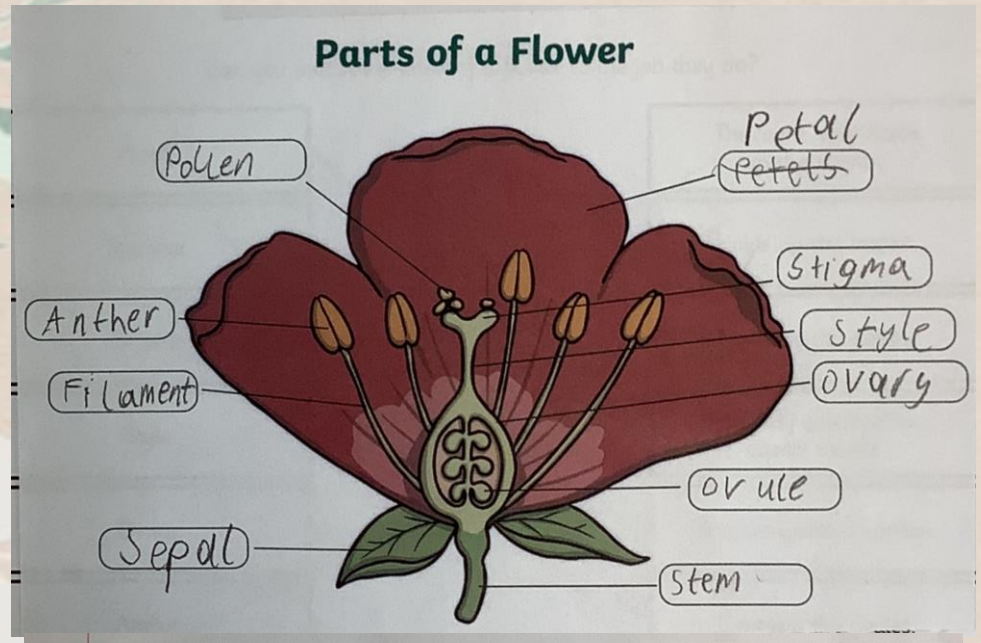
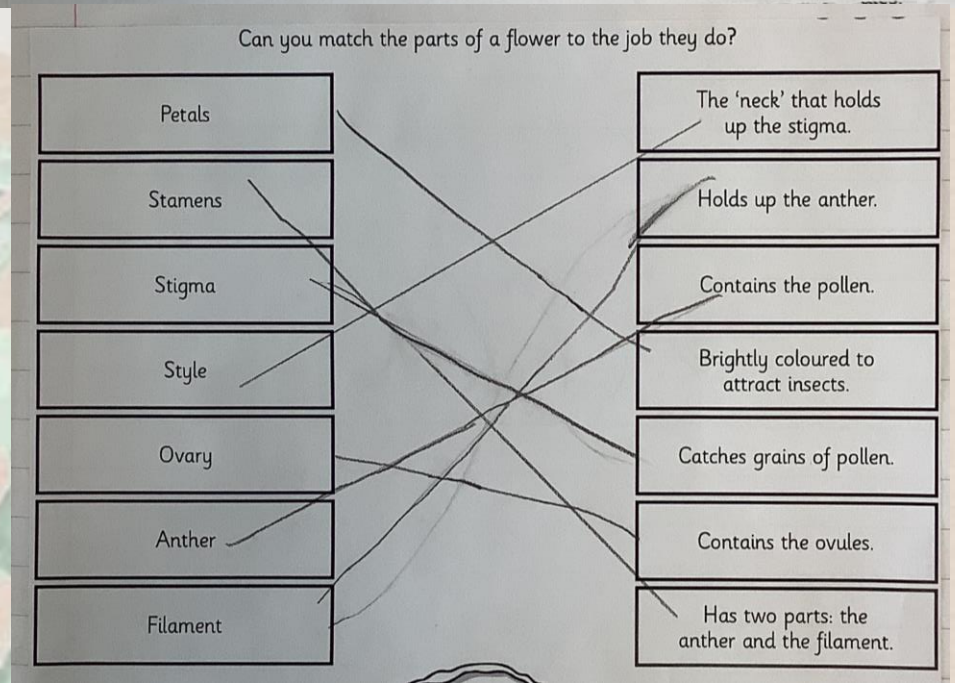
Science in

Year 3

YEAR 3





Can you match the parts of a flower to the job they do?

Petals	The 'neck' that holds up the stigma.
Stamens	Holds up the anther.
Stigma	Contains the pollen.
Style	Brightly coloured to attract insects.
Ovary	Catches grains of pollen.
Anther	Contains the ovules.
Filament	Has two parts: the anther and the filament.

11.10.22 SCIENCE

LO: To recognise, name and explain the different parts of flowering plants

YEAR 3

Can you cut and stick the descriptions and pictures to the correct stage of the life cycle?
Add the missing words to each description using the key words.

Seed Dispersal

The pollen joins with an anthel and a seed starts to form.

Germination

The seed Starts to grow.

Growing and Flowering

The plant grows bigger and forms a flower.

Pollination

Pollen from the seeds lands on the stigma and travels down the stule.

Fertilisation and Seed Formation

The fully formed ovule are moved away from the parent plant.

Seed Dispersal

Gravity

Large fruit falls to the floor and rolls away or splits open.

Ballistic

The seeds are flung out of the seedpod, sometimes with incredible force.

Animal

The seeds catch on the animal's fur or are eaten and dispersed in the animal's droppings.

wind

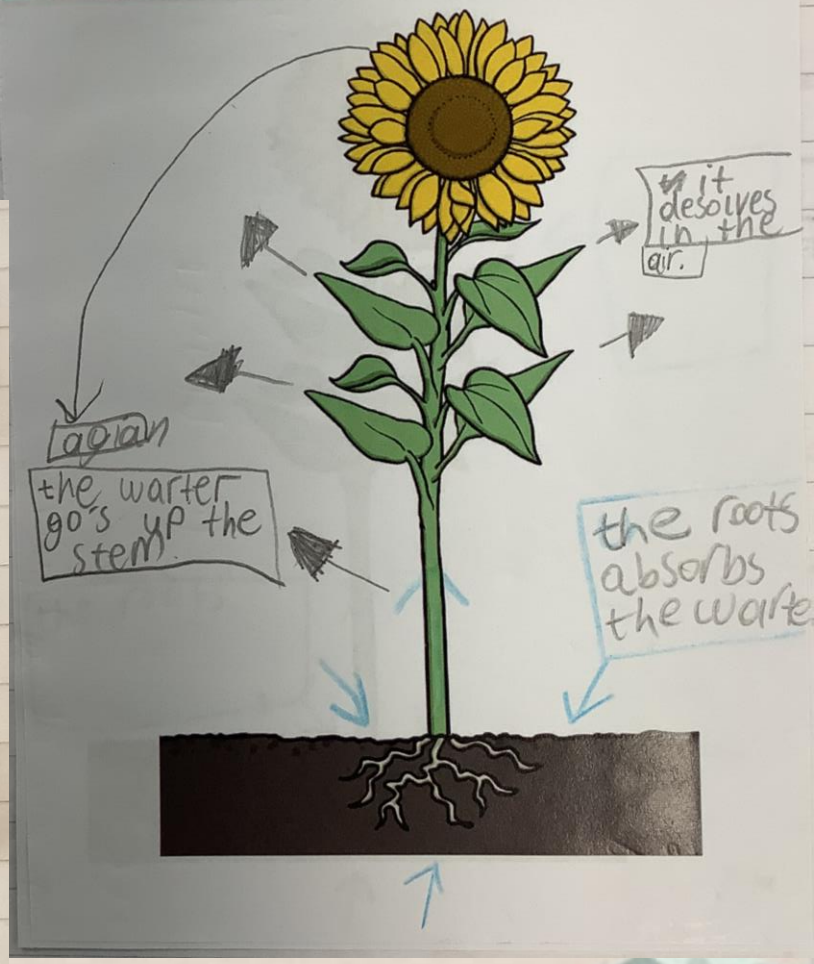
The seeds are carried on the wind and scattered.

water

The seeds fall into the water and float away.

05/10/2022 Science

LO: To explain the transportation of water in plants



YEAR 3

19.06.23 SCIENCE

lo: To identify, sort and name parts of a human skeleton

Learning Objective Achieved

Scientific Enquiry:
Researching; Identifying, Classifying & Grouping

21.6.23 SCIENCE

LO: To apply knowledge of the human skeleton and recap/develop subject knowledge of functions, similarities and differences

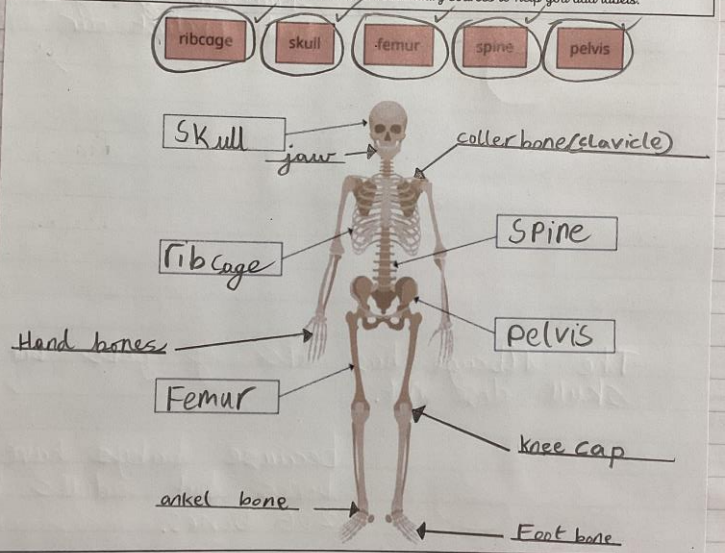
Learning Objective Achieved

Seesaw

Scientific Enquiry:
Research using secondary sources; Identifying, Grouping & Classifying

21.6.23 Activity 1 – RECAP & DEVELOPMENT

Label the human skeleton below.
Challenge yourself by seeing which you can do without looking at the secondary sources.
Can you label any of the other bones? You could use the secondary sources to help you add labels.



Write down what you know about skeletons. Start with the sentence stem below:

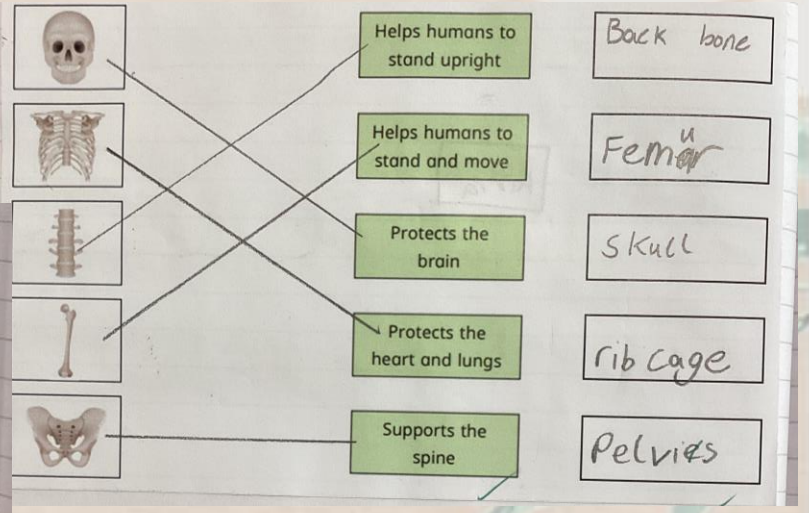
The skeleton's function is to...

The skeleton's function is to move around and to support us to stand

Teddy and Dora are talking about the importance of bones.

Write next to each bone what would happen if you DID NOT HAVE that bone as part of your skeleton

Bones	
Skull	With out your Skull your brain could get damaged.
Spine	You could not stand up right.
Ribcage	Your organs would not be protected.
Pelvis	Your spine would not be supported.
Femur	You would not be able to move



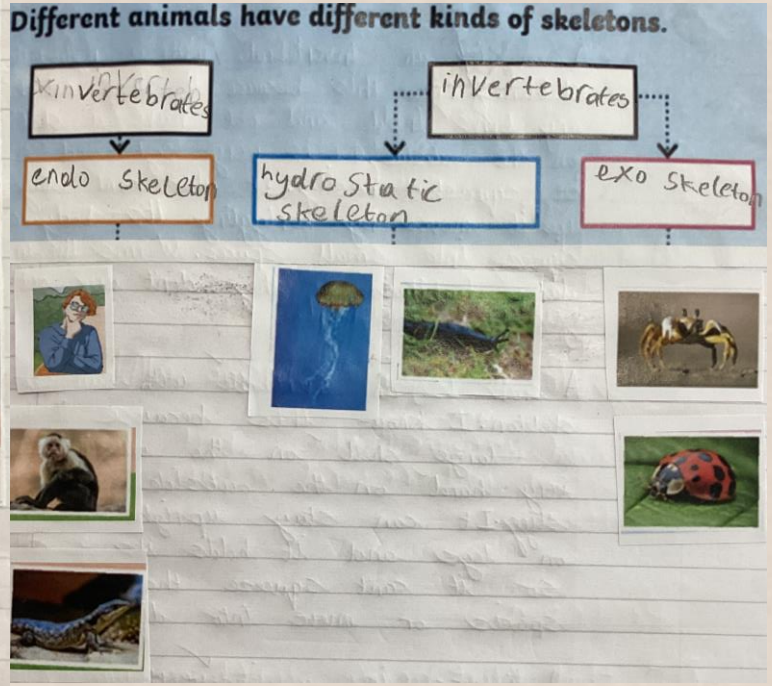
YEAR 3

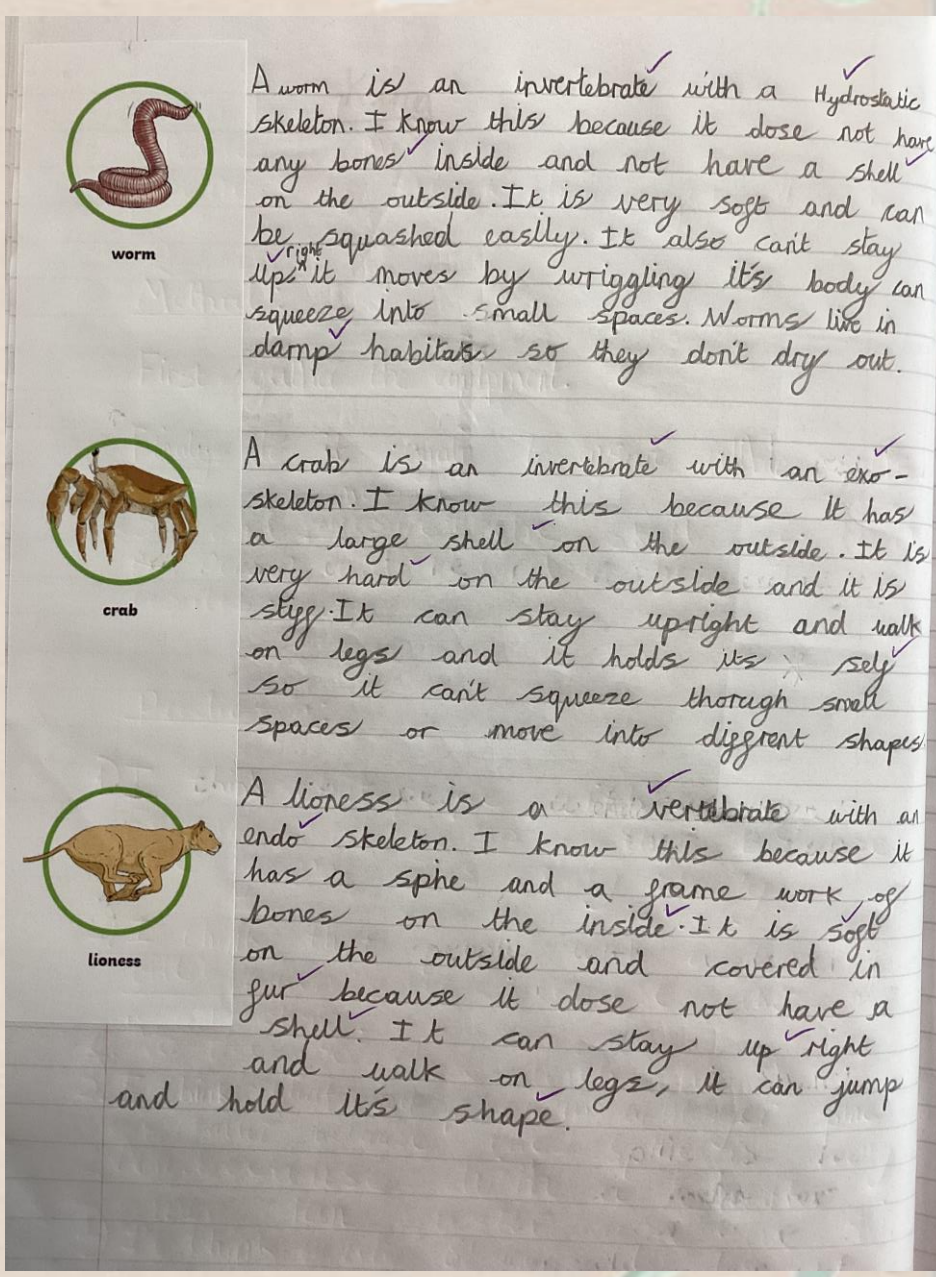
26.06.23 SCIENCE

LO: To identify, group and classify animals with different types of skeletons

LO: To explain the different types of skeletons

Scientific Enquiry: Identify, Group & Classify; Researching





YEAR 3

27.06.23

LO: To plan and conduct a scientific investigation

Scientific Enquiry: Pattern Seeking

Working Scientifically:
- Ask relevant questions and suggest how to answer
- Set up simple, practical enquiries
- Understand fair tests
- Use range of equipment to measure accurately.
- Gather, present & record data in a variety of ways
- Report findings orally and in writing using scientific language

Questions:

1) Do people with a longer femur jump further?

2) Do people with a longer femur run faster?

3) Are people with a longer spine taller?

4) Dose every 8 year old have the same size skull?

5) Can people with a longer humerus (upper arm bone) throw further?

Equipment:

- Stopwatches
- tape measures
- meter sticks
- Quoits to throw
- Cones to mark were to run
- Pencile

- Clip board
- People to measure
- Cones to mark how far they threw

Method:

First, gather the equipment.

* Finaly, do it again to ensure relible results.

* Second, mesure[sp] (measure) the skull of each per person and record in the table of results.

YEAR 3

Prediction:

1) I think that people with a longer Femur will jump further because the femur is realy strong

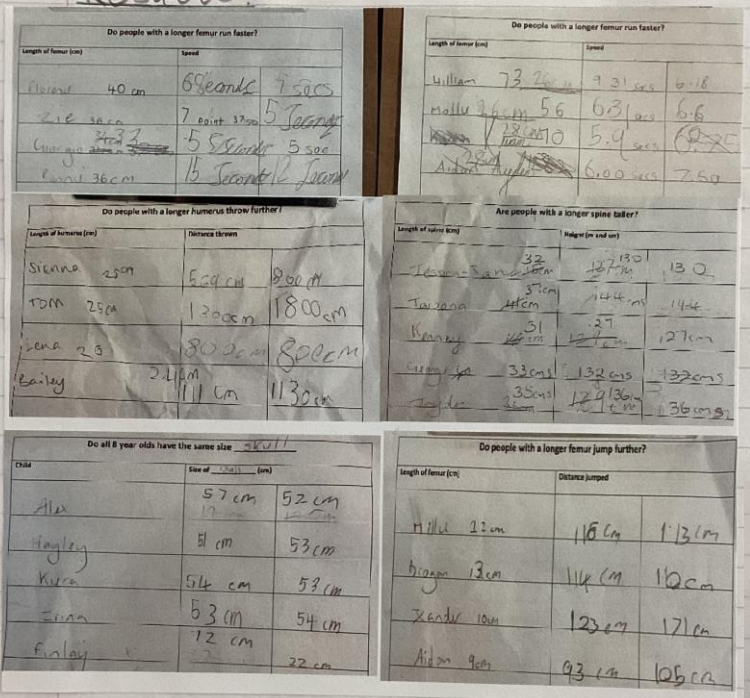
2) I think that people with a longer femur will run faster because the femur is realy strong.

3) I think that people with a longer spine are taller because the spine is realy tall.

4) I think every 8 year old dose not have the same size skull

5) I think people with a longer humerus throw further.

Results:



Do people with a longer femur run faster?

Length of femur (cm)	Speed	
Oliver 40 cm	6 seconds	7 secs
Zie 30 cm	7 point 37 sec	5 Seconds
Georgia 33 cm	5 Seconds	5 sec
Lucy 36 cm	15 Seconds	12 Seconds

Do people with a longer femur run faster?

Length of femur (cm)	Speed	
William 73 cm	9.31 secs	6.18
Molly 36 cm 56	6.31 secs	6.6
[illegible] 33 cm 10	5.4 secs	[illegible]
Aidan [illegible]	6.00 secs	7.50

Do people with a longer humerus throw further?

Length of humerus (cm)	Distance thrown	
Sienna 25cm	5.29 cm	8.00 cm
TOM 25cm	1300cm	1800 cm
Lena 23	800 cm	800cm
Bailey 24cm	111 cm	1130 cm

Are people with a longer spine taller?

Length of spine (cm)	Height (m and cm)	
Jessica Sanna 32 cm	1.27 m 130	130
Tarzana 37cm 44cm	144 cm	144
Kenny 31 cm	127 cm	127cm
[illegible] 33cms	132 cms	132cms
Taylor 35cms	1.36 m	136cms

Do all 8 year olds have the same size skull

Child	Size of skull (cm)	
Alex	57 cm	52 cm
Hayley	51 cm	53 cm
Kiera	54 cm	53 cm
Erin	53 cm	54 cm
Finlay	72 cm	22 cm

Do people with a longer femur jump further?

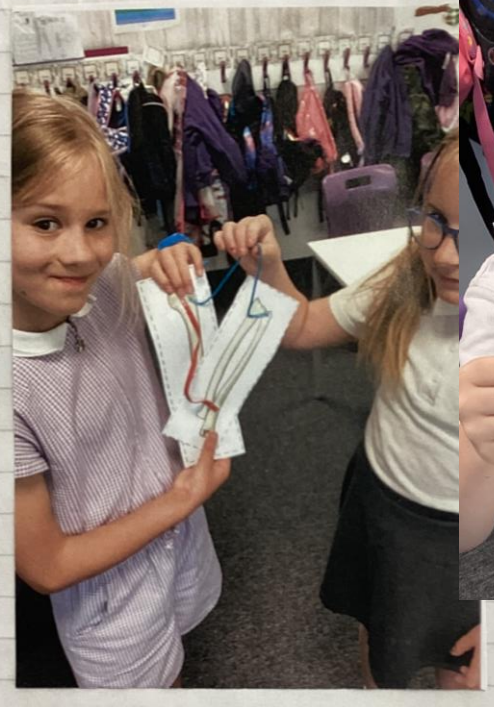
Length of femur (cm)	Distance jumped	
Millie 12 cm	116 cm	113 cm
Brogan 13cm	114 cm	110 cm
Xander 10cm	123 cm	171 cm
Aidan 9cm	93 cm	105 cm

Conclusion:

1. No, because those with the shoter femur jumped the furthest.
2. No, because with a shorter femer ran faster and we think it may be because they have stronger muscusel.
3. Yes because thier bones are longer but they have the same amount of vertebrates.
4. Sometimes but not always
5. Sometimes because they may have stronger arms.

YEAR 3

LO: To explain how bones and muscles work together to create movement



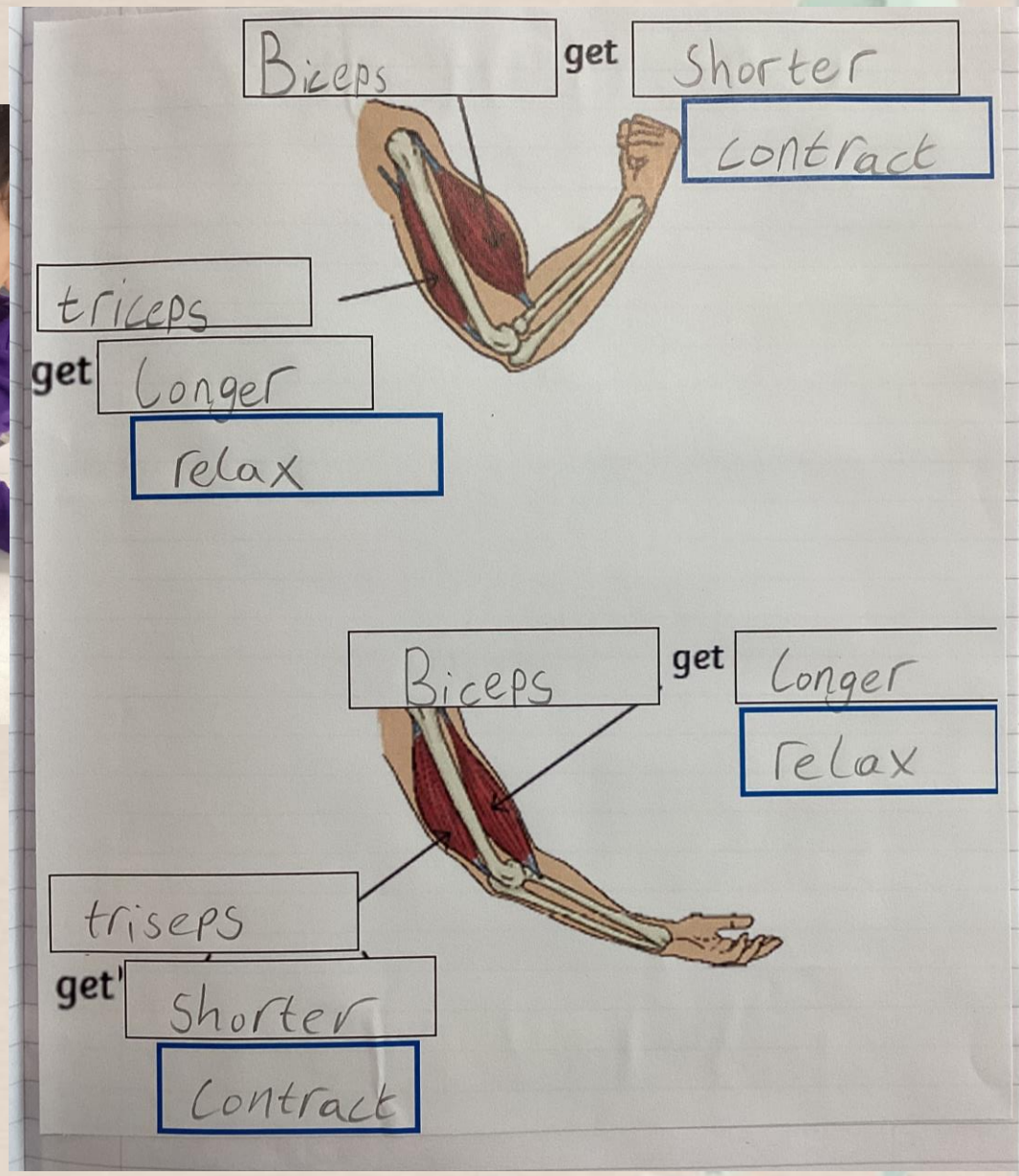
When the arm raises up, the biceps Pull up and contracts.

This means that the biceps get shorter.

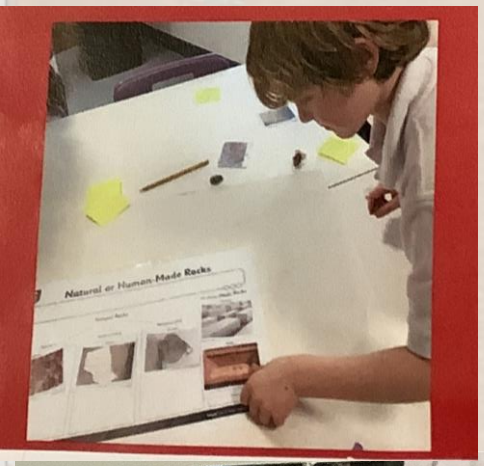
At the same time that the biceps contracts, the triceps relax.

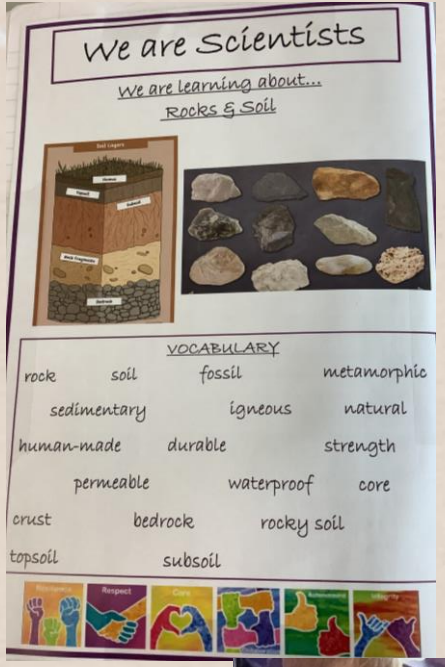
When the arm goes back down, the Bicep relax.

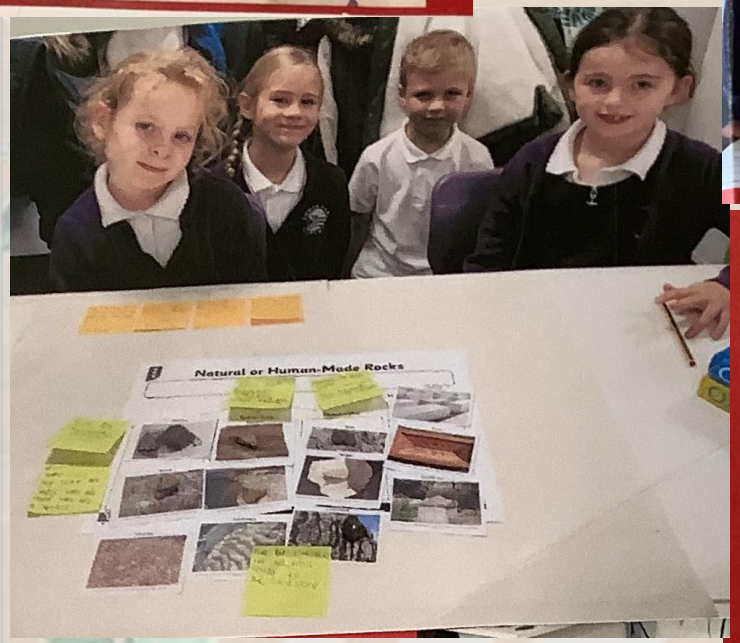
At the same time that the biceps relax, the triceps contracts.



YEAR 3







WE TESTED OUR ROCK TO SEE IF IT WAS WATERPROOF.

WE TESTED OUR ROCK FOR DURABILITY WITH SANDPAPER.

WE TESTED OUR ROCK FOR STRENGTH WITH SCISSORS.

Investigation 1

Instructions

We need to choose a **rock** for a kitchen worktop.
We need a rock that is **hard** and will **not scratch.**

Choose **5 rock samples.** Test each rock by carefully scratching it using a **nail or pin.** Then give each rock a score **1 – 10** depending on how hard it is.

Investigation

Name of rock - Marbele
1 2 3 4 5 6 7 8 9 10

Name of rock - Graphite
1 2 3 4 5 6 7 8 9 10

Name of rock - Slate
1 2 3 4 5 6 7 8 9 10

Conclusion

Which rock do you think would make the best **kitchen worktop?** Explain your answer.

Marberl because it dose not scrach it is waterproot and it dose not crumbel. it's strong.

Investigation 2

Instructions

We need to choose a hard wearing, **durable rock** that we can use for ramps at a skate park. The rock needs to be durable as many different **skateboards and scooters** will be riding over it each day.

Choose **5 rock samples.** Test each rock by gently **rubbing each rock** with a piece of sandpaper. The more rock 'dust' that comes away from the rock, the **less durable** it is. You will need to decide how many times to rub each rock. Remember to rub each rock the **same number of times** to keep it fair!

Investigation

Name of rock - Rock Gypsum
Description of rock after sandpaper: it stayed the same

Name of rock - ~~Sha~~ ~~State~~ Shale
Description of rock after sandpaper: it crumbeld.

Name of rock - Limestone
Description of rock after sandpaper: ~~it~~ it changed a lot. it crumbled.

Put the rocks in order from most durable to **least durable.**

Rockgipsum ~~Limeston~~ Limestone Slate

Conclusion

Which rock do you think would make the **best skateboard ramp?** Explain your answer.

Rock Gypsum because it is strong and smooth.

Investigation 3

Instructions

We need to **choose a rock** that will be suitable to be the **roof** of a new building. It needs to be **waterproof** due to the amount of rain we have in the UK.

Choose **5 rock samples.** Test each rock by gently dripping water onto the rock using a pipette. If the rock **'soaks'** up the water, then it is **permeable and not waterproof.**

Investigation

Name of rock - Diorite
Is it waterproof? yes

Name of rock - Gabbro
Is it waterproof? No

Name of rock - obsidon
Is it waterproof? yes!!

Put the rocks in order from most **permeable** to least permeable. Remember, if it is permeable it lets the water through so is not **waterproof!**

Gabro Dirite obsidon

Conclusion

Which rock do you think would make the best **waterproof roof?** Explain your answ

obsidon because it's water proof.

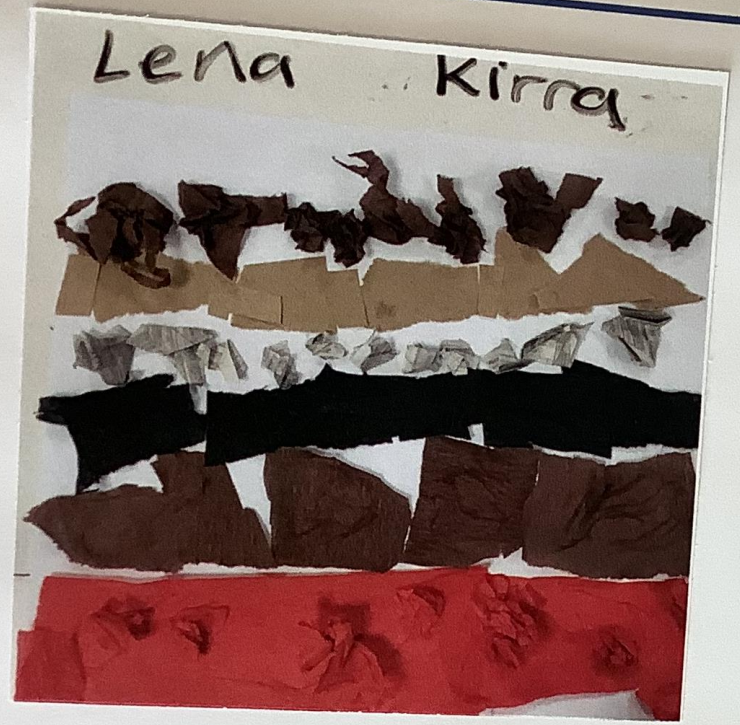
YEAR 3

SCIENCE

LO: To identify the properties of soil and the different types that make up the Earth

Learning Objective Achieved

Cover



Top soil which is full of nutrients and contains rotting plants and organisms.

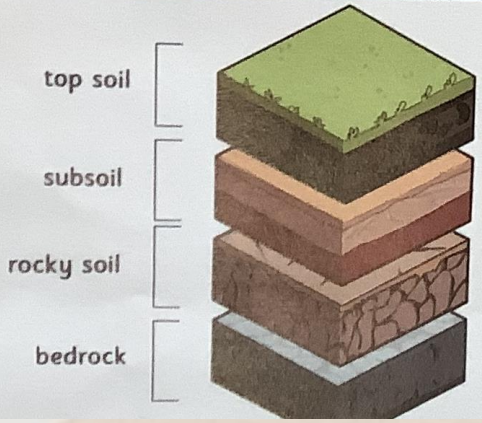
Subsoil which is tightly packed soil, lighter in colour to the top soil as it contains fewer nutrients.

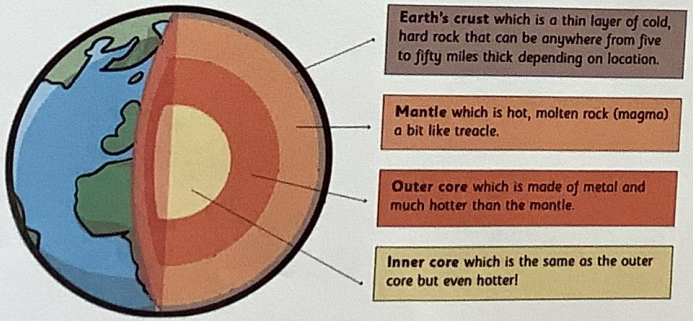
Rocky soil which is rocks that are breaking down in to soil.

Bedrock which is just rock.

Crust

Core



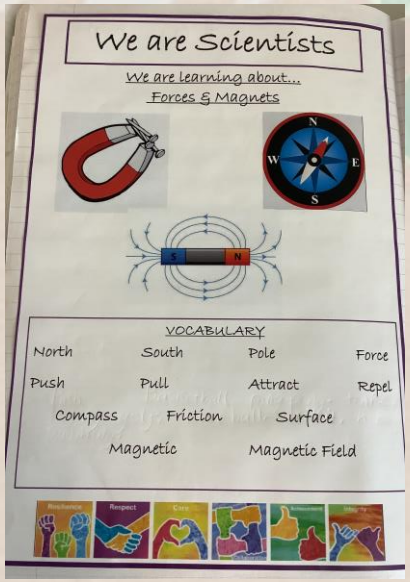


YEAR 3

MAGNETIC	NON-MAGNETIC
metal spoon	plastic handle of scisso
Jar lid	metal flask
magnet (NS)	foil tin
paper clip	plastic mug
metal key	magnet (SS NN)
scissor blades	glass of jar

Observations

- Not all metal things are magnetic.
- when you put S and S poles together or and N poles together they will repel from each other.
- when you put S and N poles together or N and S poles they were attracted to each other.
- Some objects were attrected from further away than others.
- Some objects could be picked up by the magnets.

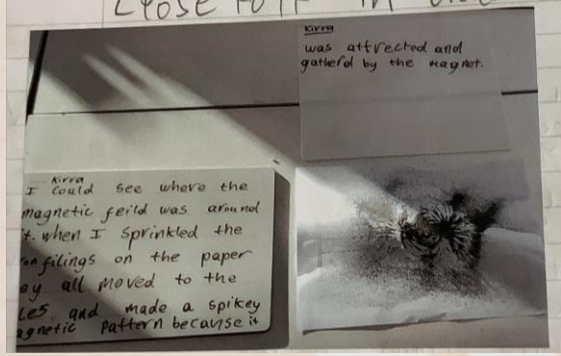


Conclusions

We found out that all magnetic materials are made of metal although not all the metal object were magnetic.

We discovered that N and S poles of the magnet attract yet N and N or S and S do not attract.

we can conclude that there must be a magnetic field around the magnet since the objects had to be close to it in order to be attracted



YEAR 3

18.01.23

LO: To plan and investigate the effects of friction of different surfaces (T)

WORKING SCIENTIFICALLY

Investigating Friction

WORKING SCIENTIFICALLY:

1. How will we make it a fair test?
2. What do we need to keep the same?
3. What do we need to change?
4. How will we make sure our results are reliable?

- Put the ramp next to the chosen surface.
- Place the car at the top of the ramp.
- Let go of the car (do not push it).
- Measure how far the car travels along the surface

Investigating Friction

WORKING SCIENTIFICALLY

Predictions:

As you let go of the car on the ramp, gravity will pull the car down.

Friction will be pushing opposite to this.

Surfaces that create a **lot of friction** will _____.

This means the car _____.

Surfaces that **don't create much friction** will _____.

This means the car _____.

Friction Findings

WORKING SCIENTIFICALLY

Conclusion:

What did you discover?

Which surface created the most friction?

Which surface created the least friction?

Was your prediction accurate?

Achieved

understanding

2) Ramp, ruler, release of car, the car

3) Surfaces

4) try it again three times. ✓

Slow the car quiker

will not travelas far

take longer to slow the car down

will travel further ✓

Conclusions

The one with the most friction is astroturf.

leasure how far the car travels along the surface.
ord your results below.

urface	Distance travelled by car
Astro turf	10/9/7/6cm
Playground	14/26/cm
Pipe	21/19/18/20 cm
~~Mat~~ Rug	13/4/10/~~14~~ 1/14
floor	

hich surface created the most friction for the toy car?

ace	Distance travelled by car
Pipe	53, 22cm 55cm
Rug	32cm, 31cm, 27cm
floor	73cm, 74cm, 43cm
Astro	12cm
Playground	

surface created the most friction for the toy car?

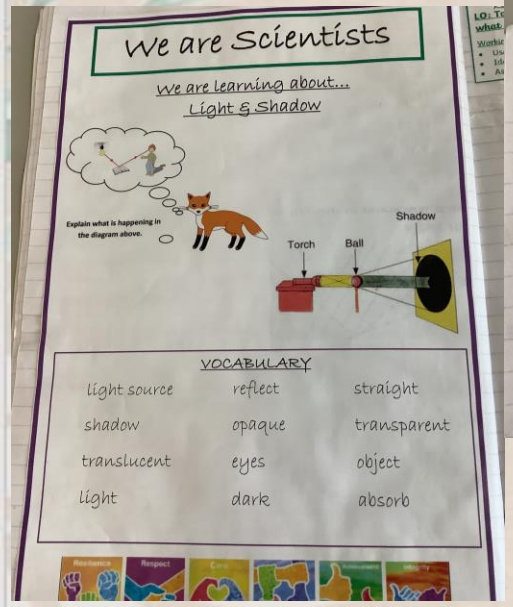
leasure how far the car travels along the surface.
ord your results below.

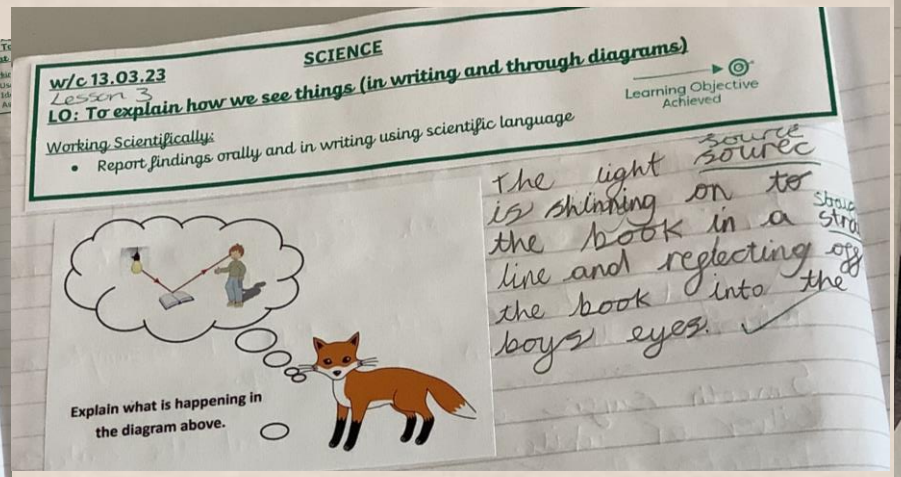
urface	Distance travelled by car
Playground	25 28 9 20
Pipe	~~25~~ 7 10 12 25 18
Rug	16 & 14
floor	
Astro turf	30 13 11 11 11

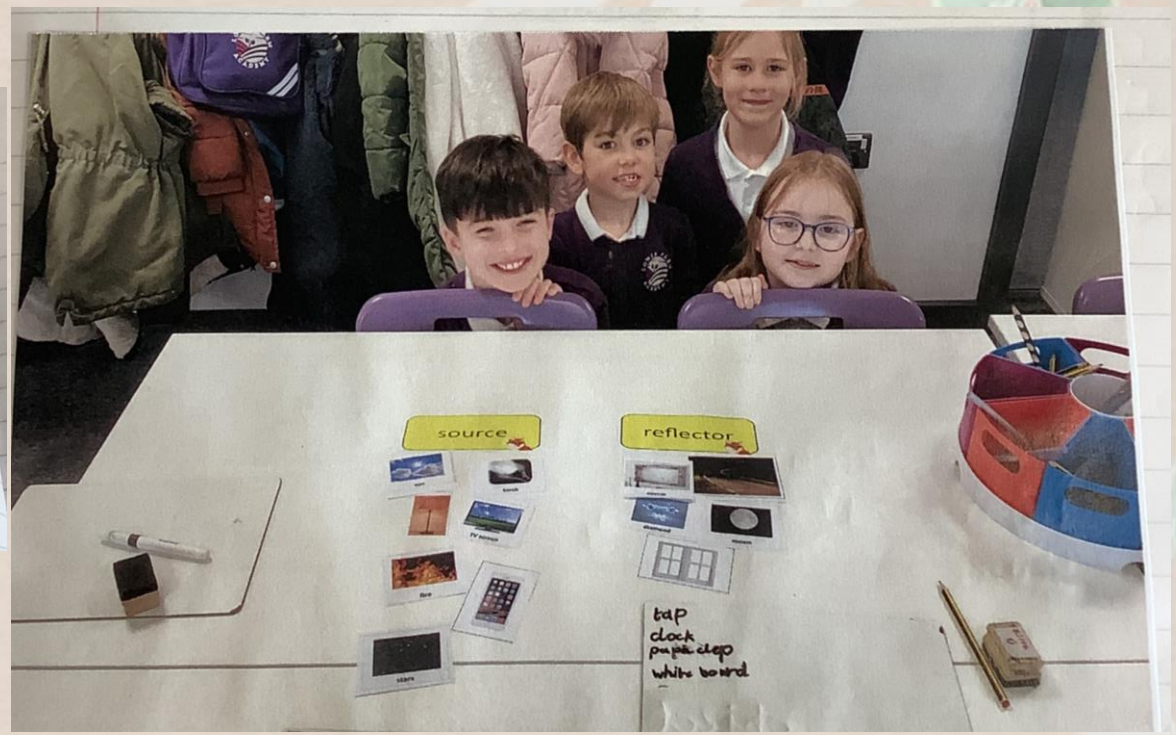
The car travelled further on the playground, pipe and floor which means there was less friction. ✓

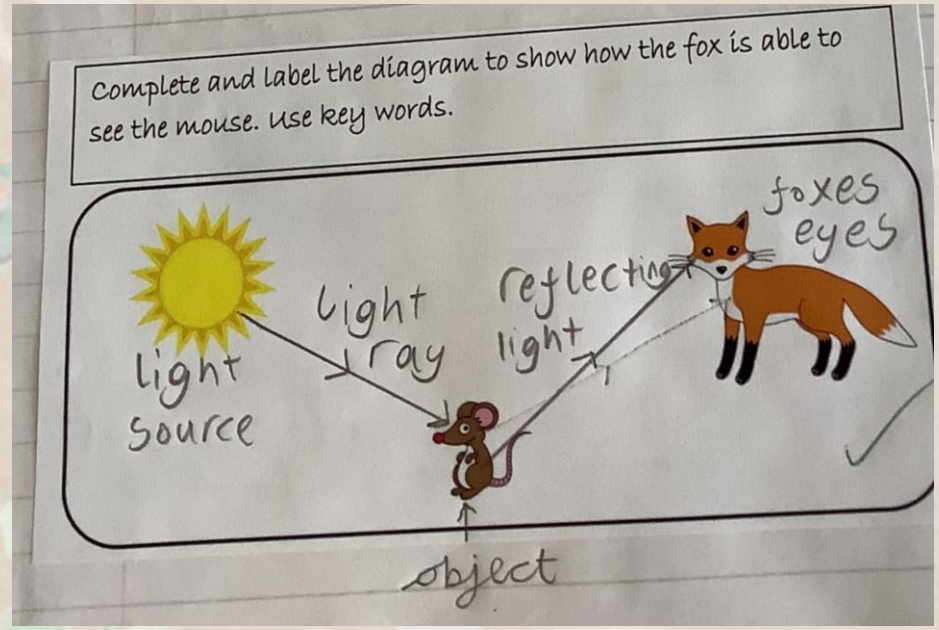
I can conclude that the rough a surface is, the more friction there is. ✓

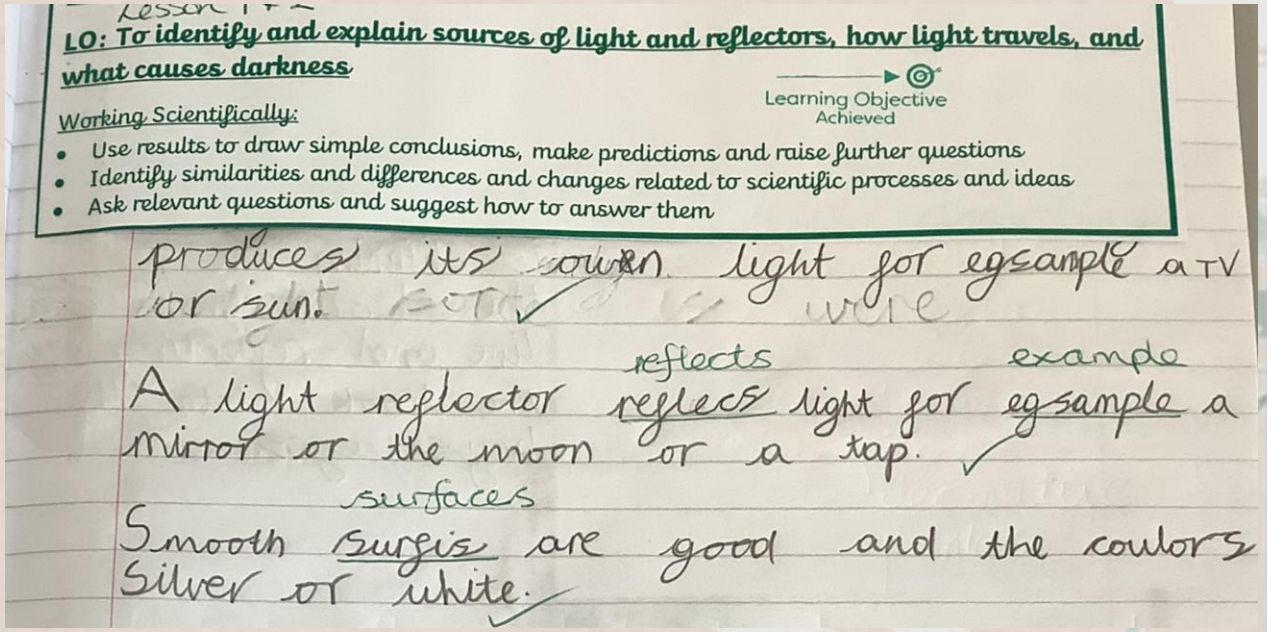
YEAR 3


We are Scientists
We are learning about...
Light & Shadow
Explain what is happening in the diagram above.
Shadow
Torch
Ball
VOCABULARY
light source
reflect
straight
shadow
opaque
transparent
translucent
eyes
object
light
dark
absorb


SCIENCE
w/c 13.03.23
Lesson 3
LO: To explain how we see things (in writing and through diagrams)
Learning Objective Achieved
Working Scientifically:
• Report findings orally and in writing using scientific language
Explain what is happening in the diagram above.
The light source is shining on to the book in a straight line and reflecting off the book into the boys eyes.


source
reflector
tap
clock
pupils clap
white board


Complete and label the diagram to show how the fox is able to see the mouse. Use key words.
light source
light ray
reflecting light
foxes eyes
object


LO: To identify and explain sources of light and reflectors, how light travels, and what causes darkness
Learning Objective Achieved
Working Scientifically:
• Use results to draw simple conclusions, make predictions and raise further questions
• Identify similarities and differences and changes related to scientific processes and ideas
• Ask relevant questions and suggest how to answer them
produces its own light for egsample a TV or sun.
A light reflector reflects light for example a mirror or the moon or a tap.
Smooth surfaces are good and the coulors Silver or white.

YEAR 3

LO: To identify opaque, translucent and transparent objects

Learning Objective Achieved

LO: To investigate how shadows are formed by different materials and properties of objects

Learning Objective Achieved

Working Scientifically:

- Ask questions, make predictions and record observations
- Use diagrams to communicate findings
- Make conclusions

Seesaw

Sort the objects into the table below.

Transparent	Translucent	Opaque
plastic lid	Blue cup	Ruler Number
Glass jar	Pink pot	Wall
window	Tissus paper	Whiteboard ruber
	Ruler Middle	Dictionary
		Jar lid
		Glue stick

If you shine a light on a pink pot the shadow is pink (the same color of the pot).

What question could we investigate?

Do all objects cearate a shadow? Dose the object look the same in the shadow?

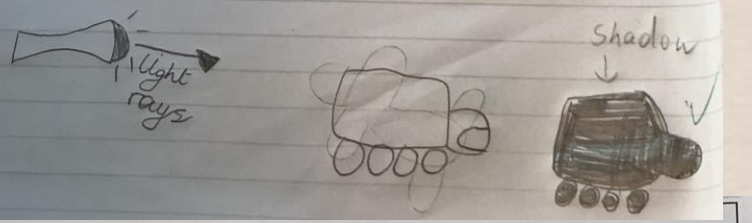
What is your prediction?

No. not all objects cearate a shadow. yes a object looks the same in the shadow.

Use the objects and a torch to investigate your question.

Objects	Transparent, Translucent, Opaque?	Observations of shadow
toy plan cube rubber	opaque	when you bring it ~~eta~~ close it gets bigger or litter
ruler pot tissue papper	translutent	when you put the torch in a pot you can see the coler of the pot
glass jar	transparent	it creats a shadow on the edge but not in the middle.

Draw a diagram to show one of your objects creating a clear shadow.
Label the light source, light rays, object, shadow, and direction of light.



Questi

1. What type of object made the best shadows? Explain your answer
2. What type of objects made the worst shadows? Explain your answer
3. What happens to the shadows when the light source is moved

The opaque object ~~ma~~ ~~ob~~ because the shadow was dark bold, blak and solid. The opaque ~~objects~~ objects blocked all the light from passing through the object.