Nettleham Church of England

(Voluntary Aided) Junior School

Curriculum

Our School Vision

As a Christian school we believe that every member of our community should feel wonderful, amazing, loved, valued and unique, because God made us that way. We encourage all our children to achieve the highest possible standards and develop skills to be lifelong learners. Our school values are: Trust, Humility, Thankfulness, Koinonia, Friendship and Endurance.

Our Curriculum Vision

Our curriculum is rooted in our school's Christian identity and reflects our values and vision. Thorough academic learning is balanced and enriched by a wide variety of creative, sporting and musical experiences. We aspire to give all our pupils the opportunities, skills and knowledge to have the best possible chance in life.

Rationale

Intent

The Church family is at the heart of our curriculum and our curriculum is taught in such a way as to reflect our values and vision. Our curriculum is based on the principles of balance, coherence and relevance. The curriculum is infused with a well thought-out variety of academic challenges balanced with an array of creative, musical and sporting enrichment opportunities whilst also nurturing personal development. Spiritual, moral, social, cultural development, along with physical and mental wellbeing, underpins all our work. These elements have been carefully considered in designing a broad, balanced and ambitious curriculum for all, which gives children the knowledge to succeed and the skills to become lifelong learners, whichever path they take. We have an aspiration for our children to be successful, independent, resilient, proactive learners, well rounded, passionate pupils so they develop the skills, knowledge and understanding that will set them in good stead for future learning and to give them the best possible chance in life. This is provided in a safe atmosphere of mutual trust, respect and support. We strive to be an inspiring learning community for all which reflect the school and village locality, heritage and community.

Implementation

Pupils learn best when they are happy, confident and interested. They are supported and challenged by staff through a variety of teaching methods to make connections between different subjects and link this to their own life experiences and prior knowledge. In this way knowledge is retained and learning becomes secure and embedded. Misconceptions are closely monitored and children receive effective and timely feedback. Children are encouraged to take responsibility for their own learning and identify their own mistakes, rectifying them where possible and appropriate.

Staff have excellent subject knowledge, which is constantly being developed, and they use this effectively to motivate all children. They ensure that the learning environment is attractive, stimulating and conducive to the development of knowledge, skills and concepts.

The curriculum is thoroughly enriched with a broad range and variety of trips, visitors and engaging experiences both within lessons, throughout the day and extra-curricular activities to enhance pupil provision. Pupils are regularly encouraged to explore their creativity and imagination through diverse music, sports and art projects and experiences.

Formative and summative assessment are regularly used to inform teacher judgements of attainment and progress allowing staff to identify any gaps and provide suitable levels of intervention, support and challenge. Results are tracked and monitored through our own assessment system and then analysed by subject leaders and senior leaders. All subjects have clearly mapped out skills and knowledge progressions, so prior knowledge is effectively built upon. Marking and feedback is used effectively to further learning, set targets, praise, inform planning, correct misunderstanding, assess, recognise success and showing children next steps to improve through reflecting on comments and personal goal setting.

The whole school family work hard to motivate and inspire our pupils to prepare them for the world they live in today and for life.

Impact

As a result of our broad and rich curriculum, pupils develop detailed knowledge and skills across a range of subjects, recalling and retaining facts and ideas appropriately, and, as a result, achieve well. Where relevant, this is reflected in national test results, where children meet government age related expectations. All pupils read competently and fluently to gain knowledge, understanding and for pleasure. Pupils are given the necessary skills and values to be ready for both the next stage of their education and for their future lives in the wider world. We instil all our pupils with good morals and values to enable them to become tolerant and compassionate individuals.

The effectiveness of our curriculum design is regularly monitored and evaluated by leaders, and adjusted if necessary to ensure the best possible outcomes for all our pupils.

Maths

Overriding concepts: Resilience - never giving up, breaking down problems into manageable parts.

Mathematics NUMBER Progression Grid

Area	Year 3	Year 4	Year 5	Year 6
Number and place value	• Read, write and use numbers up to 1000 in numerals and words • Count in multiples of 4, 8, 50 and 100 • Understand the place value of each digit in a three-digit number and find 10 or 100 more / less than a number	• Read Roman numerals to 100 • Count in multiples of 6, 7, 9, 25 and 1000 • Understand the place value of each digit in a four-digit number and find 1000 more/ less than a given number • Round numbers to nearest 10, 100 or 1000 • Begin to recognise negative numbers	• Read Roman numerals to 1000 • Read, write and use numbers to at least 1 000 000 • Count forwards/ backwards and round in powers of 10 • Begin to interpret negative numbers in context	• Read, write and use numbers up to 10 000 000 • Round any whole number to differing degrees of accuracy • Calculate intervals across zero when problem solving • Use negative numbers in context and problem solving
Addition and subtraction	• Add and subtract numbers mentally; including 3-digits • Add and subtract numbers up to 3-digits using formal written methods • Begin to estimate and check answers to calculations using a range of strategies • Solve addition/ subtraction problems; including the use of number facts	• Add and subtract numbers mentally using known facts • Add and subtract numbers up to 4-digits using formal written methods • Routinely estimate and check answers to calculations using a range of strategies • Solve two-step addition/ subtraction problems; choosing appropriate operations	• Accurately add and subtract mentally, and using formal written methods • Routinely check answers to calculations; including by rounding • Solve multi-step addition/ subtraction problems; choosing appropriate operations	• Mentally calculate mixed operations • Solve multi-step problems involving addition/ subtraction • Use efficient formal written methods for multiplication and division; interpret remainders • Solve problems involving all four operations and estimate to check answers • Identify and use common factors and multiples • Identify prime numbers
Multiplication and division	• Use mental recall of multiplication/ division facts for 3, 4, 8 • Begin to use formal written methods to calculate larger multiplications • Solve multiplication/ division problems; including simple scaling and correspondence problems	• Know and use mental recall of multiplication/ division facts up to 12 X12 to derive facts • Use factor pairs to support mental calculations • Use formal written method to multiply • Solve multiplication/ addition problems; including applying the rules of arithmetic and two-step problems	• Use known facts to mentally multiply and divide • Use formal long and short written methods for multiplication and division; include decimal numbers and interpret remainders • Recognise and use prime numbers and prime factors • Solve multiplication/ division problems; including recognition and application of factors, multiples, squares, cubes	
Fractions (including decimals and percentages)	• Understand and use unit and non-unit fractions of objects and numbers; including tenths • Recognise equivalent fractions with small denominators • Begin to compare and order fractions • Begin to calculate simple addition and subtraction of fractions; within one whole	• Understand and use hundredths • Begin to recognise decimal and fraction equivalents • Calculate simple addition and subtraction of fractions; beyond one whole • Divide by 10/100 and understand the value of the resulting decimal numbers • Solve fraction and decimal problems in context; including rounding and comparing up to two decimal places	• Recognise, compare and order fractions; including mixed numbers and improper fractions • Calculate addition and subtraction of fractions; including different denominators • Begin to multiply fractions • Recognise, compare and round decimals; up to 3 decimal places • Begin to understand decimal numbers as fractions • Solve problems involving simple percentage and decimal equivalents	• Simplify, compare and order a range of fractions • Use equivalence to add and subtract fractions • Multiply and divide proper fractions • Understand the relationship of division and fractions • Recognise and calculate numbers with three decimal places • Use equivalences between simple fractions, decimals and percentages
Ratio and proportion				When solving problems: • Apply multiplication and division facts to calculate proportionality in a range of contexts • Accurately calculate and use percentages • Understand scale factor
Algebra				•Use and generate simple formulae using symbols and letters • Generate linear number

	Year 3	Year 4	Year 5	Year 6
				sequences • Find different possibilities for the variables within equations

Mathematics MEASUREMENT, GEOMETRY, STATISTICS Progression Grid

Area	Year 3	Year 4	Year 5	Year 6
Measurement	• Use the appropriate units of length (m/ cm/ mm), mass (kg/g) and volume/capacity (l/ml) to measure, compare, add and subtract • Understand how to measure the perimeter of simple 2-D shapes • Solve practical problems for adding and subtracting amounts of money, using both £ and p to give change • Understand how to tell and record the time; including for analogue, 12-hour, 24-hour and clocks with Roman numerals • Use the terms o'clock, a.m./p.m., morning, afternoon, noon and midnight • Know a range of equivalent units of time • Use known facts to compare the duration of events	• Know how to convert units of measure (e.g. km to m, hour to minutes) • Know how to measure and calculate the perimeter of rectilinear figures (cm/ m) • Use counting to find the area of rectilinear shapes • Solve problems using a different range of measures; including money • Use the units of time to convert between analogue and digital clocks • Solve problems using conversion between units of time	• Know how to convert units of metric measure (e.g. km to m, kg to g, l to ml) • Recognise approximate equivalences between metric units and common imperial units (e.g. inches, pints, pounds) • Know how to measure and calculate the perimeter of composite rectilinear shapes (cm/ m) • Use estimating, calculating and comparing to find the area of rectangles (including squares) and estimate to find the area of irregular shapes • Use practical resources to estimate volume and capacity • When solving problems convert between units of time • When solving problems use all four operations to solve problems involving measures using decimal notation and scaling	• When solving problems that require the calculation and conversion of units of measures, use decimal notation up to three decimal places • Know how to convert between miles and km • Investigate the relationship between area and perimeter identifying examples where the same area can have the same perimeter and vice versa • Use the formulae for area and volume of shapes • Know how to calculate the area of parallelograms and triangles • Be able to calculate, estimate and compare the volume of cubes and cuboids using standard units (cm^3, m^3)
Geometry – properties of shape	•Accurately draw 2-D shapes • Recognise 3-D shapes in different orientations • Know that angles are a property of shapes and can be used to describe turns • Accurately recognise right angles; including a complete turn • Begin to identify whether angles are greater or less than a right angle • Begin to use the terms horizontal and vertical lines & perpendicular and parallel to describe pairs of lines	• Use the properties of shape to compare and classify geometric shapes • Understand and use the terms acute and obtuse to identify angles • Make observations to order angles up to two right angles by size • Recognise lines of symmetry in 2-D shapes presented in different orientations	• Use the terms acute, obtuse and reflex to estimate and compare angles • Know how to identify 3-D shapes from 2-D representations • Accurately draw and measure angles in degrees (°) • Know how to use the properties of rectangles to find missing lengths and angles • Use knowledge of sides and angles to distinguish between regular and irregular polygons	•Use given dimensions and angles to draw 2-D shapes • Construct 3-D shapes including making nets • Know how to find unknown angles in triangles, quadrilaterals and regular polygons • Solve missing angle problems on straight lines • Use the knowledge of shape properties to classify geometric shapes • Know and use the parts of circles (radius, diameter and circumference)
Geometry – position and direction		• Know how to use coordinates to describe position in the first quadrant and plot specified points • Use knowledge of coordinates and shape to complete a given polygon • Use translation horizontally and vertically to describe movement	• Know how to successfully reflect and translate shapes	• Know how to use coordinates to describe position in all four quadrants and plot specified points • Know how to draw and translate shapes on the coordinate plane • Know how to reflect simple shapes in the axes of a coordinate plane
Statistics	• Use bar charts, pictograms and tables to present and interpret data • Use information in scaled bar charts, pictograms and tables to solve one-step and two-step questions	•Use bar charts and time graphs to present discrete/ continuous data • Use bar charts, pictograms, tables and other graphs to solve comparison, sum and difference problems	•Use line graphs to solve comparison, sum and difference problems • Identify the necessary information in tables (including timetables) and be able to complete them	• Know how to construct a pie chart and line graph • Use pie charts and line graphs to solve problems • Understand the term mean as an average and be able to calculate it