Our Day

09:30 –10.00 Introductions and updates

10.00 -11:00 Developing Pupils Scientific Vocabulary

11:00 – 11:15 Break

11:15 – 12:15 Using technology to support teaching and learning in science

12:15 – 12:45 Lunch

12:45 – 14:15 Science and Oracy

14:15 – 1515 An Inclusion resource – Playdoh

15:15 – 15:30 Evaluation/wrap-up

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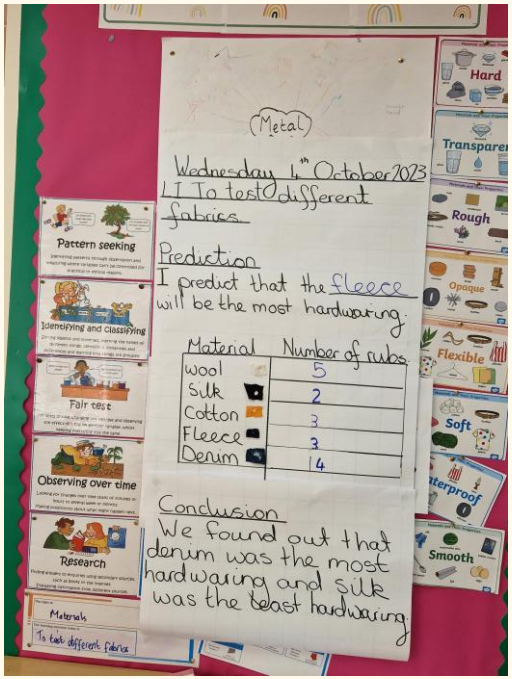
Developing Pupils Scientific Vocabulary







Kulvinder Kaur Johal CSciTeach
Email - kulvinder.johal@pstt.org.uk

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EEF Improving Science guidance report

Summary of Recommendations

Develop pupils' scientific vocabulary

Supporting primary pupils to develop scientific vocabulary can help them to actively participate in science learning and effectively communicate their understanding.

To implement this recommendation:

- Identify science-specific vocabulary.
- Explicitly teach new vocabulary and its meaning, creating opportunities for repeated engagement and use over time.



Improving Primary Science | EEF (educationendowmentfoundation.org.uk)

Improving Primary Science guidance report | Education Endowment Foundation (d2tic4wvo1iusb.cloudfront.net)

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Model the use of new words in context.

Modelling in context invites pupils into a world where new words aren't just definitions, but integral components of relatable scenarios.

By providing clear and pupil-friendly definitions within sentences, scientific language becomes not only understandable, but also memorable.

Pupil (with a pair of bar magnets): "When I put the red ends together, they push away, but a red and a blue go together.

Teacher: "Yes, these magnets use red to show the north pole, and blue to show the south pole. When opposite poles are put next to each other they attract—which means they pull towards each other—but if the same poles are put next to each other they repel—which means they push away."

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Focus on Polysemous, Tier2 and Tier 3 words

*Ms Bradbury: "If you saw the word '**light**', what would you think of?"*

*Aliana: "I've got a night**light** in my bedroom. It looks like a penguin!"*

*Cara: "My mum says my hamster is as **light** as a feather!"*

*Jared: "What about the sky? That's **light** blue."*

*Kieron: "On fireworks night, my stepdad asked anyone if they had a **light**, so he could set the firework off."*

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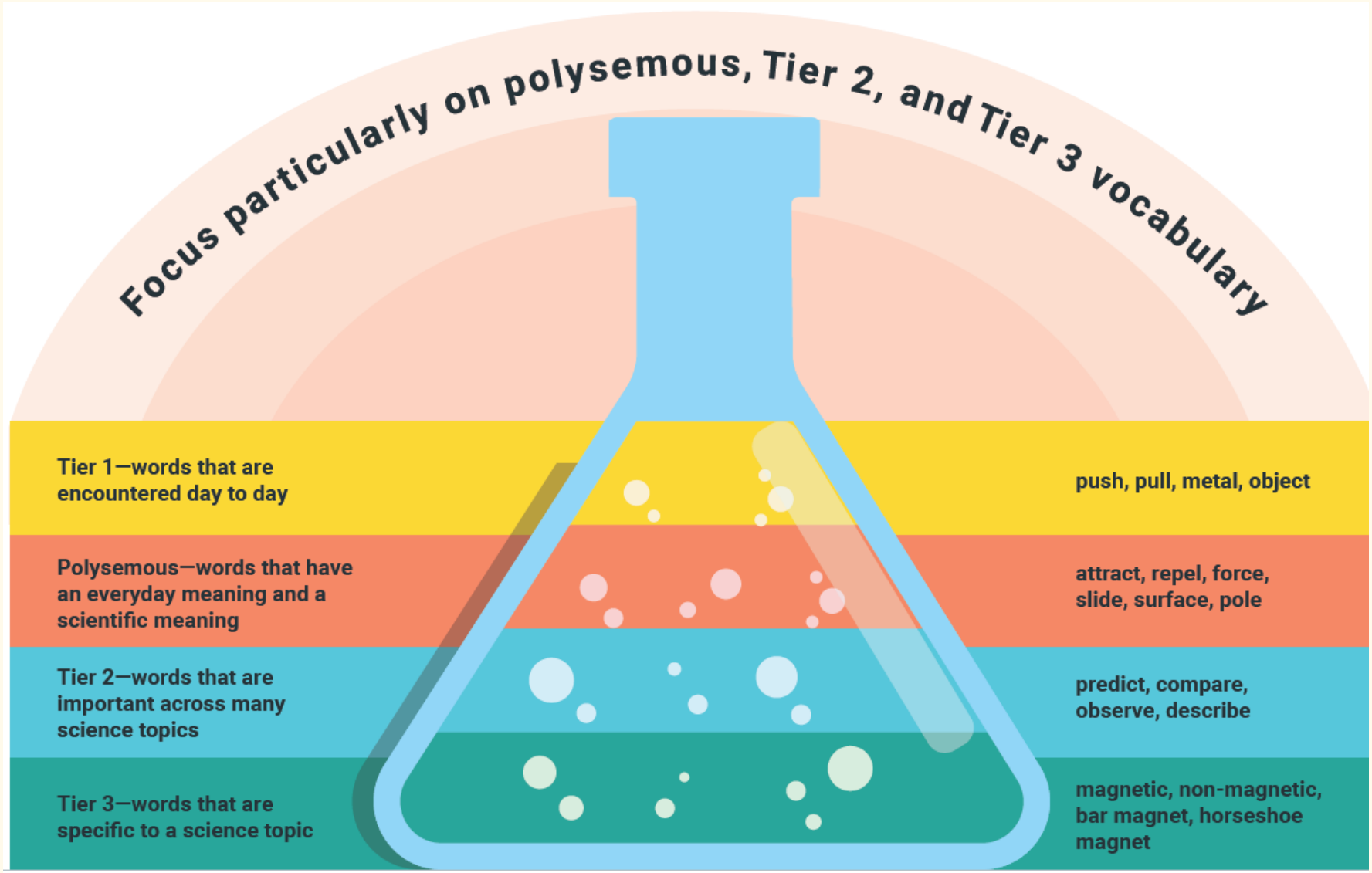
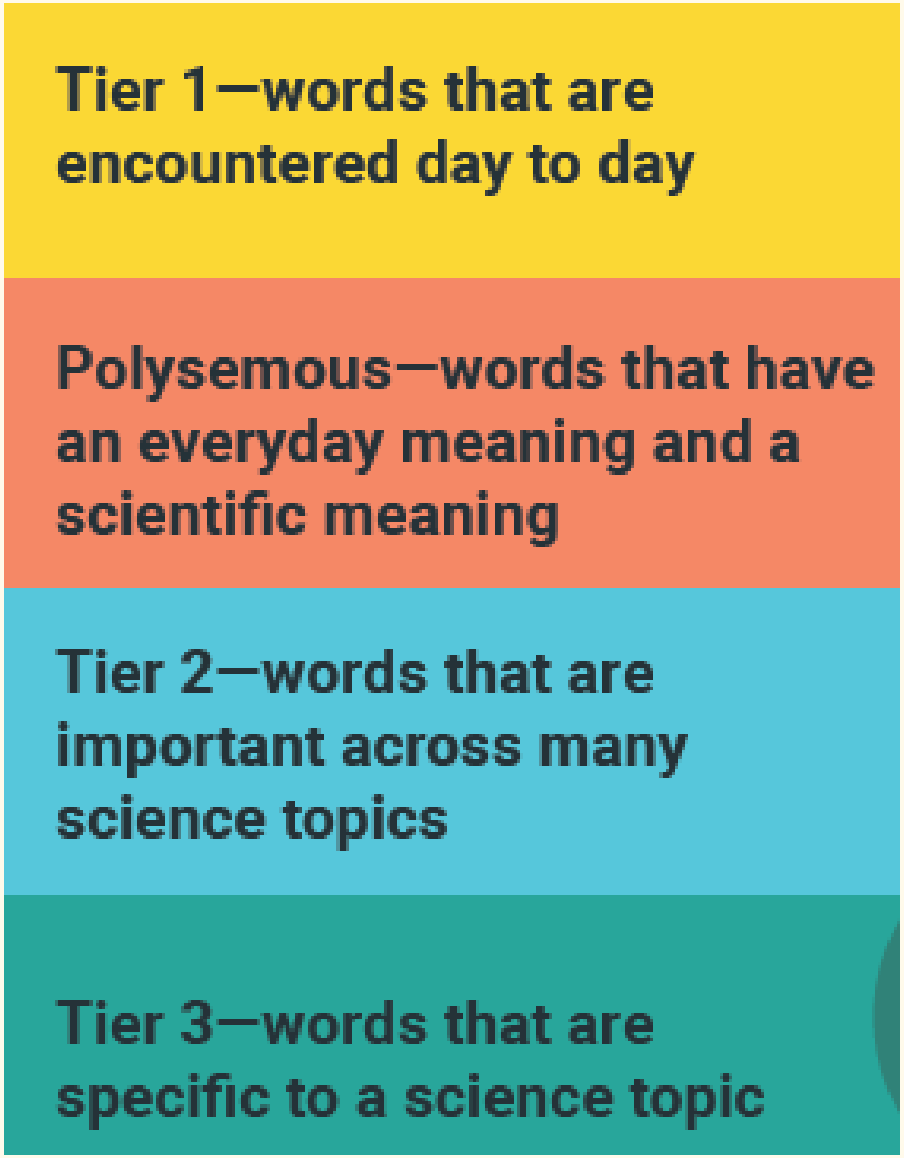
Focus on Polysemous, Tier2 and Tier 3 words



Focus on Polysemous, Tier2 and Tier 3 words

Sort these:

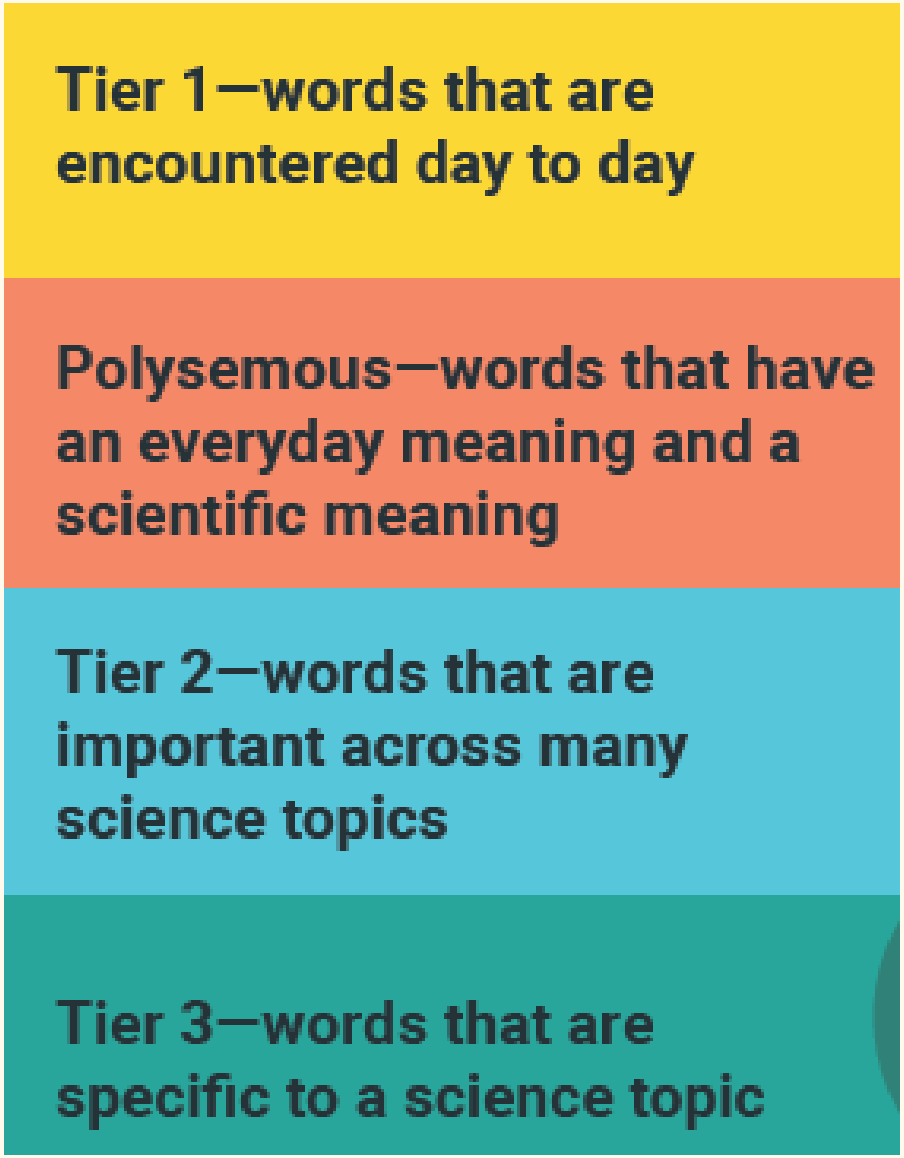
blood
arteries
transport
veins
circulates
transports
capillaries
ventricles



Focus on Polysemous, Tier2 and Tier 3 words

Sort these:

Blood	Polysemous
Arteries	Tier 3
transport	Tier 1
veins	Tier 2
Circulates	Tier 2
transports	Polysemous
Capillaries	Tier 2
Ventricles	Tier 3



Etymology, Morphology and Phonology

Key words are taught explicitly, using a standardised approach which highlights the phonology and morphology of the word.

Etymology- Discuss the origin of words

Morphology- Discuss the structure of words

Phonology –Discuss the sound of the word.

For example, looking at prefixes such as photo- meaning light, to better understand the term photosynthesis or suffixes such as -meter, meaning to measure, such as when using a thermometer to measure temperature.

Which words come to mind?

- endo- (within)
- exo- (outside of)
- Poly (many)

EEF blog: Unlocking the language of science: strategies for… | EEF (educationendowmentfoundation.org.uk)

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Strategies to teach unfamiliar scientific vocabulary.

1. Say the word to students using its correct pronunciation
2. Write it on the board – it is vital to write it out clearly, write the word larger than usual and leave plenty of space around it.
3. Break the word down into its parts – use different coloured pens for this.
4. Repeat the word one more time emphasising the different parts of the word – get the students to chant out loud
5. Discuss the etymology of the word – it is useful if you can link the word to everyday language that the students are familiar with.
6. Give an example sentence using the word – ask students to write their own sentences using the new words they've learned.

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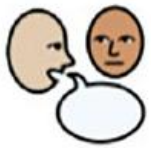
https://edu.rsc.org/feature/how-to-help-students-decode-science-vocabulary/3010205.article

Language Bullseye- Repetition and Engagement



Sentence Stems
The circulatory system is …
The important parts are the …
The job of the circulatory system is to …

Inner circle	3 points
Middle circle	2 points
Outer circle	1 point

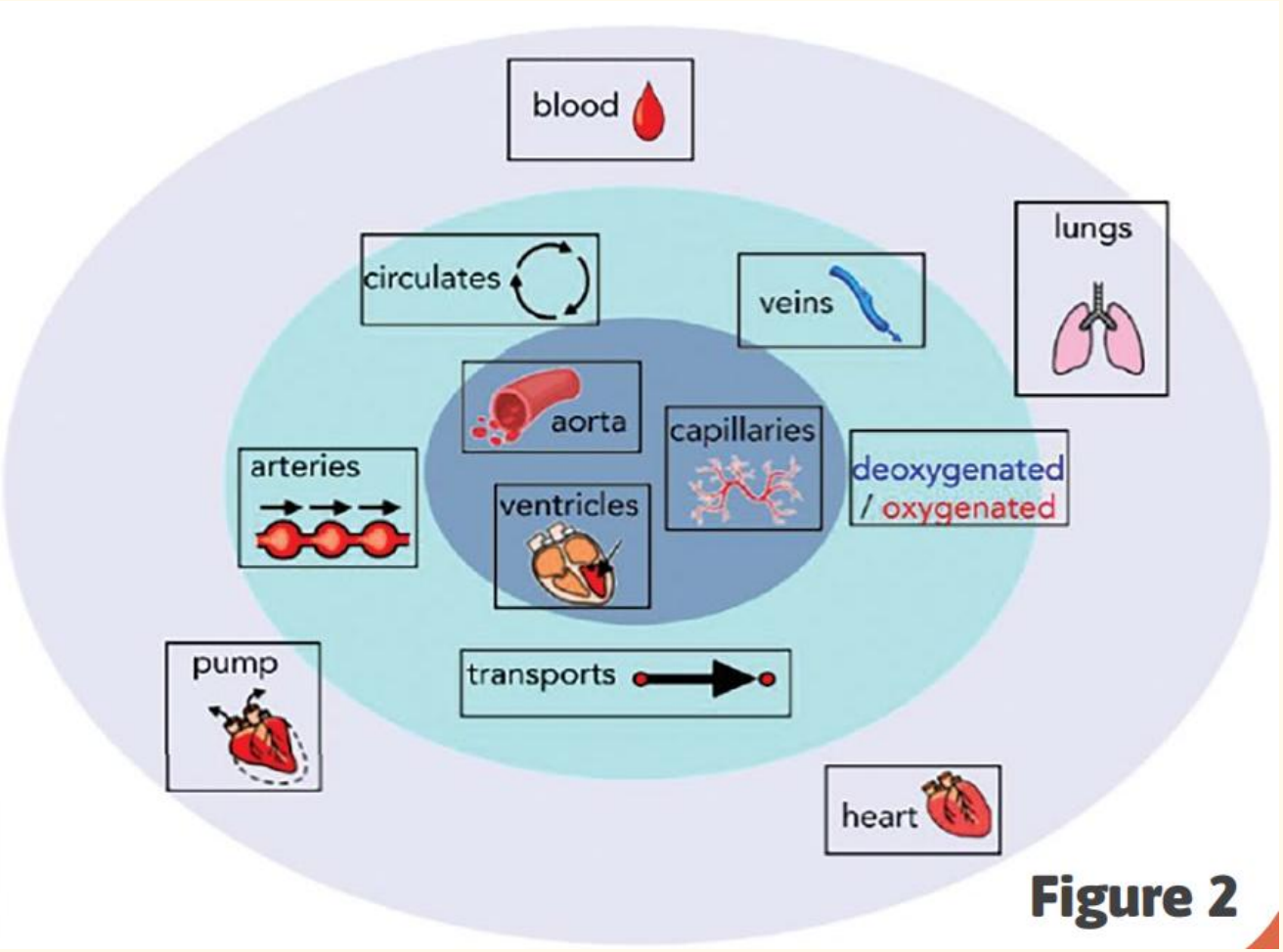


Figure 2

Supporting all children to succeed in science: how can vocabulary teaching help?
By Professor Beck Francis CBE Issue 181 | Page 19 | Published Mar 2024

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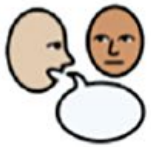
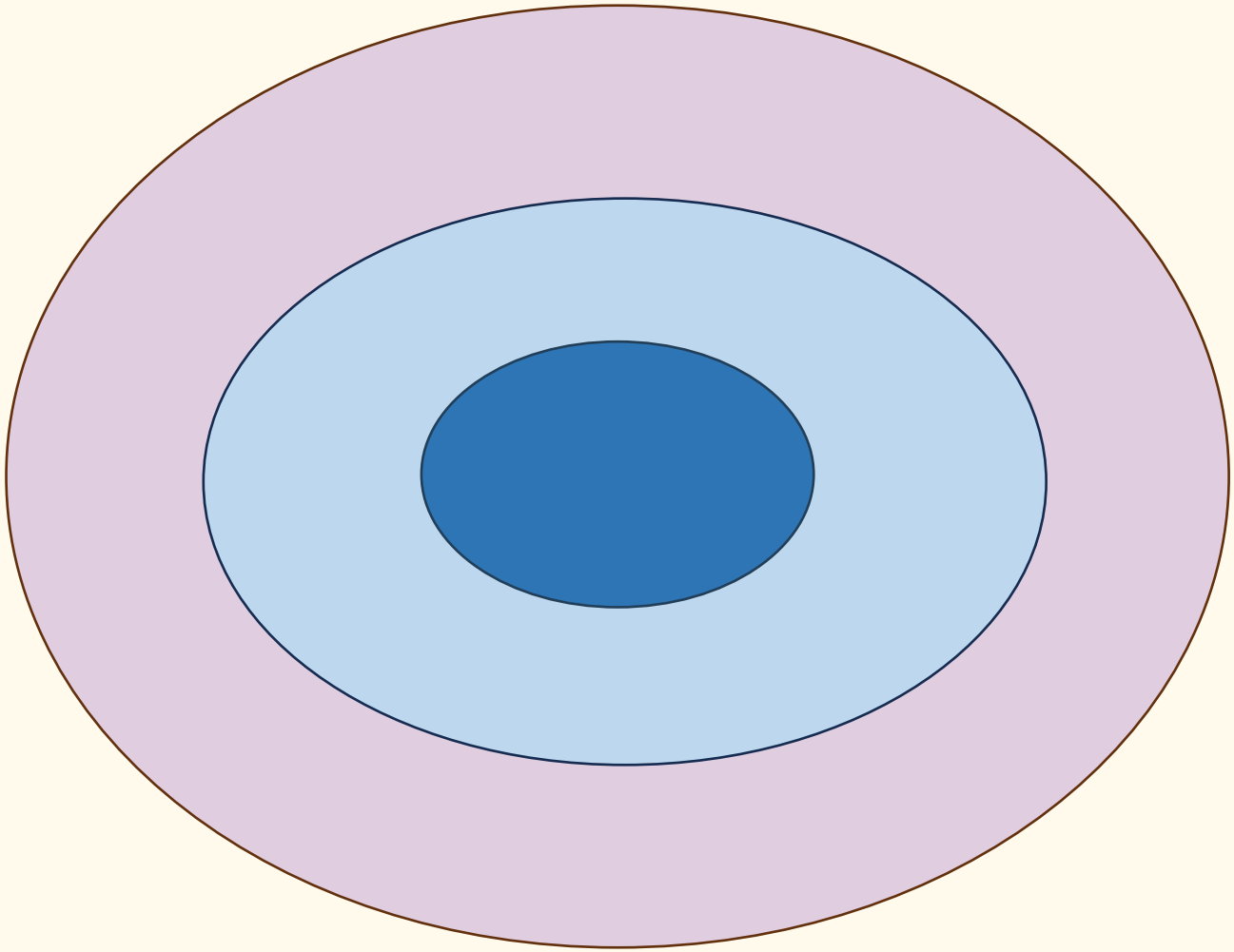
Have a go



Sentence Stems



Inner circle	3 points
Middle circle	2 points
Outer circle	1 point

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Science Vocabulary Games

Articlate/Taboo- Teams have to guess a word being described without using specified words related to it. Eg, a child might have to get their team to guess the word skeleton without using the words bone, skull, support, or body.

KIMS Game- Memorise a number of objects, then one is secretly removed named the object removed. Eg Tray of science equipment, common wild plants, materials.

Unscramble scientific words- Bonus points if they can use the word in a sentence.

Challenge the teacher-Words taken from the Science Vocabulary tin. Their teacher has one minute to write as many associated words on the whiteboard. The pupils have two minutes to do the same. The teacher reads out the words and the children cross off from their list. Points are awarded for words that are not matched.

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Science Vocabulary Games

Run Around - In the hall, assign answers to different walls. Eg Solid liquids and gases. Children begin in the centre and they run to the side. Of the whole to give an answer. Sit out if incorrect.

Pairs- Match word and definition cards. Match the picture and the word definition code. The cards can be stuck around the classroom and children take turns with a partner to five, three and recall.

Pictionary/Playdough- Children draw or model and others have to guess the word/model. E.g. parts of the digestive system, different types of teeth.

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Repetition and Engagement

Transform the learning process into a **lively experience**, so that pupils continually encounter and actively use new vocabulary, reinforcing their understanding.

Sing the song: 'We are going on the Bear Hunt' changing the words to 'We are going on a plant hunt'

Head Shoulders Knees and Toes for Trees! (youtube.com)

Farmer Plants the Seeds Lyric Video - The Kiboomers Preschool Songs & Nursery Rhymes (youtube.com)

https://www.youtube.com/watch?v=JqUh1DQadoo -- The Very Lonely Firefly

https://www.youtube.com/watch?v=3E10KEDouVA – I see the light – A song about light sources

https://www.kidsacademy.mobi/lesson/light-sources-35058933/ - Light source

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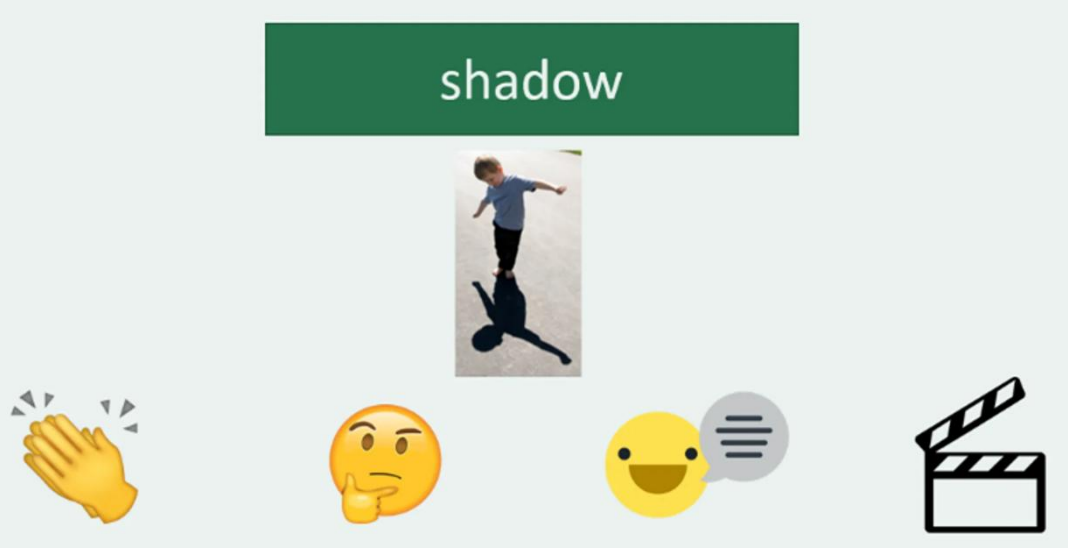
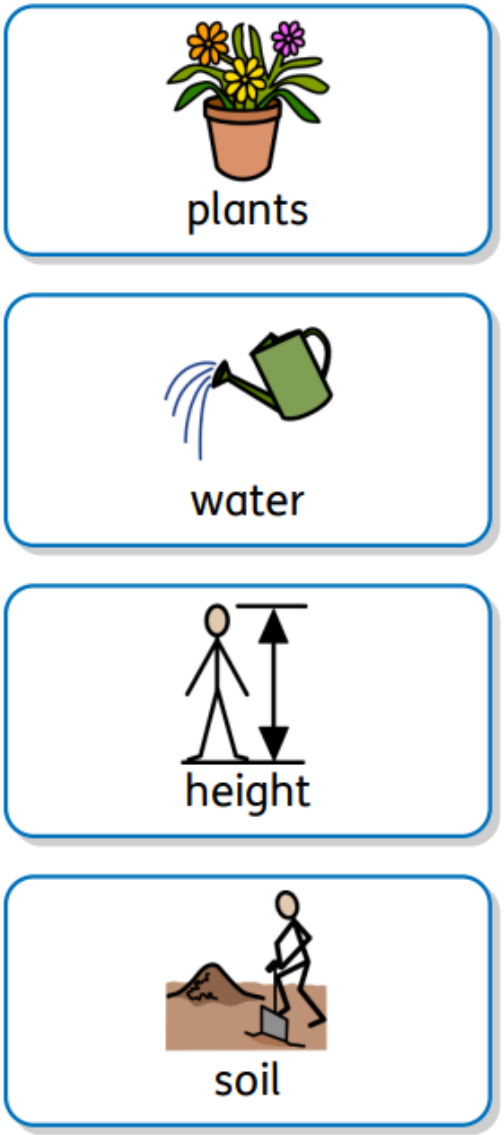
Visual Aids/widgits

Visual aids combined with image creation, such as drawing pictures or diagrams, can help pupils understand the meaning of new words.





https://researchschool.org.uk/tudor-grange/news/talking-like-scientists-how-to-teach-science-vocabulary-in-primary-school

Oral health - a context to support early literacy skills

- good oral health habits need to be formed from the earliest age.
- tooth decay is largely preventable.
- nearly a quarter of 5 year olds in England have tooth decay. Tooth extraction is one of the most common procedures for children under 6 in hospital.
- children from more deprived backgrounds are more likely to have tooth decay.
- children who have toothache, or need treatment, may have pain or infections. This can have a wider effect and lead to problems eating, sleeping, socialising and learning.

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https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/974907/EYFS_framework_-_March_2021.pdf

Using visuals to support vocabulary

1. create a series of pictorial instructions which children could use to sequence the process of cleaning their teeth
2. add key words to each picture
3. consider how these could be used:
    - to develop understanding about looking after our teeth
    - to support development of early reading skills



https://www.amazon.co.uk/Brush-Rookie-Toddler/dp/0531252361/ref=sr_1_1?crid=2D9ILHVXTM2XP&dchild=1&keywords=brush+brush+brush+book&qid=1635010352&qsid=261-1489566-1658762&sprefix=brush+brus%2Caps%2C186&sr=8-1&sres=0531252361%2C1801310521%2C1922514004%2C0794440630%2C1782953957%2C0634009621%2C1787413217%2CB089CN7VF9%2C064846332X%2C0794430406%2C1612438288%2C1838104801%2C144132707X%2C1631592904%2C1474968937%2C1847972896&srpt=ABIS_BOOK

https://www.youtube.com/watch?v=j3vm3nRrxdc

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Other ideas?

Other processes in science that this could work well for ?

e.g.

- planting seeds
- cooking – looking at changes
- making a wind stick
- other?

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Science Tin Words

Key science words are added to the tin throughout each lesson.

At the beginning of each science lesson a few words are pulled from the tin and children are asked to explain their meaning /use in a sentence.

Words are not removed when a new topic is started i.e. by the end of the academic year all key words for the science topics are in the tin.

Angelea Richards from St Richards





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Embedding vocabulary

- The science curriculum allows many opportunities for revisiting vocabulary, but we wanted to ensure that this was planned, repeated engagement rather than accidental repetition.
- For example, the topic Light is introduced in Year 3 and then revisited in Year 6.
- Which words should we introduce in Year 3?
- Which additional words would the children need to learn in Year 6?
- How would we ensure that these words were retained during Years 4 and 5?

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Science Dice



Science Dice is a hands-on resource for retrieving science vocabulary

The dice provide an engaging hands-on approach to supporting children to **recall science-specific vocabulary** and to apply it in their science learning.

Use the dice with vocabulary from previous units/ years to keep vocabulary embedded- just in odd minutes without taking up too much time.

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Learn more about Science Dice, download vocabulary sets and order your dice.

How to use Science Dice



- Use at the start of the topic to identify words the children know and words they are yet to learn

- Use throughout a topic to track the children's learning and inform the next steps for planning in the topic

- Use at the end of a topic to show children's progress

- Support children to recall prior learning and make connections across different topics by mixing and matching cards from previous topic

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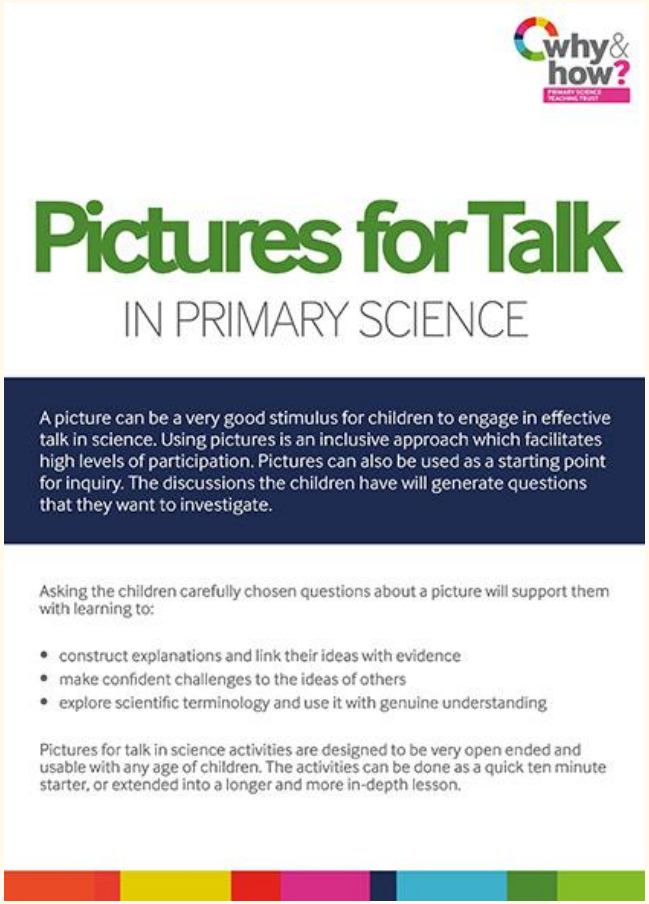
Learn more about Science Dice, download vocabulary sets and order your dice.

Providing Stimuli for Discussion



Pictures for Talk

IN PRIMARY SCIENCE

A picture can be a very good stimulus for children to engage in effective talk in science. Using pictures is an inclusive approach which facilitates high levels of participation. Pictures can also be used as a starting point for inquiry. The discussions the children have will generate questions that they want to investigate.

Asking the children carefully chosen questions about a picture will support them with learning to:

- construct explanations and link their ideas with evidence
- make confident challenges to the ideas of others
- explore scientific terminology and use it with genuine understanding

Pictures for talk in science activities are designed to be very open ended and usable with any age of children. The activities can be done as a quick ten minute starter, or extended into a longer and more in-depth lesson.



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Picture for Talk

WHAT DO YOU THINK HAS HAPPENED TO THIS BUBBLE?

WHY DO YOU THINK THIS?

WHAT DO YOU THINK MIGHT HAPPEN TO THE BUBBLE OVER TIME?

WHY DO YOU THINK THIS?



https://pstt.org.uk/resources/pictures-for-talk/

Cross curricular opportunities

Expose pupils to new vocabulary across all literacy activities

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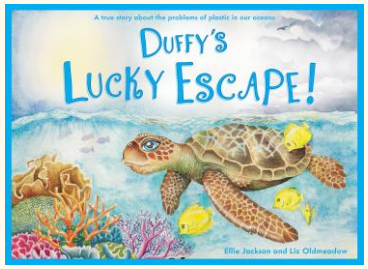
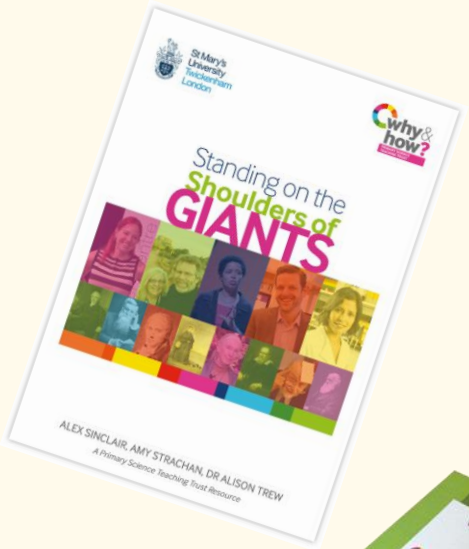
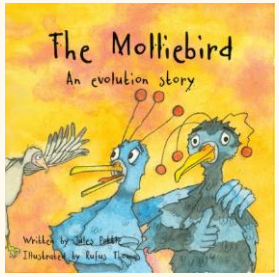
Wider reading opportunity's















https://www.stem.org.uk/teaching-science-through-stories

https://www.crestawards.org/crest-superstar

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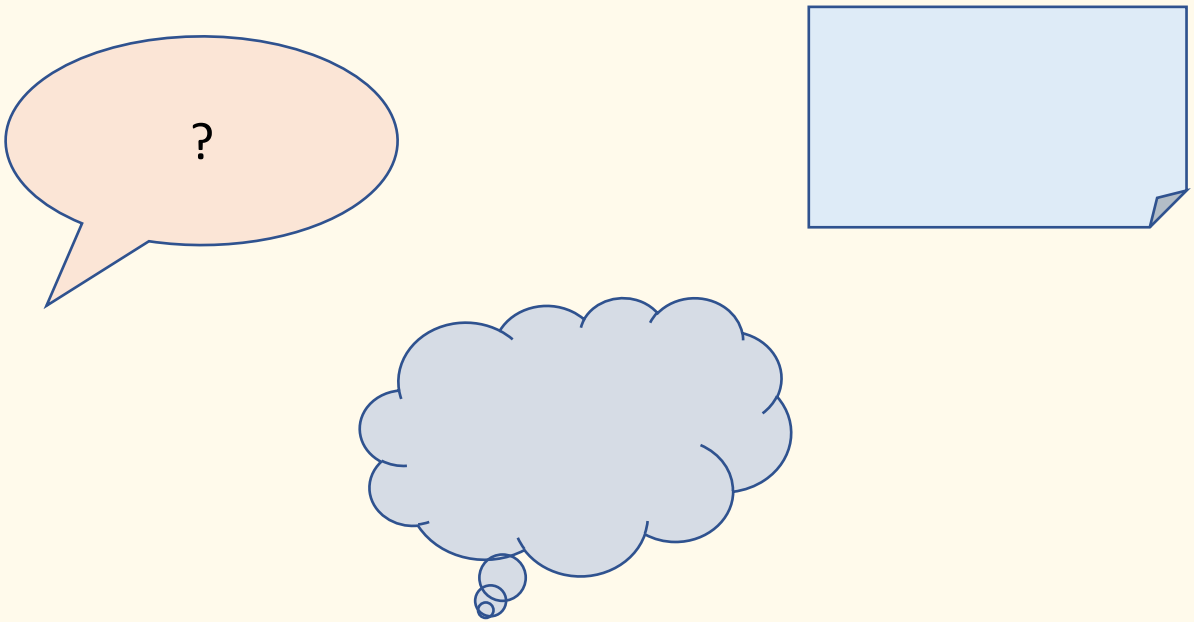
Questions, thoughts and comments



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Break 11.05-11.20

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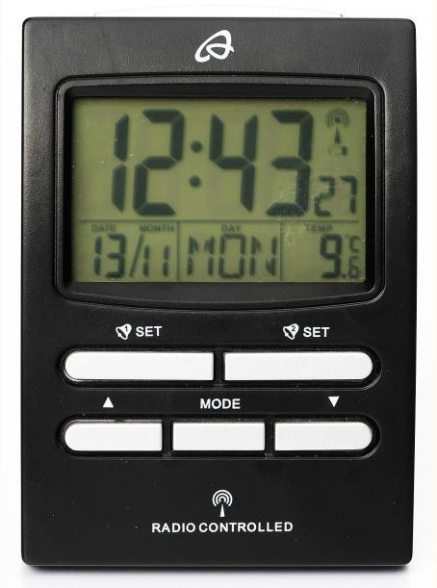
Using technology to support teaching and learning in science







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www.pstt.org.uk

Camera - observations

Observing over time



Week1



Week2



Week3 it has a root



Week4 it's got a flawer



It has open leevs



It is 13 sentermeeters and it has big leevs

Camera - observations

Observing over time



It is the only one with pettles



It is the only one with stripes on its leafs

It is the only one with a gate around it



It is the only one with apples 🍎

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Time lapse



Virtuali-tee



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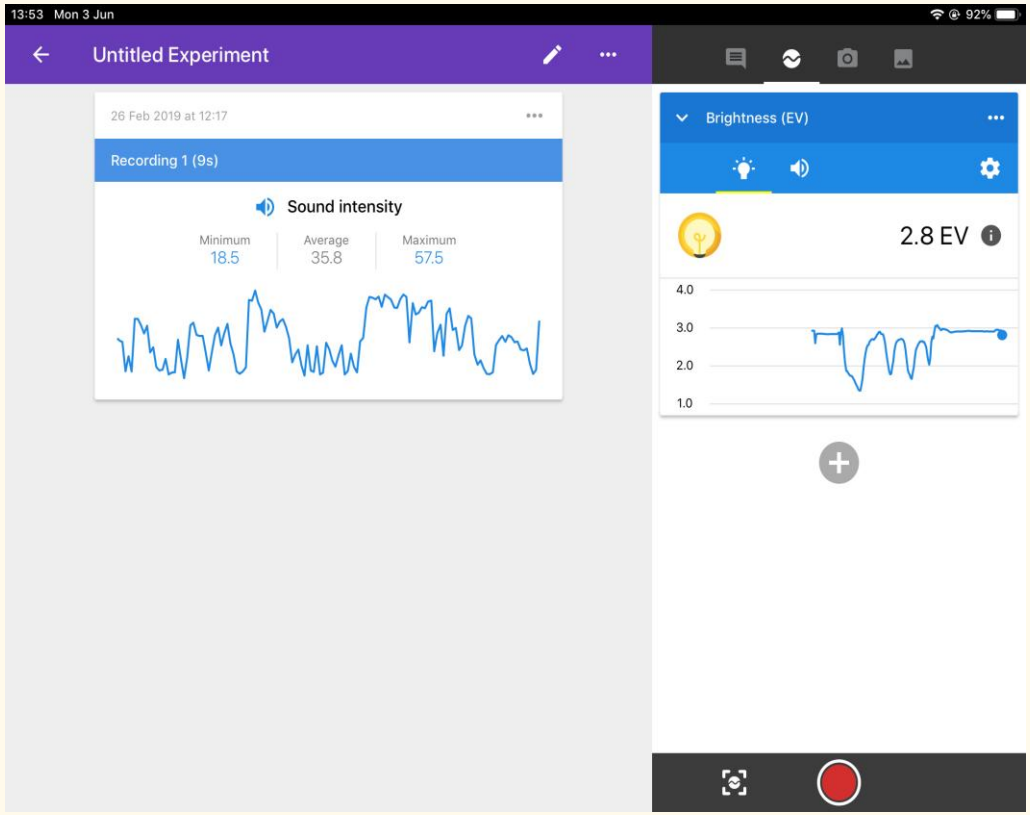
Arduino Science Journal

Perfect for data logging



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Which shaker is louder?

Make a bottle shaker, as loud as you can



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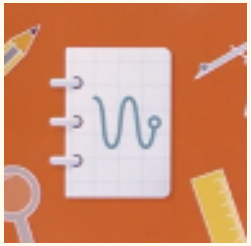
Which shaker is louder?



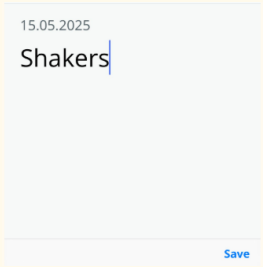
1. Find this icon on the ipad and press to open Science Journal



2. Press the + circle (bottom right corner)



3. Press pen circle (bottom right corner)



4. Type **Shakers** and press Save (bottom right corner)

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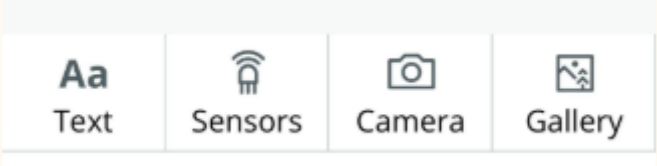
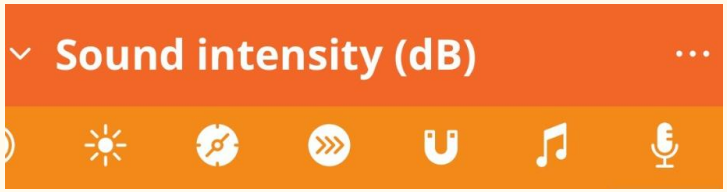
Which shaker is louder?



5. Press Sensors from bottom



6. Swipe the orange bar across until you see the musical note and microphone



7. Press microphone to get to Sound intensity (dB)



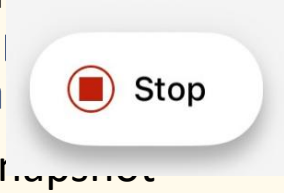
8. Press record bottom

9. One person pick up shaker with paper in and shake continuously for 5 seconds. Another person press snapshot



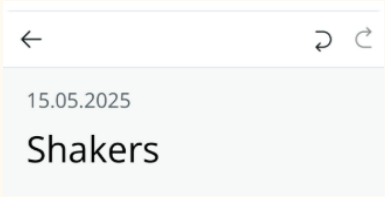
10. Wait 5 seconds and another person pick up paper clips shaker and shake continuously for 5 seconds.

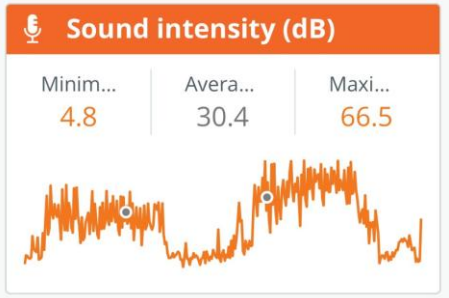




Press snapshot

Which shaker is louder?





11. Press arrow on top left of screen

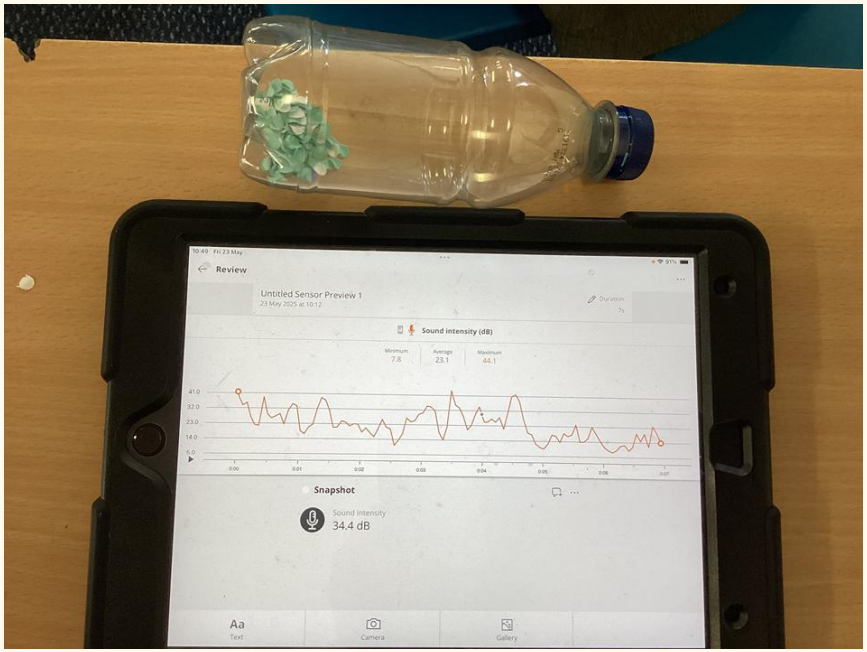
12. Press on the graph



Write your results in your table and take a photo of your groups's graph

Shaker	Volume (dB)
Paper hole punches	34.5
Metal paper clips	51.7





Comparing two shakers we measured the volume using Arduino Science journal

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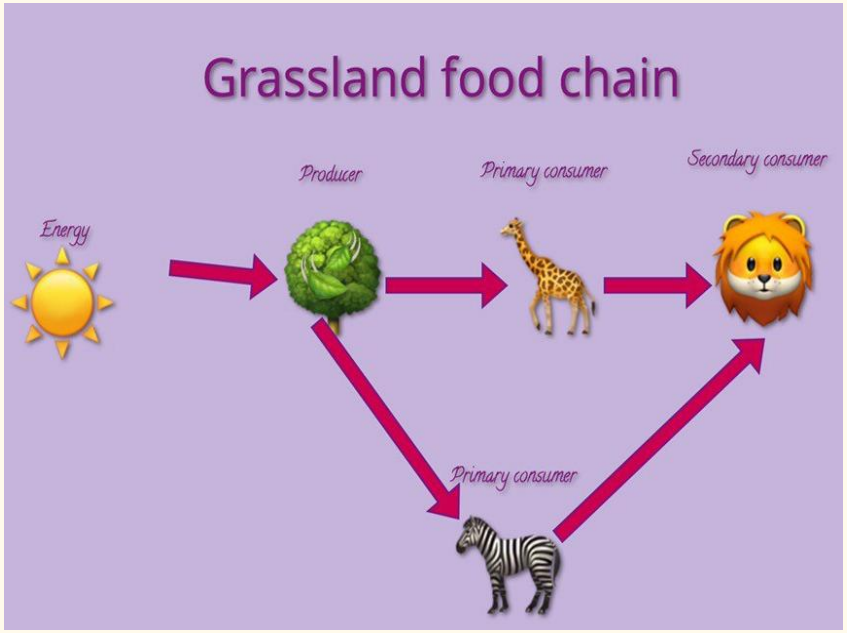
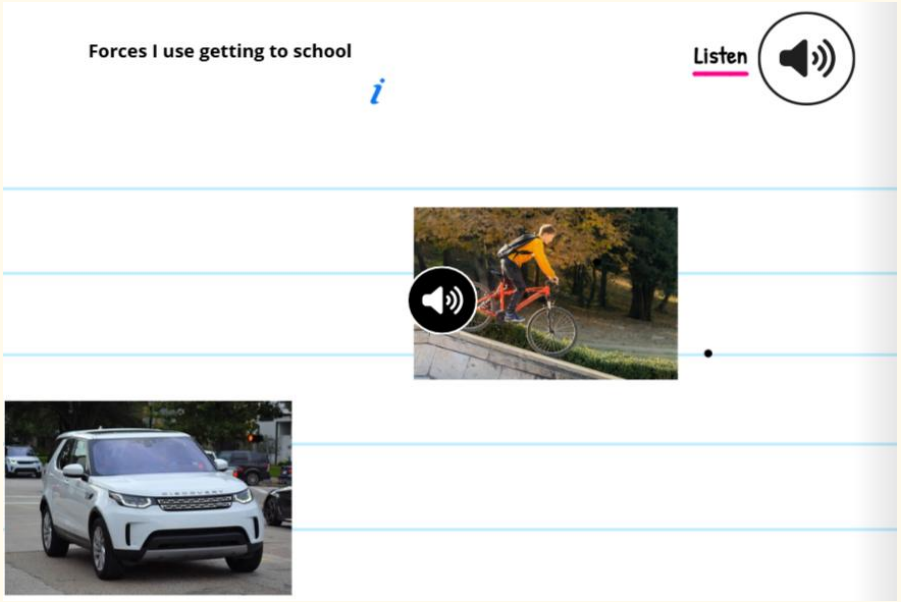
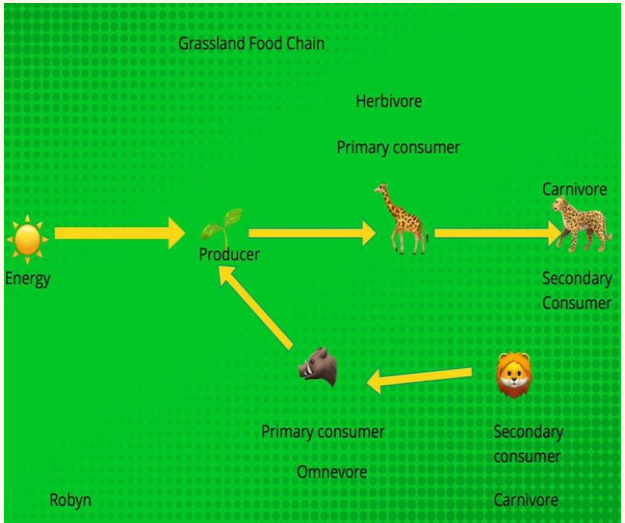
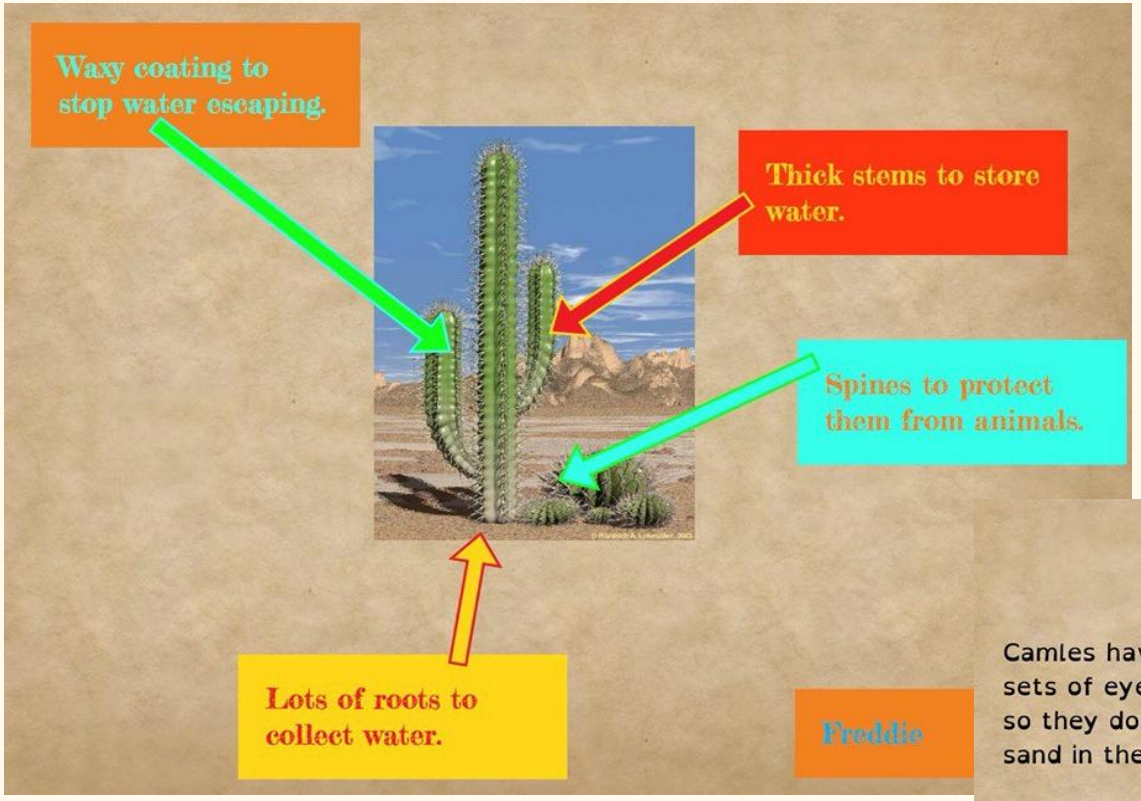
Book Creator

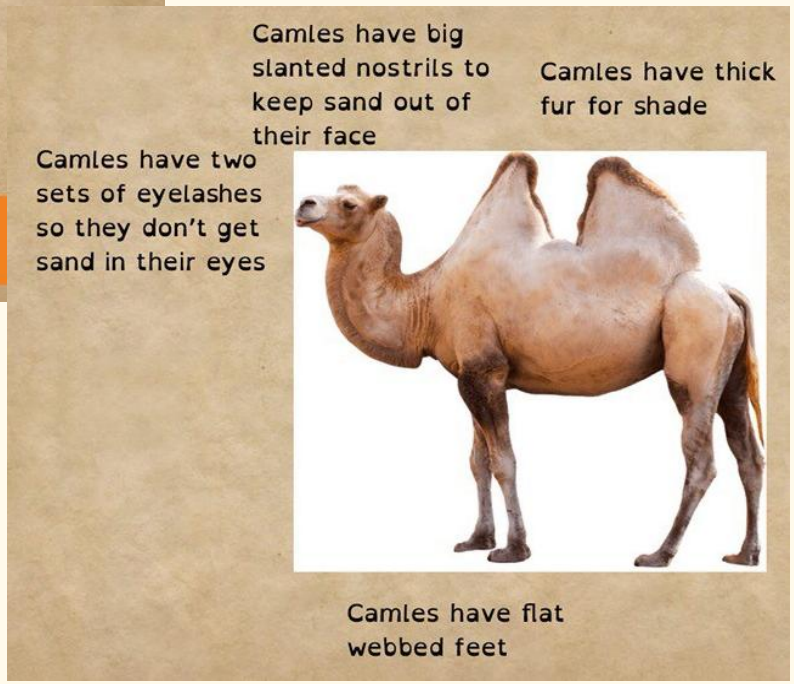






Book Creator





Using QR codes

Create your own QR codes:
qr-code-generator.com





ChatterPix Kids

- Simple to use and are great for engagement
- Pupils can record what they have found out e.g. about a tree species





https://www.duckduckmoose.com/educational-iphone-itouch-apps-for-kids/chatterpixkids/

Pages on Ipad

14:15 Wed 12 Nov 84%

Science investig...

Name:
Date:

Key words:

Title

Equipment:
Take a picture of the equipment.

Method:
What you are going to do.

Prediction:
What do you think will happen?

Observations and Results:
What can you see?
What has happened?

Conclusion:
What have you found out?

14:20 Wed 12 Nov 83%

Science investig...

Name:
Date:

Key words electricity, bulb, bright, brightest, dim, dimmest, circuit, battery, A, AA, C, D

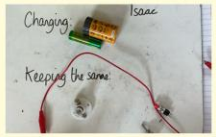
Does the size of the battery affect the brightness of the bulb?

Equipment:
Take a picture of the equipment.



Method:
What you are going to do.

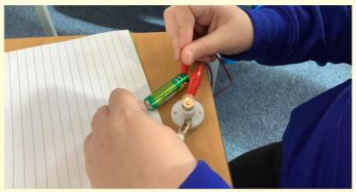
Fair test:
What 1 thing will you change?
Everything else will stay the same.



Prediction:
What do you think will happen?

I think that the bigger the battery the brighter the bulb.

Observations and Results:
What can you see?
What has happened?



Caption

Conclusion:
What have you found out?

I have found out that ...

Next steps:
What would you like to find out next?

DoInk



Green Screen by Do Ink

you can tell a story,
explain an idea,

Y1 Saving the Rainforests - Greenscreen

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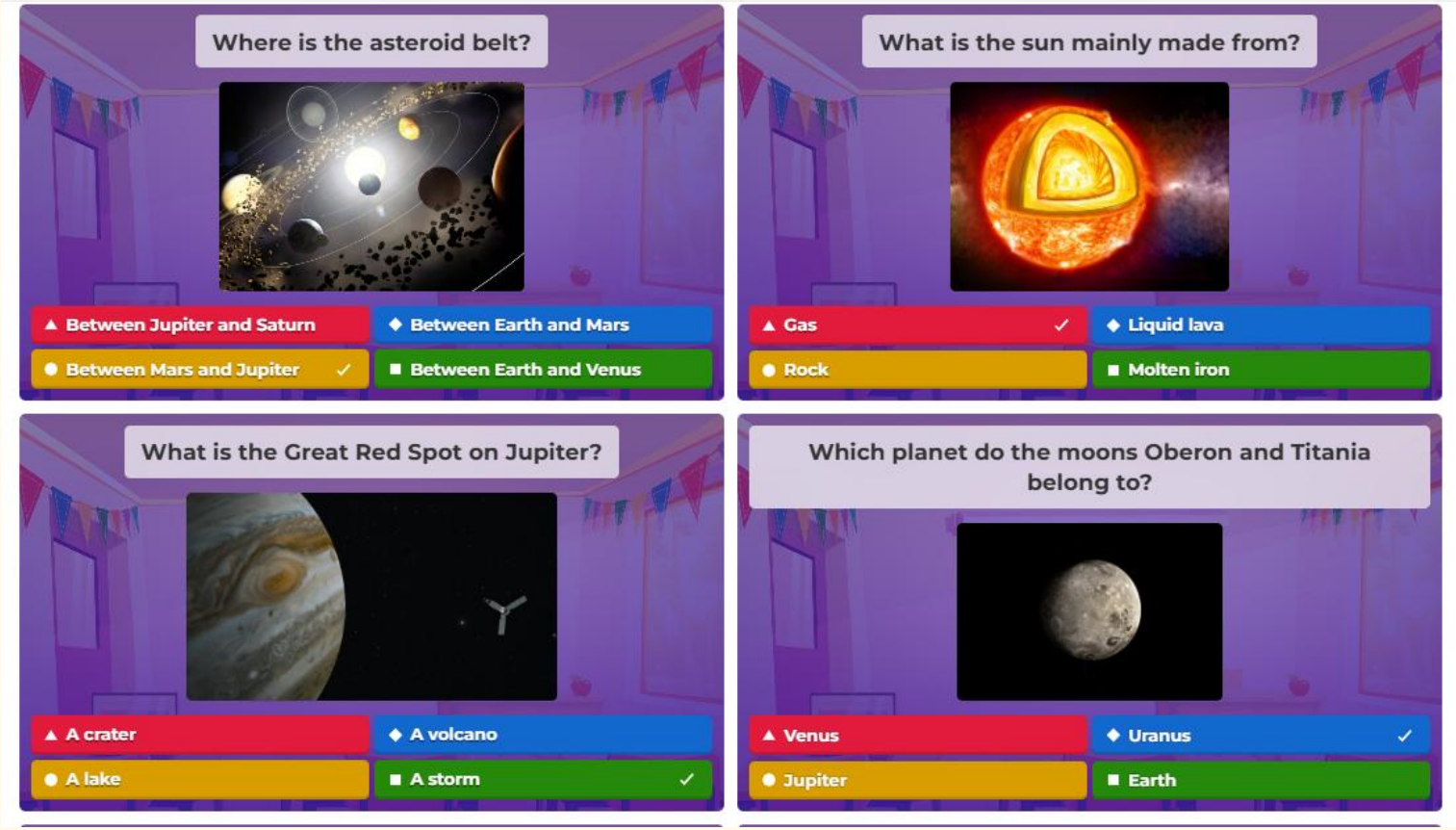
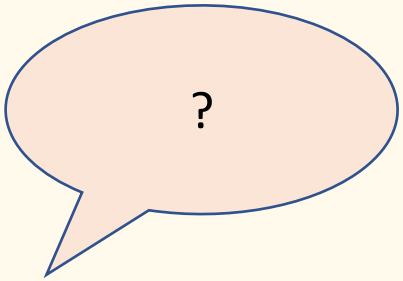
Kahoot

Pre or post unit
Often use both - linked to our assessment statements



www.kahoot.it

Questions, thoughts and comments







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Lunch 12.05-12.35

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Science and Oracy

Kulvinder Johal

Primary Science Teaching Trust

www.pstt.org.uk

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Oracy skills and the national curriculum

“Spoken language

The National Curriculum for science reflects the importance of spoken language in pupils’ development across the whole curriculum – cognitively, socially and linguistically. The quality and variety of language that pupils hear and speak are key factors in developing their scientific vocabulary and articulating scientific concepts clearly and precisely. They must be assisted in making their thinking clear, both to themselves and others, and teachers should ensure that pupils build secure foundations by using discussion to probe and remedy their misconceptions.”

Department for Education (September 2013)

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Oracy Education

The fourth ‘R’

The ‘golden thread’

Oracy Definition:

‘Articulating ideas, developing understanding and engaging with others through speaking, listening **and communication**’

Oracy Education Commission. (2024). We need to talk: The report of the Commission on the Future of Oracy Education in England. https://oracyeducationcommission.co.uk/wp content/uploads/2024/10/Future-Of-Oracy-v23-web-13.pdf

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Scientific Literacy

Scientific literacy is increasingly important:

- critical consumers
- evidence-base for decision-making

Oracy is a core element of scientific literacy, as a crucial means to support the development of scientific understanding and reasoning.

A new definition:

‘Scientific literacy for primary-aged children involves purposeful and active engagement with science ideas and real-world contexts, to **discuss and apply scientific thinking**.’

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Earle, S., Parfitt, A. and Read, S. 2025. Review of scientific literacy and oracy in primary school education. https://royalsociety.org/-/media/policy/publications/2025/review-of-scientific-literacy-and-oracy-in-primary-school-education.pdf

Building and Challenging Science Ideas

‘We need our young people to be equipped to:

- ask questions
- articulate ideas
- formulate powerful arguments
- listen actively and critically
- be able to disagree agreeably

Oracy Education Commission. (2024). We need to talk: The report of the Commission on the Future of Oracy Education in England. https://oracyeducationcommission.co.uk/wp content/uploads/2024/10/Future-of-Oracy-v23-web-13.pdf

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Facilitating discussion

Bright Ideas Time (TDTScience)

- Odd One Out
- HOT Question (Big Question)
- PMI
- Practical Prompt



10 minutes discussion slot

Encourage higher order thinking (HOT) in science

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EEF Improving Primary Science



Summary of recommendations

01 Develop pupils' scientific vocabulary	Identify science-specific vocabulary. Explicitly teach new vocabulary and its meaning, creating opportunities for repeated engagement and use over time.
02 Encourage pupils to explain their thinking, whether verbally or in written form	Create a collaborative learning environment. Capitalise on the power of dialogue. Cultivate reasoning and justification.
03 Guide pupils to work scientifically	Explicitly teach the knowledge and skills required to work scientifically, guiding pupils to apply this in practice, with opportunities for discussion and reflection.
04 Relate new learning to relevant, real-world contexts	Consider real-world contexts. Engage with science concepts supported by virtual models.
05 Use assessment to support learning and responsive teaching	Plan teaching that builds on existing knowledge and experiences. Monitor pupils' learning to inform responsive teaching, feedback, and next steps. Summarise what pupils have learned against planned criteria.
06 Strengthen science teaching through effective professional development, as part of an implementation process	Use a range of information to identify development priorities and professional learning needs. Consider factors of high quality professional development to plan or evaluate provision. Reflect on senior leadership support at the strategic to classroom level.

Education Endowment Foundation

Improving Primary Science Guidance Report | 04





Click on image to open full EEF report

What does EEF recommend?

‘impact can vary so it is important to get the detail right’

02
Encourage pupils to explain their thinking, whether verbally or in written form

1. Create a collaborative learning environment

Talk behaviours	Expectation setting	Task design
Listening skills Turn taking Respect	Shared rules – model: listening, thinking, clarifying Participation: paired talk	Small groups Scaffolding (I think…because…) I see… I notice… I wonder…

2. Capitalise on power of dialogue: ideas - science

Plan key questions (open Q)	Use strategic follow-up questions	Balance teacher/pupil voice
How did you…? Why does this…? What makes you think…?	Does anyone agree/disagree? Can you think of another reason? Why might that be the case?	Pause 5 sec for thinking time (take a sip)

3. Cultivate reasoning and justification (as they progress through primary school)

Explain (pairs/small groups)	Discuss (facilitated by teacher)*	Re-explain (time to review & update)
I predict… because…	What do we notice…? What would happen if…?	Think, pair, share Writing/ Recording/ Scribing

Common pedagogical strategies:

Making space for oracy-rich primary science

- A conducive class environment and time for the children to engage in extended discussions.

Opening out talk to build cumulative thinking

- Open questions and scaffolds to encourage scientific reasoning and explanation (sentence stems).

Prompts to spark the discussion

- Including teaching questioning, activities to instigate dialogue (Explorify), practical prompts and enquiries.

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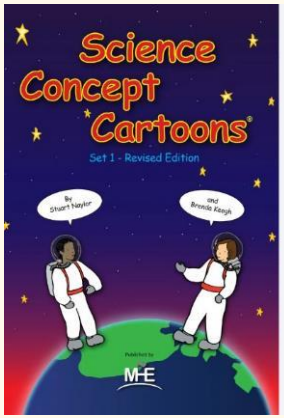
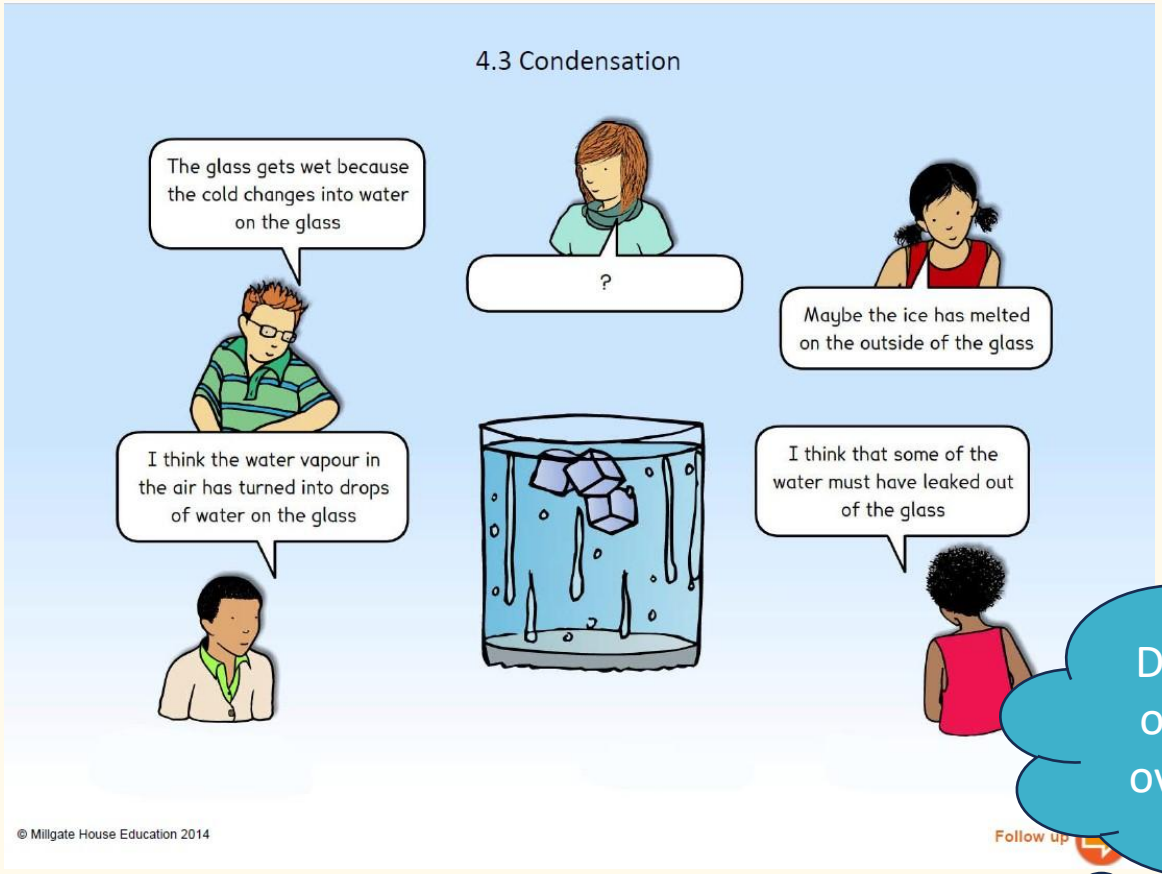
Earle, S., Parfitt, A. and Read, S. 2025. Review of scientific literacy and oracy in primary school education. https://royalsociety.org/-/media/policy/publications/2025/review-of-scientific-literacy-and-oracy-in-primary-school-education.pdf

Concept Cartoons





Do Concept Cartoons offer any advantages over other strategies?

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This content is freely available from RSC webpage:
https://edu.rsc.org/resources/science-concept-cartoons-condensation/1869.article

Which of these would you prefer? Why?



Vocabulary

surface

rough

smooth

contact

motion

movement

friction

Friction is a **force** that is created when two surfaces rub against each other:

- Smooth surfaces create less friction
- Rough surfaces create more friction

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Prompts for EYFS

I see...
I notice...
I wonder...



'I see...' is the beginning. Children look at the object, maybe draw it, and say what they see (an adult may need to prompt by saying, 'I see...'). If the object is an unfamiliar one this is a good place to spot misconceptions that may need to be addressed.

'I notice...' adds more detail and encourages children to put their ideas into words and select appropriate vocabulary. At this point they need to handle the object so that they can describe what they feel, hear and maybe even smell. If children struggle, adults can support and model vocabulary (very useful for children with English as an additional language or SEND).

'I wonder...' is the beginning of formulating questions and understanding different enquiry types. Children can then be supported to find out the answer.

Play, Observe, Ask: https://pstt.org.uk/resources/play-observe-ask/

These children were shown a pumpkin.



I see… a pumpkin.

I notice… it's smooth and it has bumpy edges. The bit on the top looks like a nose.

I wonder… if we put it in water, will it float?



I see… a pumpkin.

I notice… it's hard. It looks a bit like a tomato. It's bumpy.

I wonder… has it got seeds in like my pumpkin? I think every pumpkin's got seeds.

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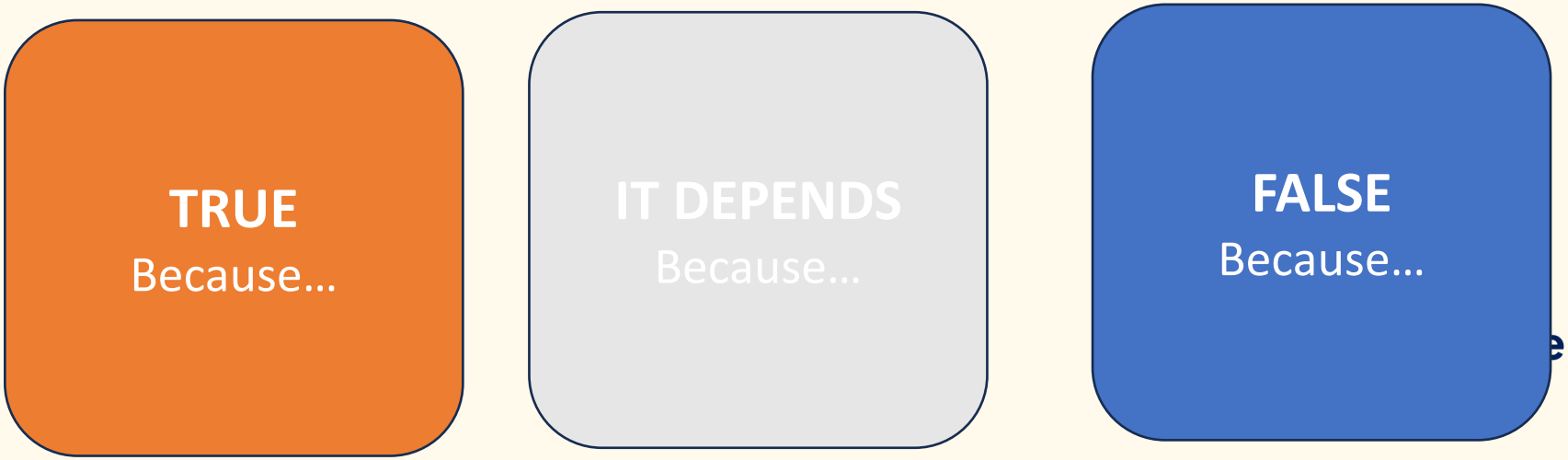
Play, Observe, Ask: https://pstt.org.uk/resources/play-observe-ask/

Scaffolding talk

True, False, It depends

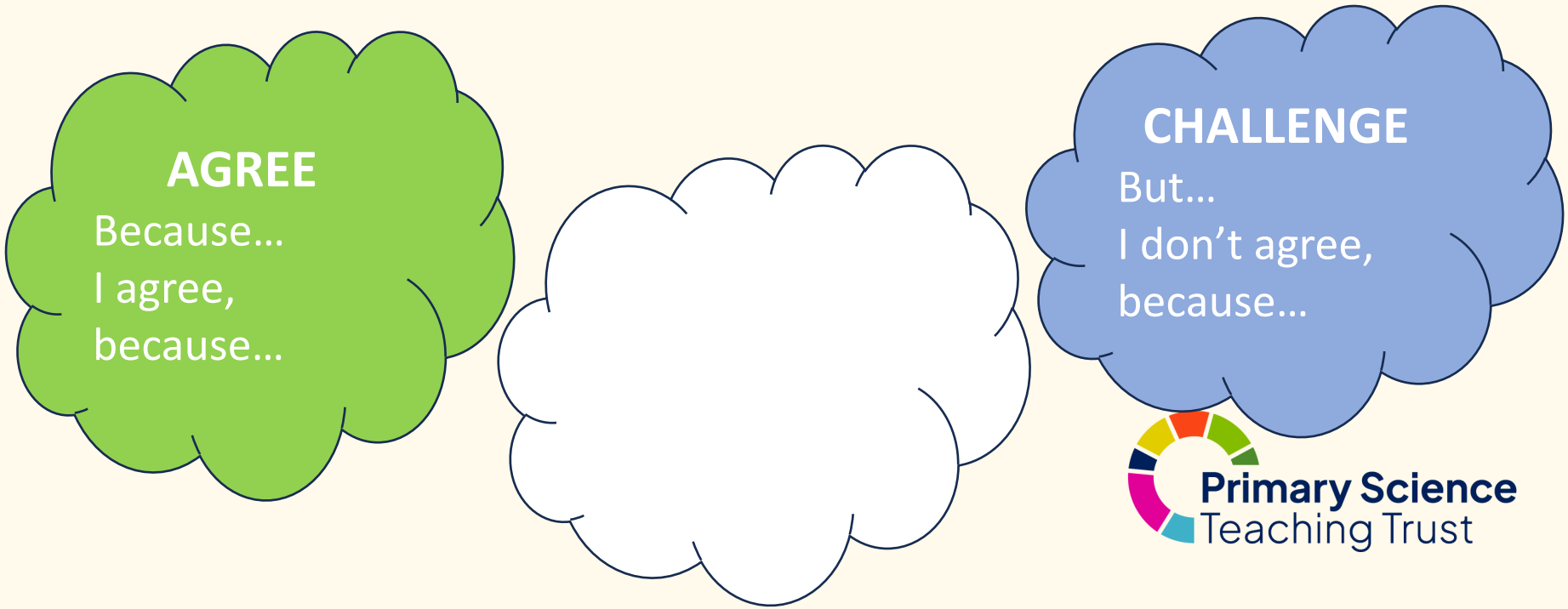
- *hand signals*
- *words displayed*
- *…could we use coloured post its?*
- *…might they just write their answer (or letter) on a white board?*



Scaffolding talk

Agree, **Build**, Challenge

- *hand signals*
- *words displayed*
- *…could we use coloured cards?*
- *…could we use sentence starters?*
  - *…would they be different for each phase?*



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Would you rather?

- Be a fish or a bird for the day?
- Live in the rainforest or a woodland?
- Use a magnifying glass or a telescope?
- Push a boulder up or down a hill?
- Wear a raincoat or use an umbrella?

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Would you rather



Would you rather be a bird or a fish?



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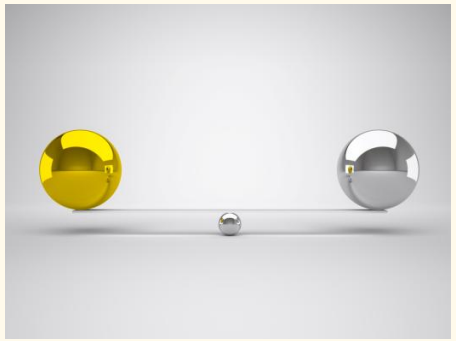
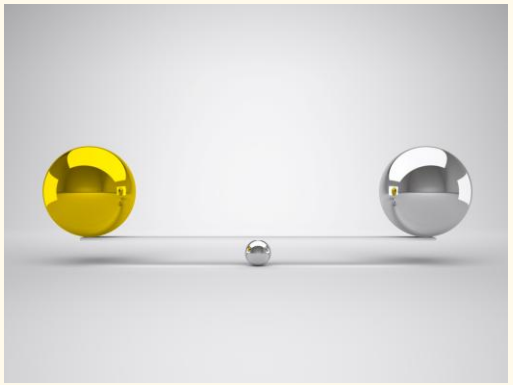
Would you rather



Would you rather be gold or silver?



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Would you rather



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Use puppets to encourage questioning and to clarify ideas





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Expert Interviewer Observer

Expert

Explains the science using the key vocabulary.

Interviewer

Asks the expert questions.

Observer

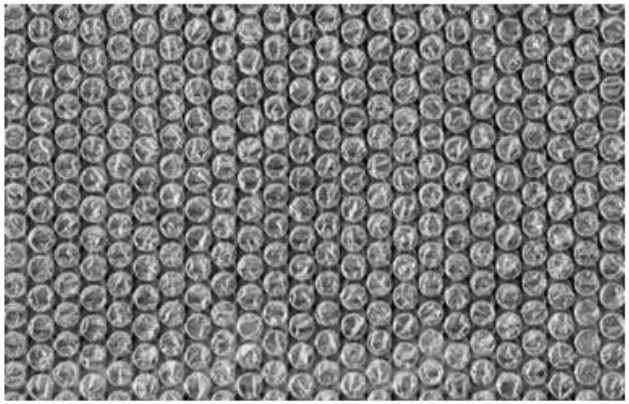
Listens and notes what vocabulary was used.

Vocabulary

attract repel magnetic magnet pole north south force iron cobalt nickel

https://www.bbc.co.uk/bitesize/topics/zvr3nrd/articles/zpvcrdm

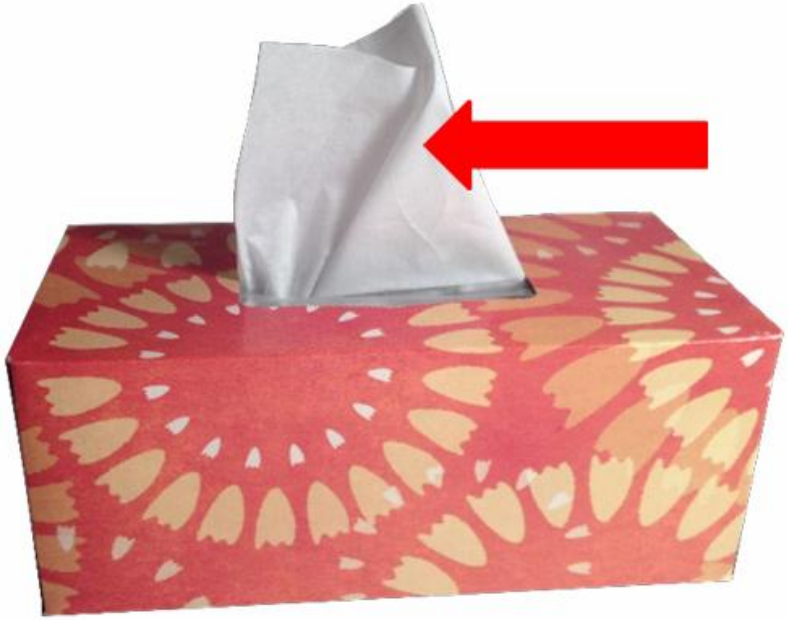
Odd One Out



bubble wrap



aluminium foil



tissue

Drama as a tool for talking

- Pollination
- Planetary motion
- Dissolving
- Circulation system
- Electric current
- Evaporation



© PSTT – TAPS – Orbit explanation

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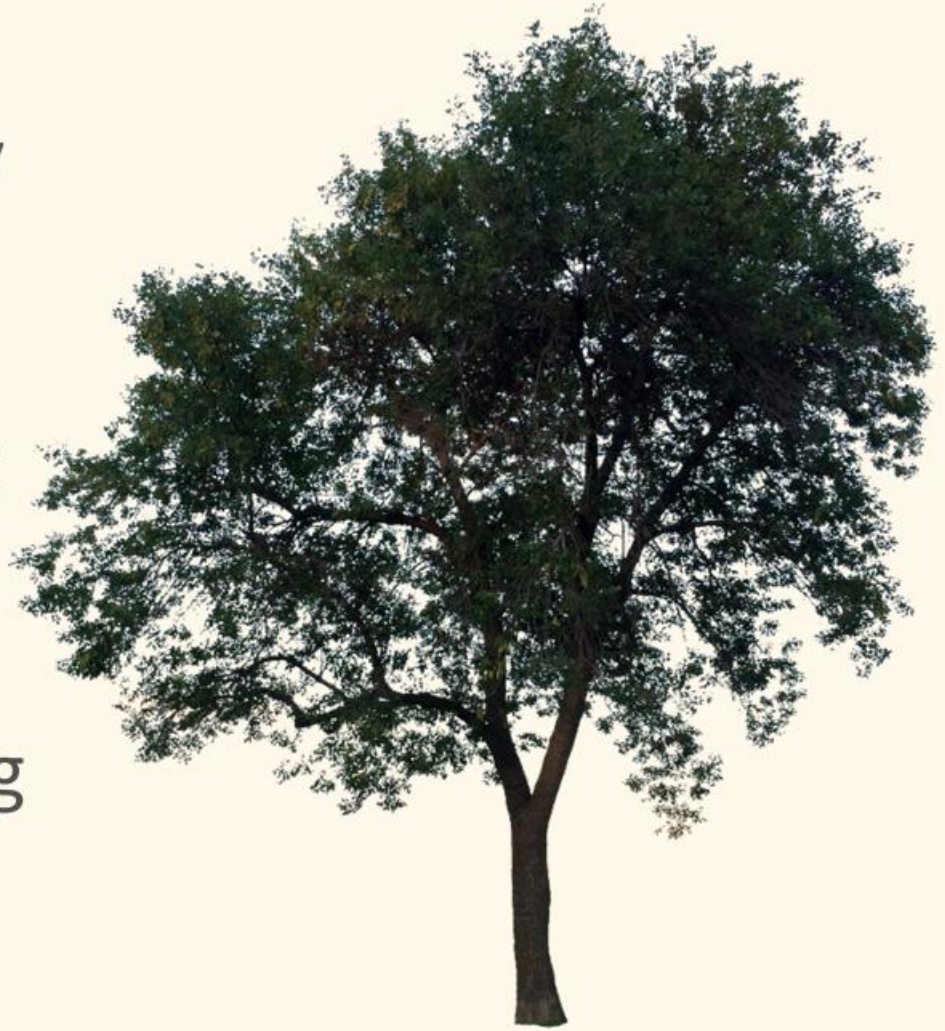
https://pstt.org.uk/download/2964/?tmstv=1676988737

HOT Question

I planted a tree in my garden 4 years ago.

It now weighs 250 kg more.

Where did this 250 kg come from?



A Big Question

An example of a **HOT (Big) Question** from Rush Common Primary School:



Where did the mass of the large tree come from?

'The roots drink water and eats the nutrients to keep it alive and grow.'

The leaves suck in the sunlight and convert it to energy, using the chemical, chlorophyll. This process is called 'photosynthesis.'

'The tree weighs more because of food and water it has eaten in past years. The tree doesn't have a mouth, so the grass collects all of the food and water then it goes down to the roots also the tree likes rain better than house pipe water.'

It has come from the branches.

More HOT questions to make you THINK

Is a flame alive?

How do you know the person next to you is alive?

Where does a puddle go?

Where does sugar go when it is dissolved in water?

Why are insulators as important as conductors?







Positive Minus Interesting (PMI)

Scenario:
People have their own plant-like green skin, so they can create their own food in sunlight.



P: the positives
M: the minuses
I: the interesting associated ideas

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Positive Minus Interesting (PMI)

Question: People have their own plant-like green skin, so they can create their own food in sunlight.		
Plus (P)	Minus (M)	Interesting (I)

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Positive Minus Interesting (PMI)

People have their own plant-like green skin, so they can create their own food in sunlight.

Positive
- People wouldn't starve.

Interesting
– Would diabetes be a problem or not? Would you not need sleep?



Minus
-You might not be able to lie still to sunbathe – you'd get a sugar rush and have to run around!

P: the positives
M: the minuses
I: the interesting associated ideas

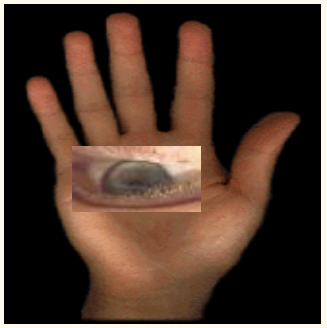
More PMI



Only humans are left in the world



Living on the moon



An eye in the middle of your hand



A chocolate teapot



Plants can walk



A world without fiction

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Always, Sometimes, Never

Rice is a solid

Toothpaste is a solid

Salt and sugar are both liquids

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Always, Sometimes, Never

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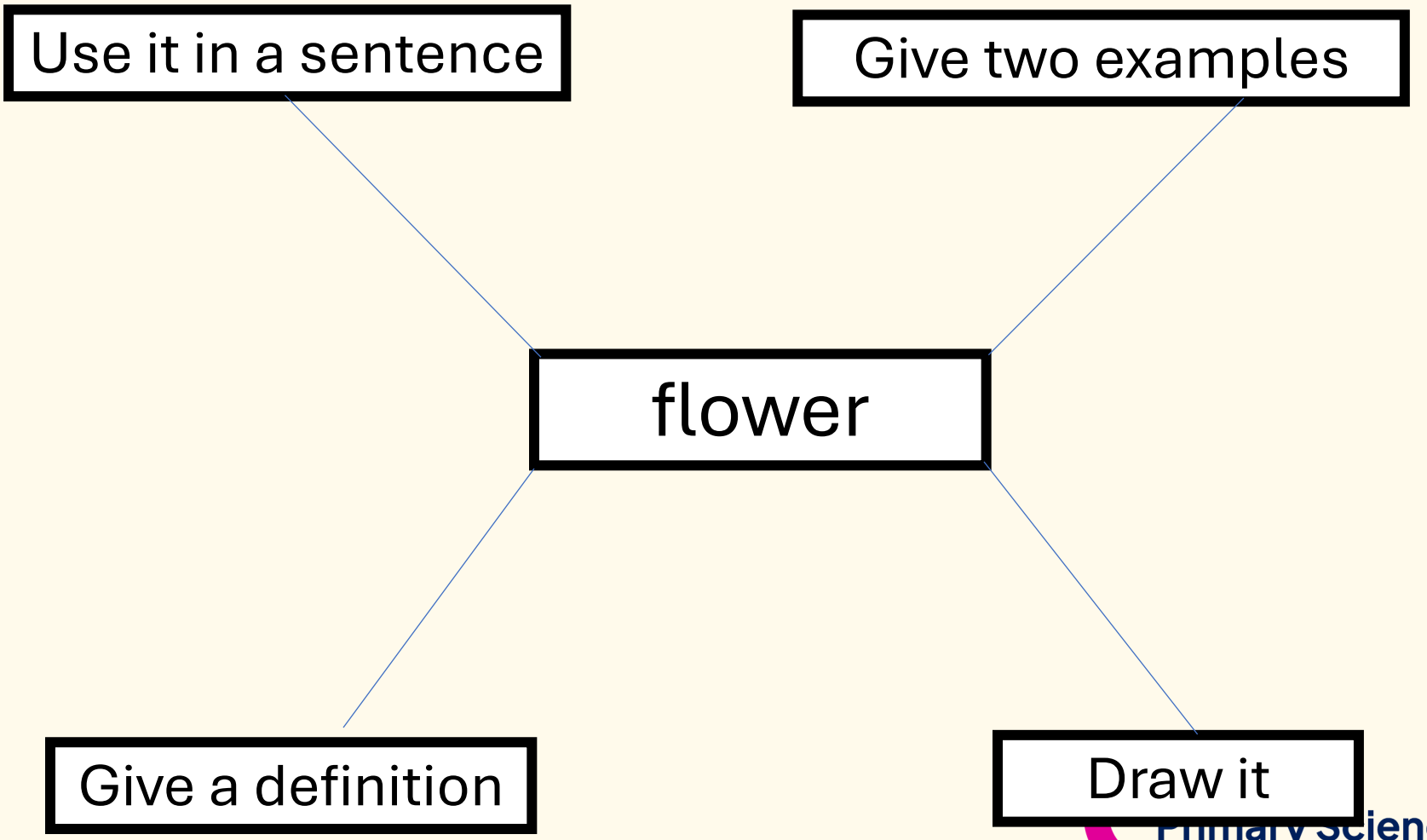
Frayer Model



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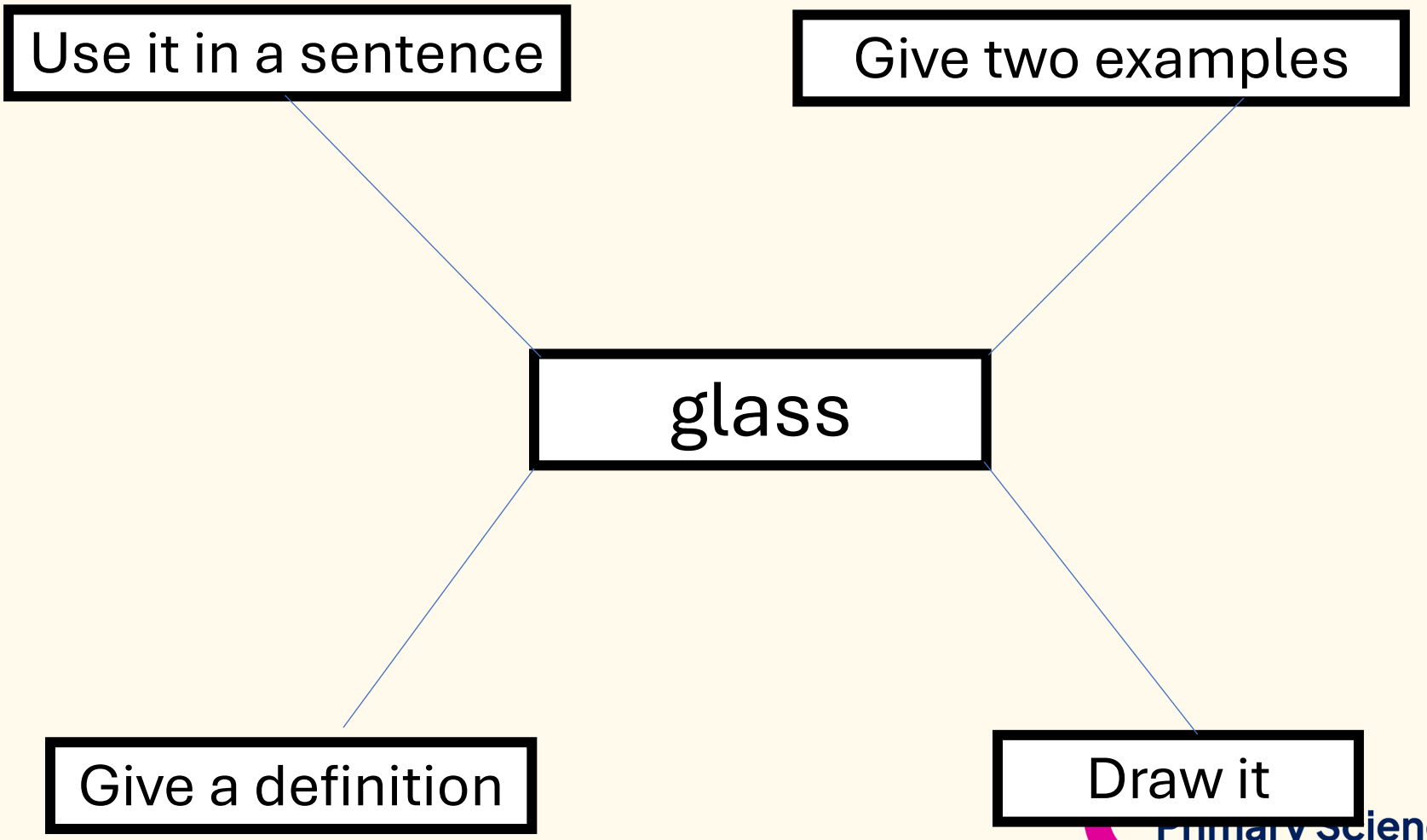
Frayer Model



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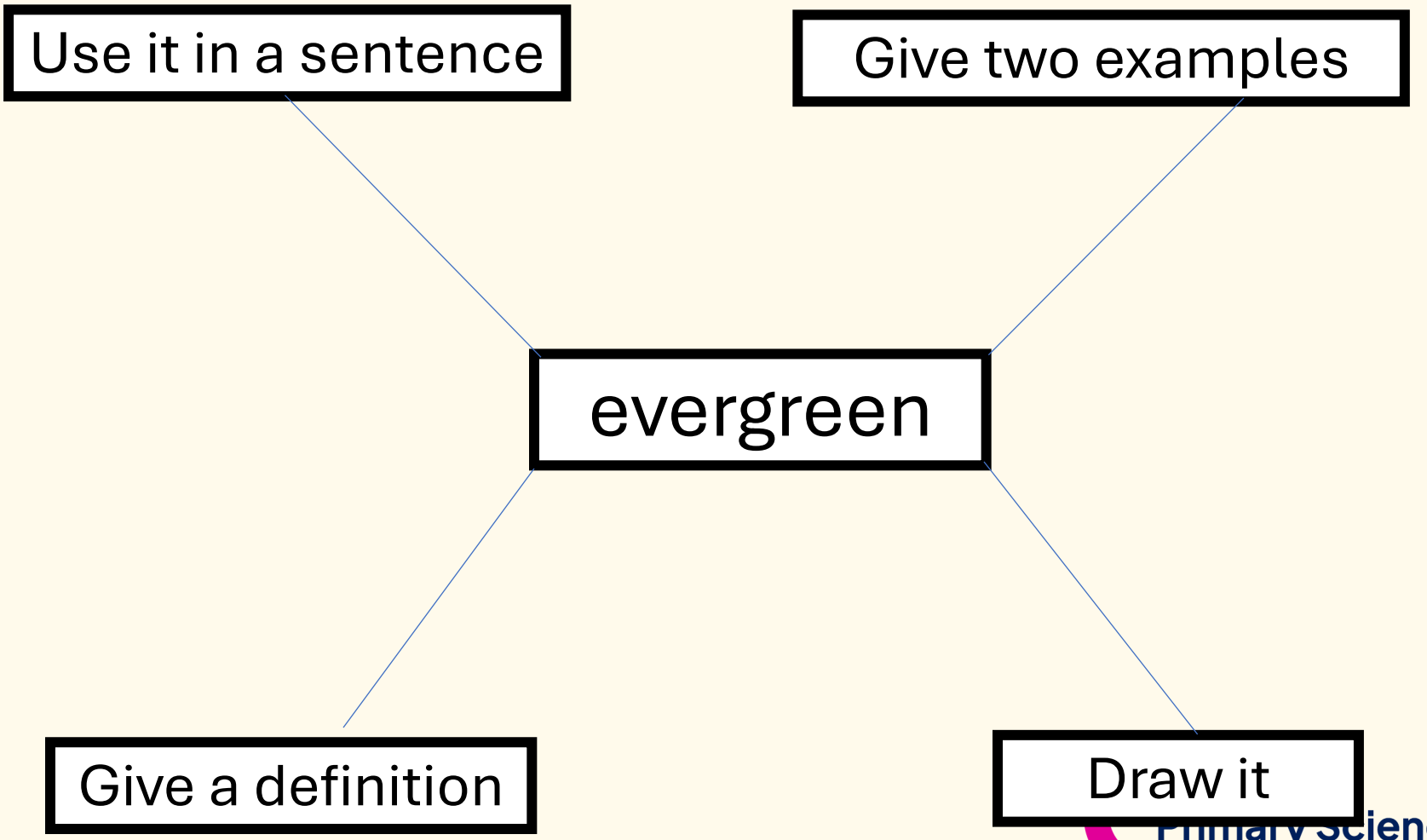
Frayer Model



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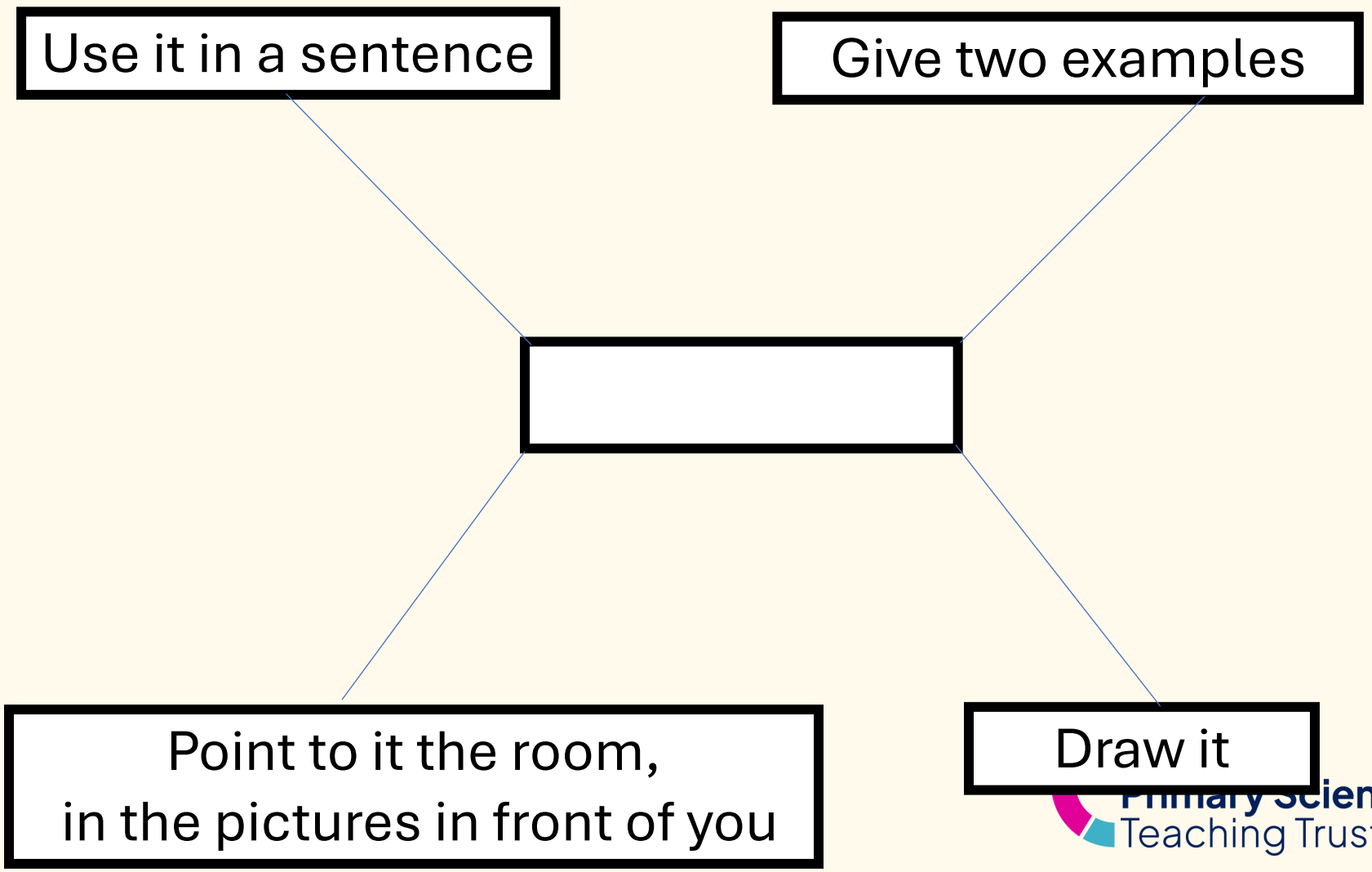
Frayer Model



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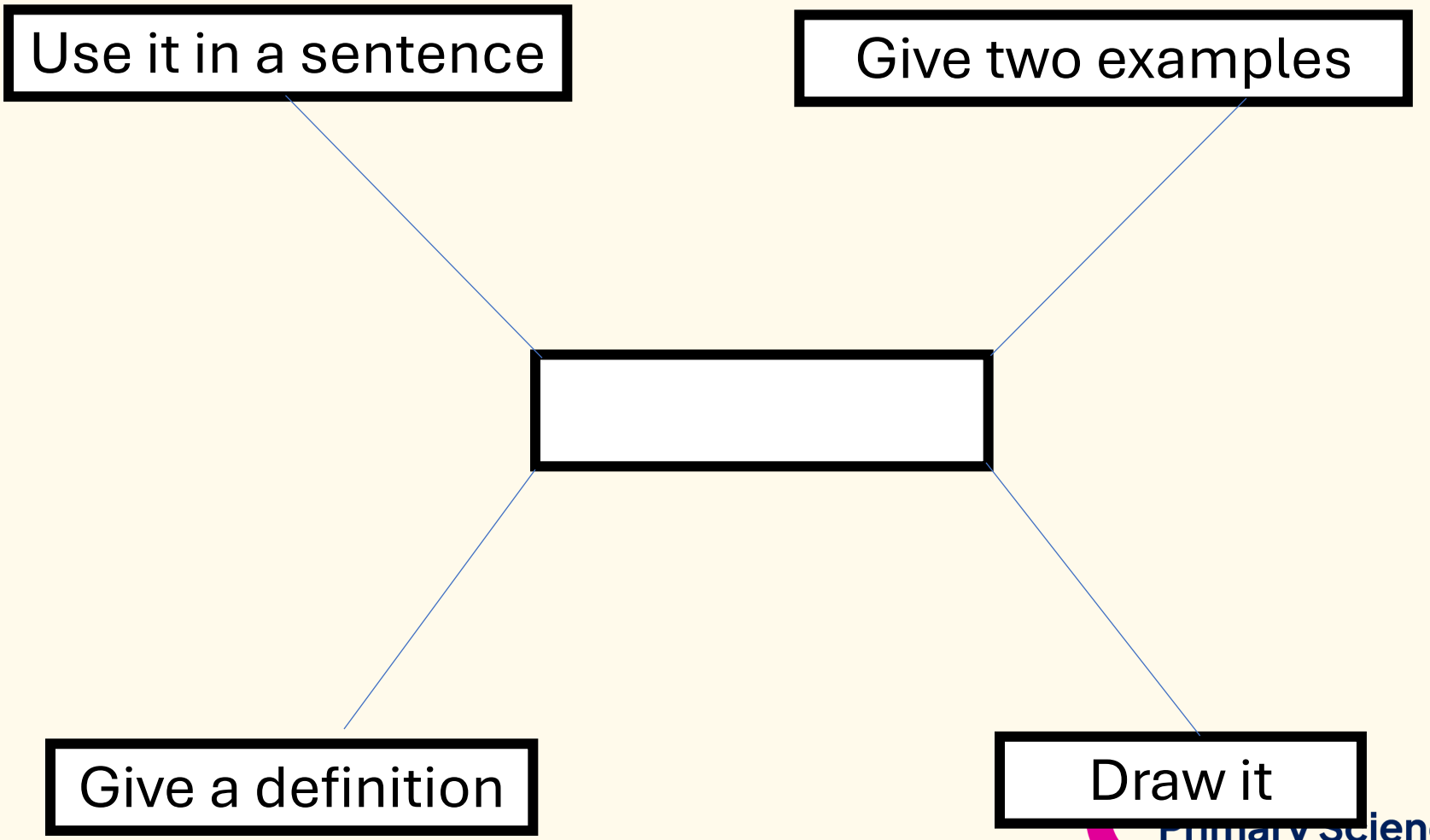
Frayer Model



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Great Science Talking Prompts

Reacting Behaviours

Supporting

When you say you agree with someone or like their idea

That's a good idea!
Yes, I agree with you!
I like what you say.

Disagreeing

When you say you don't agree with what someone is saying

I disagree with what you say.
I don't think that's right.
I don't think that will work.

Clarifying Behaviours

Summarising

Bringing together what has been said in a shorter way

So if we put all the ideas together, what we have said is...

Testing Understanding

Checking you've understood and that others understand you

Do you mean that...
Can I check you've told us that...

Giving Information

Telling people things

The facts are...
The information I have is...
What we know is...

Seeking Information

Asking questions and trying to find things out

Do you think that...?
Can you tell me a bit more about that?
Why do you think that?

PMI – activities



Bright Ideas- PMI

https://pstt.org.uk/resources/bright-ideas/

Explorify

What If?







https://explorify.uk/teacher-support/how-to-use-explorify/top-tips-what-if-activities

Royal Society - Scientific literacy and oracy in primary school education

1. Presenting and performing (oracy focus)
2. Debating (oracy focus)
3. Written work and art (scientific literacy focus)

Whitehall Park School	Will improving our knowledge of the components of food, improve our eating habits?	Students prepared a mix of poster presentations, role plays, and rap performances to showcase their learning and creativity.
Horfield CEVC Primary School	Can we power the reading cabin in our school grounds with renewable energy?'	Year 6 students composed and recorded a song, 'No Matter What', which they shared widely on social media. Their song was used in a film made by the Avon Wildlife Trust to celebrate the school making a difference by using its grounds to promote biodiversity.

https://royalsociety.org/news-resources/publications/2025/scientific-literacy-oracy-rapid-literature-review/?utm_source=email&utm_medium=educatiomnewsletter&utm_campaign=jan26&_cldee=xbCLA2sFl-TV4pzd2-uHrkei0t3qmW0ufHp3bYGXBe-5ldVFgyJog3yYD-tWBOHi&recipientid=contact-d6502e7c7305eb11a813000d3a7f4a6b-da53bcdffb1445d2851c2d493d363d4c&utm_source=ClickDimensions&utm_medium=email&utm_campaign=Education%20UK%20teachers%20newsletter&esid=317b0717-2eea-f011-8406-0022484188ab

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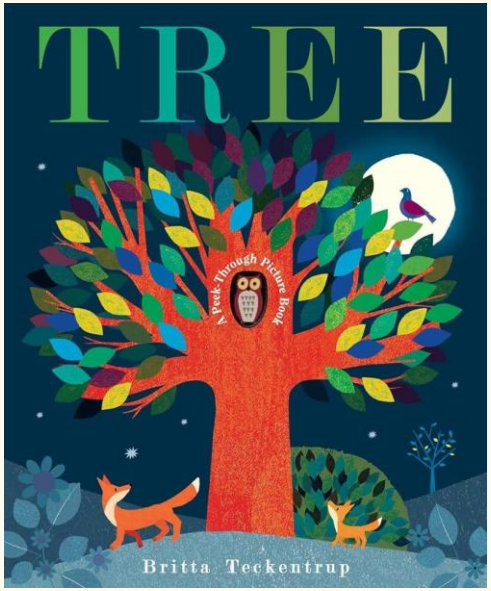
Additional activity suggestions

- School assemblies
- Small groups in class each present one area of their research for 5 minutes.
- Parents' evening
- Local or national press
- Stands at events
- Rapping and singing

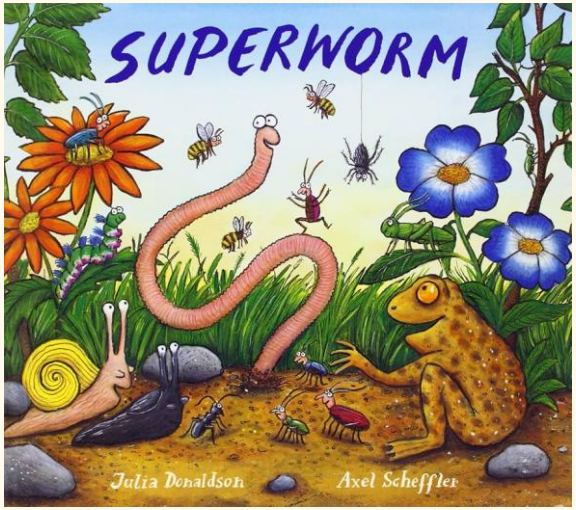
https://royalsociety.org/news-resources/publications/2025/scientific-literacy-oracy-rapid-literature-review/?utm_source=email&utm_medium=educatiomnewsletter&utm_campaign=jan26&_cldee=xbCLA2sFI-TV4pzd2-uHrkei0t3qmW0ufHp3bYGXBc-5ldVFgyJog3yYD-tWBOHi&recipientid=contact-d6502e7c7305eb11a813000d3a7f4a6b-da53bcdffb1445d2851c2d493d363d4c&utm_source=ClickDimensions&utm_medium=email&utm_campaign=Education%20UK%20teachers%20newsletter&esid=317b0717-2eea-f011-8406-0022484188ab

Science & Stories – different approaches

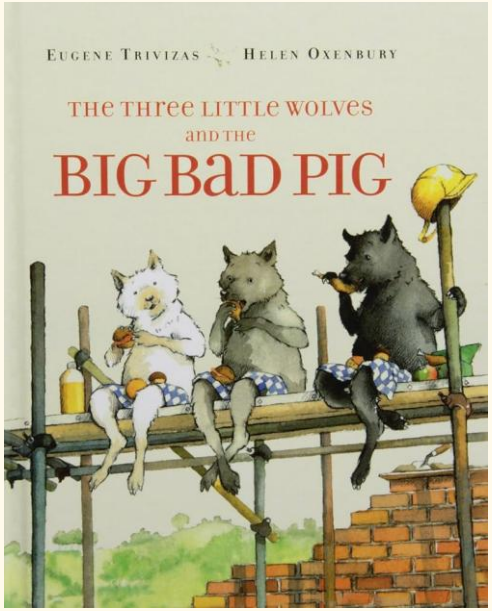
- Stimulus for discussion or exploration



EYFS – What trees do we have in our school grounds? Are they all the same? How do they change?



Y1 – Which of these animals are in our school grounds? What are the similarities and differences between them? How could we sort and group them?



Y2 – What do we know about materials? Which materials have the right properties for building a home? Which don't?

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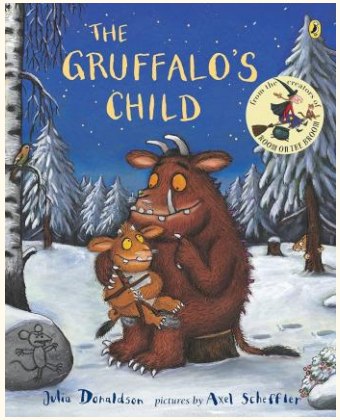
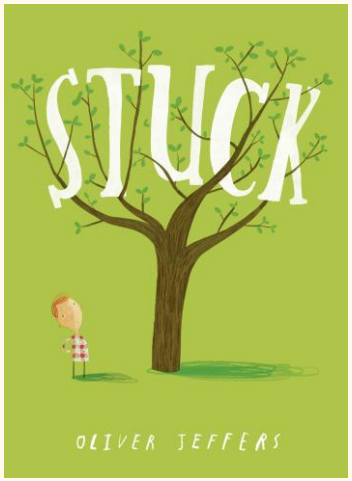
Science & Stories – different approaches

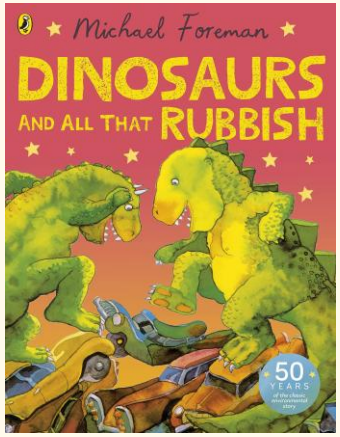
- Stimulus for discussion or exploration



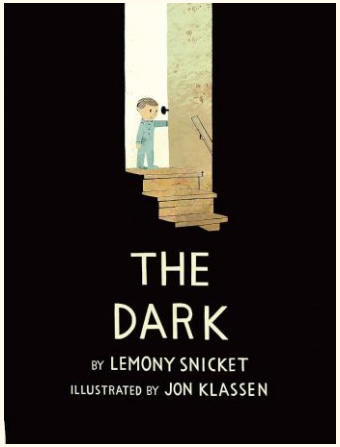
Y3 – Why was the mouse's shadow so much bigger than the mouse? How can we change the size of our shadows?



Y5 – What forces are acting on the kite? Why isn't gravity pulling it down to the ground?



Y4 – What impact are we having on our local environment?



Y6 – How does the dark behave? How does the light from a torch travel?

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Talk for just a minute on……

- The parts of a plant
- Friction
- Electricity
- How light travels.
- Uses of materials
- Animal adaptations
- The circulatory system
- Our senses
- Cleaning water
- Irreversible and reversible changes

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Establishing group talk rules

	Traffic light
We will take turns to talk and to listen	
Everyone will talk as loudly as they can	
We will ask people for reasons	
No one can change their mind	
We will share all our thoughts	
Everyone must do what the leader says	
If you don't agree with someone you can ignore them	
We will keep ideas to ourselves so no one can copy	
The person who is writing chooses what happens	
The person who is speaking decides who speaks next	
Whoever has the best idea can be in charge	

Which talk rules will you make for your group?

Adapted by Alison Eley from 'Talk Box' by L. Dawes and C. Sams (2004)

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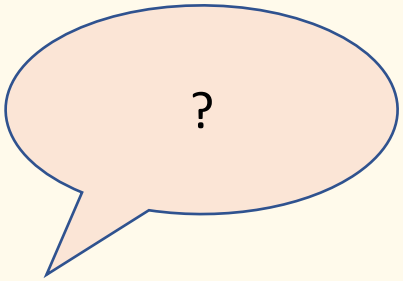
https://pstt.org.uk/resources/i-can-explain/

Questions, thoughts and comments







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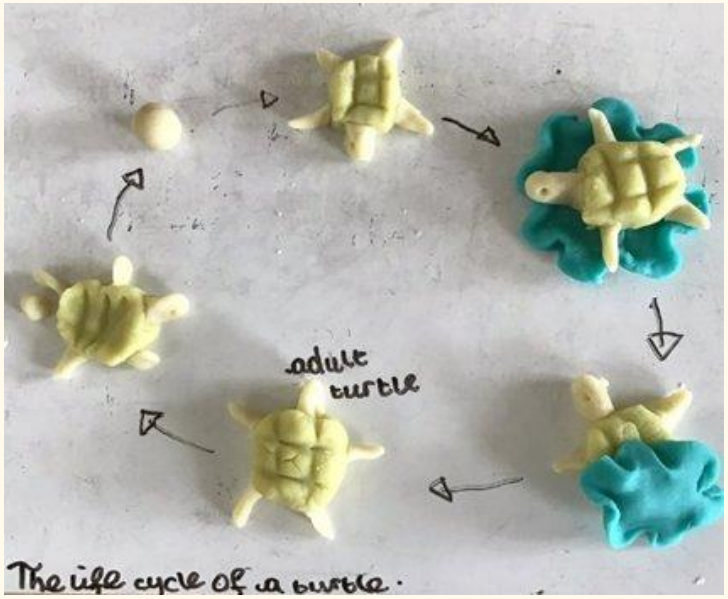
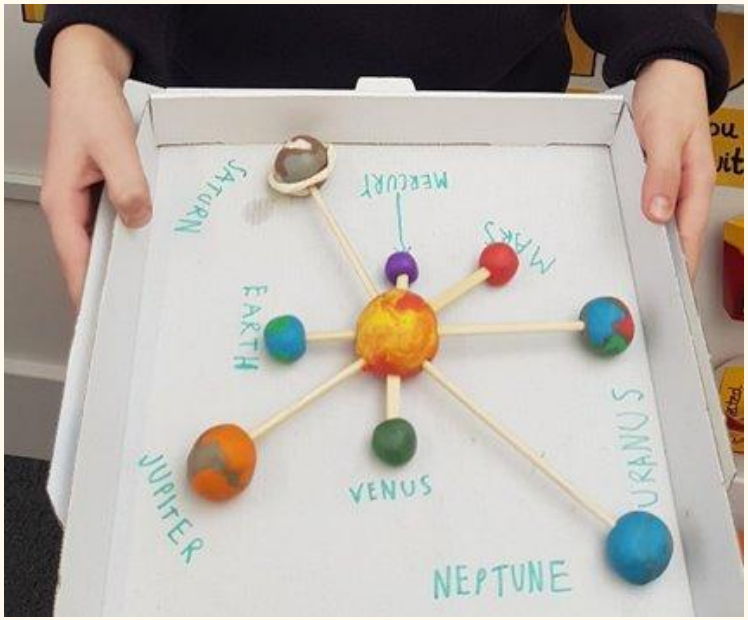
Let's Play Doh





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Benefits of Play Dough

- Self-regulation
- Creativity
- Coping tool
- Fine and gross motor skills
- Rapport building
- Addressing tactile defensiveness
- Life skills

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Making our own Play Dough

Equipment per child

- 2 tablespoons of salt
- ½ teaspoon of cream of tartar
- 1 teaspoon of vegetable oil
- ¼ cup (4 tablespoons) hand hot water
- ½ cup plain flour
- I bowl
- I spoon

Equipment per class

- Measuring cups and spoons
- Cling film
- Food colourings
- Pipettes (if using regular food colouring)
- Coffee stirrers (if using gel food colouring)

The finished amount will be a ball approximately 5cm in diameter.

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Procedure



1. Measure the salt, cream of tartar, vegetable oil and sufficient food colouring (see ingredient notes) into the bowl.
2. Add ¼ cup of hot water and mix using a spoon.
3. Add the flour and mix again using the spoon to combine the ingredients.
4. Once combined use your hands to knead the dough until it is completely mixed and holds together.
5. If the mixture is too wet add more flour, too dry more warm water and knead again.
6. If making in advance, wrap in cling film until required.

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Where does Play Dough fit on our curriculum

Long Term Science Plan

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Yr 1	Seasonal changes	Animals including Humans	Everyday materials	Plants		Seasonal changes
Yr 2	Living things and their habitats	Electricity	Animals including Humans	Uses of everyday materials	Plants	
Yr 3	Animals including Humans	Forces and magnets	Rocks	Light	Plants	
Yr 4	Animals including Humans	Electricity	States of matter	Sound	Living things and their habitats	
Yr 5	Properties and changes of materials	Properties and changes of materials	Earth and space	Animals including Humans	Forces	Living things and their habitats
Yr 6	Living things and their habitats	Animals including Humans	Evolution and inheritance	Light	Electricity	Independent Project

Where does Play Dough fit on our curriculum?

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Where does Play Dough fit on our curriculum

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Yr 1	Seasonal changes Leaf pressing Leaf modelling	Animals including Humans Making animals	Everyday materials Mark making Describe material and texture Properties		Plants Parts of a plant	Seasonal changes
Yr 2	Living things and their habitats Make life cycles Model Food chains		Animals including Humans	Uses of everyday materials Bending, twisting, squashing	Plants Growing medium?	
Yr 3	Animals including Humans Modelling	Forces and magnets Is it magnetic?	Rocks Make different rocks Make Fossils Leaf imprints	Light Make Shadows	Plants	
Yr 4	Animals including Humans	Electricity Conductors	States of matter Changing states from liquid to a solid	Sound Does sound travel through it?	Living things and their habitats	
Yr 5	Properties and changes of materials	Properties and changes of materials Reversible/irreversible change	Earth and space Model	Animals including Humans	Forces	Living things and their habitats
Yr 6	Living things and their habitats	Animals including Humans	Evolution and inheritance	Light	Electricity	

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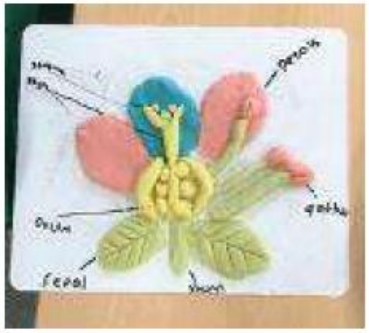
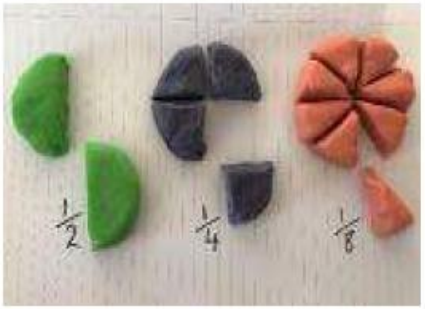
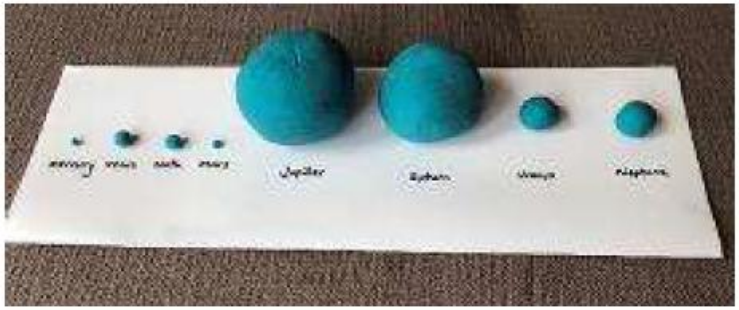
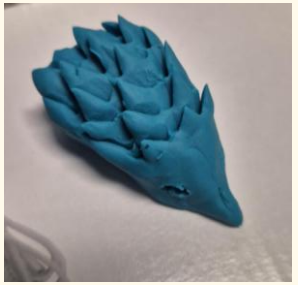
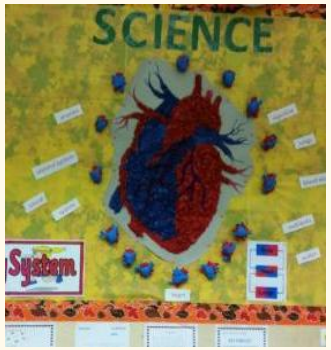
Where does Play Dough fit on our curriculum

		
Modelling teeth	*Modelling parts of a flower*	*Sculpture*
		
Modelling life cycles	*Fractions*	*Inside our earth*
		
Relative sizes of the planets	*Mock-ups in DT projects*	

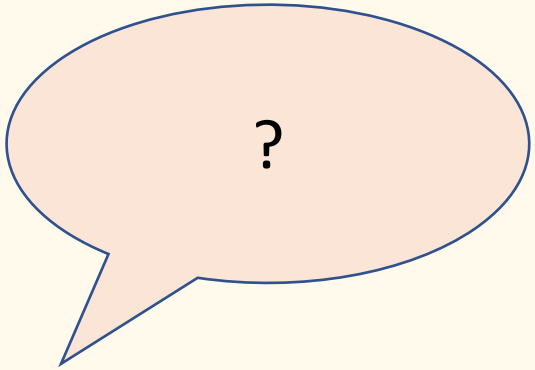


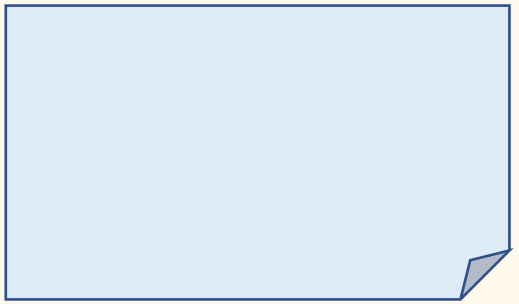


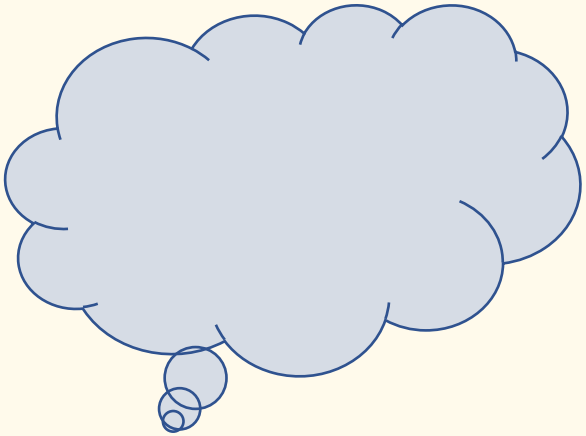




Questions, thoughts and comments







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Reflection time



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Key Take aways from today

What change/s are you going to make?

What will you do today?

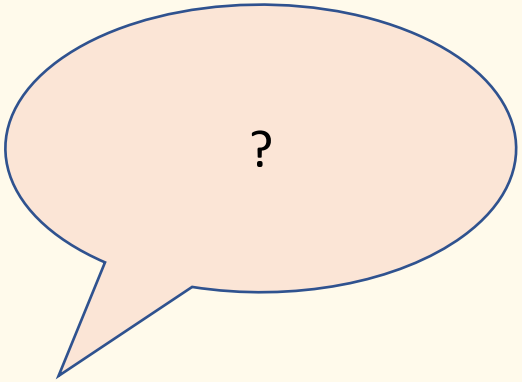
Tomorrow?

Next week?

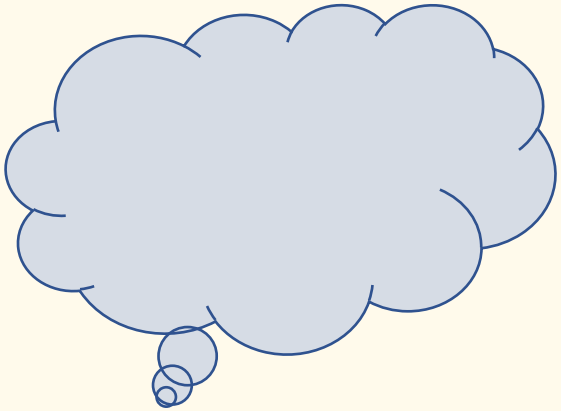
Next term?



Questions, thoughts and comments







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Regional Mentor Support Session
Feedback Form