

Intent

Our maths curriculum is designed to help children to make sense of the numbers, patterns and shapes they see in the world around them. We want all pupils at Djanogly Sherwood Academy to experience the beauty, power and enjoyment of mathematics and develop a sense of curiosity about the subject with a clear understanding. We believe all children can achieve in mathematics, and teach for secure and deep understanding of mathematical concepts through manageable steps. We encourage problem solving, which allows our children to explore unexpected discoveries and new connections. As their confidence grows, they look for patterns, use logical reasoning and suggest solutions and try out different approaches to solving problems. Children will use sophisticated, mathematical **vocabulary** to talk about their learning. Across the school, maths is taught daily so that pupils develop as creative, **resilient** mathematicians who have a deep understanding and competence in maths. We follow the principles of maths mastery in our lesson delivery. These aims link directly to our cultural capital of **aspirations, language rich and vocabulary, school values and knowledge**.



Implementation

Our maths curriculum has been developed, ensuring structured progression through a blocked, mastery approach. Lessons will include some of the following elements:-

- We use **Anchor Tasks** at the beginning of each learning sequence to introduce and explore a new concept.
- Maths FAST** : Concepts and strategies from previous terms and year group blocks are revisited and refreshed to embed learning.
- Retrieval Fluency/Reasoning/Problem solving**- recent learning is re-visited to embed concepts into long term memory.
- Vocabulary**: Teachers and pupils will discuss vocabulary and explore concepts to reactivate prior learning and secure knowledge.
- Fluency/Varied Fluency** : Pupils expand their understanding through variation, rather than a variety of tasks. Manipulatives and the use of images allows pupils to build mental models on which to hang their understanding of a concept.
- Reasoning and Problem Solving** : Pupils are exposed to rich problems and have opportunities to share reasoning with talk partners, groups and whole class.
- Independent Learning/Challenge** : Pupils are applying skills fluently and effectively, selecting tasks for independent practice.

We use **Times Table Rock stars** to practise times tables. All children in upper KS1-KS2 access the programme weekly to practise their tables. In EYFS/KS1 children practise their addition and subtraction facts using **Numbots**. Children are awarded certificates at the end of each term for their recall speed.

At the end of 2019 data showed on average our children achieved 85% accuracy when answering times table questions on TT Rock stars.

Impact

We are shaping assured, happy and resilient mathematicians who relish the challenge of maths. They will become independent, reflective thinkers, whose skills support them in all areas of the curriculum and in their daily lives. Children's books show fluency (Maths FAST), applied reasoning, problem solving and challenge.

In 2019 at the end of KS2 73% of children achieved ARE in maths (16/22 children). At the end of KS1 78% of pupils achieved ARE which is +2 above national average results. At the end of EYFS 61% of children achieved ARE in Number.

"Maths is really fun. We use lots of resources like cubes and numicon to help us learn. Our teachers give us feedback about how to get better. I really like maths lessons" - Year 2 pupil voice.

Our calculation policy has been developed around the use of **CONCRETE, PICTORIAL** and **ABSTRACT** methods to help children to SEE maths.