

Mixed ability maths teaching to drive standards and assist in diminishing the difference between groups of learners

Background

We are working to 'diminish the difference' between all children at the school and in maths we look to use mixed ability grouping in a mastery curriculum as a tool to support this.

Subject leader attended a 'Big Maths' course which inspired the change and highlighted the key principles in developing a mastery curriculum.

This project aimed to equip the children with firm number fluency skills, develop their problem solving and logical thinking whilst being able to explain their understanding by reasoning using mathematical vocabulary.

Six key principles of mastery teaching

Problem solving – encourage children to identify, understand and apply relevant mathematical principles and make connections between different ideas

Depth before breadth – children given time to fully understand, explore and apply ideas which enables them to truly grasp a concept, and the challenge comes from investigating it in new, alternative and more complex ways

Concrete, pictorial, abstract – helps children explore and demonstrate mathematical ideas, enrich their learning experience and deepen understanding

High expectations - learners are encouraged to build confidence and resilience, with no learner being left behind.

Growth mindset - encourages a love of learning and resilience

Priorities and implementation

- Shared vision – discuss with teaching team and share key principles and expectations
- CPD sessions to skill up and share ideas amongst staff
- Mapping of own statements from TT to enable opportunity for progression towards mastery and mastery with greater depth
- Mixed ability expectation – agreed at phase meetings – KS2 at all times with specific interventions for learning groups KS4 most of the time with

Reflection and wider school benefits

- All cohorts have increased the number of children achieving ARE in maths compared to previous year
- High level of children exceeding ARE, in both cohorts
- Positive impact on self-belief and confidence of children when securing written methods
- Improved relationships of children working with a range of partners to support or be supported in their learning

Sustaining - next steps

- Teachers to review MTPs to map statements from Spring 1 informed by gaps analysis
- Continue expectation of mixed ability teaching in maths without obvious grouping
- Monitor link between 'Gold' TT statements and NCETM mastery with greater depth problems in books
- Review maths in EYES and how mixed ability and mastery approach looks

Impact - Teacher feedback and SL monitoring findings:

Data

Year 1 - 91.7% at ARE with 53% exceeding compared to 88.3% ARE in Reception with 46.7% exceeding

Year 2 – 93.1% at ARE with 56.9% exceeding compared to 81% ARE in Year 1 with 51.7% exceeding

Year 3 – 86.7% at ARE with 50% exceeding compared to 83.3% ARE in Year 2 with 53.3% exceeding

Year 4 – 86.7% at ARE with 40% exceeding compared to 78.3% ARE in Year 3 with 46.7% exceeding

Teacher feedback

- Boosted confidence in all learners with overall learning environment feeling more positive
- Higher ability children more able to explain their understanding, developing their reasoning skills
- Lower ability children keen to try new methods with confidence to take more risks in their learning