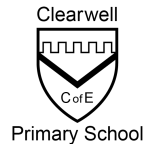


Mathematics

Curriculum Intent



At Clearwell, it is understood that every educational setting has a set of unique factors. It is important to recognise all children have the potential to achieve the best possible educational outcomes as well as being effectively prepared for their future life. Clearwell School draws children from a range of backgrounds and varied catchments. The intake is diverse and varies year on year due to its numbers. A small proportion of children are from deprived backgrounds, have special educational needs or English as a foreign language. It is important that the school's curriculum addresses these needs throughout its content and delivery.

The school follows the EYFS Framework and KS1 & KS2 National Curriculum 2014 to provide the skeleton for the knowledge, skills and milestones that are delivered within the school. Using this as its basis, the curriculum is tailored so its delivery meets the following seven statements of intent:

The curriculum intends to promote Christian values:

Clearwell C of E Primary school is a church school that prides itself on teaching Christian values throughout its curriculum and the wider life of school. As a church school, the children learn about Christian values, as well as those of other faiths, in order to prepare them as caring and considerate members of society. The values of respect, friendship and courage are nurtured and highlighted throughout all teaching and are fundamental to the children's attitudes towards learning. They help support a growth mindset and also help build relationships and attitudes beyond the curriculum. Periods of reflection and worship support learning attitudes and the ability for children to understand how Christian Values can aid learning new skills; acquiring new knowledge and supporting others to do the same.

The curriculum intends to be experience based:

It is recognised that children start school with a wide range of different experiences. The curriculum is planned to extend and enhance these experiences. An in-depth knowledge of each child allows staff to plan individual programmes and experiences to fill in any gaps in developmental progress. Staff ensure children's learning, where possible, is based on hands-on experiences; meeting visitors who can inspire children and visiting places of interest which ensure children have first-hand experiences.

The curriculum intends to utilise technology to enhance learning:

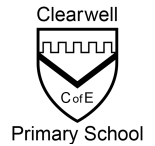
We recognise that in a society which relies so heavily on technology, we have a duty to prepare our pupils to operate effectively in the modern world. We aim to provide opportunities for pupils to learn about how technology can be used to enhance learning and awaken interest in the possibilities that exist now and those that might follow in the future.

The curriculum intends to raise self-esteem, self-confidence and promote well-being:

Throughout all aspects of school life staff promote a can-do attitude and celebrate the successes, resilience, perseverance and progress of all children. This is particularly apparent at Clearwell as, due to

Mathematics

Curriculum Intent



our small numbers, all children are given the opportunity to develop their self-esteem and self-confidence. Clearwell recognises the opportunities that small school teaching can provide and promotes mixed age learning to support and challenge all pupils. The curriculum is structured to provide the children with the opportunity to experience their full entitlement in a supportive environment that celebrates perseverance and resilience to challenge. We recognise that some children may need support to maintain and promote their well-being and we will seek to do this in a nurturing and positive learning environment.

The curriculum focusses on the core skills of Reading, Writing and Maths:

Staff recognise that for children to succeed beyond the classroom the skills of reading, writing and maths are crucial. Children start school with a range of levels of understanding and development for their age group. The school recognises some children will need extra support in order to close these gaps. Staff work closely with parents and carers to help children succeed.

The curriculum has a clearly mapped out progression of skills and knowledge:

Staff recognise that in order for children to learn effectively, it is important that the taught curriculum is carefully mapped out. The rolling programme of three and four-year curriculum cycles allow children to acquire and develop these skills, revisiting them and reinforcing them continually. This ensures that long term acquisition of skills and knowledge is embedded. Each curriculum area has been considered to ensure that the benefits of mixed age teaching can be maximised whilst still providing adequate challenge and progression within each key phase of primary education.

The curriculum intends to develop effective communicators:

Some children enter school with Speech and Language development below the expected level. As such staff tailor the curriculum to prioritise this aspect and utilise opportunities both within formal and informal learning. From the first weeks at Clearwell, children are encouraged to develop their speaking and listening skills through performance, stories, singing, rhymes and role play. The unique set up of multi-age classes means that the children have role models to imitate and learn from. The development of oracy skills is key in developing the ability to communicate in writing.

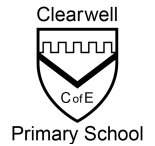
Implementation

At present the current curriculum provides a wealth of opportunities to meet these seven aims (as outlined above). However, the school recognises that there are areas to improve, consistency to be achieved across all subjects and actions to be taken in order to make this fully effective.

The curriculum will be regularly reviewed to ensure it provides the progression of skills and knowledge needed in order for children to make progress. Care will be taken to ensure that both progression and coverage of the curriculum are adhered to.

Mathematics

Curriculum Intent



Structure of the Curriculum

The curriculum is a progressive curriculum which builds upon previously gained knowledge and skills.

Where possible, we aim to develop cross-curricular links which contributes to levels of engagement and enthusiasm for learning.

The school has mixed age classes throughout the school and it is important that the curriculum allows children to build on their current understanding and not repeat previously learnt skills in the same manner. When planning the curriculum, staff are aiming to develop mastery of skills and consistent recall of key facts. The range of abilities within a teaching group is considered when planning lessons to ensure that there is support and challenge for all pupils so that all pupils make good progress.

The curriculum intends to teach children Christian values:

As a Church of England school the ethos is rooted in the teaching and modelling of Christian Values. Through regular Worship these values are reinforced and children are taught to understand how to apply them in all aspects of their life. Christian Values permeate every aspect of school and are integral to the design and implementation of policy; planning and delivery of lessons and the behaviour and standards set by all stakeholders. Teachers look to identify, model, include and praise these values in all curriculum areas.

In Maths, this means incorporating Christian values into the learning experience by using mathematical concepts as a platform to instil moral and ethical principles. For example:

Collaborative Learning with Teamwork:

Promoting teamwork and collaboration during group activities. Students work together to solve problems, reinforcing the Christian values of community and cooperation.

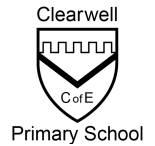
Applying Fairness in Mathematical Concepts:

Incorporating discussions about fairness and equity in mathematical scenarios. For example, exploring concepts like fair distribution in sharing resources or ensuring equal opportunities for all students in solving problems. This connects with Christian values of justice and equality.

Incorporating Christian values into the Maths curriculum not only provides a unique perspective on mathematical concepts but also reinforces the integration of moral and ethical principles into various aspects of a child's education.

Mathematics

Curriculum Intent



The curriculum is based on a range of experiences and opportunities for learning:

Currently the curriculum provides a wide range of experience-based opportunities for children to draw upon in their work these involve a range of visitors/trips and experiences in the classroom.

In Maths, the emphasis on a range of experiences and opportunities for learning in school signifies a commitment to providing a diverse and engaging mathematical education. Here are some examples:

Mathematics in Cultural Exploration:

Integrating mathematical concepts into cultural experiences. For example, exploring traditional patterns in art or architecture from different cultures, engaging students in activities that display the rich mathematical history across various civilizations.

Mathematics in Environmental Studies:

Connecting math with environmental studies. For instance, exploring mathematical concepts in relation to conservation efforts, studying patterns in weather data, or analysing environmental statistics. This approach aligns with the broader context of sustainability and ecological awareness.

Mathematics through Sports and Physical Education:

Incorporating mathematical concepts into sports and physical education activities. This could include analysing sports statistics, exploring mathematical principles behind game strategies, or measuring and recording physical fitness data.

Mathematics in Technology and Coding:

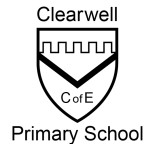
Integrating technology-related experiences into the math curriculum. Students can engage in coding activities, use digital tools for problem solving, or explore the mathematics behind technological innovations. This approach aligns with the increasing importance of technology in the modern world.

By incorporating a variety of experiences and opportunities into the Maths curriculum, students in Clearwell C of E primary school can develop a well-rounded understanding of mathematical concepts while fostering a love for learning and an appreciation for the real-world applications of mathematics.

Children will present their learning in different ways, including through performance, role play and drama. From Reception they are given the opportunity to share and talk about their work in front of the school and wider community.

Mathematics

Curriculum Intent



The curriculum intends to utilise technology to enhance learning:

We seek to utilise technology to create enthusiasm and interest in the possibilities of the modern world. Pupils will have access to devices and be taught how to use them effectively across all subjects.

In Maths, this commitment to utilising technology to enhance learning involves integrating digital tools and devices to enrich the mathematical educational experience. Here are some examples:

Interactive Learning Apps and Software:

Incorporating interactive maths learning apps and software such as TT Rock stars allow students to engage with mathematical concepts in a dynamic and visual way.

Digital Maths Manipulatives:

Introducing digital manipulatives to aid in understanding abstract mathematical concepts. For instance, using virtual blocks for teaching addition and subtraction or interactive diagrams for exploring geometric shapes, providing a hands-on and visual approach to learning.

Digital Data Analysis:

Teaching students to use digital tools such as excel and google sheets for data analysis and interpretation. For example, using spreadsheet software to organise and analyse data sets, helping students develop skills in data handling and statistical analysis.

Online Math Puzzles and Games:

Introducing online math puzzles and games that make learning enjoyable. Platforms offering interactive math games can reinforce concepts in a playful way, encouraging students to practice mathematical skills outside the traditional classroom setting.

Digital Formative Assessment Tools:

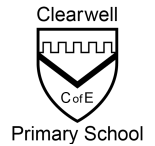
Implementing digital formative assessment tools on TT Rockstars to gauge students understanding in real-time. These tools can provide immediate feedback to both teachers and students, allowing for personalised learning and targeted support.

Online Math Resources and Tutorials:

Providing access to a variety of online resources and tutorials. Such as White Rose video lessons, interactive tutorials, and other educational websites such as the NCETM that supplement traditional classroom instruction, catering to different learning styles.

Mathematics

Curriculum Intent



By integrating technology in these ways, the curriculum can become more engaging and adaptive, fostering a positive attitude towards learning while preparing students for the digital challenges of the modern world.

The curriculum raises self-esteem, self-confidence and well-being:

The school has established a foundation of six Christian values that underpin all actions within the school. These are Hope, Trust, Peace, Forgiveness, Courage and Friendship. They are promoted regularly in all areas of the school and referenced throughout all teaching. The children talk confidently about these and how they impact on their learning. In addition to these are the values of perseverance and resilience as they directly impact on children's self-esteem and confidence. The school has a commitment to celebrating success and effort and has regular opportunities to publicly celebrate all children's learning with each other, within classes and with the local community. This also includes children's achievements outside of school which are shared in Friday assemblies. We aim to provide pupils with the emotional literacy they need to cope with challenges and manage success.

In Maths, this commitment to raising self-esteem, self-confidence, and well-being involves integrating the Christian values of Hope, Trust, Peace, Forgiveness, Courage, and Friendship, as well as the values of perseverance and resilience, into the learning experience. Here are some examples:

Encouraging Collaboration and Friendship:

Promoting group activities and collaborative problem solving in maths lessons to foster a sense of friendship and teamwork. Students can work together to solve mathematical challenges, emphasising the value of cooperation and shared learning.

Building Trust in Problem-Solving:

Creating an environment where students feel trusted to explore and express their mathematical ideas without fear of judgment. This can be achieved through open discussions, peer collaboration, and encouraging students to share their thought processes during problem-solving activities.

Developing Hope and Resilience in Facing Challenges:

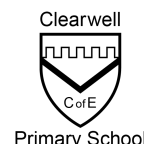
Incorporating challenging math problems that require perseverance and resilience. Students are encouraged to approach complex problems with a hopeful and determined mindset, emphasizing that mistakes are part of the learning process and can lead to growth.

Peaceful Reflection on Mathematical Concepts:

Integrating moments of reflection within math lessons, where students can review and contemplate mathematical concepts.

Mathematics

Curriculum Intent



Forgiveness in Learning from Mistakes:

Cultivating an atmosphere where mistakes are viewed as opportunities for learning and growth. Encouraging students to forgive themselves and others for errors made during the learning process, fostering a positive attitude towards overcoming challenges in maths.

Courage in Presenting and Explaining Solutions:

Providing opportunities for students to courageously present and explain their solutions to the class. This helps build confidence in public speaking and reinforces the idea that every student's perspective is valued, contributing to a positive and supportive learning environment.

Celebrating Effort and Success in Maths:

Actively acknowledging and celebrating students' efforts and successes in mathematics. This could involve regular recognition in class or showcasing achievements in school assemblies.

By infusing these values and approaches into the Maths curriculum, the school aims to nurture not only mathematical skills but also the emotional well-being of students, fostering a positive and inclusive atmosphere for learning and personal development.

The curriculum focusses on the core skills of Reading, Writing and Maths:

Reading

At Clearwell there is a strong culture of reading throughout the school. In EYFS and KS1 children read to an adult regularly. In KS2, children are given opportunities to develop their reading skills on a daily basis and some children are heard by an adult on a more regular basis according to need and ability. Class novel time is prioritised within the school day. Stories are read to the children daily in both classes. This includes longer texts in KS2 and picture books/shorter novels in EYFS/KS1. Reading is celebrated weekly within our 'Celebration' assembly.

Phonics learning takes place daily in EYFS/KS1 and is supported by closely matched reading books and word games which are sent home. The school follows the Read, Write, Inc. scheme.

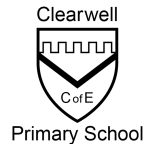
The school works closely with parents and carers to provide a consistent and sustained approach to reading.

Writing

The school has a programme of writing which covers a range of genres. The children are given the opportunity to study different high quality texts, learn the features and produce their own pieces. These are shown in specific writing books, topic work and published in class writing books.

Mathematics

Curriculum Intent



Children are encouraged to use their phonic knowledge, grammatical knowledge and wide range of vocabulary to produce writing of a high standard. They are expected to read and edit their own work at age appropriate levels.

Children are taught to join-up their writing in year 1. From year 2 onwards they are expected to present their writing in a neat, legible form with dates and titles underlined.

Maths

The school aims to develop mastery in all areas of maths and the ability to apply mathematical knowledge in a range of contexts. Fluency in basic calculation operations is a key aim of our curriculum.

In KS1/KS2 daily sessions are in place to embed core skills.

Children are expected to present their work in a clear, legible and logical form that they can use to check calculations.

The curriculum has a clearly mapped out progression of skills and knowledge:

The school has mapped out skills and knowledge across all curriculum areas to ensure that children achieve full coverage of the National Curriculum and also are challenged at an age appropriate level. Knowledge is taught on a rolling cycle and skills are developed incrementally over the period spent within a learning phase. As part of the mixed age provision - children can be continuously challenged to learn and progress utilising skills from within the key stage they are currently in; furthermore, children that find learning more difficult can be supported and work alongside others that are learning less complex skills. The teaching allows children to consolidate where necessary and aspire to achieve more wherever possible. Teachers strive to ensure that all children are working at age related expectations.

In Maths this means following the [White Rose Maths Scheme of Learning version 3.0](#). Following the [White rose calculation policy](#). WRM is a blocked scheme, which allows for depth and breadth of learning within each strand of mathematics.

Children will engage with a wide and varied range of concrete manipulatives, pictorial representations and abstract methodologies within each session.

Learning sessions include the opportunity to develop fluency skills and reasoning using relevant knowledge alongside relevant terminology and solve increasingly complex problems in a systematic and coherent way.

Sessions will include a do it, twist it and solve it to support this.

Mathematics

Curriculum Intent

1) Can you 'do it'?	Focus on the 'What it is?' Simple, standard examples followed by non-standard examples challenge procedural fluency.
2) Are you secure? (twist it)	Focus on the 'What it is not?' Active argument tasks - eg True/False, Do you agree? - focus on misconceptions and mistakes to challenge conceptual understanding
3) Can you apply it and solve it ?	Solving familiar and unfamiliar problems including empty box/find the missing symbol, 'Here's the answer - what is the question?', Always/Sometimes/Never, etc. challenge mathematical thinking

Sessions will also include explicit reference to vital mathematical vocabulary and the use of stem sentences to support and encourage all children to communicate their ideas with mathematical precision and clarity. These sentence structures often express key conceptual ideas or generalities and provide a framework to embed conceptual knowledge and build understanding.

To revisit of concepts and embed learning we use Flashback 4 daily.

Stand alone reasoning and problem solving will be taught daily in KS2 and twice a week in KS1.

In order to assist pupils to become fluent in the fundamentals of mathematics, through varied and frequent practice with increasingly complex problems over time pupils will also take part in Fluency sessions daily in KS2 and three times a week in KS1.

We are committed to ensuring that pupils secure their knowledge of Times Tables and Related Divisional Facts by the end of Year 4. Our pupils engage in regular low stakes testing through TT Rock stars tables to practice fluent recall.

The curriculum intends to develop effective communicators:

Lessons are designed to allow children to practice and develop their speech and language skills. Regular opportunities are made for them to speak in front of an audience and discuss their work with peers. All staff model good speech and children are expected to respond in full sentences where appropriate. Vocabulary extension is a priority to develop effective communication and understanding of language.

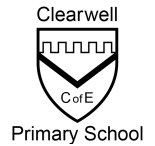
In Maths, the commitment to developing effective communicators involves integrating speech and language development strategies into the learning experience. Here are some examples:

Oral Problem-Solving Discussions:

Facilitating regular opportunities for students to discuss their mathematical thinking and problem-solving strategies with peers. Students can explain their approaches to solving mathematical problems, enhancing their ability to articulate mathematical concepts clearly.

Mathematics

Curriculum Intent



Mathematical Presentations:

Incorporating activities where students present their mathematical findings or solutions to the class. This might involve explaining a particular problem-solving process or leading a discussion on a specific mathematical concept.

Collaborative Group Work and Discussions:

Promoting collaborative group work in maths lessons, where students engage in discussions to solve problems together. This encourages effective communication, allowing students to articulate their ideas, listen to others, and collectively arrive at solutions.

Peer Teaching and Explanation:

Encouraging peer teaching, where students take turns explaining mathematical concepts to their classmates. This not only develops communication skills but also reinforces their understanding of mathematical principles as they articulate and share their knowledge.

Response in Full Sentences:

Expecting students to respond in full sentences during math discussions using the correct mathematical vocabulary with the support of sentence stems when explaining their reasoning. This practice helps them express their thoughts clearly and reinforces the importance of effective communication in the subject.

Vocabulary Building in Maths:

Making vocabulary extension a priority by introducing and reinforcing specific mathematical terms. Students can actively engage in discussions using accurate mathematical language, enhancing their ability to communicate ideas precisely.

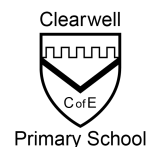
Use of Visual Aids in Communication:

Incorporating visual aids such as charts, diagrams, and models to support verbal communication. This helps students convey complex mathematical ideas more effectively, fostering a multi-modal approach to communication.

By weaving these communication-focused practices into the Maths curriculum, the school aims to develop students who not only excel in mathematical skills but also possess strong communication abilities, preparing them for a variety of contexts in and beyond the academic setting.

Mathematics

Curriculum Intent



Impact

The impact of the teaching and learning at Clearwell is that the children move on to the next stage of their learning as confident, enthusiastic and knowledgeable students. Links are still maintained with many previous learners who have demonstrated that foundations built at Clearwell have helped them succeed. The school retains a unique character that celebrates and maximises the benefits of a small, rural, mixed age setting with a strong Christian ethos and family feel.