as it really is and not how we have always thought it is, or been told to see it. This action frees us from being controlled and leads us towards freedom.

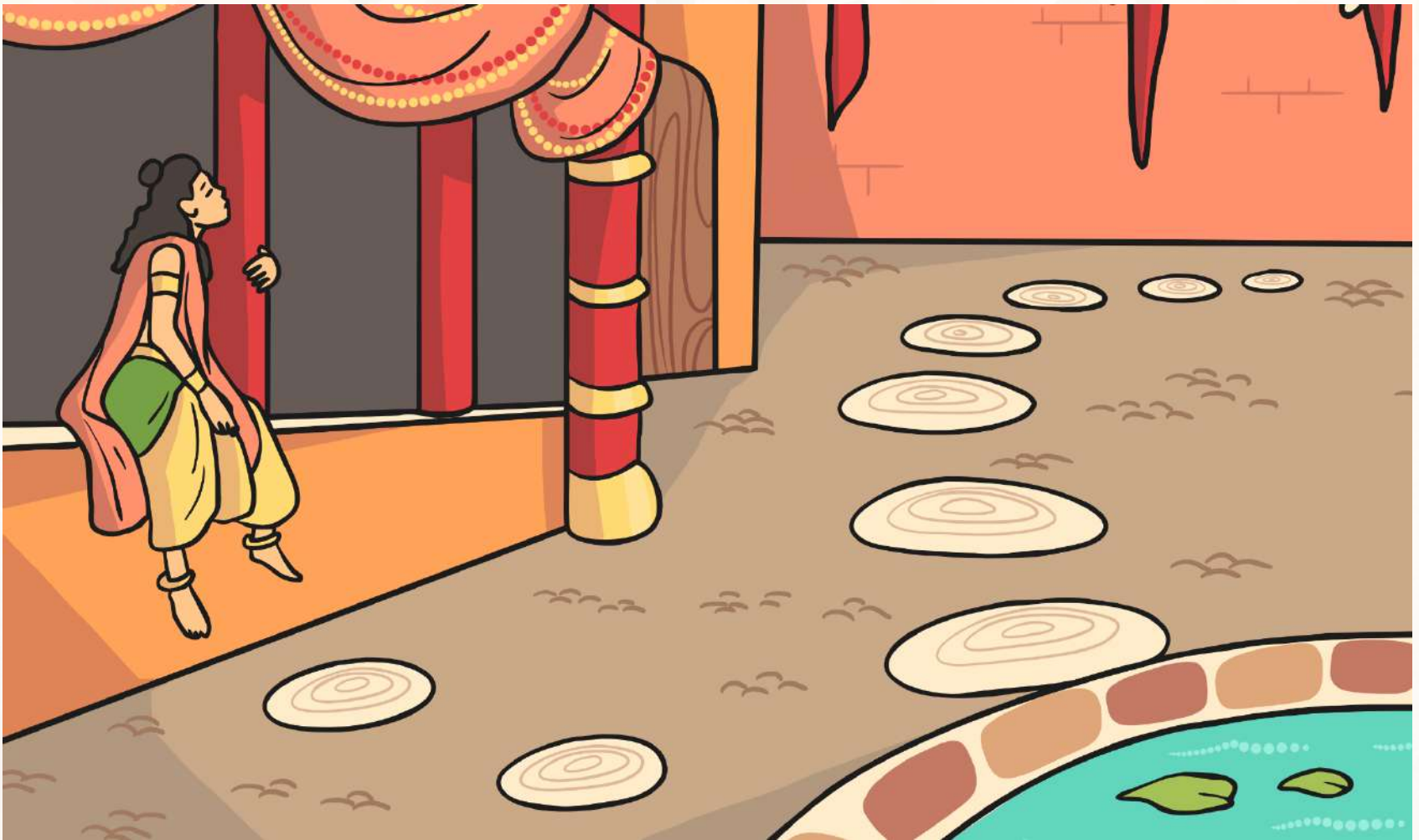
Have you managed to concentrate on something so much that you suddenly had a 'Eureka' moment and realised something important?



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The Story of the Buddha





Siddhartha Gautama was born into a royal family in Nepal and for many years lived within the palace walls away from the sufferings of life such as old age, illness and death. Never having seen these things, he didn't know what they were.



Eventually he married, had children and decided it was time to go outside the palace to see what was on the other side. He witnessed an old man, a sick man and the corpse of a dead man. He was very worried by what he saw and learned that sickness, age and death comes to everyone, even if you are a wealthy person.



Next Siddhartha saw a holy man dressed in rags with only a begging bowl in his hand. Despite owning nothing but the bowl, he looked so calm and at peace. He pondered how a man with nothing could be so content.



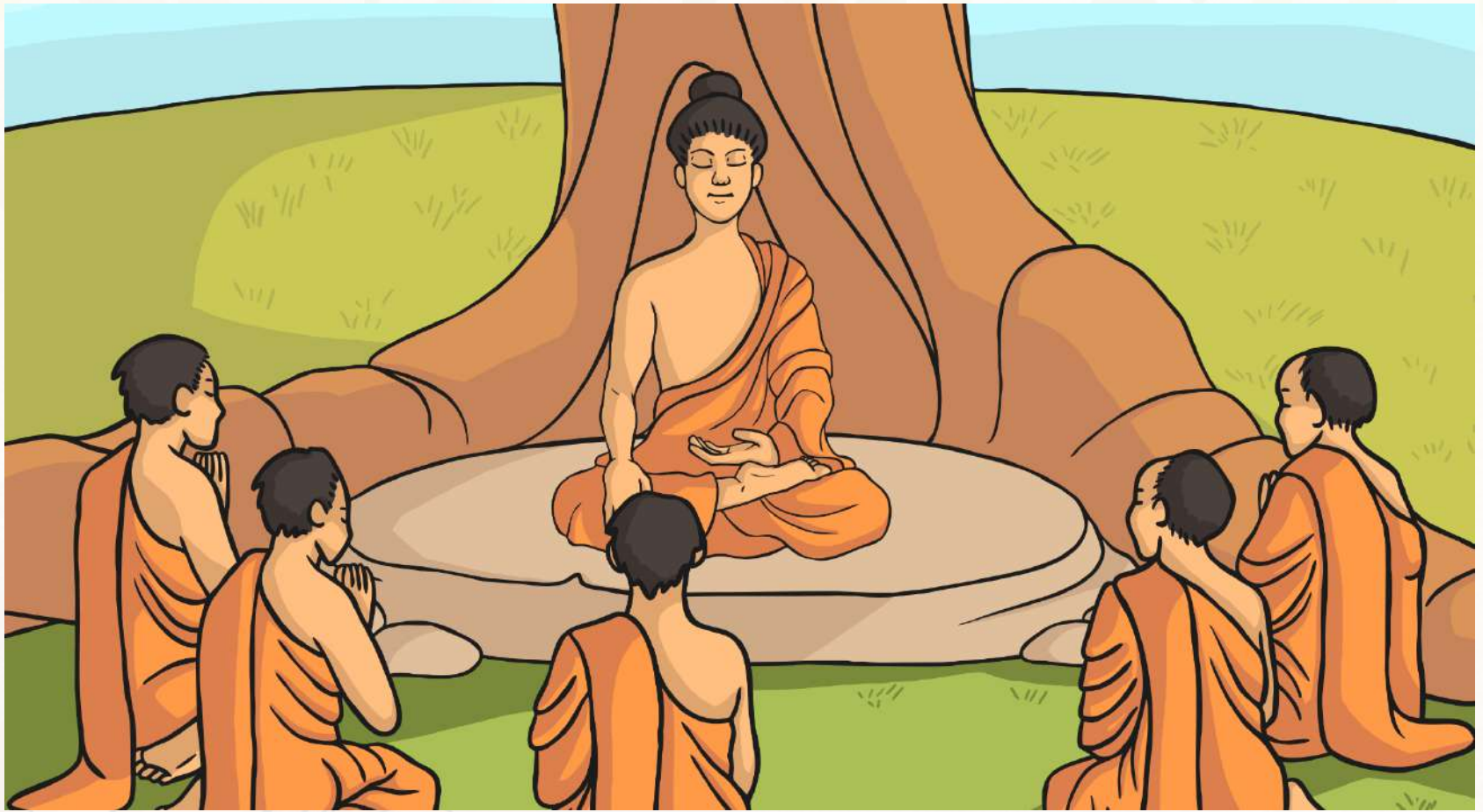
These four sights were a turning point for Siddhartha. He wanted to know if there was more to life than sickness, old age and death so he decided to leave his riches behind and go and find out for himself.



Dressed as a monk, he went to meditate under a Bodhi tree and promised himself that he wouldn't rise again until he found the truth. As he sat, he thought carefully about the past, present, future and the four sights he saw when he left the palace. After some time, he realised there was a way for people to end their pain and sadness. Within this moment, he became wise and enlightened.



He began to teach people about what he had realised and people began to call him Buddha or 'teacher'. He taught them the Four Noble Truths.



The first Noble Truth was about the fact that suffering exists. Our lives are a struggle. The second was about the cause of suffering. We create some of our own difficulties in the way we think. The third was that it is possible to end suffering, by realising we cause some of our own difficulties. And the fourth explained the path (the Noble Eightfold Path) to be followed in order to end suffering.

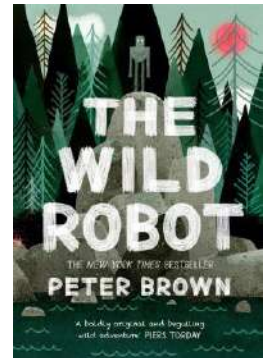


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Take 5: Ideas for Independent/Home Learning The Wild Robot by Peter Brown (Piccadilly Press)

1. Explore it

Without sharing the book title, read this story opening. You might want to hear it read aloud as well as reading it for yourself.



Our story begins on the ocean, with wind and rain and thunder and lightning and waves. A hurricane roared and raged through the night. And in the middle of the chaos, a cargo ship was sinking

down

down

down

to the ocean floor.

The ship left hundreds of crates floating on the surface. But as the hurricane thrashed and swirled and knocked them around, the crates also began sinking into the depths. One after another,

they were swallowed up by the waves, until only five crates remained.

By morning the hurricane was gone. There were no clouds, no ships, no land in sight. There was only calm water and clear skies and those five crates lazily bobbing along an ocean current. Days passed. And then a smudge of green appeared on the horizon. As the crates drifted closer, the soft green shapes slowly sharpened into the hard edges of a wild rocky island.

The first crate rode to shore on a tumbling, rumbling wave and then crashed against the rocks with such force that the whole thing burst apart.

- What is happening in this extract? Who are the central characters? Can you summarise what you've read in a couple of sentences?
- Talk about how this story opening makes you feel and what you like or dislike about it. Does it remind you of anything you know in stories or real life? How?
- Think about how it is written. What parts of this really stick in your mind? Which words and phrases do you like the best? What do you like about them? Do they look or sound interesting? Do they help you make a picture in your mind? What do other people think?

2. Illustrate it

After you have read it a few times, take a pen or pencil and a bit of scrap paper. You can use the back of an old envelope or cereal packet; whatever is to hand. Draw what you see in your imagination. It can be shapes or shading - anything that captures the place and the mood of this story opening. Maybe other people in your family want to draw what they imagine as well. Remember, everyone has their own ideas and imagines things their own way. This is a good thing!

To get started, ask yourself:

- Where does our story begin?
- What happens? How do you know?
- How does it make me feel? Does this change?
- How can I show this in a drawing?

Re-read the opening and write some words and phrases that have helped you make your picture.

Share your drawings with each other or talk about what you have drawn with someone else:

- What do you like about each other's drawings? What is the same or different about your drawings?
- Why have you chosen to draw it this way? Which words and phrases helped you make a picture?

3. Talk about it

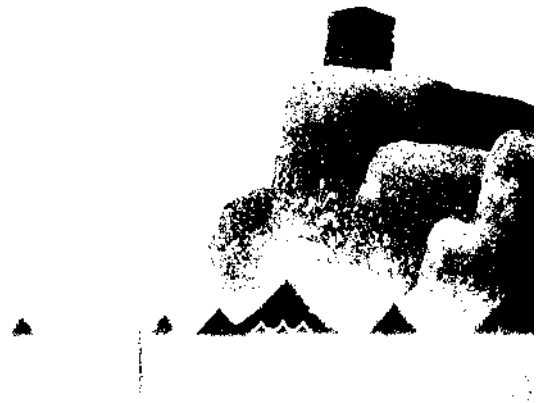
- Find and copy any words and phrases which show how forceful the hurricane was.
- Why did so many crates sink? What do you think happened to them?
- Think about the events on the night of the storm and in the following days. How would you report it on the news?

4. Imagine it

Look at the opening illustration:

Think about this:

- What do you think is inside the box?
What makes you think that?
- What other stories do you know about in books, on television or in films that have scenes like this?
- What happens in these stories?



5. Create it

Look at the front cover of the book. Is this what you expected? Why? Why not? Draw what you think this place is like.

- What kind of story world does the wild robot live in now?
- Who else might live here?

Look for clues in the illustrations and what you have read so far.

Use your story world drawing to map the robot's story. What story are you creating? What if it were a different character? What story could you make then?

Draw and write your story, trying out different ideas. Remember to use stories you already know and like for ideas. You could even publish your story in a handmade book by folding a piece of paper or on the computer, ready to share it with your teacher or your friends and family.

Why Soap Works Experiment

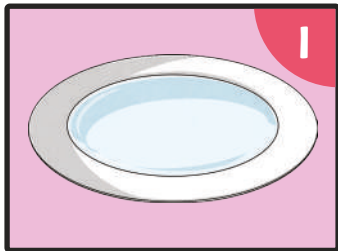
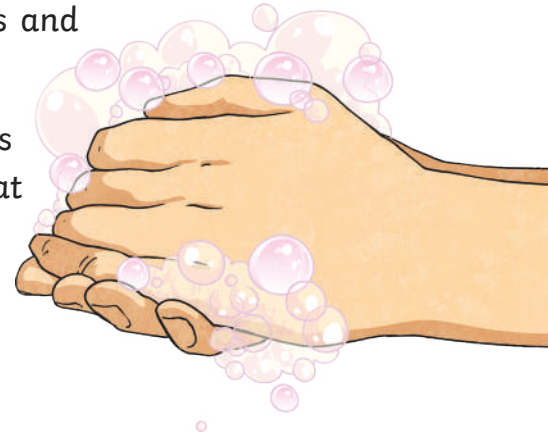
You will need:

- A bowl
- Some water
- A sprinkle of black pepper (or another spice)
- Liquid hand soap
- A hand towel
- A camera (optional)

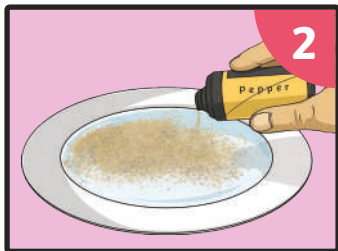
In this experiment, you are going to find out why soap works and why it is better than using just water to wash your hands.

In the experiment, the surface of the water in the bowl represents your hands. The pepper represents harmful dirt and germs that need to be washed away.

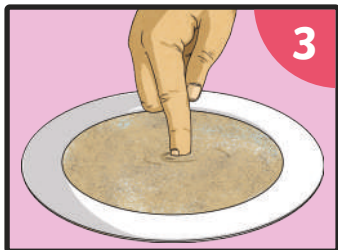
There are two tests in this experiment. They will show you what happens when you wash your hands with and without soap.



Fill the bowl with water, but not all the way to the top.

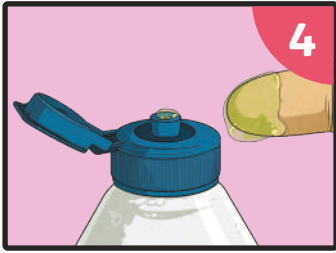


Sprinkle some black pepper on to the surface of the water. You should see the black pepper floating.

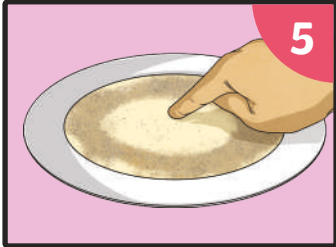


Test 1: Dip your finger into the centre of the bowl of water. Watch what happens to the pepper and record this.

Why Soap Works Experiment



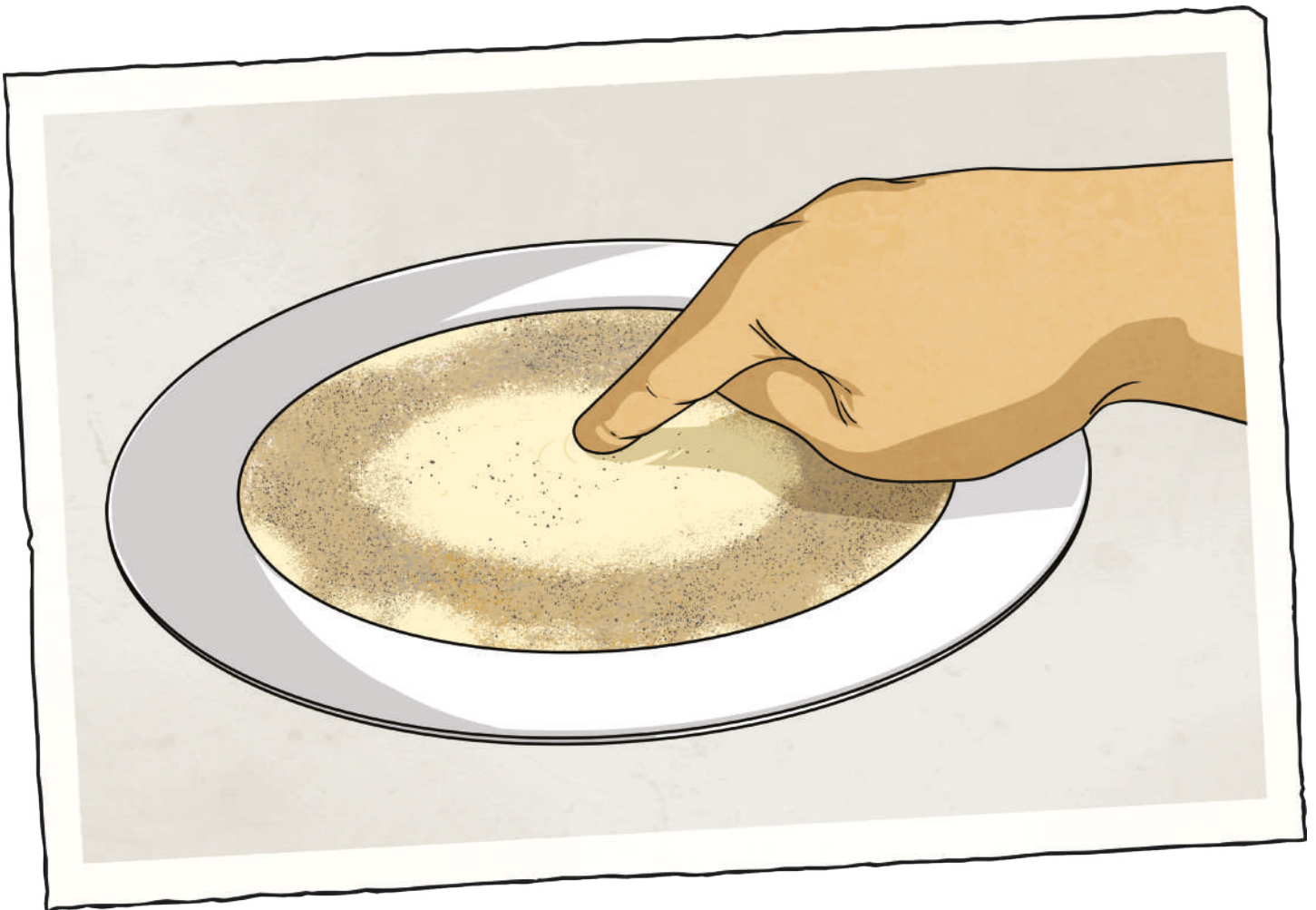
Dry your hand, then dip your finger into the liquid hand soap.

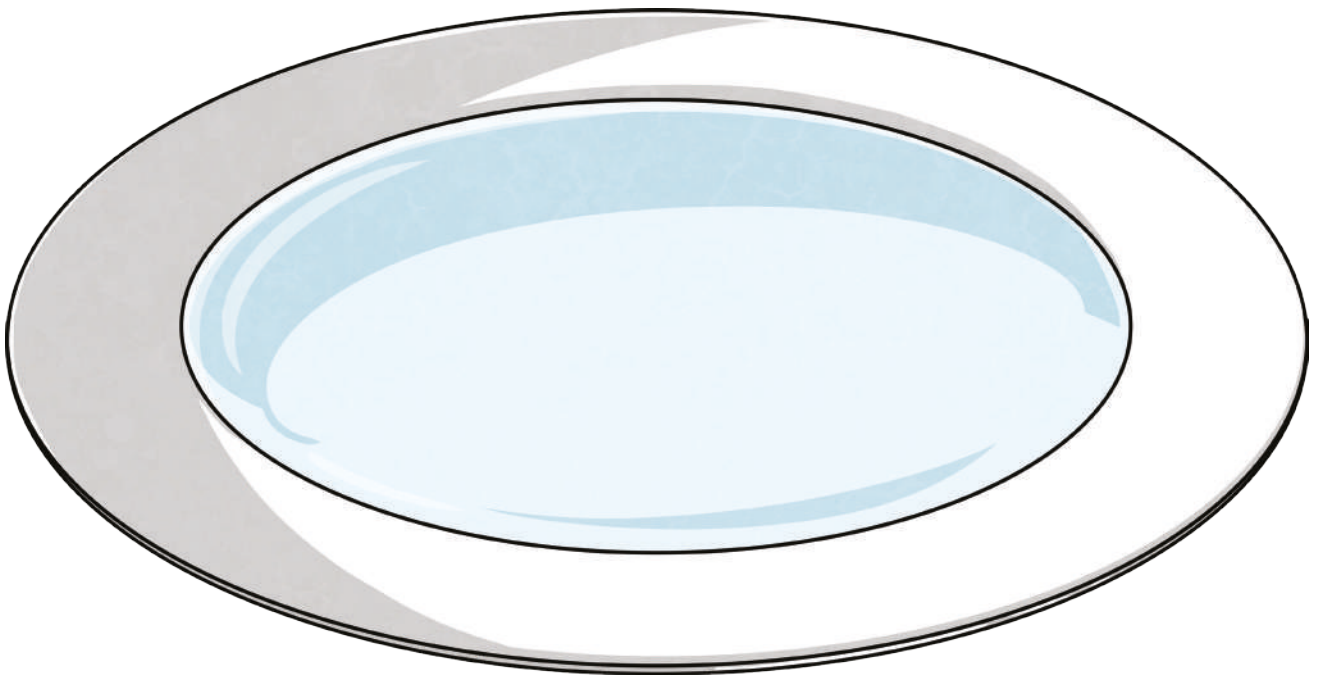


Test 2: Dip your soapy finger in to the centre of the bowl of water. Watch what happens to the pepper and record this.

Top Tip

Use a camera to take photos to record what happens to the pepper each time you put your finger into the bowl.





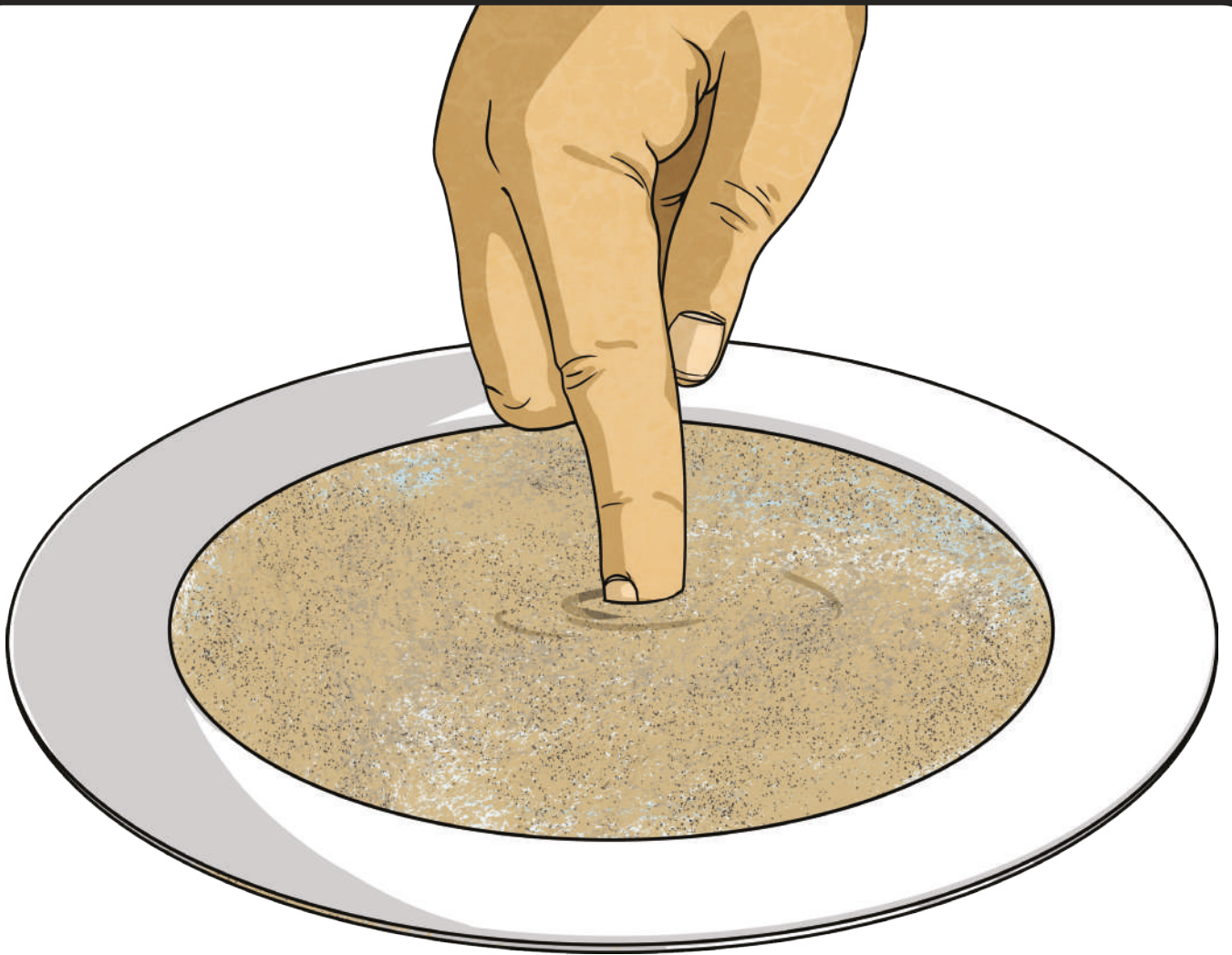
Step 1

Fill the bowl with water, but not all the way to the top.



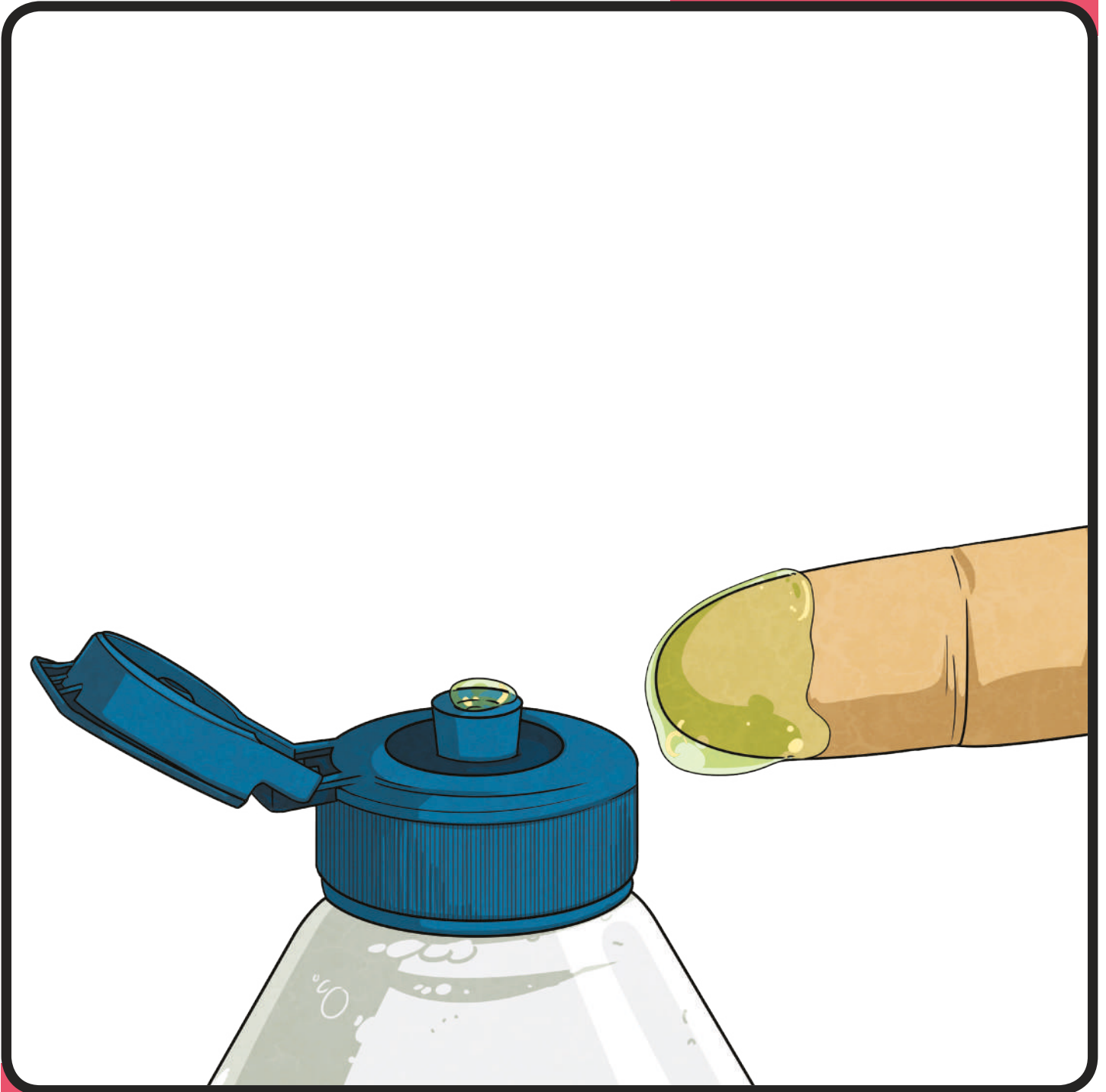
Step 2

Sprinkle some black pepper on to the surface of the water. You should see the black pepper floating.



Step 3

Test 1: Dip your finger into the centre of the bowl of water. Watch what happens to the pepper and record this.



Step 4

Dry your hand, then dip your finger into the liquid hand soap.



Step 5

Test 2: Dip your soapy finger in to the centre of the bowl of water. Watch what happens to the pepper and record this.

Why Soap Works Experiment

Record Sheet

Test 1: What I predict will happen when I put my finger into the bowl the first time.

What actually happened?

You may wish to draw a picture or add a photograph.

Test 2: What I predict will happen when I put soap on my finger and put it into the bowl.

What actually happened?

You may wish to draw a picture or add a photograph.

Why Soap Works Experiment Record Sheet

Why was there a difference in how the pepper behaved when the soap was added?

Think of the surface of the water as the skin on your hands and the pepper as microbes on your hand.

Write a sentence to explain what happens when soap meets the microbes on your skin.

Why should we use soap when we wash our hands?

Why Soap Works Experiment Explanation

In the experiment, the surface of the water represents the skin on our hands. The pepper represents harmful dirt and germs (microbes) that need to be washed away to keep us healthy and clean.

In the first test, the pepper shouldn't have moved much. A little may become stuck to the finger but it will have remained on the surface and represented the germs remaining on a hand.

In the second test, the pepper should have moved away from the soapy finger to the edges of the bowl. This shows that soap moves dirt and germs away. This is because soap removes oils found on your hands.

The natural oils on our hands trap dirt so we need soap to remove them. Without soap, the oils stay on our hands and the microbes will stay trapped in them.

