

Language prompts to help children explain

Why do you think that?

What is your reason for that?

How do you know?

What is your evidence?

Do you have any other evidence for that?

Can you think of another reason for your idea?

Can you think of any reasons why your idea might not be right?

What reasons might someone else have?

Can you explain why you do not agree with me?

Why might that not be true?



Progression in explaining

Expressing an idea or claim to knowledge

Children can describe what they have done and say what they think. Their description is consistent with what they have actually done.

“I have put all the noisy things together”
“I think the sun is hotter than the ice cube”

Giving simple justifications for ideas

Children can explain what they think, giving a reason that makes sense, although it may be subjective or not be based on actual evidence.

“I think the firework is loud because it is really dangerous”
“I think the barrel will float as it is wooden”
“The fox is hungry so it will eat the bird”

Justifying explanations with evidence

Children can explain what they think, using objective evidence to support their ideas and explanations.

“I think the barrel will float as it is made of wood and wood floats”
“The lava must be hotter than boiling water as lava is melted rock and a rock doesn't melt in boiling water”

Using evidence to justify disagreement

Children use objective evidence to support their explanations about why they do not agree with another child's idea.

“The fox won't eat the bird as it will be easier to catch the hedgehog because the bird can fly away.”
“I don't agree that the barrel will float because it is made of wood as it depends what is inside the barrel.”

Applying knowledge to justify an explanation in a new context

Children transfer ideas from one context to another. They use knowledge learned in one situation to support the explanations they generate in a different situation.

“I think the temperature on the moon in the day will be different from the night because that is what it is like for us on earth.”
“Big metal ships float and they must be really heavy so if that barrel is floating it doesn't mean it isn't heavy.”

Adapted by Alison Eley from 'Talk Box' by L. Dawes and C. Sams (2004) and 'Ideas, Evidence and Argument in Science (IDEAS) Project' by J. Osborne, S. Eduran and S. Simon (2004)

