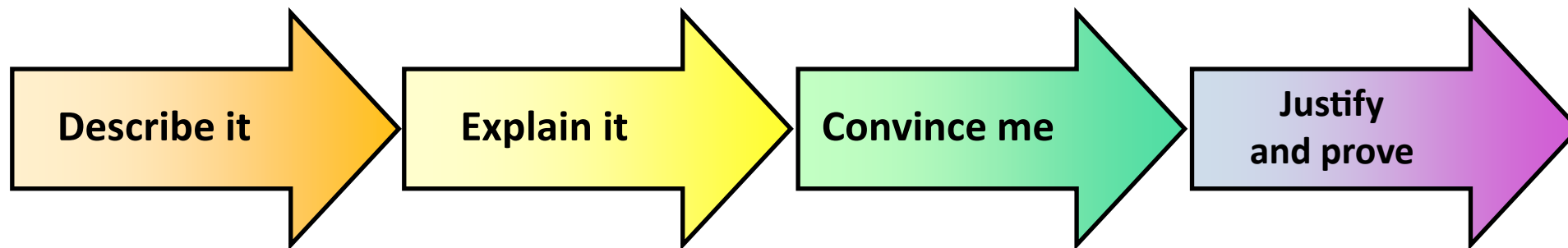
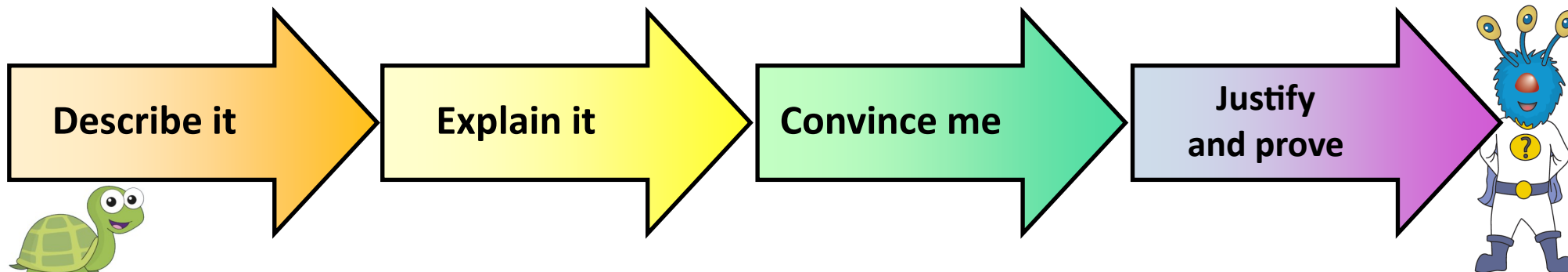


## PROGRESSION IN REASONING — KEY SKILLS



<ul style="list-style-type: none"> <li>&gt; <i>I can recall relevant maths facts.</i></li> <li>&gt; <i>I can draw and show my ideas.</i></li> <li>&gt; <i>I can find solutions and list possibilities.</i></li> <li>&gt; <i>I can find and identify patterns.</i></li> <li>&gt; <i>I can talk to my partner about solutions.</i></li> <li>&gt; <i>I can show good focus on a task.</i></li> </ul>	<ul style="list-style-type: none"> <li>&gt; <i>I can make links to relevant maths knowledge and experiences.</i></li> <li>&gt; <i>I can draw and label my solutions.</i></li> <li>&gt; <i>I can begin to organize my thinking and ideas.</i></li> <li>&gt; <i>I can re-arrange my ideas to identify patterns, similarities and differences.</i></li> <li>&gt; <i>I can give reasons for my ideas.</i></li> <li>&gt; <i>I can self-correct and check my working out.</i></li> </ul>	<ul style="list-style-type: none"> <li>&gt; <i>I can use my mathematical knowledge and experiences to provide reasons for my answers.</i></li> <li>&gt; <i>I can annotate my solution using pictures, models and images.</i></li> <li>&gt; <i>I am beginning to work systematically.</i></li> <li>&gt; <i>I can predict what will happen next in a pattern or sequence.</i></li> <li>&gt; <i>I can give verbal and written reasons to support my ideas.</i></li> <li>&gt; <i>I can show resilience and try new ideas when I don't find the answer straight away.</i></li> </ul>	<ul style="list-style-type: none"> <li>&gt; <i>I can justify my argument with correct mathematical examples, making links to a range of ideas.</i></li> <li>&gt; <i>I can add further detail to my solutions and back up my ideas, including use of suitable pictures, models and images.</i></li> <li>&gt; <i>I can work systematically.</i></li> <li>&gt; <i>I can make my own conjectures about what is going to happen.</i></li> <li>&gt; <i>I can explain my verbal and written ideas clearly and can defend my point of view.</i></li> <li>&gt; <i>I can evaluate and correct my working, persevering to find a solution.</i></li> </ul>
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# PROGRESSION IN REASONING — SENTENCE STARTERS



<p><i>I noticed... so then I ...</i></p> <p><i>The pattern looks like...</i></p> <p><i>I think this because...</i></p> <p><i>...and... then...</i></p> <p><i>I solved the question by...</i></p> <p><i>I found out that...</i></p> <p><i>I could see that the numbers/shapes got...</i></p> <p><i>The next part of the pattern is...</i></p>	<p><i>All of the numbers have...</i></p> <p><i>The strategy I used was...</i></p> <p><i>When... then...</i></p> <p><i>It's true/false because...</i></p> <p><i>This is what it looks like...</i></p> <p><i>I know that the next one is...because...</i></p> <p><i>I decided to... because... ...but...</i></p> <p><i>The first thing I did was... then...</i></p> <p><i>This does/doesn't make sense because...</i></p> <p><i>This is the same/different because...</i></p> <p><i>I already know...so...</i></p>	<p><i>I agree/disagree...because...</i></p> <p><i>I think... because...</i></p> <p><i>This will always/sometimes/never work because...</i></p> <p><i>In the bar model you can see that...</i></p> <p><i>When I looked at... I noticed that...</i></p> <p><i>If this is true then...</i></p> <p><i>This can't work because...</i></p> <p><i>If...then...</i></p> <p><i>Another strategy you could use is...</i></p> <p><i>First I tried... then I tried...</i></p> <p><i>My strategy is the same/different to yours because...</i></p>	<p><i>I can prove... because...</i></p> <p><i>I can show that...</i></p> <p><i>These ideas are linked because...</i></p> <p><i>I got a different result because... whereas...</i></p> <p><i>I think that this will... because...</i></p> <p><i>The evidence that supports this is...</i></p> <p><i>I can show this idea by...</i></p> <p><i>If... is true, then... is also true because...</i></p> <p><i>Therefore...</i></p> <p><i>That leads to...</i></p> <p><i>Consequently/furthermore...</i></p>
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# MATHS QUESTIONING SUPPORT

## SUPPORT GUIDANCE QUESTIONS

*Use these types of questions to support children in their mathematical learning*

### CHECKING FOR ACCURACY

*Would that work if you didn't use that method?*

*Can you create and solve a question similar to this one?*

*Can you draw a model to show that?*

*Can you use a different method to show your thinking?*

### CHECKING FOR UNDERSTANDING

*What do you need to find out?*

*How would you describe this question in your own words?*

*Which pieces of this question make sense and which pieces are you confused by?*

*Could you try this with simpler numbers?*

*Have you tried using pictures, models or equipment?*

### GIVING CLARITY

*Which words are important?*

*Where do you think we should start?*

*What is the goal of this question—what are we trying to find out?*

*Can you explain the steps you think we should take?*

*How can make this clearer — could you draw it or talk through it with a partner?*

## 'PROVE IT' QUESTIONS

*Use these types of questions to advance children's thinking and understanding about a concept in maths.*

*Can you explain that?      What is the same/different?      What patterns/sequences are shown? Why?*

*Is this always/sometimes/never true?      What is the support for your thinking?      How can you prove that...?*

*What are the mathematical concepts shown here?      Can you give evidence that supports that?*

*What are some big ideas that are shown here?      Make that more clear to me.      Tell me how you arrived at that conclusion.*

*Why did you take that step/use that method?      What did you do to get to this step?      Explain why that is true/false.*

*Convince me why this is correct.      Show me a model to prove your ideas.      Why does/doesn't it work for this example?*