

Mathematics is a creative subject, which allows us to understand and ultimately change the world.  
Maths is everywhere!

## Intent

The pupils at Green Gates arrive to us with very different starting points. Our aim at Green Gates Academy is for every child to:

- Have the **skills and self-confidence** to enjoy maths by accessing a **coherently** planned curriculum appropriate to their individual needs and based on secure assessments
- Be exposed to a wide range of **representation and structures** to allow pupils to have a deep understanding of mathematical concepts
- Be **fluent** in the fundamentals of maths, by having quick and efficient recall of facts and procedures and the flexibility to move between different contexts and representations
- Be able to solve problems by applying their **mathematical thinking** to a variety of problems, with increasing sophistication, including in real-life scenarios.
- **Reason mathematically** and to develop and present a justification, argument or proof using mathematical language.

## Implementation

Skills, Self Confidence and Coherence

- PUMA and GL Assessments completed with pupils to ascertain their level of understanding in relation to their chronological age
- Baselines are done in accordance with teacher assessments and data ascertained from previous schools.
- Pre and post-assessments are completed to assess prior understanding and to ensure that learning is embedded.
- Small steps approach is used to allow pupils to make connections between lessons. They are able to develop their confidence and master skills before moving on.

Representation and structures

- Concrete representations such as Numicon, Cuisenaire, Base 10 and place value counters are made available for all pupils to use. Each class has a maths box which pupils are encouraged to use to support their understanding.
- Classroom Secrets, Twinkl and White Rose resources are used throughout school which are aligned with White Rose and Power Maths. This allows pupils to be exposed to a range of representations, question types and structures.

Fluency

- Numbots and Times Table Rock Stars are used to support pupils in their quick and efficient recall of facts.
- Maths Meetings are used to consolidate key areas of maths or to introduce new content. This is done on a daily basis to support in the quick recall of facts and to develop number sense.

Mathematical Thinking

- Problem solving and reasoning is used as part of the lesson and this is used both verbally and in the written form. All pupils, no matter their attainment, are encouraged to think mathematically.
- Pupils are encouraged to use their mathematical skills in different contexts throughout the curriculum, including in Science.

CPD

- We are part of the Archimedes Maths Hub, and have been since 2019. These are opportunities to network with other schools. We are currently within our 'Sustaining' year.

- Teachers are encouraged to share best practise with one another within the school and we actively encourage 'open classrooms'.
- We work with other schools within the Trust to share best practise and share resources.

## Impact

### Pupil Voice

- Pupils speak confidently about their learning and can articulate how teaching supports in their understanding of mathematical concepts.
- Pupils show increased confidence and believe that they can learn new mathematical concepts and apply the knowledge and skills they already have.
- Pupils can articulate how they are supported in their learning by staff and the resources used.

### Evidence in Knowledge

- Pupils know how and why maths is used in the outside world and in the workplace. They know about different ways that maths can be used to support their future potential
- Pupils demonstrate a quick recall of facts and procedures, including the recollection of the times tables

### Evidence in Skills

- Pupils use acquired vocabulary in maths lessons
- Pupils have the skills to use methods independently and show resilience when tackling problems
- Pupils have the flexibility and fluidity to move between different contexts and representations of maths

### Outcomes

- Pupils are able to make good or better progress, relevant to their individual needs.