



Maths at Beavers

"It is better to solve one problem five different ways, than to solve five problems one way." - George Polya

Every lesson must include:

- a number starter that focuses on either retrieval practice or number formation.
- concrete representations to model and introduce a new concept.
- pictorial and abstract representations to solve problems.
- tasks that are differentiated by outcome rather than ability.

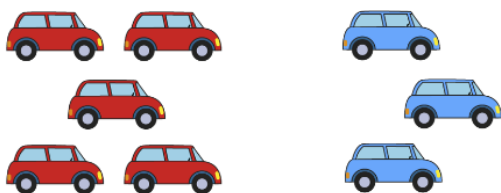
Sequence of Lessons

Initiate

Provide the children with a concrete or visual representation and challenge them to discuss the question with their partner.

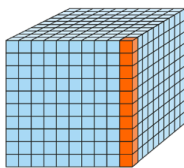
e.g.

Spot the difference between the cars on the left and the cars on the right.



or

Harris thinks that $1,000 \div 100$ equals 10. Is Harris correct?



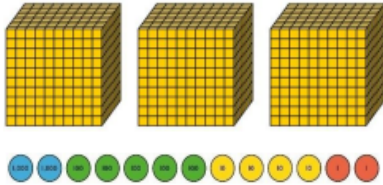



Introduce mathematical vocabulary and teach the children the sentence stems that they will need to help them to understand the new concept.



Model

Use the concrete, pictorial and abstract approach to solve the problem using the me, we, you method.

e.g.

Concrete	Pictorial	Abstract																										
<p>Use place value equipment to add 4-digit numbers.</p> 	<p>Represent numbers using visual place value counters.</p>  <p>$2,000 + 500 + 40 + 2 = 2,542$</p>	<p>Use column method, part-whole, bar models or number lines to add 4-digit numbers.</p>   <table border="1" data-bbox="1031 892 1412 1024"> <tr> <td colspan="3"></td> </tr> <tr> <td>5,000</td> <td>60</td> <td>8</td> </tr> </table> <p>$5,000 + 60 + 8 =$</p> <table border="1" data-bbox="1031 1102 1177 1228"> <thead> <tr> <th>Th</th> <th>H</th> <th>T</th> <th>O</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>5</td> <td>5</td> <td>4</td> </tr> <tr> <td>+</td> <td>4</td> <td>2</td> <td>3</td> </tr> <tr> <td colspan="4">-----</td> </tr> <tr> <td></td> <td></td> <td></td> <td>1</td> </tr> </tbody> </table>				5,000	60	8	Th	H	T	O	1	5	5	4	+	4	2	3	-----							1
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Enable

Provide the children with a 'low floor, high ceiling' activity where all children regardless of their ability will have to struggle productively. Deeper learning extensions should also be available for the more able children.