

Knowing Number Facts: Maths : Year 3 : Summer Term

| | Learning Objective | Overview | Assessment Questions | Resources |
|-----------------|---|---|---|---|
| Lesson 1 | To add tens mentally. | Children will consider and explain, using place value, what is happening when tens are added to another number – firstly without, then with, exchanging. They will go on to develop strategies for mentally solving addition of tens to two- and three-digit numbers, applying these while practising solving calculations presented using a variety of operational language. | <ul style="list-style-type: none"> Can children use number bonds to mentally solve two- and three-digit + tens calculations? Can children visualise informal, written methods or practical resources to help mentally solve calculations where exchanging is required? Can children add several tens to a two-digit number, e.g. $36 + 20 + 30 + 10$? | <ul style="list-style-type: none"> Slides Worksheets 1A/1B/1C 0–9 Number Cards Dienes Base 10 resources Adding Answers Cards (FSD...? activity only) |
| Lesson 2 | To mentally solve missing number problems, adding or subtracting tens to or from two-, three- and four-digit numbers. | Children will learn and develop strategies for mentally solving increasingly challenging missing number problems where tens/hundreds are added/subtracted. They may then go on either to select problems of varying difficulty to solve, or solve given missing number problems to crack a code and discover a secret message. | <ul style="list-style-type: none"> Can children use addition to solving missing number subtraction problems mentally? Can children use subtraction to solve missing number addition problems mentally? Can children mentally solve more complex addition and subtraction missing number problems, e.g. $31 + 30 = \square + 40$? | <ul style="list-style-type: none"> Slides Question Sticks 2A/2B/2C Worksheets 2A/2B/2C Codebreaker sheet (FSD...? activity only) Secret Codes 2A/2B/2C (FSD...? activity only) |
| Lesson 3 | To select and use mental methods (including a 'compensation method') for subtracting hundreds, tens and ones. | Children will warm up by finding pairs of numbers which total fifty, then take a look at how place value knowledge can help when subtracting tens or hundreds from another number. They will go on to learn, develop and practise a mental compensation method for subtracting tens numbers. | <ul style="list-style-type: none"> Can children count back in multiples of ten/hundred to solve subtraction calculations mentally? Can children use place value knowledge to mentally solve subtraction calculations? Can children select appropriate mental methods for subtracting, depending on the values shown? | <ul style="list-style-type: none"> Slides Worksheets 3A/3B/3C Bullseye! Game Board (FSD...? activity only) Counters (FSD...? activity only) |
| Lesson 4 | To develop mental strategies for subtracting tens and hundreds. | Building on their prior knowledge of subtracting tens and hundreds, children will develop strategies for mentally solving subtraction calculations with multiple operations, e.g. $345 - 80 - 20 - 40$. They may then either practise and develop these strategies by playing subtraction games, or by completing a timed subtraction challenge. | <ul style="list-style-type: none"> Can children explain how multi-operation calculations may be solved in different ways? Can children add multiple amounts to be subtracted in a calculation? Can children identify which digits in a number will change when tens/hundreds are subtracted? | <ul style="list-style-type: none"> Slides Number Cards 4A Subtracting Games 4A/4B/4C Plastic cups, counters, ping pong balls, tennis balls or similar Calculation Challenge 4A cards (FSD...? activity only) |
| Lesson 5 | To count in multiples of four and eight, and mentally subtract using a compensation method. | Building upon strategies developed during previous lessons, children will practise using a mental compensation method to subtract 8, 9, 80 or 90. They will also consider and discuss methods for solving missing number problems with these subtractions. Children may then either write and solve subtraction calculations, or work on a simple subtraction investigation. | <ul style="list-style-type: none"> Can children rapidly recall multiples of four and eight? Can children use a compensation method to mentally subtract eight? Can children apply their understanding of this method when subtracting 9, 80 or 90? | <ul style="list-style-type: none"> Slides Worksheets 5A/5B/5C Challenge Cards 5A-5C (FSD...? activity only) |