Maths Subject Overview

Intent

We believe that mathematical knowledge and skills are essential in enabling children to explore patterns, think logically and understand the world around them. Our maths curriculum provides pupils with a deep and secure understanding of the fundamentals of mathematics, ensuring they can apply their learning confidently in real-life contexts.

Through the use of real-world data, children develop critical thinking skills and learn to analyse, interpret and present information across a range of global issues, including social justice, sustainable development and governance. Pupils are encouraged to consider the wider impact of data and recognise the contributions of different cultures to the development of mathematics.

Our maths curriculum reflects our six core values. Over seven years at Lawn, children are encouraged to think deeply, challenge themselves and develop resilience when solving problems. Through the White Rose scheme, pupils build fluency, reasoning and problem-solving skills while applying mathematics to meaningful contexts. They learn to work collaboratively, explain their thinking with integrity and demonstrate responsibility in the way they approach mathematical enquiry.

Our intent is to deliver a carefully sequenced curriculum through White Rose, aligned with the National Curriculum, while making purposeful links across STEM subjects and global citizenship projects.

Maths in EYFS Overview

Maths is one of the Specific Area of Learning in the EYFS Framework.

Developing a strong grounding in number is essential so that all children develop the necessary building blocks to excel mathematically.

Children should be able to count confidently, develop a deep understanding of the numbers to 10, the relationships between them and the patterns within those numbers. By providing frequent and varied opportunities to build and apply this understanding - such as using manipulatives, including small pebbles and tens frames for organising counting - children will develop a secure base of knowledge and vocabulary from which mastery of mathematics is built.

In addition, it is important that the curriculum includes rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures.

It is important that children develop positive attitudes and interests in mathematics, look for patterns and relationships, spot connections, 'have a go', talk to adults and peers about what they notice and not be afraid to make mistakes.

ELG: Number

Children at the expected level of development will:

Have a deep understanding of numbers to 10, including the composition of each number.

Subitise (recognise quantities without counting) up to 5.

Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.

ELG: Numerical Patterns

Children at the expected level of development will:

Verbally count beyond 20, recognising the pattern of the counting system.

Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.

Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

In EYFS maths is taught via daily whole class input following the White Rose Scheme.
As well as these sessions there are small group adult led activities and continuous and enhanced provision in both the indoor and outdoor areas providing regular opportunities for children to practice their foundational knowledge and skills, explore the previous taught learning as well as other mathematical ideas and understanding.

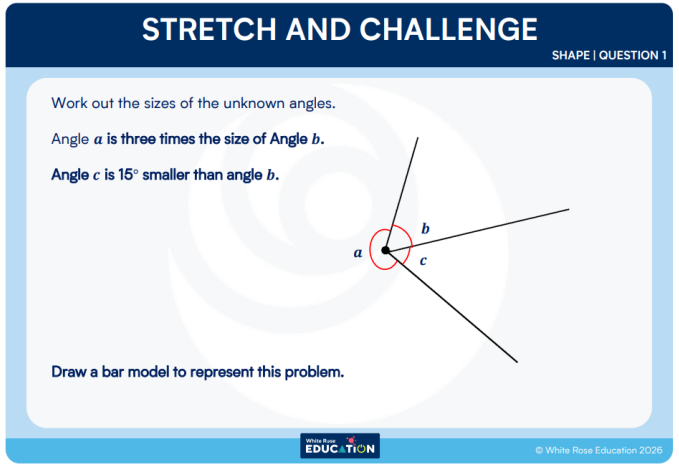
Autumn		Spring		Summer	
Marvellous Me	Let's Celebrate	Explorers		Castles	Minibeasts
Getting to Know you: Time spent getting to know the children. Opportunities for introducing areas of the provision. Exploring mathematical understanding in different areas of the provision. Exploring the continuous provision. Where do resources belong? Inside and out.	**It's Me 1, 2, 3.** Find 1, 2 and 3 Subitise 1, 2 and 3. Represent 1, 2 and 3. 1 more 1 less Composition of 1, 2 and 3. **Circles and triangles** Identify and name circle and triangles Compare circles and triangles Shapes in the environment. Describe position.	**Alive in 5** Introduce 0 Find 0-5 Subitise 0-5 Represents 0-5 1 more 1 less Composition Conceptual subitising to 5. **Mass and Capacity** Compare mass Find a balance Explore capacity Compare capacity	**Building 9 and 10** Find 9 and 10 Compare numbers to 10 Represent 9 and 10 Conceptual subitising to 10 1 more 1 less Composition to 10 Bonds to 10 (2 parts) Make arrangements of 10 Bond to 10 (3 parts) Doubles to 10 (find a double) Doubles to 10 (make a double) Explore even and odd.	**To 20 and beyond** Build numbers beyond 10 (10-13) Continue patterns beyond 10 (10-13) Build numbers beyond 10 (14-20) Continue patterns beyond 10 (14-20) Verbal counting beyond 20 Verbal counting patterns. **How many now?** Add more How many did I add? Take away How many did I take away?	**Sharing and grouping** Explore sharing Sharing Explore grouping Grouping Even and Odd sharing Play with and build doubles

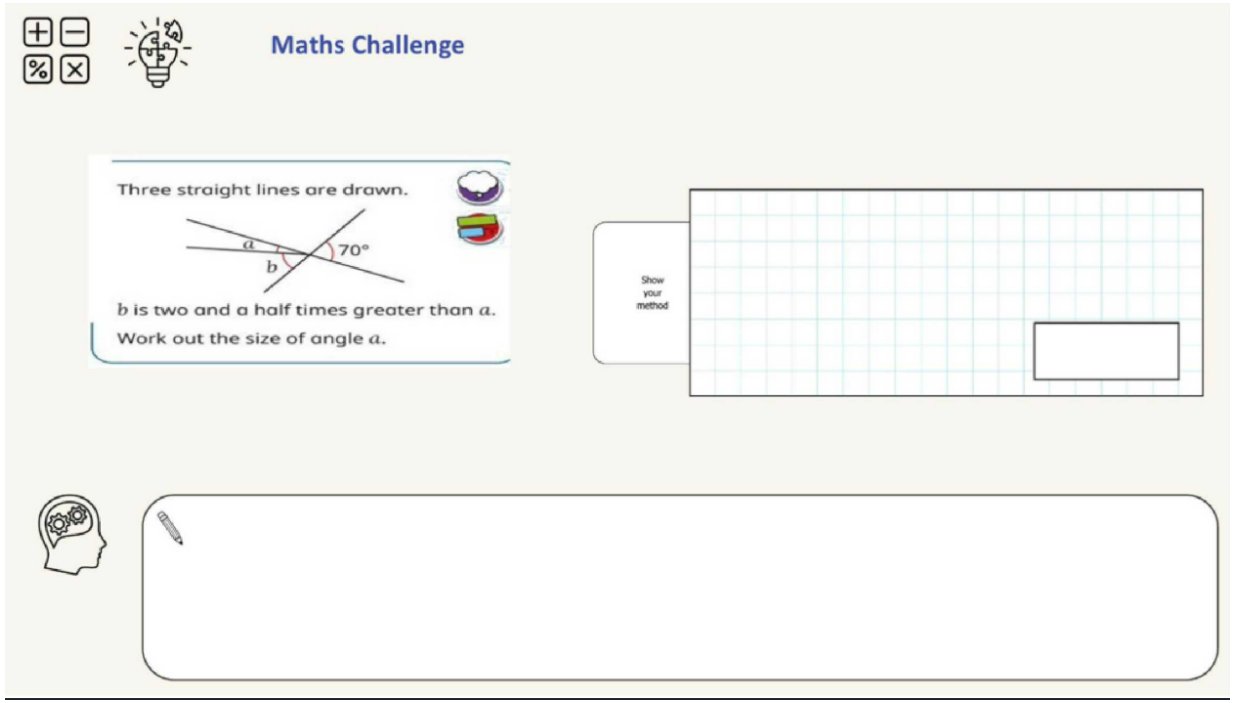
Autumn		Spring		Summer	
Marvellous Me	Let's Celebrate	Explorers		Castles	Minibeasts
Match, Sort and Compare Match objects Identify a set. Sort objects to a type. Explore sorting techniques. Create sorting rules. Compare amounts **Talk about Measure and pattern** Compare size. Compare mass Compare capacity Explore simple patterns Copy and continue simple patterns. Create simple patterns.	**1, 2, 3, 4, 5** Find 4 and 5 Subitise 4 and 5 Represent 4 and 5 1 more 1 less Composition of 4 and 5 Composition of 1-5 **Shapes with 4 sides** Identify and name shapes with 4 sides Combine shapes with 4 sides Shapes in the environment. My day and night.	**Growing 6, 7, 8** Find 6, 7, 8 Represent 6, 7, 8 1 more 1 less Composition of 6, 7, 8 Make pairs odd and even. Double to 8 (find a double) Double to 8 (make a double) Combine 2 groups Conceptual subitising **Length, Height and time** Explore length Compare length Explore height Compare height Talk about time Order and sequence time.	**Explore 3D shapes** Recognise and name 3D shapes Find 2D shapes within 3D shapes Use 3D shapes for tasks 3D shapes in the environment Identify more complex patterns Copy and continue patterns. Patterns in the environment	**Manipulate, compose and decompose** Select shapes for a purpose. Rotate shapes Manipulate shapes Explain shape arrangements. Compose shapes Decompose shapes Copy 2D shape pictures Find 2D shapes within 3D shapes,	**Visualise, build and map** Identify units of repeating patterns Create own pattern rules Explore own pattern rules Replicate and build scenes and constructions Visualise from different positions Describe positions Give instructions to build Explore mapping Represent maps with models Create own maps from familiar places Create own maps and pans form story situations. **Make connections** Deepen understanding Patterns and relationships.

Implementation

Planning

- Planning follows the White Rose 3.0 scheme of work following the steps in sequence.
- Some steps can take more than one day – use your AfL and professional judgement.
- Retrieval (Fast 4) planned daily.
- Greater depth questions explicitly planned (using WR stretch materials) and modelled.
- Lesson slides follow the agreed school design.
- Teachers anticipate misconceptions and plan worked examples carefully.
- For KS1 a maximum of 7 Magma maths questions should be set. For KS2 a maximum of 12 questions but this up to the professional discretion of the teacher.
- Every lesson should have a problem solving or reasoning for children to complete on Showbie at the end of the lesson.





Implementation (Lesson Design)

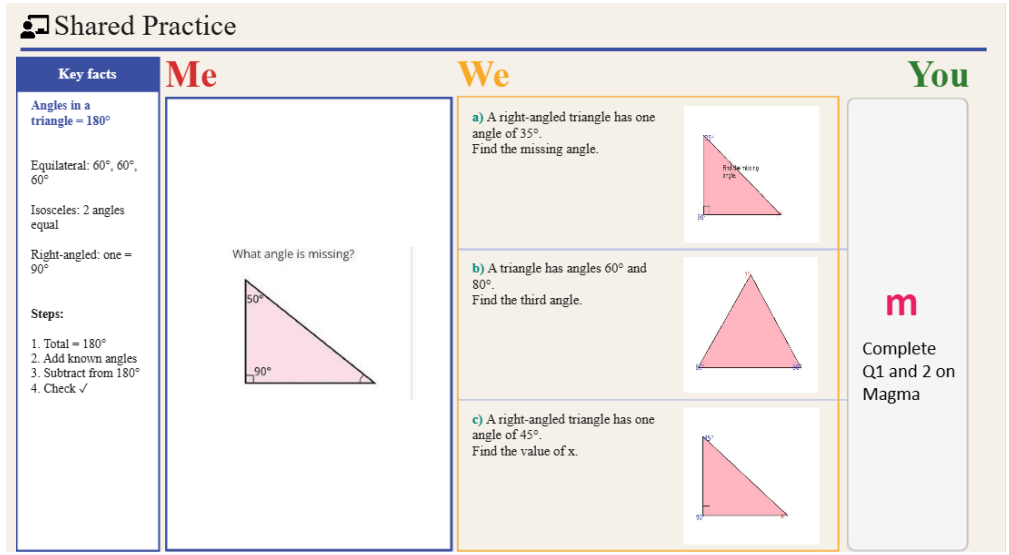
Six stages move from retrieval through modelled instruction to independent fluency, with assessment at the centre — guiding which stage to return to.



Implementation

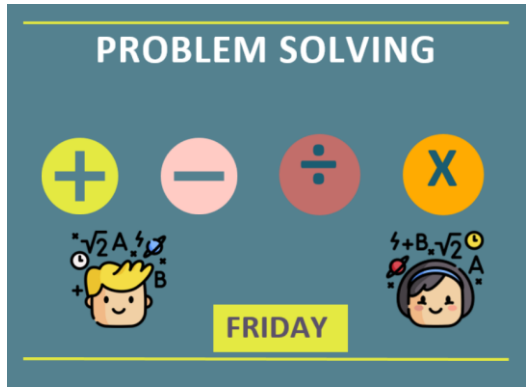
Subject Specific

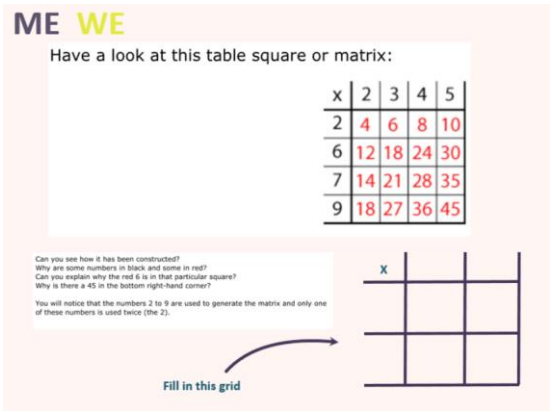
Explicit modelling of new concepts.
Use of worked examples to reduce cognitive load.
Me–We–You approach consistently applied.
Emphasis on mathematical vocabulary and sentence stems.
Reasoning questions formalised (not optional).
Live marking used to address misconceptions immediately.
At least once a half term children will complete a problem solving (Friday) investigation from the Nrich website.
Bar models and visual representations Concrete–Pictorial–Abstract (CPA) approach embedded throughout.

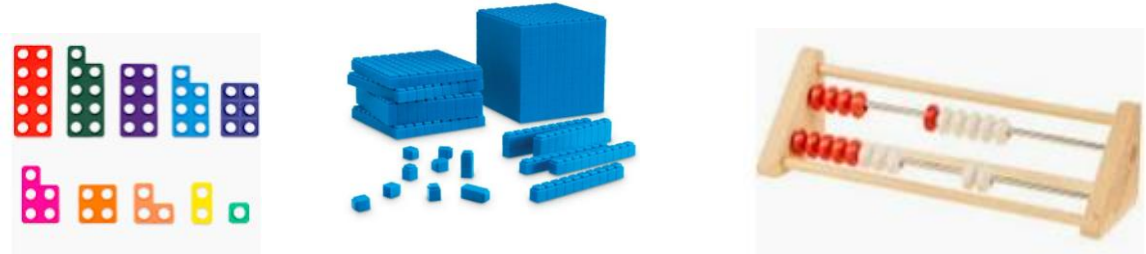


Resources

White Rose Maths is the core scheme for sequencing and questioning.
Magma Maths (for fluency and challenge)
Concrete manipulatives (Base 10, counters, cubes, rekenrek)
Bar models and visual representations Concrete–Pictorial–Abstract (CPA) approach embedded throughout.



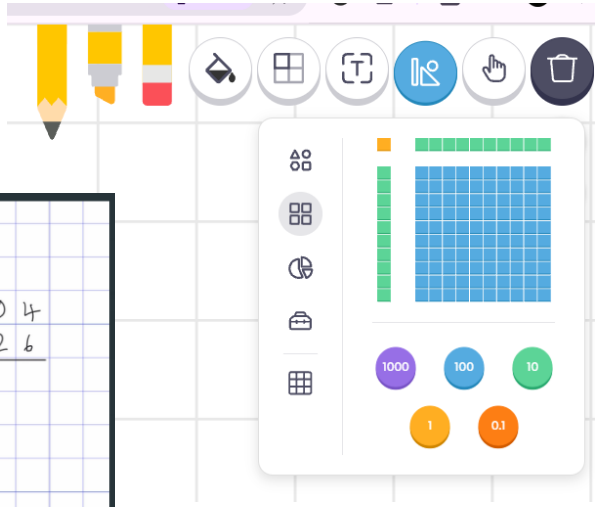


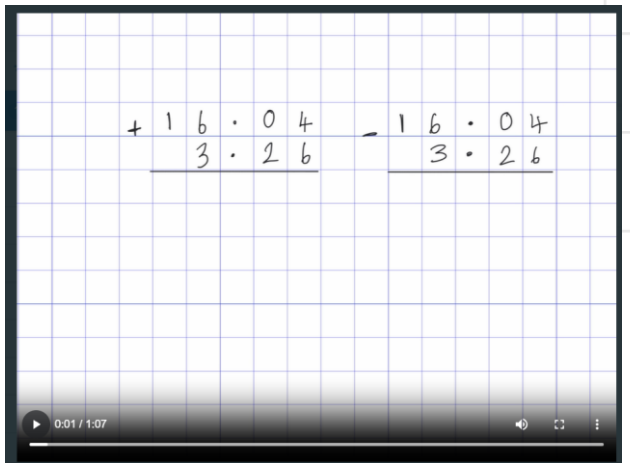


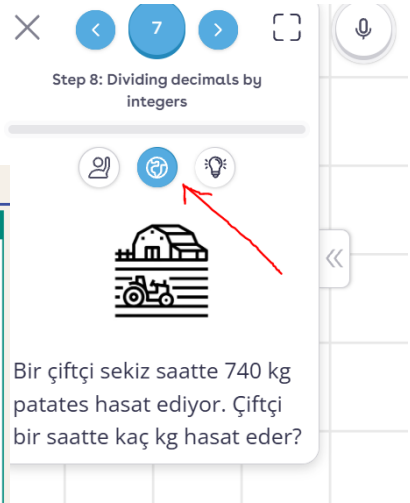
Inclusion

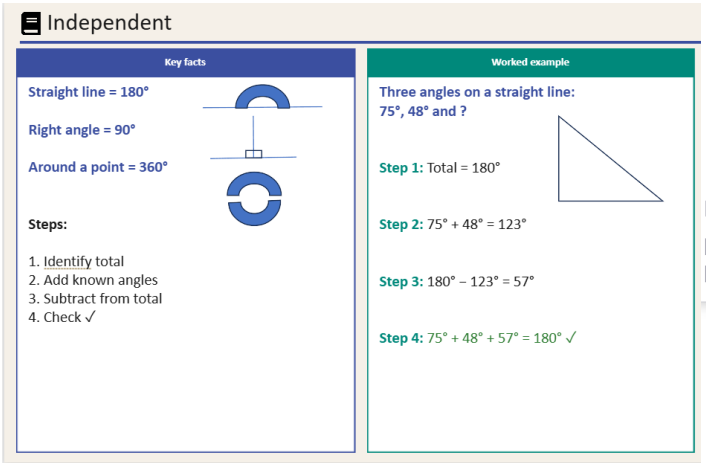
- All pupils access age-related objectives within their key stage. Pupils working outside their key stage receive targeted TA support aligned to the appropriate year group, supported by White Rose videos.
- Pre-teach interventions and structured programmes (e.g. 1stClass@Number) are used to close gaps.
- Explicit modelling, worked examples and carefully sequenced questions reduce cognitive load. Modelling videos are put on Showbie to allow children to access them in their own time.
- Manipulatives are available physically and via the Magma Maths app to secure conceptual understanding.
- Vocabulary is explicitly taught; sentence stems support reasoning.
- Pupils may use voice recording or dictation to explain reasoning where appropriate.
- Magma Maths translation tools support EAL pupils.
- Misconceptions are addressed immediately through live marking and in-lesson adaptation.
- High expectations are maintained for all pupils through appropriate scaffolding and challenge.

Implementation









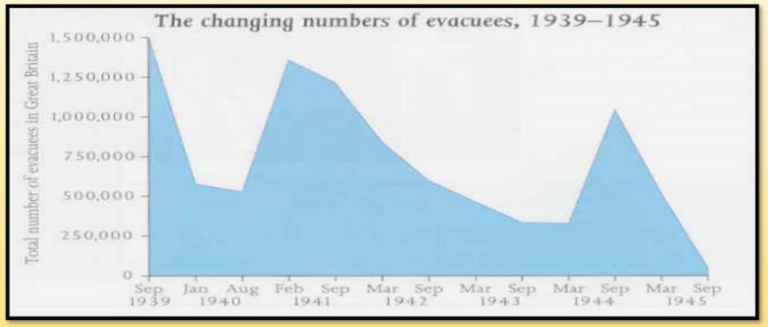
Implementation

Enrichment

Mathematics is linked across the curriculum:
Science – data handling, measurement
Geography & History – interpreting statistics and timelines
D&T & Art – measurement, scale, proportion
STEM Days – applying maths to global citizenship challenges
Children see mathematics as purposeful and applicable beyond the classroom.

Evacuation

What enquiry questions does this graph raise?

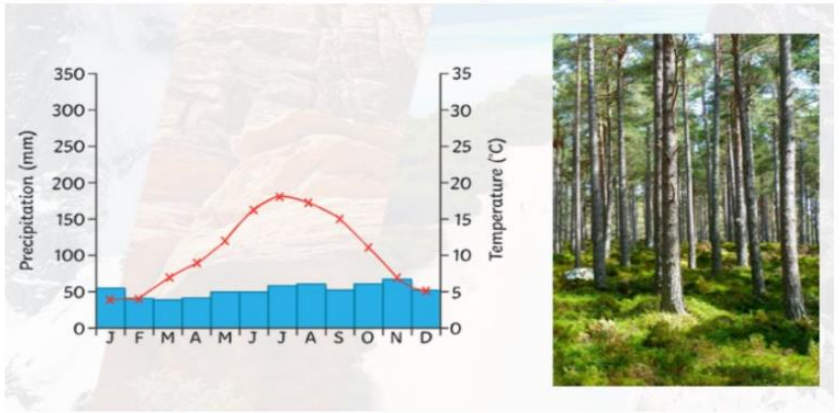


Top tip
Link your questions to specific dates

Let me show you…

What happened in August 1940 – nearly a year after the war started to cause a huge increase in evacuation?

We're going to use maths to compare the temperature and rainfall between the UK and Brazil. Let's start by examining the UK…

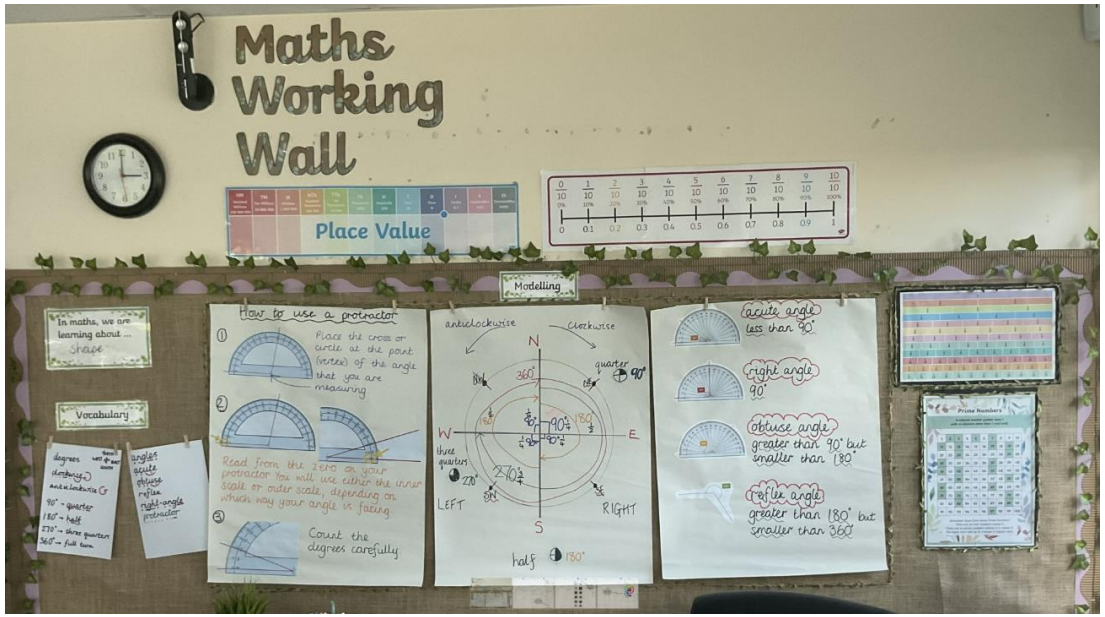


What do you notice about the volume of rainfall throughout the year?
What do you notice about the temperature?
What is the approximate temperature in Jan and July? How much warmer is July than January?

Implementation

Environment

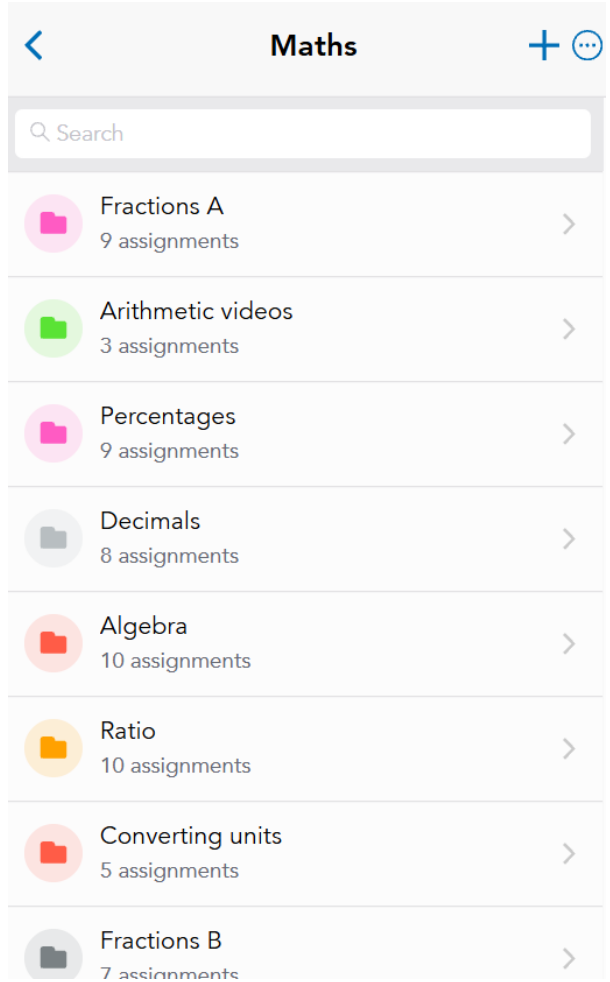
- Every classroom has a Maths Working Wall, which is built up across a unit rather than refreshed weekly.
- Working walls include: Key mathematical vocabulary
- Modelled worked examples
- Reasoning sentence stems
- Manipulative visuals (e.g. bar models, CPA representations)
- Manipulatives are: Freely accessible in KS1Teacher-directed in KS2Digital resources are accessible via Magma Maths.
- Mini whiteboards are used to support live modelling and immediate AfL.
- The environment supports independent reference to models, vocabulary and representations to reduce cognitive load and promote mathematical reasoning.

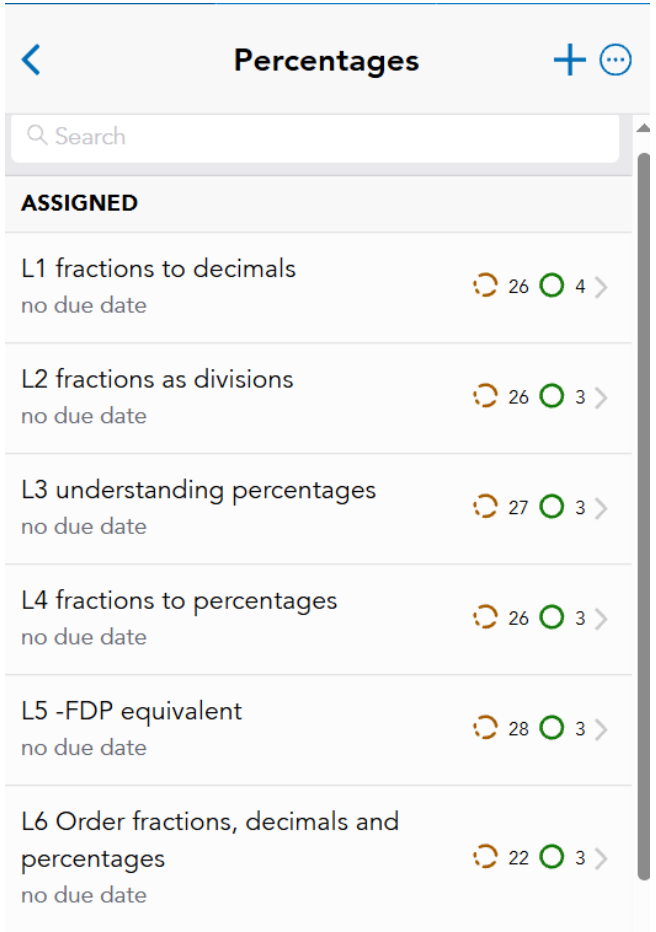


Impact

Evidencing on Showbie

- Lessons should be clearly titled on Showbie.
- During lessons, pupils complete the "We" and "You" stages of shared practice on Showbie to evidence guided reasoning and increasing independence.
- Problem-solving and reasoning questions are also completed and submitted via Showbie.
- Independent practice (Y2–Y6) is completed on Magma Maths.





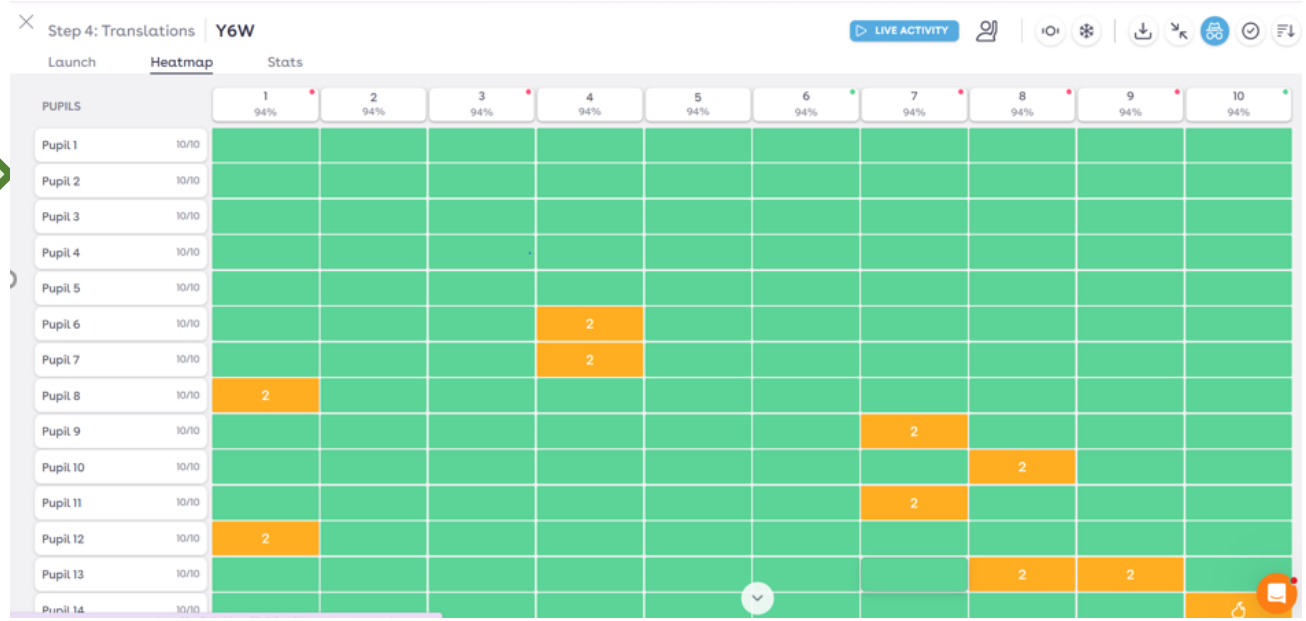
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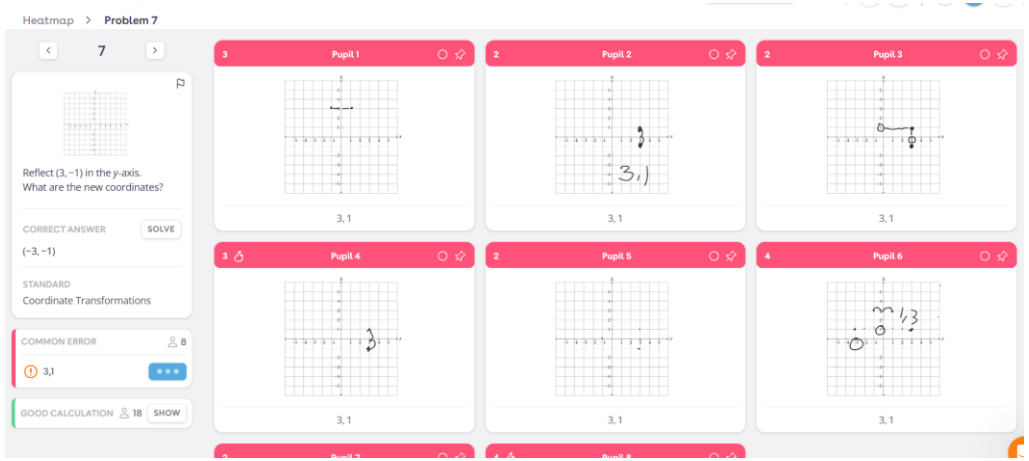
Marking and Feedback

- Live marking should be used for a majority marking and feedback.
- The spreadsheet on Magma should be used to assess and provide moment in time feedback to ensure all children are being successful in the lesson.
- Spreadsheets should be more or less or green or yellow.
- Use the common error tab on Magma to provide whole class feedback on misconceptions.

Monitoring

- Curriculum impact monitoring conducted twice per year using school format.
- Triangulation of evidence that could include: pupil voice, analysis of pupil outcomes on Showbie, pop ins, learning walk, meet the teacher (formal/informal), lesson study, team teach, sharing good practice (through observation)
- Things to celebrate, things to be aware of, things to be concerned about, will be reported to SLT to discuss next steps





Impact

Summative Assessment

Summative assessments happen during the autumn 2, spring 2 and summer 2 half-terms

Years 1-5 complete HeadStart papers (1 arithmetic, 1 reasoning). Y6 complete past KS2 SATs papers (1 arithmetic, 2 reasoning).

Raw data is input into Smartgrade for question analysis.

Question analysis data should be used to inform retrieval tasks and could be passed on to parents, carers or tutors to support the child at home.

HeadStart primary

SMARTGRADE

