

QUESTIONING

The key to effective STEM learning



THOUGHTFUL QUESTIONS

Open up Conversations

Extend Learning

Foster Interest and Curiosity



Children are naturally curious, but it's not enough for them to develop their STEM skills and knowledge. Children need adults to build on their interest in the world around them. When children notice things or do things, we can make these experiences rich learning opportunities by asking questions.

Asking questions that focus on 'WHAT' children can see or do, rather than 'WHY' allow children to confidently answer and experience success. 'What is happening to the bubbles?' is much easier to respond to than 'Why do the bubbles stick together?' and promotes further discussion between children and adults.

Asking questions affords children opportunities to describe and explain things and for adults to elaborate, extend and/or model new vocabulary. These exchanges are key to developing children's language as well as their interest in STEM.

Blank's levels of questioning* are a helpful way to scaffold our questions, moving from the concrete to the abstract.

Level 1 - Focus on salient features

What is it?
What are you doing?
What can you see?

Level 2 - Focus on the details and less salient features

Can you describe it?
What size/shape/colour is it?
How many ... does it have?
What does it taste/smell/feel/sound like?
Where is it?

Level 3 - Generalisation and explanations

What do you think it means?	How can we tell?
What did you try?	What comes next?
What will happen next?	What is missing?
	Is it the same/different?

Level 4 - Predict, reason and problem solve

What will happen if ...	Who could we ask?
What else could it be?	Could you do it a different way?
What could you use instead?	What would you do next time?
Where could we find out...?	