DEEP DIVE:

Curriculum area: MAPA

Belle Vue School

Cornfields School

'Improving life chances'

INTRODUCTION

In September 2019, Ofsted introduced changes to the inspection framework. They continued to report on all aspects of a school, as set out in section five of the Education Act 2005, but changed the judgement headings and introduced a 'quality of education' judgement.

The revised inspection methodology, which supports the education inspection framework, has combined aspects of the previous key judgements of 'teaching, learning and assessment' and 'outcomes' to provide a more holistic view of standards, particularly focusing on the curriculum.

The new methodology also saw the introductions of 'deep dives', which involves gathering evidence on the curriculum intent, implementation and impact. The Ofsted deep dive is one of the key elements of the new Ofsted inspection framework's curriculum focus.

In any school, the primary focus must be the education pupils are receiving day to day in the classroom. In order to establish if what pupils are receiving in the class is a quality education, we must be clear on the purpose of what we are delivering.

We have therefore utilised the Ofsted 'deep dive' framework as a system to ensure we are focussed on the quality of education and are able to accurately direct resources to achieve an outstanding curriculum Our staff have looked at the subjects we offer and our cohort of pupils. Our staff have reflected and asked the questions.

1. What is the intention of this programme of study? (Intent)
Only when we can answer this question do we move on to the next question.

2. How should we best deliver this programme of study? (Implementation)
Only when we can answer this question do we move on to the next question.

3. How will we know we have been successful? (Impact)

At the core of our deep-dive approach is to consider and evaluate how education flows from intention to implementation to impact within our school. Without doing this, it would be impossible to form a valid judgement on the quality of the education we provide. Moreover, in completing the deep dives, we are able to ask ourselves pertinent questions and are able to accurately identify areas for improvement, from which we are able to quickly respond to provide necessary improvements in the quality of the education we deliver.

In summary, the deep-dive approach adopted by Ofsted has been developed to allow for accurate assessments of the quality of education to be made. It has been seen that this assessment process is a highly effective tool and we have embraced this tool as a regular feature of our self-assessment process in considering the quality of education we offer.

CURRICULUM AREA: MAPA

Intent

MAPA enriches and enhances the experience of the mathematics curriculum for all learners – developing mathematical thinking and problem-solving skills, offering challenging, inspiring and engaging activities, showing mathematics in a meaningful context – and making maths a creative, enjoyable, human, social activity for pupils.

When teaching MAPA at Cornfields and Belle Vue, we provide a curriculum that caters for the needs of all individuals and sets them up with the necessary skills and knowledge for them to become successful in their future adventures. Our is aim to prepare them for a successful working life and therefore we incorporate sustained levels of challenge through varied and high-quality activities with a focus on fluency, reasoning and problem solving.

Our MAPA curriculum allows pupils to make better sense of the world around them by relating the pattern between mathematics and everyday life.

Many pupils respond better when being engaged in practical activities, rather than reading from textbooks. They grow in confidence if you give them a task to do and that they are able to achieve. This can be incorporated into teaching the National Curriculum in an effective, engaging and enjoyable way.

Getting the pupils involved in practical activities is a highly effective way of engaging them in their learning. This will be built on over the year to ensure progression and resilience. The lessons will enhance their study skills and help to broaden and secure their knowledge. This topic offers a range of opportunities for investigating the best way to apply basic principles and addresses both their practical and commercial aspects.

We seek to grow confidence and develop a positive view of maths in all our pupils. The topics are broad and the pace is challenging. The content also allows for a broader, deeper understanding of mathematics, which is a priority when living in a modern society. We intend to develop pupils' curiosity and encourage a fascination with problem solving. This is knowledge that will remain with them for the rest of their lives.

The lessons are intended to improve pupils' mathematical vocabulary and an understanding of how to apply them to basic scientific principles. Lessons will also provide variety and opportunities for consolidation and challenge, to ensure both interest and progress in maths. This will be built on over the year to ensure progression and resilience. The lessons will enhance their study skills and help to broaden and to secure their knowledge.

Implementation

Pupils have the opportunity to work on a number of practical-based activities to put maths skills, knowledge and understanding into practice. To date, our pupils have built log houses, laid paving stones and even built a classroom. All of these activities have required measuring, estimating and number skills, giving pupils the opportunity to apply their maths skills.

In MAPA, we try to combine a fun atmosphere with what is often seen as a daunting subject. Through revisiting existing skills, lesson plans and resources we will help pupils to build on prior knowledge as well as introducing new skills and challenges. Key concepts will be highlighted in each lesson pack, to help pupils to increase their maths vocabulary and general understanding.

At Cornfields and Belle Vue, we implement our approach through high quality teaching, delivering appropriately challenging, inspiring and engaging activities for all individuals. To support this, we have a range of mathematical resources in classrooms including Numicon, Base10, cubes, counters and other concrete equipment. When pupils have grasped a concept using concrete equipment, images and diagrams are used (pictorial) before moving to abstract questions.

We focus on developing problem solving, building pupils' perseverance, enhancing their mathematical reasoning and their ability to apply knowledge creatively in unfamiliar context, as well as boosting their confidence in facing new challenges. Reality-based problem solving presents pupils with the opportunity to share their solutions. It also enables teachers to combine creative mathematics and problem solving with natural resistance.

To help the pupils' to develop their knowledge, there will be a structure whereby prior learning will always be considered and where there are opportunities for revision. Through revisiting and consolidating previous understanding, our lesson plans and resources will help pupils to build on prior knowledge by attaching new skills to their existing knowledge structure. Through these lessons, we intend to inspire pupils to appreciate the importance of mastering mathematics for living in the modern world.

Through the NRICH programme, pupils will have the opportunities to explore a variety of activities to support their mathematical learning. (NRICH is an innovative collaboration between Faculties of Mathematics and Education at the University of Cambridge, part of the University's Millennium Mathematics Project.)

Pupils have opportunities to work alone, in pairs or in groups. Good problem solvers work together, learn from their mistakes and are not afraid to ask questions in order to develop their problem-solving skills.

Impact

MAPA provides the most effective way of developing a deep understanding of mathematical concepts. It enables pupils to absorb the mathematical ideas that are present in everyday activities, thus helping them to become critical thinkers. This will improve their ability to enquire intelligently about the world around them and to assess their own impact on it. Pupils realise that they have choices to make and the importance of interacting with the technology that is around them. When they have completed the course, they will be able to manage the complexities of the modern world with confidence.

Mathematics will utilise a full range of resources, including display materials that will be seen across the school. The learning environment will be enhanced by technical vocabulary displays, which will then be spoken and used by learners. We will ensure that the importance of mathematics is appreciated by all pupils across the school, therefore encouraging them to continue building on the knowledge that they already have. Its impact will also become apparent through the pupils' key skills, which will be developed during each lesson. All pupils in school will be able to talk confidently about their place in a world of complex technologies. The lessons will promote inquisitive minds and foster a real understanding of how vital mathematics is in our modern Britain. This evidence will be seen through the correct use of data-management skills, with well-balanced explanations and a well-structured skills base.

The impact of MAPA will be to assist in driving up mathematical achievement and progress for all pupils. Using a practical activity can help to structure a lesson and to improve engagement and knowledge retention. Our pupils learn more easily by actually 'doing' activities and this is particularly relevant in MAPA. It will develop skills in critical thinking and problem solving, which support all subjects that are taught within Cornfields and Belle Vue. Pupils' self-esteem and resilience will grow as they realise that they are able to apply and use maths skills to achieve tangible outcomes.

Through discussion and feedback, children at Cornfields and Belle Vue talk enthusiastically about their MAPA lessons and speak about how they love learning about maths. They can articulate the context in which maths is being taught and relate this to real-life purposes. Pupils will achieve accredited AQA Unit Awards that align to the projects that they are working on.

IN SUMMARY

The core purpose of our schools is to 'improve the life chances of children'. In short – we aim to reverse and eradicate the known correlation between poor outcomes in life – and factors that have made pupils vulnerable to underachievement at school. We achieve this by going above and beyond, setting high expectations and improving outcomes by working together with others.

We have a clear and compelling vision about the knowledge and skills that pupils need in order to take advantage of opportunities, responsibilities and experiences of later life. Our school ethos and curriculum are firmly embedded with a belief that we can powerfully address social disadvantage.

We are clear about the end points the curriculum is building towards – and what pupils need to know and be able to do to reach those end points. Our school curriculum is planned and sequenced so that new knowledge and skills build on what has been taught previously.

Ofsted has outlined that schools who take a radical approach to the curriculum – with effective sequencing, structure and implementation – will be assessed favourably. We welcome this autonomy and believe that the curriculum needs to be radically reviewed, as doing more of the same will result in the status quo of underperformance of disadvantaged groups being the norm.

A well-constructed, well-taught curriculum will lead to pupils learning more and – and therefore achieving positive results. We aim to ensure that all of our pupils acquire the knowledge and cultural capital they need to succeed in life.