

Age-related expectations: Year Three

MATHS

Number and place value

- count from 0 in multiples of 4, 8, 50 and 100
- find 10 or 100 more or less than a given number
- recognise the place value of each digit in a three-digit number (hundreds, tens, ones)
- compare and order numbers up to 1000
- identify, represent and estimate numbers using different representations
- read and write numbers up to 1000 in numerals
- read and write numbers up to 1000 in words
- solve number problems and practical problems involving these ideas

✦ Recognise the value of each digit in a 4-digit number and the value of a tenth ✦ Being able to have an understanding about negative numbers recognising they are smaller than zero

Addition and subtraction

- add and subtract numbers mentally, including a three-digit number and ones; a three-digit number and tens; a three-digit number and hundreds
- add numbers with up to three digits, using formal written methods of columnar addition
- subtract numbers with up to three digits, using formal written methods of columnar subtraction
- estimate the answer to a calculation
- use inverse operations to check answers
- solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction

✦ Add and subtract numbers with any number of digits using formal written methods

Multiplication and division

- recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables
- write and calculate mathematical statements for multiplication and division using the multiplication tables that they know
- multiply two-digit numbers by one-digit numbers, using mental and progressing to formal written methods
- divide two-digit numbers by one-digit numbers, using mental and progressing to formal written methods
- solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects

✦ Know all multiplication facts up to 10×10 ✦ Be able to instantaneously answer questions eg how many 7s in 42? ✦ \times and \div any 2-digit by 1-digit number, with understanding of remainder

Fractions

- as a vulgar and decimal fraction: count up and down in tenths; recognise that a tenth arises from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10
- begin to recognise and understand decimals in relation to measures (money, length...) and simple unit fractions
- recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators
- recognise, find and write fractions as numbers: unit fractions and non-unit fractions with small denominators
- recognise and show, using diagrams, equivalent fractions with small denominators
- add and subtract fractions with the same denominator within one whole eg $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$
- know pairs of fractions that total 1
- compare and order unit fractions
- compare and order fractions with the same denominators
- solve problems that involve all of the above

✦ Can find fractional values (from $\frac{1}{10}$ to $\frac{1}{100}$) of amounts up to 1000

Measurement

- measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)
- measure the perimeter of simple 2-D shapes
- add and subtract amounts of money to give change, using both £ and p in practical contexts
- tell and write the time from an analogue clock with increasing accuracy to the nearest minute
- tell and write the time from a clock using Roman numerals from I to XII
- tell and write the time from a clock with 12-hour and 24-hour clocks
- estimate, record and compare time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours
- use vocabulary such as o'clock, am/pm, morning, afternoon, noon and midnight
- know the number of days in each month
- know the number of seconds in a minute and the number of days in each year and leap year
- compare durations of events [eg to calculate the time taken by particular events or tasks]

✦ Use knowledge of number to solve problems related to money, time and measures ✦ Measure, compare, + and - more complex problems using common metric measures (different units)

✦ Can relate knowledge of time to problems related to timetables

Geometry: properties of shapes

- draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them
- recognise angles as a property of shape or a description of a turn
- identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn
- identify whether angles are greater than or less than a right angle
- identify horizontal and vertical lines and pairs of perpendicular and parallel lines

✦ Know that the total internal angles of a triangle measure 180°

Statistics

- present data using bar charts, pictograms and tables
- interpret and present data using bar charts, pictograms and tables
- solve 1-step and 2-step questions (eg How many more/fewer?) using data presented in scaled bar charts, pictograms, tables