

MATHS AT ISH

STARTER QUESTION

WHICH ONE IS EASIER TO SOLVE?

WHY?

$$3 + 8 + 7 =$$

OR

$$6 + 3 + 9 =$$



OVERVIEW

- Maths Mastery – what is it, why and how do we teach it?
- Maths progression at ISH
- Maths is fun!
- Question time

MATHS MASTERY – WHAT IS IT?

STARTER QUESTION:
WHICH ONE IS EASIER? WHY?

$$\mathbf{A) \ 3 + 8 + 7 =}$$

OR

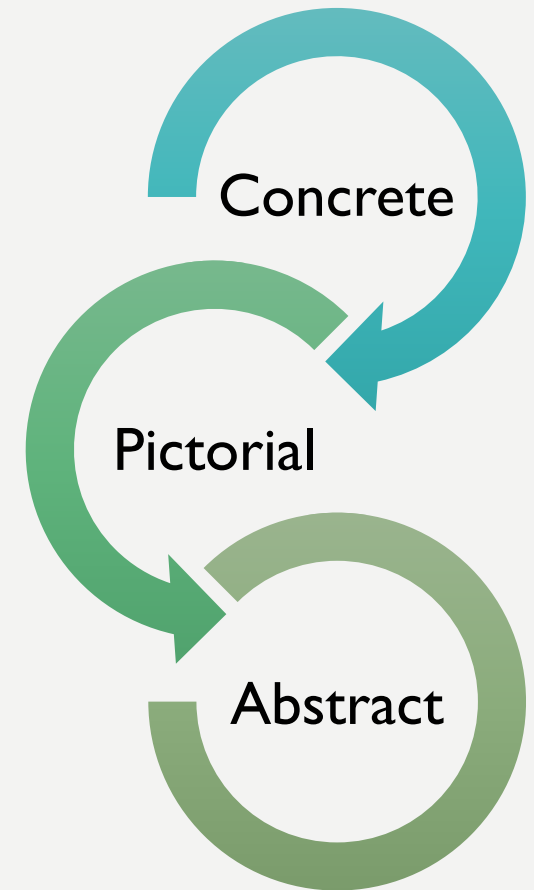
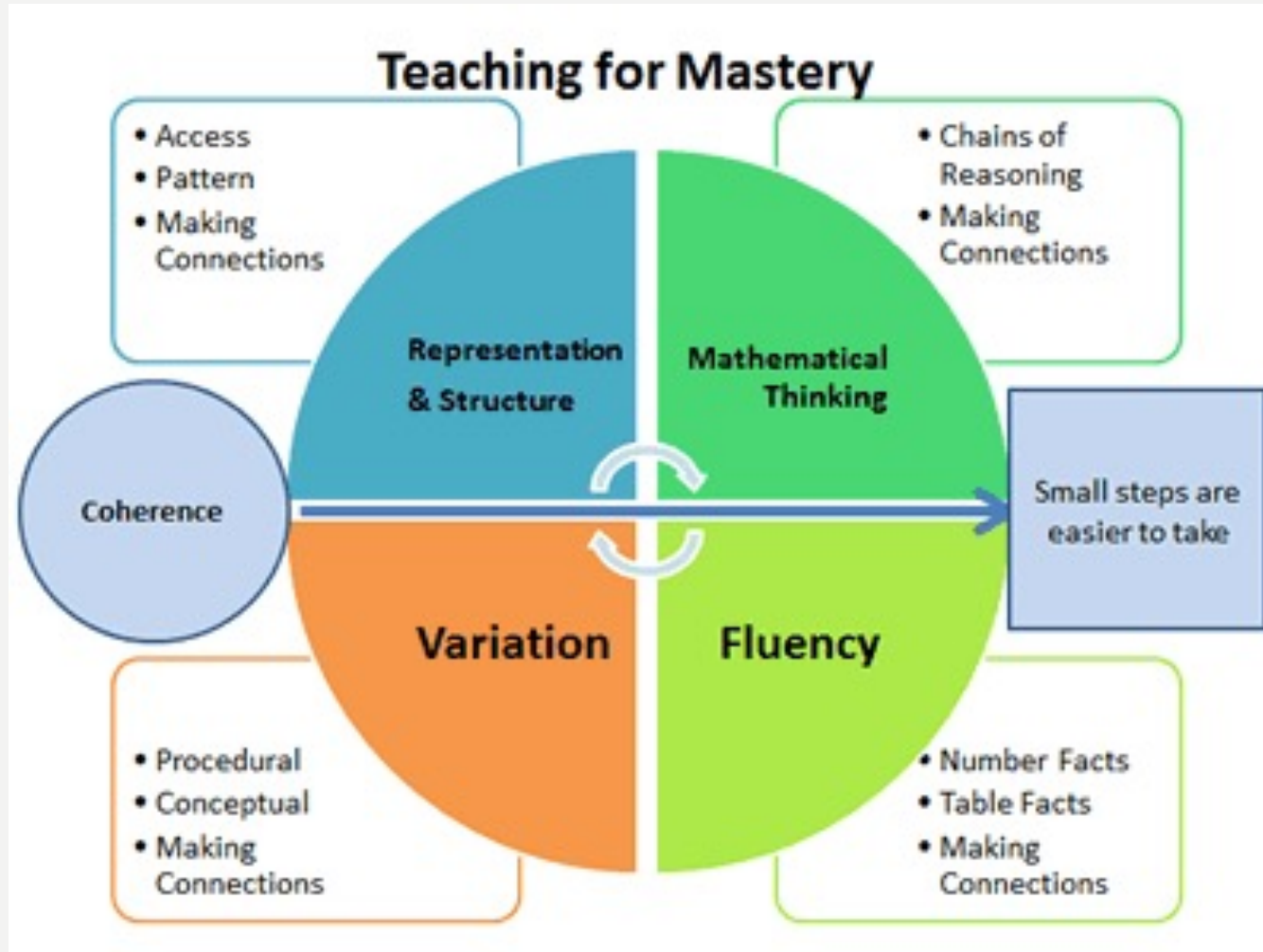
$$\mathbf{B) \ 6 + 3 + 9 =}$$

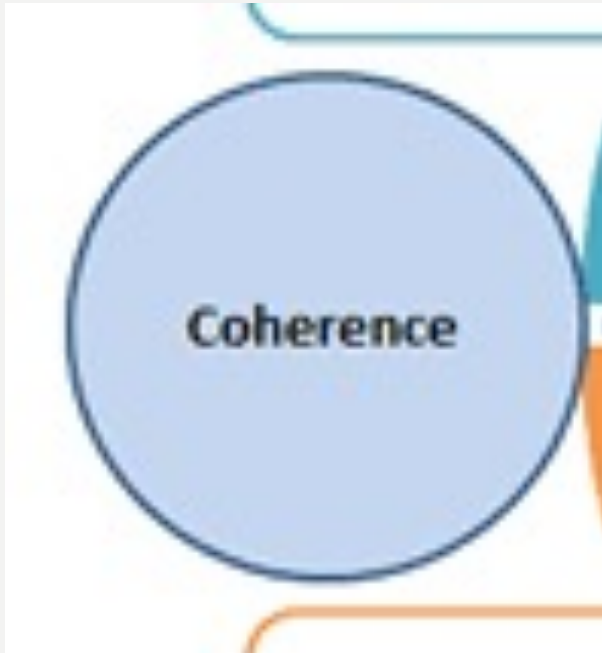
connections

patterns

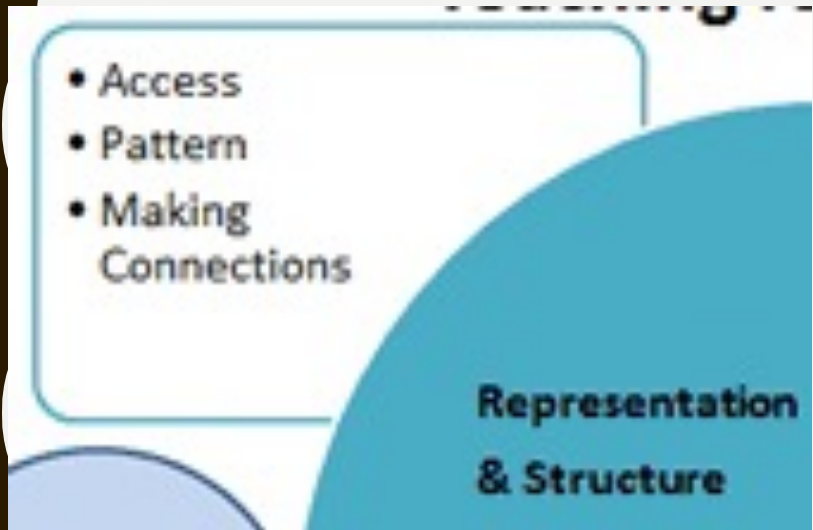
*deeper
understanding*

MATHS MASTERY – WHAT IS IT?

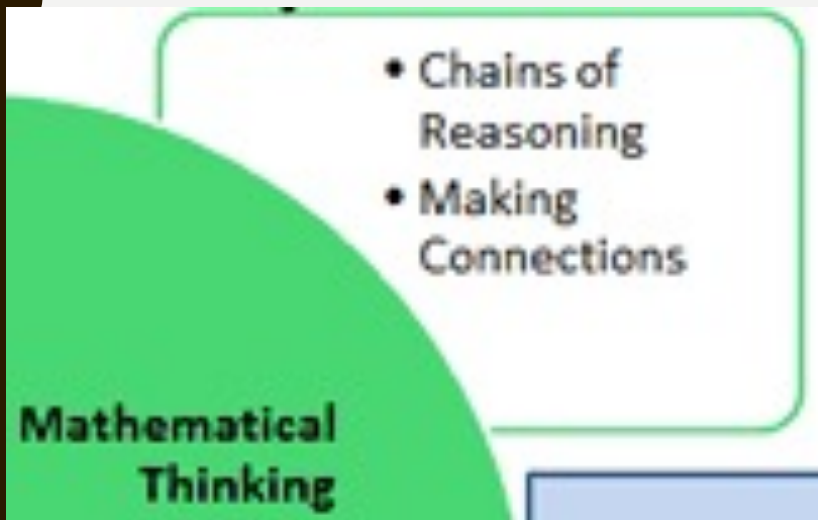




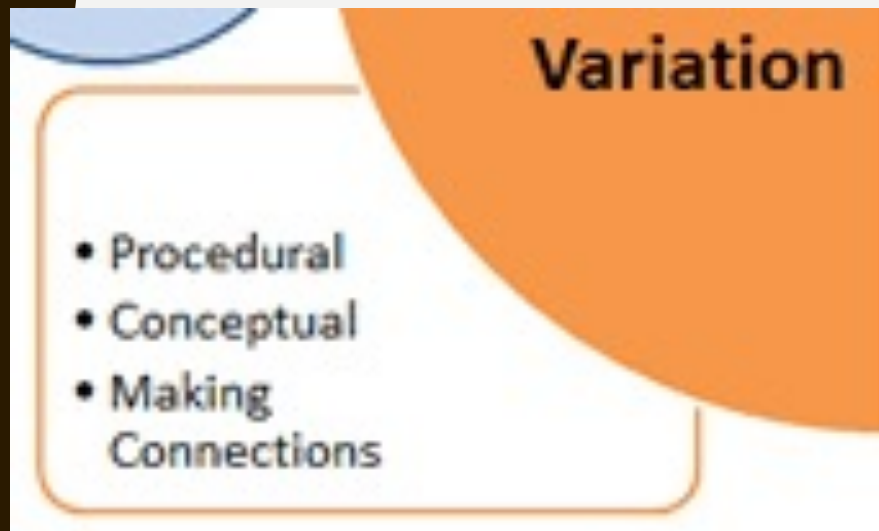
- Small steps
- Sequence
- Key learning point
- Prior knowledge



- Expose structure
- Difficulty point
- Expose patterns



- Depth
- Reason & discuss
- Spotting patterns & connections
- Conjectures



- Essential features
- Examples/non-examples
- Standard/non-standard
- Intelligent practise

Fluency

- Number Facts
- Table Facts
- Making Connections

- Efficient
- Accurate
- Flexible
- Quick recall

MATHS MASTERY – WHY DO WE TEACH IT?

- Actual understanding versus tricks
- Confidence – everybody can!
- Real world thinking / problem solving

MATHS MASTERY – HOW DO WE TEACH IT?

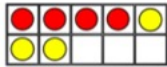
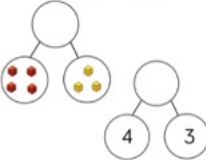
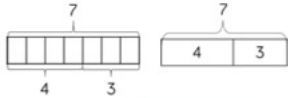










A maths mastery lesson includes:

- Teacher input (actively engaged with by children)
- Independent, pair, or group practise
- Challenge



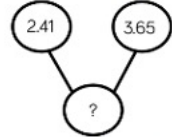
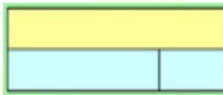




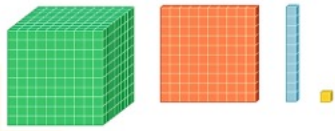

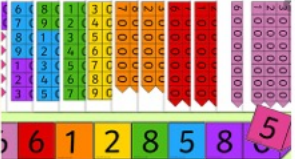

MATHS PROGRESSION AT ISH

Place Value

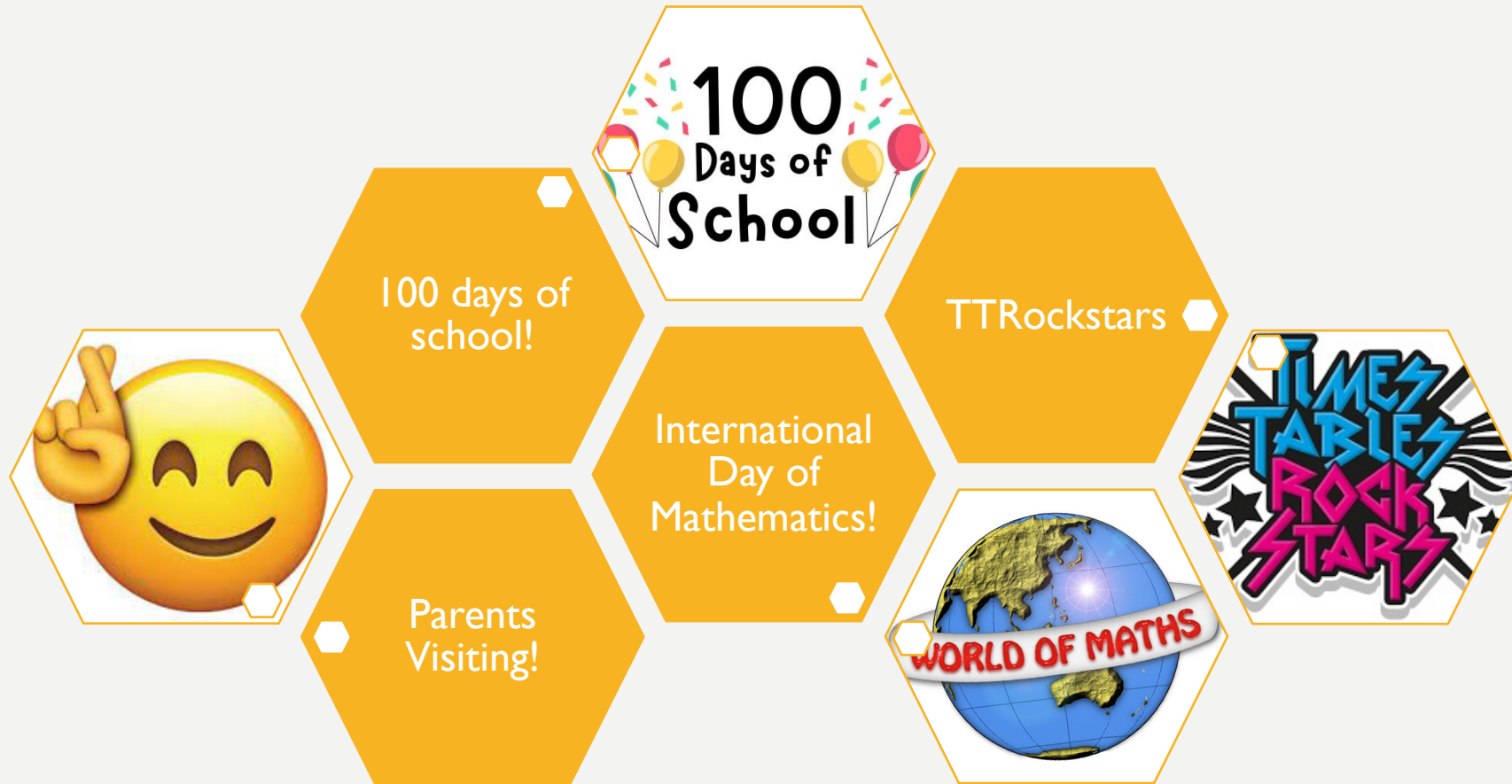
National Curriculum Goals	Key Vocabulary	Representations	Concrete Resources														
<p><u>Group 2</u></p> <ul style="list-style-type: none"> count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens given a number, identify one more and one less identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least read and write numbers from 1 to 20 in numerals and words 	<p><u>Group 2</u></p> <p>Zero Ones Tens Partition -teen number -ty number</p> <p>Compare Equal to / the same as (=) Smaller / fewer / less / is less than (<) Smallest / fewest / least More / bigger / larger / greater / greater than (>) Most / biggest / largest / greatest</p> <p>Before / 1 less After / 1 more Jump forwards Jump backwards Skip counting / counting by</p> <p>Number Number in words Digit Symbol Represent</p> <p>How many?</p>	<p><u>Group 2</u></p> <p>Ten frames</p>  <p>Part-whole model</p>  <p>Bar model</p>  <p>Bead strings</p>  <p>Place value chart</p> <table border="1" data-bbox="1090 1129 1217 1310"> <tr> <td>Tens</td> <td>Ones</td> </tr> <tr> <td> </td> <td> </td> </tr> </table> <p>Place value cards</p> 	Tens	Ones			<p><u>Group 2</u></p> <p>Snapcubes</p>  <p>Counters</p>  <p>Numicon</p>  <p>Straws</p>  <p>Bead strings</p>  <p>Number lines (labelled)</p>  <p>Base ten</p>  <p>Counting rack</p>  <p>Flashcards with numbers</p> <table border="1" data-bbox="1510 1168 1765 1310"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> <tr> <td>6</td> <td>7</td> <td>8</td> <td>9</td> <td>10</td> </tr> </table>	1	2	3	4	5	6	7	8	9	10
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MATHS PROGRESSION AT ISH

Place Value

National Curriculum Goals	Key Vocabulary	Representations	Concrete Resources
<p>Group 7</p> <ul style="list-style-type: none"> read, write, order and compare numbers up to 10 000 000 and determine the value of each digit round any whole number to a required degree of accuracy use negative numbers in context, and calculate intervals across zero solve number and practical problems that involve all of the above 	<p>Group 7</p> <p>Zero Tenths Hundredths Thousandths Ones Tens Hundreds Thousands Tens of thousands Hundreds of thousands Millions Partition Negative number / minus number Positive number Whole number / integer Place value Value Place holder</p> <p>Compare Equal to / the same as (=) Smaller / fewer / less / is less than (<) Smallest / fewest / least More / bigger / larger / greater / is greater than (>) Most / biggest / largest / greatest Order Ascending Descending</p> <p>Estimate / approximate Round to the nearest 10 / 100 / 1000 / 10 000 / 100 000</p> <p>100 less / 1000 less / 10 000 less 100 more / 1000 more / 10 000 more Skip counting / counting by / counting in / times tables / multiples of / factors / products / intervals</p>	<p>Group 7</p> <p>Part-whole model</p>  <p>Bar model</p>  <p>Place value chart</p> 	<p>Group 7</p> <p>Counters</p>  <p>Place value counters</p>  <p>Dice</p>  <p>Base ten</p>  <p>Number lines (unlabelled)</p>  <p>Place value cards</p>  <p>Place value chart</p> 

MATHS IS FUN!



QUESTION TIME!

