

Y4-5 Learning Sequence

Numbers to 10,000

Learning Steps

Prior learning check & remediation/deepening of prior

Composition of 10,000

Represent numbers to 10,000

Partition to THTO

Value of digits to 10,000

Number lines

1, 10, 100, 1000 more & less

PS Lesson: PV and value of digits (more than possibility)

Compare numbers to 10,000

Order numbers to 10,000

PS Lesson: compare & order (visual)

Column addition to 10,000: same PV

Column addition to 10,000: different

Column subtraction to 10,000: same PV

Column subtraction to 10,000: different

What is perimeter?

Calculating rectilinear perimeter ($2L + 2B$)

Calculating rectilinear perimeter $2(L + B)$

Calculating regular shape perimeter using multiplication

PS Lesson: perimeter

Find two multiples a number is between

Find the midpoints between two numbers

Round 2-digit numbers to nearest 10

Round 3-digit numbers to nearest 100

Round 4-digit numbers to nearest 1,000

Round 3-digit numbers to nearest 10

Round 4-digit numbers to the nearest 10

Round 4-digit numbers to the nearest 100

Mixed rounding

PS Lesson: rounding (working backwards)

Assessment

Pause & Stretch: re-assessment & deepening as required

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
- Bridging the whole when adding with tenths
- Mental methods for addition involving tenths – not bridging
- Mental methods for addition involving tenths – bridging
- Bridging the whole when subtracting with tenths
- Mental methods for subtraction involving tenths – not bridging
- Mental methods for subtraction involving tenths –bridging
- Column addition and subtraction involving tenths
- Round numbers with tenths to nearest whole

PS Lesson: tenths (real-life)

- hundredths as decimals & partitioning
- Compare and 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

PS Lesson: hundredths (more than one possibility)

- Thousands as decimals and value of digits & partition
- Compare & order numbers with thousandths

Assessment

Pause & Stretch: re-assessment & deepening as required

Y4-5 Learning Sequence

Multiplicative Relationships

Learning Steps

Prior learning check & remediation/deepening of prior

Gattegno Charts

Multiplying by 10 moving digits

Multiplying by 100 moving digits

Divide by 10 moving digits

Divide by 100 moving digits

PS Lesson: multiplying and dividing by powers of 10 (open-ended)

Using known facts multiplication – scale of 10

Using known facts multiplication – scale of 100

Using known facts division – scale of 10

Using known facts division – scale of 100

PS Lesson: place value and known facts (working backwards)

Interpret a division story with a remainder and represent it as an equation

Division with remainders

Division with remainders VF & Think

When there will and will not be a remainder in a division equation

PS Lesson: interpret remainders (working backwards)

Assessment

Pause & Stretch: re-assessment & deepening as required

Y4-5 Learning Sequence

Factors, Multiples & Primes

Learning Steps

Prior learning check & remediation/deepening of prior

- What is area?
- Rectangle area counting squares
- Rectangle area using formula & squares
- Rectangle area using formula
- What is volume?
- Cubes to measure volume
- Calculating the volume of cubes and cuboids
- Square numbers
- Cube numbers
- Missing volume measurement problems
- Multiplying 3 numbers together using the commutative & distributive properties
- PS Lesson:** volume (working backwards)
- Find all factors of a number
- Common factors
- Prime numbers & composite numbers
- PS Lesson:** prime numbers (investigations)
- Common multiples

Assessment

Pause & Stretch: re-assessment & deepening as required

Y4-5 Learning Sequence

Short Division & Short Multiplication

Learning Steps

Prior learning check & remediation/deepening of prior

- 2 x 1 short multiplication into 3 x 1 into 4 x1 with no regrouping
- 2 x 1 short multiplication into 3 x 1 into 4 x1 with one regrouping
- 3 x 1 short multiplication into 4 x1 with two regrouping
- 2 x 1 short multiplication into 3 x 1 into 4 x1 with multiple regrouping
- Short Multiplication VF Practice Lesson
- 2 x 1 short division into 3 x 1 into 4 x1 with no remainder or regrouping
- 2 x 1 short division 3 x 1 into 4 x1 with remainder at end but no regrouping
- 2 x 1 short division into 3 x 1 into 4 x1 with 1 piece of regrouping
- 2 x 1 short division into 3 x 1 into 4 x1 with more than 1 piece of regrouping
- Short Division VF Practice Lesson

Assessment

Pause & Stretch: re-assessment & deepening as required

Learning Steps

Prior learning check & remediation/deepening of prior

Multiply numbers with decimals by 10, 100, 1000 using moving digits

Convert from larger to smaller metric units

Divide numbers with decimals by 10, 100, 1000 using moving digits

Convert from smaller to larger metric units

Converting units (VF) practice lesson

PS Lesson: moving digits for decimals (multi-domain / real-life word / multi-step)

Scaled multiplication facts – 1DP

Scaled multiplication facts – 2DP

Multiplying numbers with 1DP by ones using mental methods

Multiplying numbers with 1DP by ones using written methods

Multiplying numbers with 2DP by ones using written methods

Varied practice and think for multiplying decimals

Scaled division facts – 1DP

Scaled division facts – 2DP

Short division – decimal dividends

Short division – decimal dividends – varied practice

PS Lesson: multiplying & dividing decimals (open-ended)

Assessment

Pause & Stretch: re-assessment & deepening as required

Y4-5 Learning Sequence

Fractions

This unit only covers Year 4 fraction learning steps
Year 5 fraction learning steps will be taught in depth during Y5 fact fluency sessions

Learning Steps

Prior learning check & remediation/deepening of prior

- Understand mixed numbers
- Understand improper fractions
- Convert improper fractions into mixed numbers
- Convert mixed numbers into improper fractions

PS Lesson: mixed/improper (real-life word)

- Compare and order mixed when the whole number and the denominator of the fractional part is the same
- Compare mixed numbers when the whole number and the numerator of the fractional part is the same

PS Lesson: compare fractions (rules and patterns)

- Add proper fractions through the whole
- Add mixed numbers not bridging the whole
- Add mixed numbers bridging the whole

PS Lesson: add mixed numbers (open-ended)

- Subtract proper fractions from wholes
- Subtract proper fractions from mixed numbers – not bridging the whole
- Subtract proper fractions from mixed numbers – bridging the whole
- Subtract mixed numbers from mixed numbers – not bridging the whole
- Subtract mixed numbers from mixed numbers – bridging the whole

PS Lesson: add and subtract mixed numbers (multi-step)

Assessment

Pause & Stretch: re-assessment & deepening as required

Y4-5 Learning Sequence

Negative Numbers

Learning Steps

Prior learning check & remediation/deepening of prior

What are negative numbers?

Understand counting through zero into negative numbers

Compare and order numbers including negative numbers

Increases through zero

Decreases through zero

Find the difference

PS Lesson: negative numbers (multi-step)

Describe positions using coordinates in the first quadrant

Read coordinates in all 4 quadrants

Plot coordinates in all 4 quadrants

Describe a translation

Translate in all 4 quadrants

Complete a symmetric pattern

Reflect in all 4 quadrants

PS Lesson: coordinates (logic)

Charts involving negative numbers

Assessment

Pause & Stretch: re-assessment & deepening as required