

Barefoot

 Computing at School

These cards provide key questions to prompt discussion in your classroom linked to the Barefoot computational thinking concepts and approaches.

'Computational Thinking' is a set of problem solving skills that we can use in everyday life.

Instructions: 1. Print on good quality card or paper. 2. Cut out and fold each concept card in half. 3. Hole punch where indicated and thread on key ring loop. 4. Add to lanyard. (You could laminate)

Collaboration



Playing and working collaboratively

Prompts and questions

- What shall I do? Good idea, I will get...
- Who did you work with?
- Whose turn is it?
- Do you have the same as...?
- Who can you work with to change this?

Creating

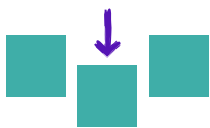


Making things, checking and fixing things

Prompts and questions

- How did you make that?
- Show me what it does.
- Did you test it?
- What do you like about yours?
- Does it work as you wanted it to?
- I wonder how it could be better?
- What could you do to change it?

Tinkering

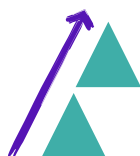


Playing and exploring

Prompts and questions

- Have a go...
- Why don't you try...
- What do you think will happen?
- I wonder what might happen if...

Persevering

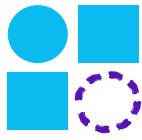


Learning from mistakes and not giving up

Prompts and questions

- Self-talk / model how you (the adult) is persevering with something tricky or challenging
- Which part is tricky?
- How can we fix the tricky part?
- Let's try and finish what we have started

Pattern



This includes comparing, grouping, spotting similarities and differences and working out rules

Prompts and questions

- Are these (objects, pictures etc.) the same?
- What is the same / different about them?
- Can you explain the pattern?
- How can we continue the pattern?
- Is there a mistake in this pattern?
- I wonder how we could fix it...
- Could you make your own pattern from...?
- What is the rule for your pattern?

Logical reasoning



Anticipating, predicting and explaining

Prompts and questions

- I wonder what will happen...
- I wonder how it works...
- Will it...float / sink / break / fall etc? Why? Why not?
- What happened?
- Did that surprise you? Why?
- What have you found out?
- How do you know that?

Abstraction

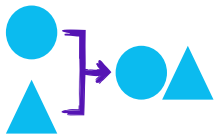


Working out what is important and ignoring what is not important, e.g. naming, labelling, sticking to the main theme, summarising

Prompts and questions

- What do you need to include?
- Which parts are important?
- Why do / don't you need that?
- Why did you choose to include.....?
- Do you have the same as...?
- How is yours different? Is that important?

Algorithms



Instructions and sequencing

Prompts and questions

- Which one might come first?
- What comes next?
- Which one is before / after this one?
- Which one is the last one?
- Can you put these steps into the right order?

Decomposition



Breaking problems down into steps

Prompts and questions

- What do we need to do?
- What are the main parts we need to do / make?
- What do we need to do first?
- Which part shall we think about next?
- Self-talk / model how you (the adult) is splitting a task into parts to make it easier, e.g. first we need to make the cake mix, next put the cakes in the oven, and then put the icing on.