



MATHEMATICS



INTENT

At Tadcaster Primary Academy we want children to develop a confidence, understanding and enthusiasm for mathematics. Using our mastery approach to maths the children will develop a wide range of mathematical skills and use them to solve a wide range of problems in a wide range of situations. They will think and communicate mathematically in written, spoken and graphical form. The lessons should engage the children, develop curiosity in our pupils and involve real life contexts. Through both independent and cooperative work the children will acquire the foundation necessary for the further study of mathematics and other curriculum areas.

IMPLEMENTATION

We are currently working towards a long-term goal of implementing and modifying the teaching for mastery approach. Using this approach maths lessons begin with fluency of mathematical basics, learning new concepts and then progressing to reasoning and problem solving using the skills learnt. To support this style of learning we teach a mastery approach by using CPA (Concrete, Pictorial, Abstract) framework. The CPA approach is a system of learning that uses physical and visual aids to build a child's understanding of abstract topics. Pupils are introduced to a new mathematical concept through the use of concrete resources. When they are comfortable solving problems with physical aids, they are given problems with pictures – usually pictorial representations of the concrete objects they were using. Then they are asked to solve problems where they only have the abstract i.e. numbers or other symbols. This enables them to show further understanding and knowledge of the skills and concepts learnt. Our aim is to teach lessons that are stimulating and challenging while also including the repetition of basic skills which require regular practice.

IMPACT

Throughout each lesson formative assessment takes place and feedback is given to the children through marking and next step tasks to ensure they are meeting the specific learning objective. Teacher's then use this assessment to influence their planning and ensure they are providing a mathematics curriculum that will allow each child to progress. Each term children complete an assessment to help them to develop their testing approach and demonstrate their understanding of the topics covered. The results are then used to determine children's progress and attainment. The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. However, decisions about when to progress should always be based on the security of pupils' understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on.