Orton Wistow Primary School – Curriculum Plan

Subject : Maths | **Year :** 5 | **Unit :** Number and Place Value

Vocabulary	Knowledge What children will know			Understanding What children will understand			Skills What children will be able to do		
Define the word and include etymology if useful.	Learning Remembering	Teaching Telling	Assessment Testing	Learning Practising	Teaching Coaching	Assessment Observing	Learning Reflecting	Teaching Facilitating	Assessment Evaluating
Millions **Factor pair -** a pair of numbers multiplied together form another number called their product. **Powers of 10 –** A power of 10 is the number 10 multiplied by itself a number of times. **≥ -** Greater than or equal to **≤ -** Less than or equal to **≈ -** Approximately **Divisibility -** can be divided evenly without leaving a remainder. **Square number -** a number that results from multiplying an integer by itself which can be represented in the shape of a square. **Prime number -** a number that has exactly two factors. It can only be divided evenly by itself and one.	• Pupils know Roman numerals up to 1000 • Pupils know which place value column to look at when round numbers to the nearest 10, 100, 1000 and 10 000 • Pupils know to focus on the column with the highest place value when comparing numbers • Pupils know to include the zero when counting up or back through zero **Stem Sentences** Ten one thousands make ten thousand. One hundred hundreds make ten thousand. Ten ten thousands make one hundred thousand. One hundred one thousands make one hundred thousand. _____ is less than _____ ,so ____thousand is less than ____ thousand.			• Children understand what is happening in the place value columns when adding 10, 100 and 1000 • Pupils understand what is the same and what is different about our number system and the Roman numeral system • Pupils understand which two numbers a given number lies between when rounding. • Pupils understand the convention of rounding up if numbers are exactly halfway • Pupils understand when rounding is valuable, e.g. populations of countries or when packing 53 items into boxes of 10 you need 6 boxes • Pupils understand negative numbers in context, such as temperature			• Count forward and back in steps of powers of 10 for any given number up to 1,000,000 • Interpret negative numbers in context • Count forwards and backwards with positive and negative whole numbers, including through zero • Read, write, order and compare numbers up to 1,000,000 and determine the value of each digit • Use concrete materials and pictorial representations when representing numbers up to 1,000,000 • Round any number up to 1,000,000 to the nearest 10,100,1000, 10 000 and 100 000 • Read Roman numerals to 1000 (M) and recognise years written in Roman numerals • Recognise square numbers and cube numbers		

			
Vocabulary	**Knowledge** What children will know	**Understanding** What children will understand	**Skills** What children will be able to do
Define the word and include etymology if useful.	**Learning** (Remembering) / **Teaching** (Telling) / **Assessment** (Testing)	**Learning** (Practising) / **Teaching** (Coaching) / **Assessment** (Observing)	**Learning** (Reflecting) / **Teaching** (Facilitating) / **Assessment** (Evaluating)
	Negative numbers are less than zero. Negative numbers are below zero. Positive numbers are greater than zero. Positive numbers are above zero. For both negative and positive numbers, the larger the value of the number, the further it is away from zero.		

Orton Wistow Primary School – Curriculum Plan

Subject : Maths | **Year :5 /6** | **Unit :Addition and Subtraction**

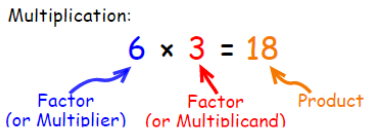
			
Vocabulary	**Knowledge** What children will know	**Understanding** What children will understand	**Skills** What children will be able to do
Define the word and include etymology if useful.	**Learning** (Remembering) / **Teaching** (Telling) / **Assessment** (Testing)	**Learning** (Practising) / **Teaching** (Coaching) / **Assessment** (Observing)	**Learning** (Reflecting) / **Teaching** (Facilitating) / **Assessment** (Evaluating)
Addition Add, more, and, make, sum, total, altogether Double Near double Half, halve One more, two more… ten more **Addends –** the numbers added together to make the sum **Subtraction** Take away, minus, fewer, less, difference between One less, two less… ten less **Minuend –** a quantity or number from which another is to be subtracted **Subtrahend -** a quantity or number to be subtracted from another. **Equals** Is equal to, is the same as Number bonds Number pair Number facts Part, part, whole Partition Recombine Missing number Tens boundary / Hundreds boundary **Commutative** - involving the condition that a group of quantities connected by operators gives the same result whatever the order of the quantities involved, e.g. $a \times b = b \times a$.	• Pupils will know how to use place value to line up numbers with more than 4 digits accurately • Pupils will know when an exchange is and isn't needed • Pupils know how to round numbers in order to estimate • Pupils know the most appropriate number to round to, e.g. the nearest 10, 100 or 1000 • Pupils know that addition can be done in any order but subtraction cannot **Stem Sentences** If one addend is increased by an amount and the other addend is decreased by the same amount, the sum remains the same.	• Pupils understand '0' as a place holder	• Use manipulatives and pictorial representations to demonstrate how to add and subtract • Add and subtract increasingly larger numbers mentally • Use formal written methods to add and subtract numbers greater than 4-digits • Use rounding to estimate and check answers • Solve addition and subtraction muti-step problems

			
Vocabulary	**Knowledge** What children will know	**Understanding** What children will understand	**Skills** What children will be able to do
Define the word and include etymology if useful.	**Learning** Remembering / **Teaching** Telling / **Assessment** Testing	**Learning** Practising / **Teaching** Coaching / **Assessment** Observing	**Learning** Reflecting / **Teaching** Facilitating / **Assessment** Evaluating
Approximate - something is almost, but not completely, accurate or exact; roughly			

Orton Wistow Primary School – Curriculum Plan

Subject : Mathematics | **Year : 5** | **Unit : Multiplication and Division**

			
Vocabulary	**Knowledge** What children will know	**Understanding** What children will understand	**Skills** What children will be able to do
Define the word and include etymology if useful.	**Learning** Remembering / **Teaching** Telling / **Assessment** Testing	**Learning** Practising / **Teaching** Coaching / **Assessment** Observing	**Learning** Reflecting / **Teaching** Facilitating / **Assessment** Evaluating
Multiplication Multiply Multiplied by Groups of Times Repeated addition **Multiple -** The result of multiplying a number by an integer (not by a fraction). **Common multiple -** A multiple that is common to two or more numbers.	• Pupils know that the commutative law can be applied when multiplying three or more numbers. • Pupils know that 1 is a factor of all positive intergers. • Pupils know that 1 is not a prime number (it only has one factor.) • Pupils know that 2 is the only even prime number. • Pupils know the notation for squared is ^{2}. • Pupils know the squared numbers up to 12x12.	• Pupils understand the relationship between multiplication and division. • Pupils understand the invesrse relationship between factors and multiples. • Pupils understand that a multiple of a number is the product of the number and another whole number. • Pupils understand that some numbers only have two factors (themselves and one) and these	• Pupils have automatic recall of multiplication and division facts within the times tables. • Pupils can use systematic methods to find all the factors of a positive integer. • Pupils can use concrete and pictorial representations to build multiples of numbers. • Pupils can find common factors of two numbers. • Pupils can recall prime numbers up to 19.

Vocabulary	Knowledge What children will know			Understanding What children will understand			Skills What children will be able to do		
Define the word and include etymology if useful.	Learning Remembering	Teaching Telling	Assessment Testing	Learning Practising	Teaching Coaching	Assessment Observing	Learning Reflecting	Teaching Facilitating	Assessment Evaluating
Factor - Numbers we can multiply together to get another number. **Common factor -** When we find the factors of two or more numbers, and then find some factors are the same ("common"), then they are the "common factors". **Multiplicand –** The number to be multiplied **Multiplier –** The number by which the multiplicand is multiplied by **Product –** The result of a multiplication  **Division** Dividing Divide Divided by Divided into Grouping Sharing Shared equally Left over Remainder Equal groups of	• Pupils know the notation for cubed is ^{3}. • Pupils know that the number which is left over when dividing is the remainder. **Stem Sentences** "A multiple of a given number is the product of the given number and any whole number." "A factor of a given number is a whole number that the given number can be divided by without giving a remainder." "21 is a multiple of 3. 3 is a factor of 21." "21 is a multiple of 3, so… • 2,100 is a multiple of 300" • 2,100 is a multiple of 3" "2 times 4 ones is equal to 8 ones: write 8 in the ones column." "2 times 3 tens = 6 tens: write 6 in the tens column." "8 tens divided by 4 is equal to 2 tens: write 2 in the tens column." "4 ones divided by 4 is equal to 1 one: write 1 in the ones column."			numbers are known as prime numbers. • Pupils underdstand that squared numbers are derived from multiplying a number by itself. • Pupils understand that cubed numbers are derived by multiplying a number by itself three times e.g. 6x6x6 • Pupils understand what is happening in each step of the long multiplication algorithm. • Pupils understand the role of the zero (place holder) when using the long multiplication algorithm. • Pupils understand the short division method by using place value counters to partition a number and then group.			• Pupils can establish whether a number up to 100 is a prime number. • Pupils can show squared numbers using concrete and pictorial representations. • Pupils can multiply four-digit numbers by a single-digit number using a short multiplication algorithm. • Pupils can use partitioning to multiply up to 4-digi numbers by a 2-digit number. • Pupils can use long multiplication to multiply up to 4-digit numbers by a 2-digit number or a 3-digit number by a 2-digi number.		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Dividend – The amount that you want to divide up. **Divisor –** The number we divide by. **Quotient -** The answer after we divide one number by another. **dividend ÷ divisor = quotient.** **Commutative law -** The Law that says you can swap numbers around and still get the same answer when you add or when you multiply. **Ditributive law -** multiplying a number by a group of numbers added together **is the same as doing each multiplication separately.** **Prime number -** A number that is only divisible by itself and 1 to leave a whole number. **Composite number -** A whole number that can be made by multiplying other whole numbers. **Square number -** the number we get after multiplying an integer (not a fraction) by itself. **Cubed number -** The whole number is used **three times**, just like the sides of a cube.			

Orton Wistow Primary School – Curriculum Plan

Subject : Mathematics | **Year : 5** | **Unit : Decimals**

Vocabulary	Knowledge What children will know			Understanding What children will understand			Skills What children will be able to do		
Define the word and include etymology if useful.	Learning Remembering	Teaching Telling	Assessment Testing	Learning Practising	Teaching Coaching	Assessment Observing	Learning Reflecting	Teaching Facilitating	Assessment Evaluating
tenths **hundredths** **thousandths** **decimal** **decimal fraction** **decimal point** **decimal place** **decimal equivalent**	• Pupils know what the decimal point means • Pupils know tenths are worth more than hundredths and hundredths are worth more than thousandths. • Pupils know that 1 tenth = 1/10 = 0.1 • Pupils know that there are ten 0.1 in 1. • Pupils know that 1 is 10 times as much as 0.1. • Pupils know that 1 hundredth = 1/100 = 0.01 Pupils know that there are ten 0.01 in 0.1. • Pupils know that 0.1 is 10 times as much as 0.01 • Pupils know that 1 thousandth = 1/1000=0.001 • Pupils know that there are ten 0.001 in 0.01, one hundred 0.001 in 0.1 and one thousand 0.001 in 1. • Pupils know to look at the digit in the first decimal place when identifying which number is bigger **Stem Sentences**			• Pupils understand the place value of each digit in a number with 2 decimal places • Pupils understand the relative size of plave-value blocks to identify the different values of decimal numbers. • Pupils understand how to round a decimal to the nearest whole number. • Pupils understand how to round a decimal to the nearest tenth. • Pupils understand the process of exchanging whole numbers into tenths and tenths into hundredths to subtract decimals efficiently. • Pupils understand the links with number bonds to 10, 100 and 1000 when adding decimals. • Pupils understand the importance of lining up the decimal point in order to ensure the correct place value when adding and subtracting numbers with different decimal places.			• Pupils can show decimal numbersusing concrete representations. • Pupils can rename tenths, hundredths and thousandths. • Pupils can partition decimal numbers in different ways. • Pupils can convert fractions into deciamals and vice versa. • Pupils can compare and order decimal numbers with up to three decimal places. • Pupils can place decimal numbers on a number line. • Pupils can use concrete representations to add and subtract decimal numbers. • Pupils can use their understanding of column addition when adding and subtracting decimal numbers. • Pupils can lay out the column method accurately using decimal numbers. • Pupils can use a number line to count on from a smaller decimal to a larger decimal.		

			
Vocabulary	**Knowledge** What children will know	**Understanding** What children will understand	**Skills** What children will be able to do
Define the word and include etymology if useful.	**Learning** Remembering **Teaching** Telling **Assessment** Testing	**Learning** Practising **Teaching** Coaching **Assessment** Observing	**Learning** Reflecting **Teaching** Facilitating **Assessment** Evaluating
	1 is 10 times the size of one-tenth. One-tenth is 10 times the size of one-hundredth. 1 is 100 times the size of one-hundredth. 10 tenths is equal to 1 one. 10 hundredths is equal to 1 tenth. 100 hundredths is equal to 1 one. 18 hundredths is equal to 10 hundredths and 8 more hundredths. 10 hundredths is equal to 1 tenth. So 18 hundredths is equal to 1 tenth and 8 more hundredths, which is 0.18. Three hundredths is zero-point-zero-three.	• Pupils understand the importance of zero as a place holder when adding and subtracting decimal numbers. • Pupils understand the effect of multiplying and dividing both integers and decimal numbers by multiples of 10 (Highlighting the misconception of adding a zero at the end of the original number.)	• Children can find complements which sum to make 1. • Pupils can apply their knowledge of calculating decimals to real life contexts such as pounds and pence and measures. • Pupils can multiply decimal numbers by 10, 100 and 1000. • Pupils can divide numbers with decimals by 10, 100 and 1000. • Pupils can use place value charts to show the effect of multiplying and dividing numbers by multiples of 10.

			
Vocabulary	**Knowledge** What children will know	**Understanding** What children will understand	**Skills** What children will be able to do
Define the word and include etymology if useful.	**Learning** Remembering **Teaching** Telling **Assessment** Testing	**Learning** Practising **Teaching** Coaching **Assessment** Observing	**Learning** Reflecting **Teaching** Facilitating **Assessment** Evaluating
fraction **unit fraction –** a fraction with a numerator of 1 **Non-unit fraction –** a fraction where the numerator is greater than or equal to the denominator (equal to or greater than one whole) **Proper fraction –** a fraction where the numerator is smaller than the denominator (less than one whole) **improper fraction – a fraction where the numerator is larder than the denominator** **equivalent fraction –** equal in value **mixed number –** a whole number and a fraction combined into one number **numerator,**	• Pupils know how many equal parts make a whole. • Pupils know that when the denominator increases, the fraction is getting smaller. • Pupils know that when adding or subtracting fractions with the same denominator, the denominator remains the same. • Pupils know that multiplying can be written as repeated addition. • Pupils know that when multiplying a fraction by a whole number, the denominator remains the same. • Pupils know that – of ___ is the same as – x ___. **Stem Sentences** The whole is divided into 4 equal parts and 1 of those parts is shaded. The whole is divided into 12 equal parts and 3 of those parts are shaded. To find $\frac{1}{5}$ of 15, we divide 15 into 5 equal parts. 15 divided by 5 is equal to 3, so $\frac{1}{5}$ of 15 is equal to 3.	• Pupils understand how multiplication and division are related to finding equivalent fractions. • Pupils understand how to use multiplication and division to convert mixed numbers into improper fractions and vice versa. • Pupils understand if fractions are increasing or decreasing in a sequence. • Pupils understand how to find the intervals between fractions on a number line. • Pupils understand how to use multiples to find a common denominator. • Pupils understand how to use common numerators to compare and order fractions. • Pupils understand how find a common denominator between two fractions, when one of the fractions has the common denominator in order to add or subtract fractions with different denominators. • Pupils understand how partitioning into whole and parts is helpful • when adding and subtracting mixed numbers.	• Pupils can use concrete and pictorial representations to show equivalent fractions. • Pupils can use the abstract method to find equivalent frctions. • Pupils can represent mixed numbers and improper fractions using bar models and other pictorial representations. • Pupils can place fractions and mixed numbers on a number line. • Pupils can count up and down in given fractions. • Pupils can find missing fractions in a sequence. • Pupils can compare and order fractions where the denominators are multiples of the same number. • Pupils can add and subtract mixed numbers. • Pupils can use concrete and pictorial representations to multiply fractions by whole numbers. • Pupils can multiply mixed numbers by a whole number.

			
Vocabulary	**Knowledge** What children will know	**Understanding** What children will understand	**Skills** What children will be able to do

Define the word and include etymology if useful.	Learning Remembering	Teaching Telling	Assessment Testing	Learning Practising	Teaching Coaching	Assessment Observing	Learning Reflecting	Teaching Facilitating	Assessment Evaluating
common numerator – when two or more fractions have the same numerator **denominator** **common denominator –** when two or more fractions have the same denominator **equal part** **equal grouping** **equal sharing** **parts of a whole** **half, two halves** **one of two equal parts** **quarter, two quarters, three quarters** **one of four equal parts** **one third, two thirds** **one of three equal parts** **sixths, sevenths, eighths, tenths, hundredths, thousandths…**	Three-fifths is equal to 3 one-fifths. To find 3 one-fifths of 40, first find one-fifth of 40 by dividing by 5, and then multiply by 3. $\frac{1}{4}$ and $\frac{3}{12}$ are equivalent because 1 is the same portion of 4 as 3 is of 12.			• Pupils understand the concept of commutativity when multiplying fractions by whole numbers.					

Orton Wistow Primary School – Curriculum Plan

Subject : Mathematics | **Year : 5** | **Unit : Percentages**

Vocabulary	Knowledge What children will know			Understanding What children will understand			Skills What children will be able to do		
Define the word and include etymology if useful.	Learning Remembering	Teaching Telling	Assessment Testing	Learning Practising	Teaching Coaching	Assessment Observing	Learning Reflecting	Teaching Facilitating	Assessment Evaluating
Proportion **in every, for every** **per cent**, % - out of one hundred. Derived from the Latin per centum, meaning "hundred" or "by the hundred". **percentage,**	• Pupils know that per cent means out of a hundred. • Pupils know the symbol % **Stem Sentences** 60 out of 100 is 60 per cent. 50 % is equivalent to ½. 25% is equivalent to ¼. 75% is equivalent to ¾.			• Pupils understand that percentage is a measure of proportion. • Pupils understand that 'per cent' relates to 'number of parts per hundred'. • Pupils understand the connection of percentages, fractions and decimals.			• Pupils will recognise different representations which shows different parts of a hundred. • Pupils can convert a fraction with a denominator of 100 into a percentage. • Pupils can convert fractions with denominators that are factors of 100 into hundredths.		

Orton Wistow Primary School – Curriculum Plan

Subject : Maths | **Year : 5** | **Unit : Statistics**

Vocabulary	Knowledge What children will know			Understanding What children will understand			Skills What children will be able to do		
Define the word and include etymology if useful.	Learning Remembering	Teaching Telling	Assessment Testing	Learning Practising	Teaching Coaching	Assessment Observing	Learning Reflecting	Teaching Facilitating	Assessment Evaluating
Line graph, continuous data, conversion graph **represent** **group, set** **list, table, two-way table** **label, title, axis, axes** **diagram** **most popular, most common least popular, least common** **maximum/minimum value outcome**	• Pupils know that reading the graph at specific points gets information about one variable based on the other. • Pupils know that data can be represented in tables. • Pupils know that two-way tables show more than one piece of information about each variable, for example the number of adults and children in a school and how many do/do not wear glasses. • Pupils know that timetables are a special type of two-way table.			• Pupils understand that joining points using a straight dashed line is used because they cannot be certain of exact values between the given values at two points. • Pupils understand that conversion graphs show exact values. • Pupils understand why the data between two points are only estimates. • Pupils understand the range of possible answers that a two-way table can show, identifying the meaning of each cell by looking at both the horizontal and vertical labels. • Pupils understand why it is important to have this information available and how anyone can read the timetable to understand information they may wish to know.			• Pupils can decide what intervals to use by looking at the greatest and lowest values and using an appropriate scale. • Pupils can find the difference between two points, the amount of time spent above/below certain points and make inferences based on information presented to them. • Pupils can estimate points between two intervals. • Pupils can work out the information that they need to extract from the table to answer questions on the data. • Pupils can find missing values in the table, such as the total number or one of the parts from given totals. • Pupils can read and interprest timetables such as TV guides and timetables for local buses and swimming pools.		

Orton Wistow Primary School – Curriculum Plan

Subject : Mathematics | **Year : 5** | **Unit : Position and Direction**

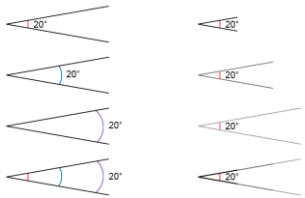
Vocabulary	Knowledge What children will know			Understanding What children will understand			Skills What children will be able to do		
Define the word and include etymology if useful.	Learning Remembering	Teaching Telling	Assessment Testing	Learning Practising	Teaching Coaching	Assessment Observing	Learning Reflecting	Teaching Facilitating	Assessment Evaluating
Coordinates **Axes** **X axis** **Y axis** **Origin (0,0)** **Quadrant** **First quadrant** **clockwise, anticlockwise** **compass point** **north, south, east, west, N, S, E, W** **north-east, north-west, south-east, south-west, NE, NW, SE, SW** **horizontal, vertical, diagonal** **translate, translation** **movement** **whole turn, half turn, quarter turn, three-quarter turn** **rotate, rotation** **angle, is a greater/smaller angle than** **degree** **right angle** **acute angle** **obtuse angle** **Symmetry, symmetrical, line of symmetry** **reflection** **straight line**	• Pupils know the point (0,0) is know as the origin. • Pupils know that to find where a reflected point is located, you can use a mirror or count how far the point is away from the mirror line. • Pupils know that when translating shapes, you should focus on one vertex at a time. • Pupils know when translating shapes, you move along the X axis first (left/right) and then along the Y axis (up/down) • Pupils know the difference between reflection and translation. •			• Pupils understand the first number in a coordinate represents the X coordinate and the second number represents the Y coordinate. • Pupils understand the coordinate is fixed (does not move) wheras a point can be plotted at different coordinates, so it can be moved. • Pupils understand that symmetry is the quality of being made up of exactly similar parts facing each other or around an axis. • Pupils understand that when you reflect an object, you have a mirror image. • Pupils understand that when a shape is translated, the shape itself does not change size nor orientation. • Pupils understand the effect of the translation on the X coordinate and Y coordinate. For example, how does a translation of 3 up affect the X and the Y coordinates? (The X coordinate has not changed)			• Pupils can plot points on a coordinate grid. • Pupils can identify points on a grid and give the coordinates. • Pupils can explain what translation means. • Pupils can translate a shape accurately. • Pupils can record the vertices of a shape after a translation and write the coordinates correctly. • Pupils can identify symmetrical shapes. • Pupils can draw a reflection when given a shape and a mirror line.		

			
Vocabulary	**Knowledge** What children will know	**Understanding** What children will understand	**Skills** What children will be able to do
Define the word and include etymology if useful.	**Learning** Remembering **Teaching** Telling **Assessment** Testing	**Learning** Practising **Teaching** Coaching **Assessment** Observing	**Learning** Reflecting **Teaching** Facilitating **Assessment** Evaluating
		• Pupils understand that different mirror lines produce different reflections.	

Orton Wistow Primary School – Curriculum Plan

Subject : Mathematics | **Year : 5** | **Unit : Properties of Shape**

			
Vocabulary	**Knowledge** What children will know	**Understanding** What children will understand	**Skills** What children will be able to do
Define the word and include etymology if useful.	**Learning** Remembering **Teaching** Telling **Assessment** Testing	**Learning** Practising **Teaching** Coaching **Assessment** Observing	**Learning** Reflecting **Teaching** Facilitating **Assessment** Evaluating
<u>2-D shape</u> **Polygon (from Greek "many-angled)** **Quadrilateral (Latin *quadrilaterus*, from *quadri-* "four" and *latus* "the side, flank of humans or animals, lateral surface,")** **Regular, irregular** **Vertex, vertices** **sides** **point, pointed** **<u>Triangles</u>**	• Pupils know that angles are measured in degrees (°) • Pupils know that complete turn is 360 dgrees. • Pupils know that half a turn is 180 degrees. • Pupils know that a quarter turn (right-angle) is 90 degrees. • Pupils know a reflex angle is greater than 180 degrees but less than 360 degrees. • Pupils know that angles on a straight line add to 180 degrees.	• Pupils understand how to read both inside and outside scales on a protrator. • Pupils understand that two right angles are equivalent to a straight line. • Pupils understand that a straight line is half of a turn. • Pupils understand when they should measure an angle and when they can calculate the size of an angle from given facts.	• Pupils can use their knowledge of right-angles to estimate the size of acute and obtuse angles. • Pupils can use a protractor to draw angles of a given size. • Pupils can calculate missing angles on a straight line. • Pupils can calculate missing angles around a point. • Pupils can identify 3D shapes from their 2D nets.

Vocabulary	Knowledge What children will know			Understanding What children will understand			Skills What children will be able to do		
Define the word and include etymology if useful.	Learning Remembering	Teaching Telling	Assessment Testing	Learning Practising	Teaching Coaching	Assessment Observing	Learning Reflecting	Teaching Facilitating	Assessment Evaluating
Isosceles (Greek *isoskelēs*, from *isos* 'equal' + *skelos* 'leg'.) **Scalene (Greek *skalēnos* 'unequal'; related to *skolios* 'bent'.)** **Equilateral (Latin *aequilateralis*, from *aequilaterus* 'equal-sided')** **<u>Quadrilaterals</u>** **Square** **Rectangle** **Rhombus** **Parallelogram** **Trapezium** **<u>3-D shape</u>** **Face** **Edge** **vertex, vertices** **apex** **prism** **net** **<u>Angle</u>** **Right-angle** **Acute** **Obtuse** **Reflex** **Clockwise** **Anti-clockwise** **protractor** **<u>Line</u>** **Horizontal** **Vertical** **Parallel**	• Pupils know that the position of the arc indicating an angle does not affect the size of the angle, which is determined by the amount of turn between the two lines. • Pupils know that the length of the lines does not affect the size of the angle between them.  • Pupils know that "regular" means all the sides and angles of a shape are equal. **<u>Stem Sentences</u>** **"An acute angle is smaller than a right angle."** **"An obtuse angle is larger than a right angle but less than the angle on a straight line."** **"A reflex angle is larger than the angle on a straight line, but less than the angle for a full turn."** **"An acute angle is less than 90°." "An obtuse angle is greater than 90° but less than 180°." "A reflex angle is greater than 180° but less than 360°."**								

			
Vocabulary	**Knowledge** What children will know	**Understanding** What children will understand	**Skills** What children will be able to do
Define the word and include etymology if useful.	**Learning** Remembering / **Teaching** Telling / **Assessment** Testing	**Learning** Practising / **Teaching** Coaching / **Assessment** Observing	**Learning** Reflecting / **Teaching** Facilitating / **Assessment** Evaluating
Perpendicular			

Orton Wistow Primary School – Curriculum Plan

Subject : Mathematics | **Year : 5** | **Unit : Measures**

			
Vocabulary	**Knowledge** What children will know	**Understanding** What children will understand	**Skills** What children will be able to do
Define the word and include etymology if useful.	**Learning** Remembering / **Teaching** Telling / **Assessment** Testing	**Learning** Practising / **Teaching** Coaching / **Assessment** Observing	**Learning** Reflecting / **Teaching** Facilitating / **Assessment** Evaluating
length **centimetre** **metre** **millimetre** **kilometre** **mile** **foot, feet** **inch, inches** **weight** **mass** **tonne** **kilogram** **gram** **pound**	• Pupils know how to line up a ruler accurately. • Pupils know that milli- means 1/1000 • Pupils know that there are 10 mm in 1 cm. • Pupils know that 1 mm is the same as 0.1 cm. • Pupils know that there are 1000 metres in a kilometre. • Pupils know that 1m is the same as 0.001km • Pupils know which operation to use when converting a smaller unit	• Pupils understand the connections between centimetres and metres. • Pupils understand the connections between metres and kilometres. • Pupils understand the difference between imperial and metric units of measure. • Pupils understand the link between multiplying and dividing by 10, 100 and 1,000 when converting between units of length, mass and capacity. • Pupils understand the role of zero as a place holder when performing some calculations, as	• Pupils can read the scale of a ruler accurately to measure in millimetres and centimetres. • Pupils can write measurements as decimals. • Children read, write and recognise all metric measures for length, mass and capacity. • Pupils can convert between centimetres and metres, including decimals. • Pupils can convert between kilometres and metres, including decimals.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ounce **capacity** **volume** **litre** **millilitre** **centilitre** **a.m., p.m.** **digital/analogue clock/watch, timer** **12-hour clock time, 24-hour clock time**	of measurement to a larger one and vice versa. • Pupils know the difference between capacity (the amount an object can contain) and volume (the amount actually in an object). • Pupils know the unit of measure that would be the most appropriate to measure different items. • Pupils know that 1kg is approximately 2.2 pounds. • Pupils know that 1 inch is approximately 2.5 cm • Pupils know there are 12 months in a year. • Pupils know how to convert years into months by multiplying by 12. • Pupils know there are 7 days in a week. • Pupils know how to convert days into weeks by dividing by 7. • Pupils know there are 60 minutes in an hour. • Pupils know how to convert minutes into hours by partitioning or dividing by 60. • Pupils know there are 24 hours in a day. • Pupils know different months have different numbers of days. • Pupils know the symbol '≈' as "is approximately equal to".	questions will involve varied numbers of decimal places. • Pupils understand how to work out what each mark is worth on a scale. • Pupils understand the connections between hours, minutes and seconds. • Pupils understand that time is not a decimal unit and so number lines are a more efficient methos when calculating time.	• Pupils can identify 1 tenth and 1 hundredth of a kilogram. • Pupils can convert between grams and kilograms by dividing or multiplying. • Pupils can compare the mass of different items by converting. • Pupils can convert between metres,centimetres and millimetres; litres and millilitres; kilograms and grams; seconds, minutes and hours etc • Pupils can use a ruler to measure 2-D shapes. • Pupils can use decimals to express units of measure when converting. • Pupils can compare measurements in different units and determine 'greater than', 'less than' and 'equal to'. • Pupils can determine how many seconds there are in a minute, how many minutes in an hour, how many hours in a day, and so on. • Pupils can find fractions of time and convert these into decimals using division. • Pupils can convert between days and hours.

			
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	Remembering	Telling	Testing	Practising	Coaching	Observing	Reflecting	Facilitating	Evaluating
	Stem Sentences There are 1000 grams in a kilogram so to convert grams to Kilograms we divide by 1000. There are 100 centimetres in a metres so when we convert centimetres to metres, we divide by 100.								

Orton Wistow Primary School – Curriculum Plan

Subject : Maths

Year : 5

Unit : Area and perimeter

			
Vocabulary	**Knowledge** What children will know	**Understanding** What children will understand	**Skills** What children will be able to do
Define the word and include etymology if useful.	**Learning** (Remembering) / **Teaching** (Telling) / **Assessment** (Testing)	**Learning** (Practising) / **Teaching** (Coaching) / **Assessment** (Observing)	**Learning** (Reflecting) / **Teaching** (Facilitating) / **Assessment** (Evaluating)
Metre **Kilometre** **Perimeter** **Length** **Width** **Rectangle** **Rectilinear** **Dimensions**	• Children know that the perimeter is the distance around the outside of a two-dimensional shape. • Pupils know the different methods of finding the perimeter, for example adding all four sides separately, adding the length to the width and then doubling, or doubling the length and the width and then adding the results. • Pupils know a rectilinear shape is a shape that has only straight sides and right angles. This can look like two or more rectangles that have been joined together and is sometimes referred to as a compound shape. • Pupils know a polygon is a closed two-dimensional shape with straight sides. • Pupils know a regular shape is a two-dimensional shape with equal sides and angles, so a square is a regular rectangle. • Pupils know that area is measured in square centimetres (cm^2) • Pupils know that other units such as mm^2, m^2 and km^2 are also examples of units of area. • Pupils know compound shapes are shapes made up of two or more other shapes. • Pupils know that one way to obtain an estimate is to find the total number of complete squares,	• Pupils understand to measure from the zero mark. • Pupils understand which method is most efficient for finding the perimeter. • Pupils understand the connection between the perimeter of some rectilinear shapes and the rectangle that can be drawn around the shape. • Pupils understand that cm is a measure of length and cm^2 is a measure of area. • Pupils understand that we multiply the length by the width to calculate the area of a rectangle. • Pupils understandthat a compound shape is made up from other shapes and that the area of the compound shape remains the same, whichever way the shape is split. • Pupils understand that an estimate is not exact and other people may find a different estimate. • Pupils understand that for larger shapes, the areas of rectangles within them can be found by multiplying the length by the width, rather than counting all the squares individually.	• Pupils can use a ruler accurately to measure lengths. • Pupils can use their understanding of perimeter to calculate missing lengths. • Pupils know that when calculating the perimeter of a rectilinear shape, they should mark sides that they have already included in their total, to avoid counting sides more than once. • Pupils can use their knowledge of regular shapes to find the perimeter by multiplying by the number of sides. • Pupils can use the perimeter of a shape to find a missing side. • Pupils can find the areas of shapes by counting squares. • Pupils can find missing lengths on the shape to support finding the area. • Pupils can count squares to estimate the areas of non-rectilinear shapes. • Pupils can use their knowledge of fractions to estimate how much of a square is covered.

								
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	then include a square if more than half of it is coloured, but not if less than half is coloured.								