

Y5-6 Learning Sequences

Place Value

Learning Steps

Prior learning check & remediation/deepening of prior

Composition of 10,000
Composition of 100,000
Composition of 1,000,000
Position numbers to 10,000 on a number line
Position numbers to 100,000 on a number line
Position numbers to 1,000,000 on a number line
Count forwards and backwards in powers of ten to 1,000,000
Represent numbers to 10,000,000
Partition numbers to 10,000,000
Value of digits to 10,000,000
Number lines to 10,000,000
Compare numbers to 10,000,000 (same PV)
Compare numbers to 10,000,000 (different PV)
Order numbers to 10,000,000

PS Lesson: PV to 1,000,000 (all possibilities)

round any 4-digit number to the nearest 10, 100, 1000

round up to seven-digit numbers to any power of 10

PS Lesson: rounding (multi-domain)

Written column addition to 10,000,000

Written column subtraction to 10,000,000

PS Lesson: column addition & subtraction (multi-step)

Assessment

Pause & Stretch: re-assessment & deepening as required

PS Skills Lesson: trial & improvement

Y5-6 Learning Sequence

Negative Numbers

Learning Steps

Prior learning check & remediation/deepening of prior

Count through zero in ones and other multiples including number lines

Compare and order numbers including negative numbers

Increases through zero

Decreases through zero

Find the difference

Graphs involving negative numbers

Assessment

Pause & Stretch: re-assessment & deepening as required

Learning steps inside ** (e.g. *divide fractions by integers*) are lessons that will have been covered in Y6 Fact Fluency therefore the lessons could be adapted to a reminder of the procedure and straight onto VF, Think, GDS. These learning steps could be skipped if time is short before SATs – as long as secured in Y6 Fact Fluency.

Learning Steps

Prior learning check & remediation/deepening of prior

- Tenths as decimals
- Integers & Tenths as Decimals
- Partition numbers with tenths
- Compare numbers with tenths
- Order numbers with tenths
- *Column addition and subtraction involving tenths*
- Round numbers with tenths to nearest whole
- hundredths as decimals and value of digits & partition
- Compare & order numbers with hundredths + money
- Round numbers with hundredths to nearest whole
- Round numbers with hundredths to nearest tenth
- *Column addition and subtraction involving hundredths*
- Thousands as decimals and value of digits & partition
- Compare & order numbers with thousandths

Assessment

Pause & Stretch: re-assessment & deepening as required

Learning steps inside ** (e.g. *divide fractions by integers*) are lessons that will have been covered in Y6 Fact Fluency therefore the lessons could be adapted to a reminder of the procedure and straight onto VF, Think, GDS. These learning steps could be skipped if time is short before SATs – as long as secured in Y6 Fact Fluency.

Learning Steps

Prior learning check & remediation/deepening of prior

- *2 x 1 column into 3 x 1 into 4 x1 with no regrouping (including decimals)*
- *2 x 1 column into 3 x 1 into 4 x1 with one regrouping (including decimals)*
- *2 x 1 column into 3 x 1 into 4 x1 with two regrouping (including decimals)*
- *2 x 1 column into 3 x 1 into 4 x1 with multiple regrouping (including decimals)*
- *Multiply numbers with decimals by 10, 100, 1000 using moving digits*
- *Divide numbers with decimals by 10, 100, 1000 using moving digits*
- Convert from larger to smaller metric units
- Convert from smaller to larger metric units
- *Scaled multiplication division facts (including decimals)*
- Introduction to area
- 2 x 2 long multiplication (including area)
- 3 x 2 long multiplication (including area)
- 4 x 2 long multiplication (including area)
- Long multiplication & area practice lesson (VF, Think, GDS)
- Compound area
- Introduction to volume including cubes
- Calculating volume
- *2 x 1 into 3 x 1 into 4 x1 short division with no remainder or regrouping*
- *2 x 1 into 3 x 1 into 4 x1 short division with remainder at end but no regrouping*
- *2 x 1 into 3 x 1 into 4 x1 short division with 1 piece of regrouping*
- *2 x 1 into 3 x 1 into 4 x1 short division with more than 1 piece of regrouping*
- *Short division including decimal dividends*
- *Short division: decimal quotients (expressing remainders as decimals)*
- Building multiple strings (fact bank)
- Long division – no remainder – divisor smaller than first 2 digits of dividend
- Long division – no remainder – divisor larger than first 2 digits of dividend
- Long division – remainders
- Long division practice lesson (VF/RPS)
- Missing length area and volume problems

Assessment

Pause & Stretch: re-assessment & deepening as required

Learning steps inside ** (e.g. *divide fractions by integers*) are lessons that will have been covered in Y6 Fact Fluency therefore the lessons could be adapted to a reminder of the procedure and straight onto VF, Think, GDS. These learning steps could be skipped if time is short before SATs – as long as secured in Y6 Fact Fluency.

Learning Steps

Prior learning check & remediation/deepening of prior

- *Multiply fractions (proper & improper) by wholes*
- *Multiply mixed numbers by wholes *
- *Multiply fractions by fractions*
- *Divide any fraction by integer*
- *Find unit fractions of amounts*
- *Find non-unit fractions of amounts*
- *Fractions as operators*
- Equivalent fractions using manipulatives
- Using equivalence tables – scaling up & down
- Fraction-decimal equivalence to tenths & hundredths
- Fraction – Decimal Equivalence
- Converting decimals to fractions
- Factors & common factors
- Prime numbers & composite numbers
- Simplifying Fractions
- Common multiples
- Comparing fractions
- *Adding proper fractions with different denominators from same multiple family*
- *Adding proper fractions with different denominators*
- *Adding mixed numbers with different denominators not through whole*
- *Adding mixed numbers through whole*
- *Subtracting fractions with different denominators from same multiple family*
- *Subtracting fractions with different denominators*
- *Subtracting mixed numbers with different denominators (not breaking whole)*
- *Subtracting mixed numbers with different denominators (breaking whole)*
- *Percentages of amounts multiples of 25%, 50%, 75%*
- *Percentages of amounts 10% & multiples of 10%*
- *Percentages of amounts 5% & multiples of 5%*
- *Percentages of amounts 1% & multiples of 1%*
- *Percentage of amounts practice lesson (VF, Think, GDS)*
- FDP Equivalence

Assessment

Pause & Stretch: re-assessment & deepening as required

Y5-6 Learning Sequence

Ratio (Year 5 only)

Learning Steps

Prior learning check & remediation/deepening of prior

Language of ratio – scaling up
Language of ratio – simplest form
Real-life ratio problems
Recipes
Scale drawings
Scale factors
Miles & Kilometres
Correspondence Problems

Assessment

Pause & Stretch: re-assessment & deepening as required

PS Skills Lesson: finding starting points

Y5-6 Learning Sequence

Algebra (Year 5 only)

Learning Steps

Prior learning check & remediation/deepening of prior

- 1-step function machines
- 2-step function machines (output)
- 2-step function machines (input)
- Missing Number Equations
- Balancing Number Equations
- Sequences
- Form expressions
- Algebraic expressions
- Solve 1-step equations
- Solve 2-step equations
- Pairs of values

Assessment

Pause & Stretch: re-assessment & deepening as required

PS Skills Lesson: conjecture & generalising

Y5-6 Learning Sequence

Geometric Reasoning (Year 5 only)

Learning Steps

Prior learning check & remediation/deepening of prior

Measure acute angles including estimation

Measure obtuse angles including estimation

Draw angles

Draw accurate 2D shapes

Construct 3D shapes from 3D nets

PS Lesson: nets (visual problems)

Right angles: calculating missing angles

Straight lines: calculating missing angles

360° around a point: calculating missing angles

Measure reflex angles

Triangles: calculating missing angles

Quadrilaterals: calculating missing angles

Vertically opposite angles: calculating missing angles

Mixed practice: calculating missing angles

Area of parallelograms

Area of triangles

PS Lesson: same area but different perimeter & vice-versa (more than 1 possibility)

Mixed area practice

PS Lesson: area (multi-step)

Solving problems involving reading/plotting coordinates in all 4 quadrants

Solving problems involving translating coordinates in all 4 quadrants

Solving problems involving reflecting coordinates in all 4 quadrants

Features of a circle & radius and diameter relationship

Assessment

Pause & Stretch: re-assessment & deepening as required

PS Skills Lesson: visualising

Y5-6 Learning Sequence

Calculator Skills (Year 6 only)

Learning Steps

- Inverse checks using a calculator
- Using the negative number feature of calculators
- Interpreting money using calculators
- Solving problems with calculators
- Investigating vampire numbers

Y5-6 Maths Plan

Probability (Year 6 only)

Learning Steps

The vocabulary of probability
Probability expressed as fractions
Probability expressed as decimals
The probability scale
Sum of probabilities