Autumn

Chapter 1 – Numbers to 100

To count numbers up to 100 using concrete objects: counting up by 1s and 10s.
To understand each digit in a number has its own value.
To be able to compare numbers using place value knowledge gained from previous lessons.
To be able to split a number into two separate numbers which combine to make the original number: partitioning a number into tens and units.
To recognise and describe number patterns that go up and down by 1s, 2s or 10s.
To recognise and describe patterns with more complex numbers: in particular 3 and 5.
To use place value knowledge to think about the effects of each digit in a number.

Chapter 2 – Addition and Subtraction

To be able to add a single-digit number to a 2-digit number without regrouping the ones.
Simple addition of 10s and ones.
To add with tens and units where the units are both more than 0.
To add single-digit numbers to a double-digit number resulting in renaming of units.
To add two 2-digit numbers with the sum of units more than or equal to 10. This lesson is the natural next step from the previous lesson.
To consider the first steps of subtraction: subtracting units from a 2-digit number without affecting the 10s column.
To focus on subtracting mainly in the tens column whilst using unit subtraction to draw out similarities.
To focus on subtracting tens from a 2-digit number with the ones being more than 0.
To subtract a 2-digit number by another 2-digit number. In this lesson both 2-digit numbers have a value for ones but the subtraction does not stay within each column and there is no need to rename any groups.
To subtract a 2-digit number by a 1-digit number. The key concept covered in this lesson is when subtraction forces us to rename the units group as there are not enough units to subtract in the first place.
To subtract a 2-digit number by another 2-digit number where renaming has to occur.
To add three single-digit numbers.

Chapter 3 – Multiplication of 2, 5 and 10

To realise multiplication is the same as repeated addition with equal groups.
To focus on understanding and learning the 2 times table.
To continue to focus on the 2 times table whilst also looking at number patterns formed in the 2 times table.
To cover the basics of the 5 times table and to highlight multiplication visually as equal groups.
To look at the 5 times table in more depth. Pupils will look at patterns and think of strategies that will help them answer questions on this times table.
To introduce the 10 times table by focusing on the numbers found in the 10 times table.
To look at the 10 times table in more detail by looking at patterns and relationships.
To investigate links between the 2, 5 and 10 times tables. To understand commutative law.
To use knowledge of the 2, 5 and 10 times tables to investigate commutative law further.
To use the 2, 5 and 10 times tables to solve word problems.
To use the newly-gained knowledge of multiplication to solve problems.

Chapter 4 – Multiplication and Division of 2, 5 and 10

To understand that grouping is a way of dividing.
To be able to divide by sharing an amount.
To be able to divide by 2. The two strategies used here are splitting into groups of x and splitting into equal groups of many.
To be able to divide by 5 and identify links with multiplying by 5.
To be able to divide by 10 and identify links with multiplying by 10.
Use multiplication and division skills to identify family facts in a number sentence.
Understand and solve word problems which require the use of the multiplication and division skills covered in this chapter.
To be able to link whether odd or even numbers can be divisible by 2, 5 or 10.
To use multiplication and division knowledge in problem solving and to create equations from questions.

Chapter 5 – Length

To be able to understand that we measure length using a standard unit of measure called a metre.
To be able to understand that a centimetre is a smaller unit of measure than a metre and that you can measure length, height and width using the same unit of measure.
To be able to compare length for objects using greater than and less than symbols.
To be able to compare different lengths using centimetres as the unit of measure.
To be able to compare and measure various line lengths: both straight and curvy.

To be able to solve problems involving measurement in the context of word problems.
To be able to solve addition and multiplication word problems involving measurement.
To be able to solve addition and division word problems involving measurement.

Spring

Chapter 6 – Mass

To understand that mass is measured in kilograms and by using scales.
To be able to measure mass in grams and to understand that it is a smaller unit of measure than a kilogram.
To be able to measure mass accurately in grams using scales.
To be able to compare the mass of two different objects accurately.
To be able to compare the mass of three objects and use the appropriate vocabulary.
To solve word problems in the context of mass.
To solve word problems on mass.
To solve problems that involve comparing, using scales and balances to measure mass accurately.

Chapter 7 – Temperature

To be able to read temperature in celsius accurately.
To be able to estimate temperature and to read thermometers to confirm the estimate.
To be able to understand how temperature is read and how to order temperatures from highest to lowest.

Chapter 8 – Picture Graphs

To be able to read a picture graph with confidence.
To be able to read and interpret a picture graph with confidence.
To be able to read and interpret a picture graph where the value of the picture can represent more than 1.
To be able to read and interpret a picture graph where the value of the picture can represent more than 1.
To be able to read, interpret and create a picture graph where the value of the picture can represent more than 1.
To consolidate knowledge on how to read, interpret and create a picture graph where the value of the picture can represent more than 1.

Chapter 9 – More Word Problems

To decide when it is appropriate to add and/or subtract when solving word problems; to improve the use of bar modelling and decision making based on visual representations.
To use the bar model method to solve word problems looking at difference.
To solve multi-step word problems using bar modelling; to use more than one bar model in a problem to work out the answer.
To use bar modelling to solve multi-step word problems involving unknown quantities.

Chapter 10 – Money

To identify standard UK coins and notes and write their names.
To count notes in sequences of 5 and 10; to recognise the value of notes by appearance.
To count coins in sequences of their value; to recognise the value of coins by appearance.
To represent amounts of money using coins and notes; to count coins and notes using their denominations.
To create equal amounts of money using different coins.
To exchange denominations of money for different coins.
To compare different amounts of money using coins.
To add money together to determine the total amount.
To calculate change from £100 or less; to use the bar model approach to represent amounts of money.
To solve more complex word problems using bar modelling as a primary method.

Chapter 11 – Two-Dimensional Shapes

To identify the number of sides on basic 2-D shapes.
To identify and count the vertices in regular polygons.
To identify lines of symmetry in basic 2-D shapes.
To construct shapes using pattern blocks that have lines of symmetry.
To sort shapes based on number of sides, vertices and other factors.
To draw shapes using square grids and dotted grids; to copy shapes from sight into their books using grid paper.
To recognise patterns of familiar shapes and colours of up to 3 objects.
To describe patterns using ordinal numbers and shape names.
To move shapes on a square grid from one position to another using common language.
To turn objects using quarter, half and three-quarter turns both clockwise and anticlockwise on a square grid.

Summer

Chapter 12 – Three-Dimensional Shapes

To recognise 3-D shapes by identifying their properties.
To describe 3-D shapes and classify them using faces, vertices and edges.
To describe 3-D shapes based on the number of faces and 2-D make ups; to construct nets of shapes into 3-D shapes
To group 3-D shapes by similar properties.
To form 3-D structures using multiple 3-D objects.
To make and recognise patterns using 3-D shapes.

Chapter 13 – Fractions
To make equal parts from a whole using simple and complex methods.
To show and recognise halves and quarters.
To show and identify more than one quarter using materials and pictures.
To show and identify thirds in shapes; to use the vocabulary 'numerator' and 'denominator' when referring to fractions.
To identify and name fractions by looking at the number of pieces and how many are shaded in.
To recognise equivalent fractions in quarters, thirds and halves.
To compare and order similar fractions by looking at the size of the pieces shaded.
To compare and order fractions with different denominators.
To count the number of wholes and parts to form mixed numbers.
To count in halves and place halves onto a number line using pictures.
To count in quarters and place quarters onto a number line using pictures.
To count in thirds and place thirds onto a number line using pictures.
To find fractions (half) of whole numbers.
To find a fraction (third) of a whole number.
To find a fraction (quarter) of a number.
To find a fraction (half, third, quarter) of a quantity (length).

Chapter 14 – Time
To tell and write time to 5-minute intervals.
To tell time to 5-minute intervals and to the hour.
To sequence events of the day looking at analogue clocks and picture clues.
To draw hands on an analogue clock to show correct time.
To find the duration of time using an analogue clock in 30- and 60-minute intervals.
To find the duration of time to 5-minute intervals.
To find the ending time in intervals of 5 minutes from delayed starts.
To find the starting time from 30-minute and 1-hour interval durations.
To find the start of multiple durations of time using a common end.
To compare durations of time from the least amount to the most amount of time and vice versa.

Chapter 15 – Volume
To compare volume in different-sized containers using the terms 'greater than,' 'less than,' 'greatest' and 'least.'
To compare the volume of different containers using non-standard units.
To measure volume using litres and determine whether an amount is 'more than,' 'less than' or 'equal to' a litre.
To measure volume using millilitres and litres; to determine how many ml there are in 1 l.
To solve word problems involving bar models with litres as the standard unit.
To solve word problems using ml and l, including problems involving difference.
To solve word problems involving volume and multiplication.