

Additive reasoning 2.12	Length of unit: 3 weeks	Week beg:	Year: 2	Teacher:
<p>Success criteria</p> <p>Pupils can represent and solve addition and subtraction problems involving two 2 digit numbers in different contexts, appropriately choosing and using number facts, understanding place value and counting.</p>	<p>Prior Learning:</p> <p>Check that children can already</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 • given a number, identify one more and one less • read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs • represent and use number bonds and related subtraction facts within 20 • add and subtract one-digit and two-digit numbers to 20, including zero • solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \square - 9$ • recognise and use language relating to dates, including days of the week, weeks, months and years • sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening] <p style="text-align: center;"><input type="checkbox"/></p>		<p>Resources</p> <p>Maths vocabulary book</p> <p>Using and Applying in every maths lesson</p> <p>Assessment through guided maths</p> <p>Think Maths!</p> <p>Pitch and Expectations Y2</p> <p>Models and Images</p> <p>Overcoming Barriers to learning Level 1 to 2/Level 2 to 3</p> <p>Securing Level 1/Level 2/Level 3</p>	
<p>Guidance</p> <p>Pupils practise addition and subtraction to 20 to become increasingly fluent in deriving facts such as using $3 + 7 = 10$, $10 - 7 = 3$ and $7 = 10 - 3$ to calculate $30 + 70 = 100$, $100 - 70 = 30$ and $70 = 100 - 30$. They check their calculations, including by adding to check subtraction and adding numbers in a different order to check addition (e.g. $5 + 2 + 1 = 1 + 5 + 2 = 1 + 2 + 5$). This establishes commutativity and associativity of addition.</p>				

Learning objectives

Pupils should be taught to:

Number and place value

- count in tens from any number, forward and backward
- recognise the place value of each digit in a two-digit number (tens, ones)
- use place value and number facts to solve problems

Addition and subtraction

- solve problems with addition and subtraction:
 - using concrete objects and pictorial representations, including those involving numbers, quantities and measures
 - applying their increasing knowledge of mental methods and written methods
- recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100
- add and subtract numbers using concrete objects, pictorial representations, and mentally, including:
 - a two-digit number and ones
 - a two-digit number and tens
 - two two-digit numbers
 - adding three one-digit numbers
- show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot
- recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems

Statistics

- ask and answer questions about totalling and compare categorical data.

Pupil outcomes:

I can show and explain how I know how much water is needed altogether to fill two water trays, when one holds 65 litres and the other holds 26 litres, and record a matching number sentence.

I can show and explain how I know that our sand tray holds 20 litres more than the class next door when ours holds 75 litres and theirs holds 55 litres, recording a matching number sentence.