

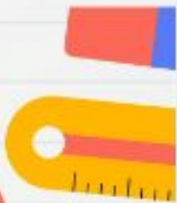
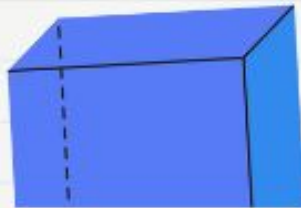
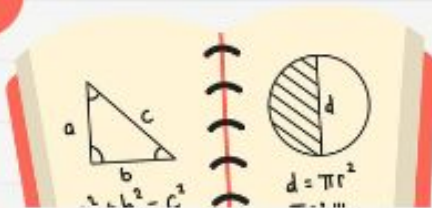


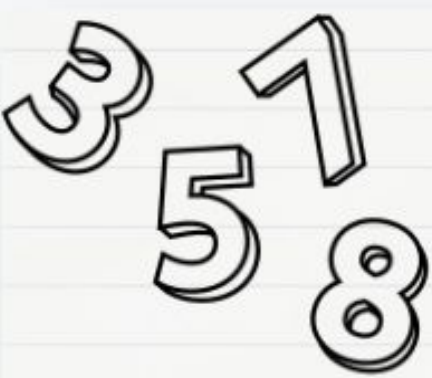
Developing Mathematics



Thursday 28th November 2024

Led by: R.Pesticcio





Aims

- To share how we teach maths in Birchgrove and see 'maths in action'
- To provide you with an understanding of the progression skills from Year 1 to Year 3
- To offer 'top tips' that can be applied at home
- To walk away with a toolkit you can use at home
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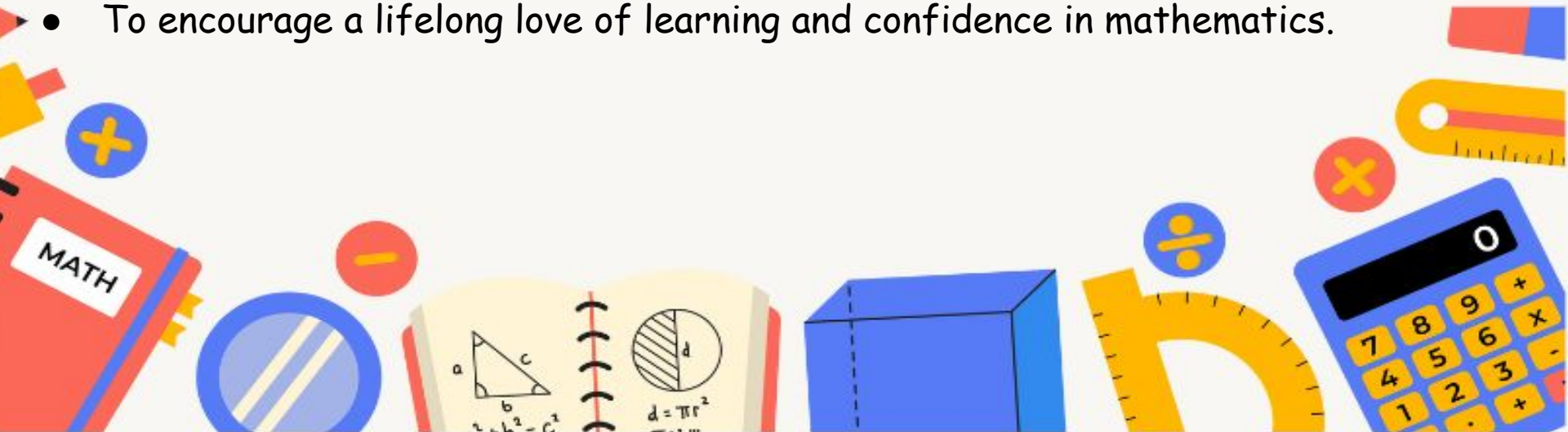


MATH



Numeracy at Birchgrove

- It to be meaningful and engaging, rooted in real-life experiences.
- To provide opportunities for children explore, investigate and have fun.
- To encourage a lifelong love of learning and confidence in mathematics.



Progression Sep 1 & 2



Reception

Adult-led tasks, continuous provision and enhanced provision
(Play-based activities)

Year 1

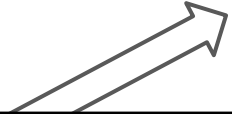
Adult-led tasks, continuous provision and enhanced provision
(COOL Board)

Year 2

Increased adult-led tasks and enhanced provision
(Independent Challenges)

Year 3

Whole class teaching and ability setting.

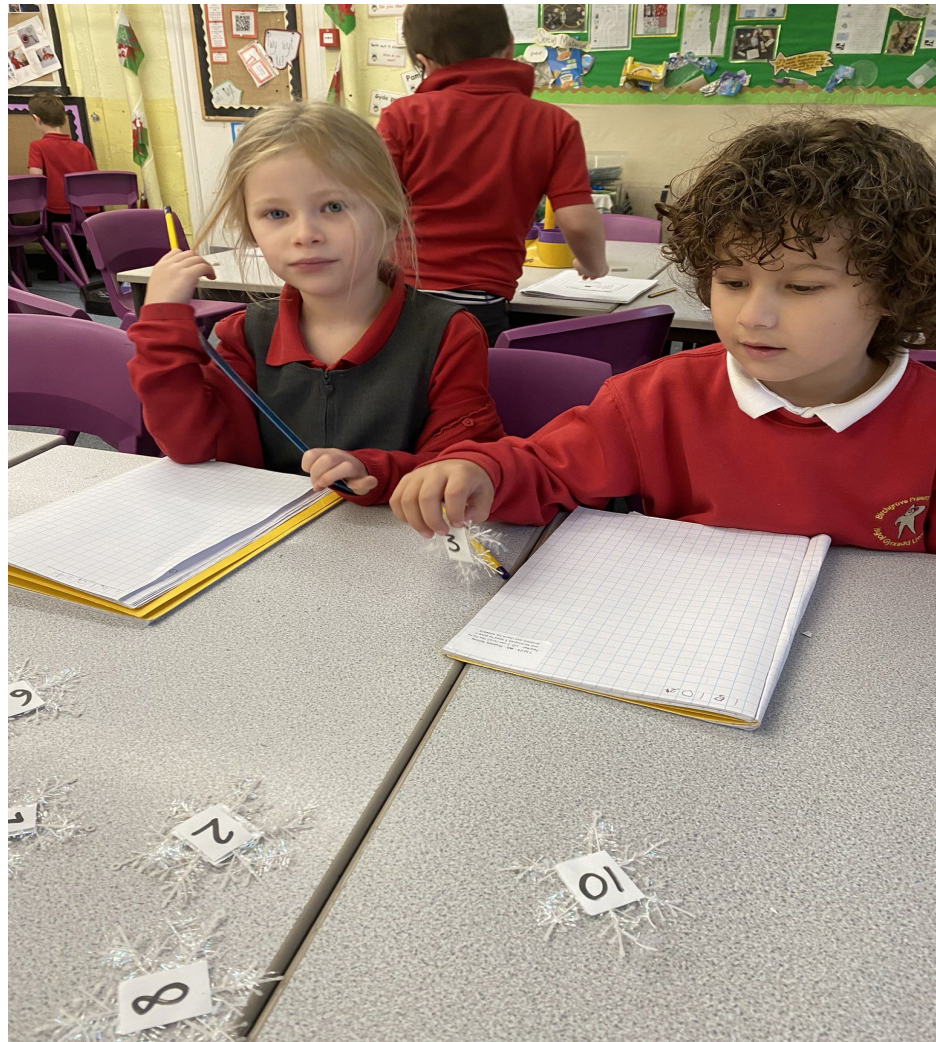


Numeracy in Progression Step 1 & 2

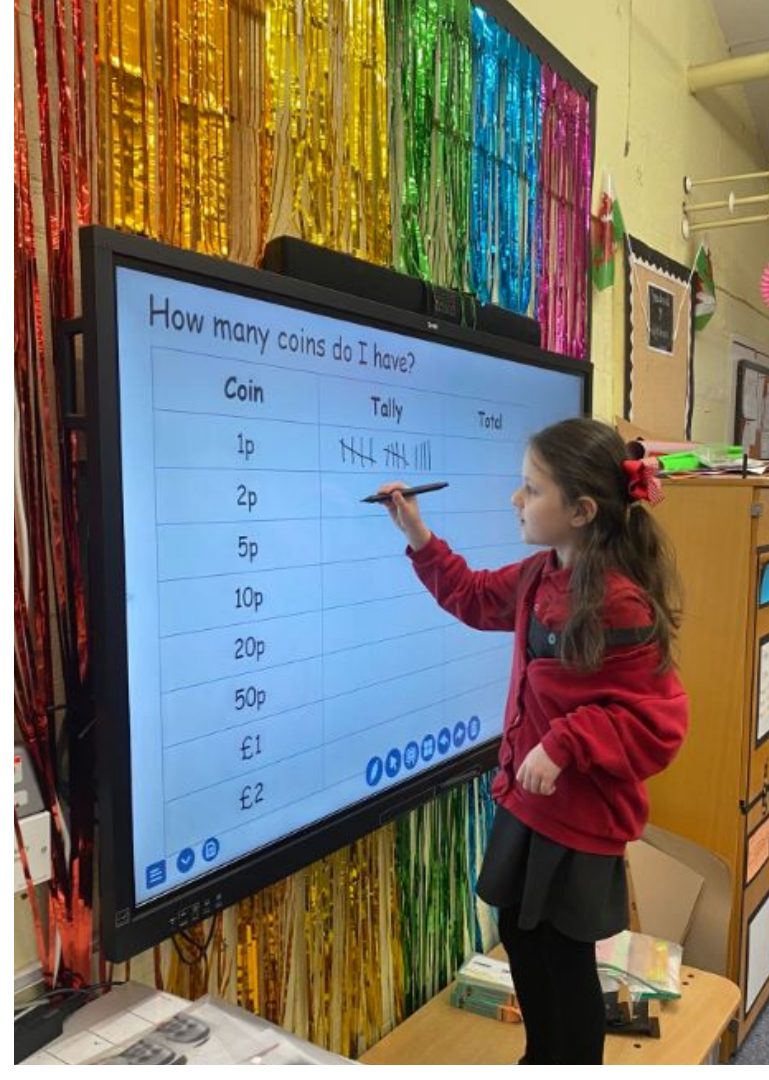
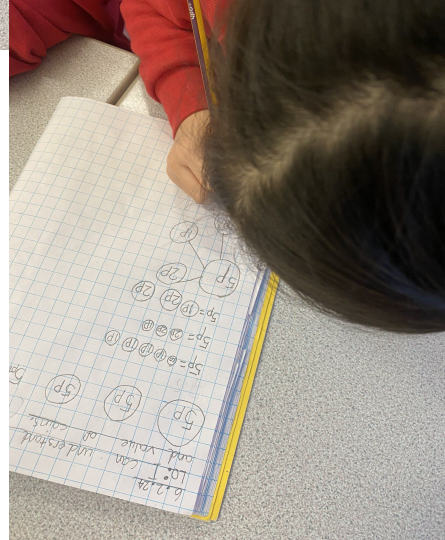
Adult-led activities in mathematics are designed to introduce children to specific skills through planned, focused tasks. This approach allows new concepts to be introduced clearly and demonstrated effectively by the teacher, giving children a solid foundation before they practice.

During these sessions, the teacher's role is to support, guide, and closely monitor each child's understanding, promptly addressing any misconceptions that may arise. This immediate feedback helps build children's confidence and prepares them to apply their new skills with increasing independence, laying the groundwork for more complex problem-solving and mathematical reasoning.





Oh no! Mrs Pesticcio dropped the snack money on the floor! Blwyddyn 2 helped her sort the money and then went onto investigate equivalence and value of coins.



Continuous Provision activities are designed to capture and focus children's attention, offering them a chance to practice and refine skills they've previously been taught.

Through these activities, children grow as independent learners, developing their problem-solving and critical thinking abilities.

In Reception, Year 1 and 2 there is a dedicated '**Maths Area**'—a space children can freely access or be directed to. This area is stocked with resources like number lines, 100 squares, counting cubes, Numicon plates, counters, and various dice to support hands-on exploration.

Each week, the Maths Area includes carefully planned activities that allow children to revisit and reinforce key skills, such as addition and subtraction, number bonds, doubling, and halving. Presented in the form of games, challenges, or problem-solving tasks, these activities provide a fun and interactive way for children to solidify their mathematical understanding.



Mathematical vocabulary
Position language
Counting
Sequencing
Rehearsing skills
Communication
Collaboration
Independence
Developing confidence



Enhanced Provision is where an area of the classroom, such as the role play, has a **specific** task the children are asked to complete. For example; The Bakery Role Play could be enhanced to encourage children to practice their money skills by asking them to take on the role of a shopkeeper selling baked good to a customer and giving the correct change.



Alternatively, the children might asked to use the outside area to play a shooting game where they have to add up their points, record their calculations and compare them with a friend to decide the winner.



Resources to support independence

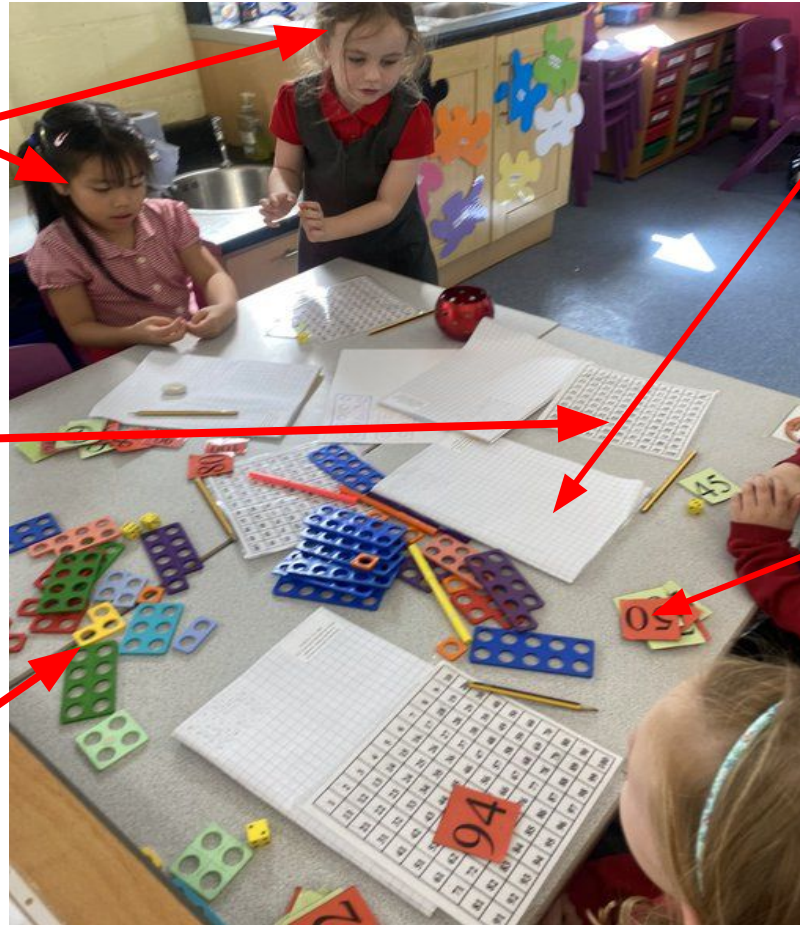
Learning partners

100 square

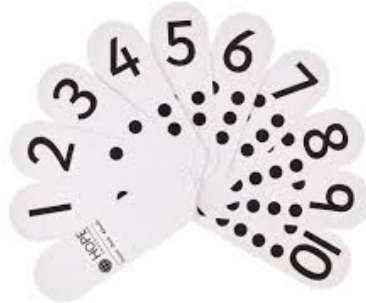
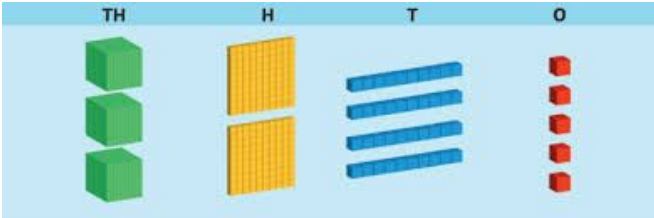
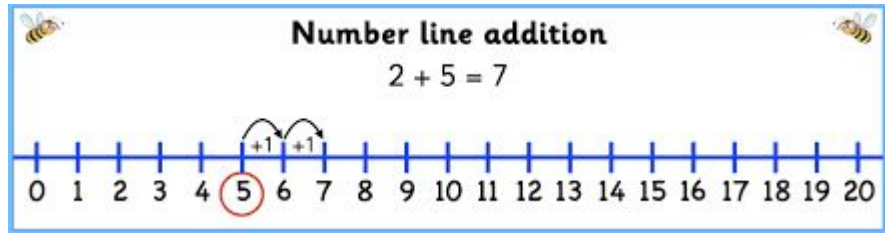
numicon

Paper and pencils

place value cards



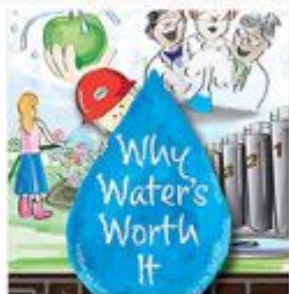
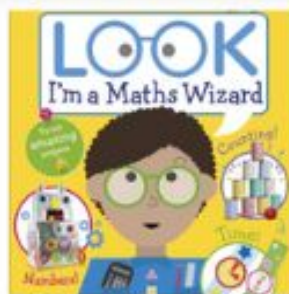
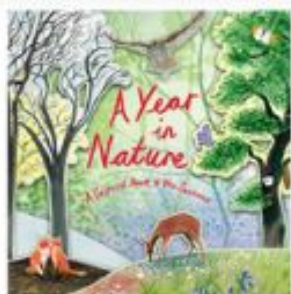
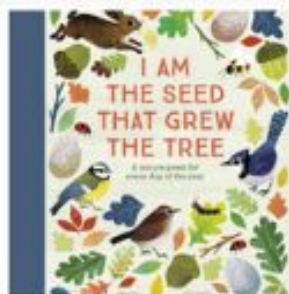
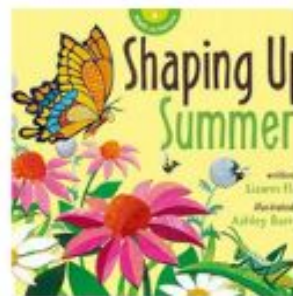
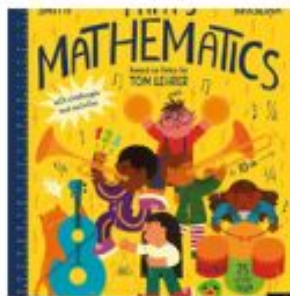
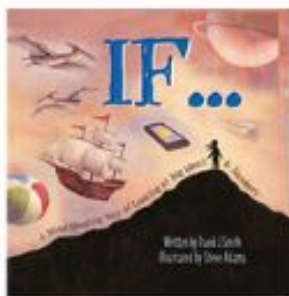
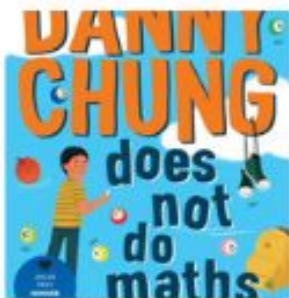
Resources to support learning at home



100 Square

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Storybooks



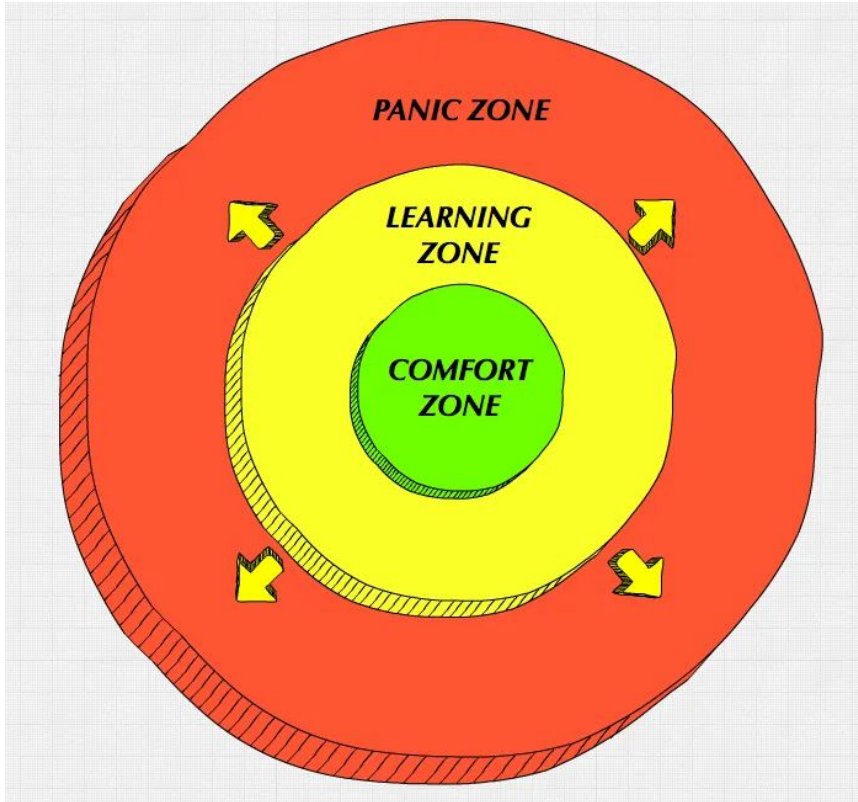
Whole class teaching and setting

in Year 3 is where the children move from enhanced and continuous provision to daily whole class adult-led teaching.

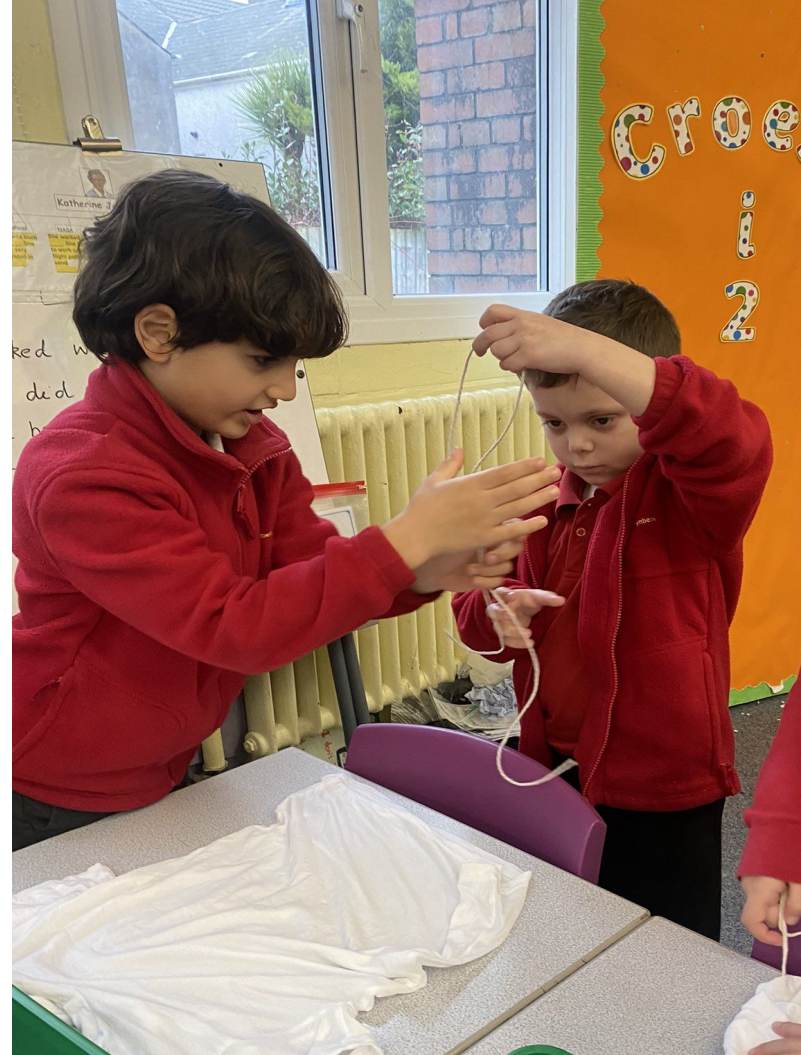
To ensure every child's individual needs are met we set for numeracy lessons. Setting according to ability helps provide a more tailored lesson to their skill set, support the development of their knowledge, plug gaps and increase confidence. Setting is based on in-house assessments combined with the teacher's judgment. It is flexible and movement is encouraged.



Growth Mindset



Across **the**
curriculum is where
children deepen their
understanding of a variety of
mathematical concepts. Providing
children with practical activities
where they need to problem solve,
decide the best approach and what
skills they need to use to complete
the task is where the best
learning happens.





Maths skills can be transferred into science investigations, historic dates and timelines, design and technology, ordering events in literacy, the creative arts, P.E and many more...

The outdoors provides an engaging setting for children's learning, and we make the most of opportunities to bring mathematics beyond the classroom walls.

Learning in an outdoor environment enriches mathematical experiences, allowing children to explore concepts in real-world contexts.

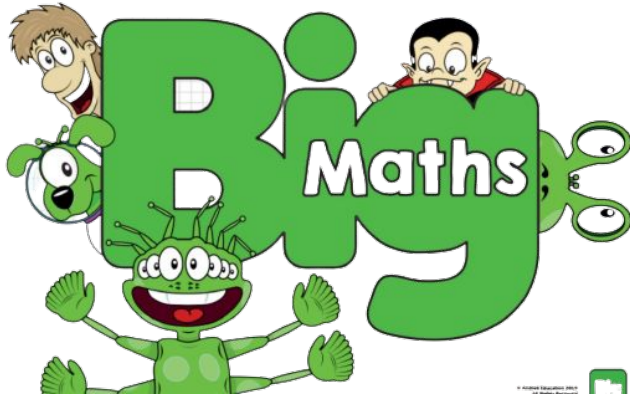
This is a free resource that you can access.



Through observation, conversation, and hands-on investigation, the outdoors becomes a valuable resource, fostering curiosity and deeper understanding in an interactive way.



Big Maths it is a daily mental maths method that breaks down mathematical skills and processes into small, easy steps that are taught in a sequence. Each step builds upon the previous one which helps to ensure that every child has the learnt the firm foundations to solve a different and some trickier mathematical concepts.





General Strategies

1. **Encourage a Positive Attitude:** Foster a positive growth mindset by praising effort rather than just correct answers. Encourage your child to see mistakes as learning opportunities.
2. **Daily Math Conversations:** Integrate math into daily conversations. Ask your child to count items during shopping or estimate how much time a task will take.
3. **Use Resources from the Curriculum:** Familiarise yourself with the specific outcomes of the Welsh curriculum for each year.

Year 1

Counting and Number Recognition:

- Use number lines and counting songs.
- Play games that involve counting objects, like counting toys or snacks.

Simple Addition and Subtraction:

- Use everyday items (like fruits or toys) to model simple addition and subtraction.
- Practice with flashcards for basic sums and differences.

Shape and Space:

- Identify shapes in the environment and discuss their properties.
- Engage in activities that involve sorting and comparing shapes.

Math Games: Play board games that involve counting, like "Snakes and Ladders" or simple card games.

Year 2

Place Value:

- Use base ten blocks or similar manipulatives to explain the concept of tens and ones.
- Encourage grouping items in tens for counting.

More Complex Addition and Subtraction:

- Solve word problems together that involve real-life situations.
- Introduce strategies like drawing pictures or using number lines to solve problems.

Measurement:

- Involve your child in measuring ingredients for cooking or baking.
- Use rulers to measure objects around the house and discuss lengths.

Time:

- Practice telling the time using analog clocks. Use everyday situations to discuss time, such as scheduling activities.

Year 3

Multiplication and Division:

- Use arrays or grouping strategies to introduce multiplication concepts.
- Play games that involve sharing and grouping items for division practice.

Fractions:

- Use food items (like pizza or cake) to visually demonstrate fractions.
- Discuss halves, quarters, and thirds in practical situations, like sharing snacks.

Data Handling:

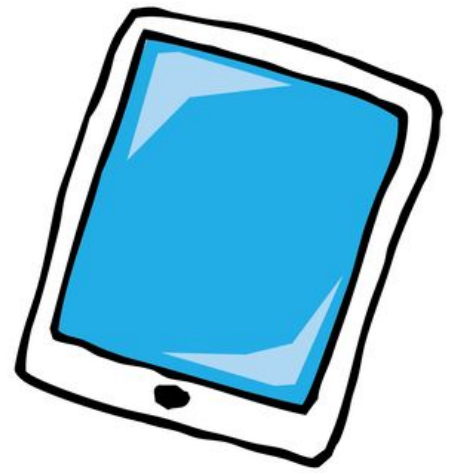
- Collect data on family preferences (like favorite colors or foods) and create simple bar graphs or charts.
- Discuss the results and what they might mean.

Problem Solving:

- Encourage your child to explain their reasoning when solving problems.
- Use open-ended questions that require thinking, such as "What would happen if...?"

Additional Resources

- **Online Games and Apps:** Utilise educational websites and apps that focus on math skills (e.g., hit the button, BBC Bitesize).
- **Library Resources:** Visit local libraries for math-related story books or activity books that reinforce concepts in a fun way.



By engaging with your child in these ways, you can help build their confidence and skills in math, making it a positive experience.

Online Math Games for Children Age 5-8

1. **BBC Bitesize**
 - **Website:** BBC Bitesize - Maths
 - **Description:** Offers a wide range of interactive math games and activities aligned with the UK curriculum, suitable for different age groups.
2. **Topmarks**
 - **Website:** Topmarks Maths Games
 - **Description:** A collection of educational games covering various math topics for primary school children, including counting, addition, subtraction, and shapes.
3. **Mathsframe**
 - **Website:** [Mathsframe.co.uk](https://www.mathsframe.co.uk)
 - **Description:** Provides interactive math games that are mapped to the UK National Curriculum, covering topics from basic number skills to fractions.
4. **Maths Rocks**
 - **Website:** [MathsRocks.co.uk](https://www.mathsrocks.co.uk)
 - **Description:** Offers a variety of online games that help children practice their math skills in a fun and engaging way.
5. **CBeebies**
 - **Website:** CBeebies Maths Games
 - **Description:** Features math games with popular CBeebies characters, aimed at preschool and early primary children to build foundational math skills.
6. **NCTM (National Centre for Excellence in the Teaching of Mathematics)**
 - **Website:** NCTM Maths Games
 - **Description:** Provides various resources and games for teachers and parents, aimed at enhancing children's understanding of math concepts.
7. **National Geographic Kids**
 - **Website:** NatGeo Kids - Math Games
 - **Description:** A selection of fun math games and puzzles that encourage problem-solving and critical thinking.
8. **Phonics Play**
 - **Website:** Phonics Play - Maths
 - **Description:** While primarily focused on phonics, this site offers some math-related games suitable for early learners.
9. **Twinkl**
 - **Website:** [Twinkl.co.uk](https://www.twinkl.co.uk)
 - **Description:** A comprehensive educational resource with a wide range of printable worksheets and interactive games, tailored to the UK curriculum.
10. **Mathletics**
 - **Website:** [Mathletics.co.uk](https://www.mathletics.co.uk)
 - **Description:** A subscription-based program that offers a range of interactive math activities and games aligned with the UK curriculum.