Maths at St. Berteline's CEPS

It is the aim of the school that all children should be confidently numerate and that their mathematical skills be developed to the fullest in a supportive atmosphere.
Mathematics can be used in many different circumstances as a precise and unambiguous means of representing ideas, of predicting outcomes, or explaining results. Mathematics also provides children with a way of testing their hypotheses by classifying, ordering, counting, measuring.....and then generalising about what they have discovered.
Through the use of mathematics to solve problems in school, children become more aware of the need for mathematical understanding and skills necessary in future life and to appreciate the role of mathematics in science and technology.
Mathematics is not only included in the school curriculum because it is a useful subject, people around the world have always used geometric patterns and structures for decoration and enjoyment and the pleasure derived from playing strategic games or deciphering puzzles continues into adulthood and can be enjoyed either on one's own or together with others.
At St. Bert's, we feel that mathematics contributes to a child's personal, social, and intellectual development as it plays an important role in everyday life.

We use 'Power Maths' as our whole school Maths scheme providing an engaging and challenging Maths curriculum from EYFS to Year 6.

What is *Power Maths*?

Power Maths is a resource that has been designed for UK schools based on research and extensive experience of teaching and learning around the world and here in the UK. It has been designed to support and challenge all pupils, and is built on the belief that EVERYONE can learn maths successfully.

How does this support our approach to teaching?

The philosophy behind *Power Maths* is that being successful in maths is not just about rote-learning procedures and methods, but is instead about problem solving, thinking and discussing. Many people feel they were taught maths in a way that was about memorising formulas and calculation methods, then having to apply them without any real understanding of what or how these methods actually work. *Power Maths* includes practice questions to help children develop fluent recall and develop their conceptual understanding. *Power Maths* uses growth mindset characters to prompt, encourage and question children. They spark curiosity, engage reasoning, secure understanding and deepen learning for all.

How will the lessons work?

Each lesson has a progression, with a central flow that draws the main learning into focus. There are different elements, informed by research into best practice in maths teaching, that bring the lessons to life:

- **Discover** – each lesson begins with a problem to solve, often a real-life example, sometimes a puzzle or a game. These are engaging and fun, and designed to get all children thinking.
- **Share** – the class shares their ideas and compares different ways to solve the problem, explaining their reasoning with hands-on resources and drawings to make their ideas clear. Children are able to develop their understanding of the concept with input from the teacher.
- **Think together** – the next part of the lesson is a journey through the concept, digging deeper and deeper so that each child builds on secure foundations while being challenged to apply their understanding in different ways and with increasing independence.
- **Practice** – now children practice individually or in small groups, rehearsing and developing their skills to build fluency, understanding of the concept and confidence.
- **Reflect** – finally, children are prompted to reflect on and record their learning from each session and show how they have grasped the concept explored in the lesson.

What if my child needs a confidence boost, or wants to be challenged further?

Power Maths is based on a 'small-steps' approach, sometimes called a mastery approach. This means that the concepts are broken down so that your child can master one idea without feeling over-whelmed. There are a range of fluency, reasoning and problem solving questions in each lesson that are designed to support the different needs and confidence levels within a class, while at the same time fostering a spirit of working and learning together. Each lesson includes a challenge question for those children who can delve deeper into a concept.

Content

Term 1

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Numbers to 5	Numbers to 10	Numbers to 100	Place value within 1000	Place value- 4 digit numbers (1)	Place value within 100,000	Place value with 10,000,000
Comparing groups within 5	Part-whole within 10	Add/Sub (1)	Add/Sub (1)	Place value- 4 digit numbers (2)	Place value within 1,000,000	Four operations (1)
Shape (2D and 3D)	Add/Sub within 10 (1)	Add/Sub (2)	Add/Sub (2)	Add/Sub	Add/Sub	Four operations (2)
Change within 5	Add/Sub within 10 (2)	Money	Mult. and Division (1)	Perimeter	Graphs and Tables	Fractions (1)
Number Bonds within 5	2D and 3D Shapes	Mult. and Division (1)		Mult. and Division (1)	Mult. and Division (1)	Fractions (2)
Space	Numbers to 20				Area and Perimeter	Position and Direction

Term 2

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Numbers to 10	Addition within 20	Mult. and Division (2)	Mult. and Division (2)	Mult. and Division (2)	Mult. and Division (2)	Decimals
Comparing nos. within 10	Subtraction within 20	Statistics	Money	Area	Fractions (1)	Percentages
Addition to 10	Numbers to 50	Length and Height	Statistics	Fractions (1)	Fractions (2)	Algebra
Measure (Length, Height and weight)	Introducing length and height	Properties of Shape	Length	Fractions (2)	Fractions (3)	Imperial and Metric units
No. bonds to 10	Introducing weight and volume	Fractions	Fractions (1)	Decimals (1)	Decimals and Percentages	Perimeter, area and volume
Subtraction						Ratio and Proportion
Exploring Pattern						

Term 3

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Counting on and counting back	Multiplication	Position and Direction	Fractions (2)	Decimals (2)	Decimals	Properties of Shapes
Numbers to 20	Division	Prob. solving and efficient methods	Time	Money	Properties of Shape (1)	Problem Solving
Numerical patterns	Halves and Quarters	Time	Angles and Properties of Shape	Time	Properties of Shape (2)	Statistics
Shape (composing and decomposing shapes)	Position and Direction	Weight, volume and temperature	Mass	Statistics	Position and Direction	
Measure (volume and capacity)	Numbers to 100		Capacity	Angles and 2D shapes	Converting Units	
Sorting (optional)	Time			Position and Direction	Volume and Capacity	
Time (optional)	Money					