

# FOR SCHOOLS – educational tips

## Learning concepts

Learning number bonds, tables and formal written methods need a sound conceptual base. Below are some suggestions.

Practice and understanding in:	Topics & Games
<b>100 square</b>	<b>Topics:</b> Section under <i>Special topics – Easy adds or subtracts in the 100 square</i> also topics for tables <b>Games:</b> <i>Sum demo, Match sum</i> with <i>10x10 grid</i> games option ticked, <i>Treasure, Grid</i>
<b>Adding 9</b> (Round to 10 then adjust +10 -1)	<b>Topics:</b> Topics under heading <i>Special topics\Rounding and adjustment</i> (adding 10 has to be secure first however) <b>Games:</b> <i>Crocodiles, Numberline, Safe cracker</i>
<b>Bonds of 10</b>	<b>Topics:</b> <i>PAIRS of numbers that TOTAL 10</i> <b>Games:</b> Those under the 'Recommended games' tab <i>Grab coins</i> – with game option to <i>Collect coins to make up 10</i> <i>Fill gaps</i> also shows the relative size of the numbers involved
<b>Bridging through 10s boundaries</b> (Making mental addition and subtraction easier eg 26+7 could be 26+4=30 then 30+3=33)	<b>Topics:</b> Any topic with <i>carrying</i> or <i>exchanging</i> in its title – type 'carrying' or 'exchanging' into <i>Search</i> <b>Games:</b> <i>Crocodiles</i>
<b>'Carrying' in addition</b>	<b>Topics:</b> Any topic with <i>carrying</i> in the title – type 'carrying' into <i>Search</i> in the menu <b>Games:</b> <i>Formal sums, Calc rods, 3 or more, recommended games, Grab coins</i>
<b>Conservation</b> (The number of objects doesn't change even if rearranged)	<b>Topics:</b> <i>Addition with answers up to 5, to 10, to 20, to 100</i> <b>Games:</b> <i>Conserve</i>
<b>Counting</b> (In 2s 3s etc)	<b>Topics:</b> The section of topics under <i>Counting and Sequencing</i> <b>Games:</b> Under the <i>Counting &amp; ordering</i> tab
<b>Counting on, counting back, seeing a small difference</b>	<b>Topics:</b> <i>Finding a small difference (by counting on), TU</i> <i>Taking off a small amount, TU</i> <i>Finding a small difference (by counting on), HTU</i> <i>HTU – Units (counting back)</i> <b>Games:</b> <i>Grid, Numberline</i>
<b>Decimals</b> The concept	<b>Topics:</b> The sections under headings for <i>Recognition</i> <b>Games:</b> Those under the 'Recommended games' tab
<b>Fractions</b> The concept	<b>Demo:</b> Bring the topic on screen and click on any of the samples in the right hand panel for a demo, then use the recommended games
<b>Fractions</b> Equivalence	<b>Topics:</b> Those under headings for <i>Recognition and equivalence</i> with 'Equivalent' in their title <b>Demo:</b> Bring the topic on screen and click on any of the samples in the right hand panel for a demo, then use the recommended games

Practice and understanding in:	Topics & Games
<b>Linking new facts with old</b>	<b>Topics:</b> Any topic with <i>Link</i> in the title – type 'link' into <i>Search</i> in the menu <b>Games:</b> <i>Sharks, Maze, Salvage, Fill gaps</i>
<b>Long division</b> (When concept is understood)	<b>Topics:</b> Topics under the headings <i>Single-digit division</i> and <i>Two-digit and three-digit division</i> <b>Games:</b> <i>Formal sums</i>
<b>Maths vocabulary for + – x ÷</b>	<b>Topics:</b> All topics in each operation suitable for mental arithmetic <b>Games:</b> <i>Pick listen, Numberline</i> Also the <i>Worded problems – Arithmetic with Quiz, Greening</i>
<b>Missing numbers</b>	<b>Topics:</b> Ones with <i>Missing numbers</i> in the title – type 'missing' into <i>Search</i> in the menu <b>Games:</b> Those under the 'Recommended games' tab
<b>Partition</b> Method of adding /multiplying eg 256 stands for 200+50+6	<b>Topics:</b> Topics for adding or multiplying up to 3 digits <b>Games:</b> <i>Partition</i> <i>Calc rods</i>
<b>Place value</b> (eg in the number 62 the 6 digit stands for 60 and the 2 for 2 units)	<b>Topics:</b> <i>Easy adds to 100</i> with the topics in the drop-down 'Also' menu <i>Adding 1 or 10 answers to 100</i> <i>Adding 1, 10, 100 answers to 1000</i> <i>Easy adds and subtracts in the 100 square</i> with the 'Also' menu <i>Easy addition and subtraction facts to 1000</i> with the 'Also' menu Decimal topics under <i>Recognition</i> <b>Games:</b> <i>Match, Calc rods, Which, Fit in, Pick</i> <i>Number build</i> – use <i>Options</i> for changing number size <i>Safe cracker</i> – use <i>Options</i> for changing number size <i>Grab coins</i> and <i>Spend coins</i> – both with any topic
<b>Quick recall of + and – facts</b>	<b>Topics:</b> Any that need quick recall <b>Games:</b> Those under the 'Mental maths' tab also under 'Recommended games' and some 'Understanding and practice'
<b>Quick recall of x and ÷ facts</b>	<b>Topics:</b> Any that need quick recall <b>Games:</b> Those under the 'Mental maths' tab and under 'Recommended games' and some 'Understanding and practice' Also <i>Crocodiles, Count, Bombs, Rolling</i>
<b>Reversals</b> (e.g. reading 81 for 18)	<b>Topics:</b> Any which involve <i>TU</i> and <i>HTU</i> <b>Games:</b> <i>Match</i> <i>Number build</i> (reading from left to right) <i>Safecracker</i> (linking place value and digit order) <i>Calc rods</i> (setting up numbers correctly) <i>Formal sums</i>
<b>Rounding</b>	<b>Topics:</b> Ones with <i>Rounding</i> in the title – type 'rounding' into <i>Search</i> in the menu Any which involve numbers above 100 (for rounding to nearest 10) Any which involve numbers above 1000 (rounding to the nearest 100) <b>Games:</b> <i>Knock down</i> (with the game option for rounding)
<b>Understanding division</b> The concept	<b>Topics:</b> <i>Division by 2 up to Division by 10</i> <b>Games:</b> <i>Surround, Numberline, Crocodiles, Sum demo, Fill gaps, Running man, Jump, Calc rods, Grid</i> Use <i>Demo options</i> at the bottom of the screen to tailor it to your needs

Practice and understanding in:	Topics & Games
<p><b>Understanding exchanging</b> A popular method (decomposition) in subtraction – needed in vertical sums, when the bottom digit is larger than the top digit you are taking it from)</p>	<p><b>Games:</b> <i>Grab coins</i> and <i>Spend coins</i> – with any topic <i>Calc rods</i> and <i>Sum demo</i> – with any topic with <i>exchanging</i> in its title – use the <i>Search</i> to find them by typing in 'exchanging'</p> <p>When concept is understood; <i>Formal sums</i> is useful</p>
<p><b>Understanding multiplication</b> The concept</p>	<p><b>Topics:</b> <i>Tables topics</i> <i>TU x U</i></p> <p><b>Games:</b> <i>Surround</i>, <i>Calc rods</i>, <i>Crocodiles</i>, <i>Sum demo</i>, <i>Fill gaps</i>, <i>Running man</i>, <i>Jump</i>, <i>Snails</i></p> <p>When concept is understood; <i>Formal sums</i> is useful Use <i>Demo options</i> at the bottom of the screen to tailor it to your need</p>