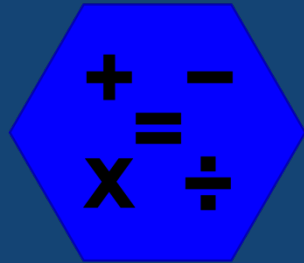


Maths at Barley Croft



Intent – Why?

Why do we need to follow the curriculum we do? How does it meet the needs of our community? What do we want our curriculum to give to our children?

Implementation – How?

How do we make sure we are delivering what we intend? What do the lessons and planning look like? What opportunities are the children given? This is the vehicle for our intent

Impact – What?

When a child leaves Barley Croft, what are they like? They will be a representation of everything their school life has given them. What will they achieve and how have we made sure they have the tools to do it?

Maths gives us hope that every problem has a solution

Intent

At Barley Croft Primary School , we have embraced a mastery approach to the teaching and learning of mathematics because we recognise that Our belief is that all children can be successful in the study of mathematics. We do not accept that ‘some children cannot do maths’ or that children should be limited by prior attainment. Maths is for everyone – you just need the right mindset! We teach the skills to ensure our children are resilient learners who become life-long mathematicians. We aim to deliver an inspiring and engaging mathematics curriculum through high quality teaching using Power Maths.

The Power Maths approach enables children to be numerate, independent, enquiring and confident. Children should not be afraid to make mistakes and should fully embrace the fact that mistakes are part of learning! Developing a positive attitude to Maths is essential at Barley Croft. Teachers promote children’s enjoyment of maths and provide opportunities for children to build a conceptual understanding of maths before applying their knowledge to everyday problems and challenges. We ensure that challenge is provided for all children, whatever their understanding. Children are encouraged to be brave and push the boundaries, deepening their understanding further.

There is a difference between not knowing and not knowing yet

Implementation

At Barley Croft, we recognise that children need to be confident and fluent across each yearly objective. To ensure consistent coverage, teachers follow the Power Maths scheme of learning to support their planning. High quality resources are used in conjunction with Power Maths, such as NRich and NCETM to support, stretch and challenge all children within the classroom.

Our curriculum builds on the concrete, pictorial, abstract approach. By using all three, the children can explore and demonstrate their mathematical learning. Together, these elements help to cement knowledge so children truly understand what they have learnt. All children when introduced to a new concept for the first time are encouraged to physically represent mathematical concepts. Objects and pictures are used to demonstrate and visualise abstract ideas, alongside numbers and symbols. Throughout Barley Croft you will see these three methods being used:

Concrete – children have the opportunity to use concrete objects and manipulatives to help them understand and explain what they understand.

Pictorial – children then build on this concrete approach by using these pictorial representations, which can then be used to reason and solve problems.

Abstract – with the foundations firmly laid by using the concrete and pictorial methods the children can move onto an abstract approach using numbers and key concepts with confidence.

Vigorous monitoring means that children, who need extra support with their learning, receive high quality intervention time with a teacher or teaching assistant.

Impact

Summative assessment takes place at the end of each unit and at data capture which is three times a year. Children's progress and attainment are discussed by teachers with the leadership team so appropriate next steps can be put into place.. Formative assessment takes place on a daily basis and teachers adjust planning accordingly to meet the needs of their class. In addition, we place a strong emphasis on the power of questioning; this enables us both to explore topics together as a class as well as verbally develop reasoning skills during our lessons.

The maths leads monitor the effectiveness of teaching frequently through lesson observations, book scrutinies and pupil interviews.

When children leave Barley Croft they will have:

1. A secure understanding of place value up to 10 million including decimal numbers
2. Fluent recall of the times tables up to 12
3. Add and subtract mentally with confidence – where the numbers are less than 100 or the calculation relies upon simple addition/subtraction and place value. Examples include: $6,723 - 400$, $78 + 46$, $72 - 46$, $8020 + 910$, $100 - 64$, $5000 + 12,000$, etc.
4. To be fluent in the vocabulary of maths > For children to participate effectively in mathematics lessons, they must acquire the appropriate vocabulary to enable them to explain their thinking and make progress in different areas of mathematical knowledge.
5. Round to ten, a hundred and a thousand, ten thousand or one hundred thousand.
6. To have a secure method of calculation to solve problems involving all four operations (+ - x ÷)
7. Solve missing number problems.
8. Add and subtract fractions with different denominators and mixed numbers and multiply simple pairs of proper fractions, and divide proper fractions by whole numbers writing the answer in simplest form.
9. Measure areas and perimeters; understand that area is a measurement of covering and is measured in square units, and perimeter is a length, measured in cm, m or mm.
10. Use 12 and 24 hour clocks; calculate time intervals; use timetables.

5 by 25

Bank Statement / Financial documents

Read and understand a bank statement.

Understand how interest rates can affect your money positively and negatively.

You do not want to end up paying huge amounts of interest on credit cards.

Mortgage documents > What do the mortgage interest rates mean? How much will I pay back? Which interest rate is the best deal for me? Is 1.2 or 1.6% interest better for me?

Money

You need to be able to clearly understand the value of money as when you are out and about in shops or restaurants and you are making purchases. Are the items I am buying the best value? Is the buy one get 1 free of the 150ml shampoos as good value as the mega 300ml bottle?

If you have £30.00 to spend you need to make calculations in your head to ensure that you do not exceed that amount. If you're paying by cash – have you been give the correct change?

The ability to do quick accurate mental maths will undoubtedly save you money and embarrassment if you haven't got enough cash to pay!

Budgeting

If you are ever going to successfully live on your own, you need to be able to budget. Understand what money is coming into your household each month. Then make sure what you are spending does not exceed this.

Setting up a simple household budget book where all purchases are logged and subtracted from the monthly income will ensure that you never get into debt! You might even find you are able to save some money for a rainy day.

Kitchen Calculations

The recipe serves four, but you're a family of six. Help! What do you do? Fractions and proportions to the rescue! This is one of the most straightforward examples of the "kitchen maths" most people do. I need to feed 2 extra people. 2 is half of 4. So, if my recipe says I need 400g of flour, I need half as much again which is 200g which equals 600g in total. If my recipe needs two eggs: half of 2 is 1. Therefore I would need 3 eggs.

Time and dates

The ability to be able to read and manage time is crucial to any person in a job. You need to be able to set your alarm for the right time. Then when you're up think – Ok it 7:00, I need to leave at 7:30, I have 30 minutes to get ready.

You might need to read a bus or train timetable accurately to get into work on time. All of these skills require an understanding of time

Similarly at work you will be working to deadlines. So the ability to manage time and dates is crucial