

Ormskirk C.E Primary School – Science Flowchart

Revisit and retrieval

Begin the lesson by recapping previous learning and vocabulary.
Use of knowledge organisers.
Short retrieval task

Big questions/ Awe and wonder

Wow moment to engage children.
Child – led enquiry.
Capture the children's curiosity.

Discover and investigate

Investigate and discover about the learning objective.
Make predictions.
Practical investigations

Explain and evaluate.

Discuss findings and address any misconceptions.
Revisit predictions
Encourage children to draw conclusions and recognise relationships.

Scientific enquiry will be taught from Early years up to year 6. Children will know which strand they are using. Use the symbols in your lessons to allow children to make links.

Stem Sentences

I can see ____.
I think ____ because ____.
I wonder ____.
Why/how/what/where ____?

I predict ____ because ____.
I expect to see ____ because ____.
We want to test ____ to find out if ____.
To find out ____ we could ____.
If we change ____ then ____.
It is a fair test because ____.
The ____ variable is ____.

My results show ____.
I found out that ____.
I was surprised when ____ because ____.
The similarities/differences between ____ and ____ are ____.
Based on ____ I can conclude / predict that ____.
The pattern I noticed is ____.
I made a marvellous mistake when ____

Object / picture / video.
I see, I think, I wonder.
Explorify: Odd One Out, Zoom In Zoom Out, What's Going On?
Explore: provide children with a purpose for investigating.
Can you prove them right / wrong?
Explore the curiosity cube.
Consider an imaginative / real life question or problem.
What other questions do the children have? What would they like to find out?
Big questions the children can discuss.
Use of concept cartoons

Key scientific questions are answered through a learning activity / practical investigation.
Working together with small groups or partners.
Key scientific vocabulary is explored and displayed as it arises.
Enquiry type is identified using enquiry using symbols.
Identify and address children's misconceptions.
Provide opportunities for children to plan investigations.

Lots of opportunities for talk using STEM sentences and scientific vocabulary.
Discussing and learning from mistakes.
Teacher modelling.
Opportunities are created for children to record scientific findings, using graphs and scientific write-ups.
Earwig is used to capture children's discoveries and reflections.
Children discuss what they want to find out next? To inform next steps.
Record in a variety of ways.

Comparative / fair testing
Changing one variable to see its effect on another, whilst keeping all others the same.



Research
Using secondary sources of information to answer scientific questions.



Observation over time
Observing changes that occur over a period of time ranging from minutes to months.



Pattern-seeking
Identifying patterns and looking for relationships in enquiries where variables are difficult to control.



Identifying, grouping and classifying
Making observations to name, sort and organise items.



Problem-solving
Applying prior scientific knowledge to find answers to problems.



Working Wall: Displayed as a journey and added to each week (a progression of learning).
Children's questions, predictions, key vocabulary, stem sentences, variables, enquiry superheroes, marvellous mistakes, a celebration of findings. Assessment is ongoing using questioning and discussion. The use of Earwig and a variety of ways of recording so it is inclusive to all learners. Assessment completed after each unit of study and recorded on the EXCEL spreadsheets.