



DUDLEY
INFANT
ACADEMY

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Maths Policy

<i>Approved by staff</i>	<i>September 2017</i>
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Introduction

'Mathematics is a creative and highly inter-connected discipline that has been developed over centuries. It is essential to everyday life, critical to science and technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject. '

(National Curriculum 2014)

At Dudley we aim to provide the best teaching to develop conceptual understanding alongside pupils' fluent recall of knowledge and confidence in problem solving. We plan to find out how pupils think by observing our pupils closely; listening carefully to what they say, and asking questions to probe and extend their understanding.

The aims of the 2014 Curriculum are for our pupils to:

- Become fluent in the fundamentals of mathematics through varied and frequent practice with complexity increasing over time.
- Develop conceptual understanding and ability to recall and apply knowledge rapidly and accurately.
- Reason mathematically; follow a line of enquiry, conjecture relationships and generalisations.
- Develop an argument, justification and proof by using mathematical language.
- Problem solve by applying knowledge to a variety of routine and non-routine problems. Breaking down problems into simpler steps and persevering in answering.

The National Curriculum sets out year-by-year programmes of study for Key Stage 1. This ensures continuity and progression in the teaching of mathematics.

The EYFS Statutory Framework 2014 sets standards for learning, development and care of children from birth to five years old and supports an integrated approach to early learning. This is supported by the 'Development Matters' non statutory guidance.

The EYFS Framework in relation to mathematics aims for pupils to:

- Develop and improve their counting skills
- Understand and use numbers
- Calculate simple addition and subtraction problems
- Describe shapes, space and measures

The purpose of mathematics in our academy is to develop:

- Positive attitudes towards the subject and awareness of mathematics in the real world
- Competence and confidence in using and applying mathematical knowledge, concepts and skills

- An ability to solve real problems, to reason, to think logically and to work systematically and accurately
- Initiative and motivation to work both independently and cooperatively with others
- Confident communication of maths where pupils ask and answer questions, openly share work and learn from their mistakes
- An ability to use and apply mathematics across the curriculum and in real life
- An understanding of mathematics through the process of enquiry and investigation

We aim to provide a stimulating and exciting learning environment that takes account of different learning styles and uses appropriate resources to maximise teaching and learning.

Teachers planning and organisation

Long term planning

The White Rose Maths Hub yearly overview provides the long term planning for mathematics taught in the academy.

Medium term planning

EYFS, Years 1 and 2 use the White Rose Maths Hub schemes of learning as their medium term planning documents.

These schemes provide teachers with exemplifications for maths objectives and are broken down into fluency, reasoning and problem solving, key aims of the National Curriculum. They support a mastery approach to teaching and learning and have number at their heart. They ensure teachers stay in the required key stage and support the ideal of depth before breadth. They support pupils working together as a whole group and provide plenty of time to build reasoning and problem solving elements into the curriculum.

Short term planning

The above schemes of learning support daily lesson planning. Lessons are planned using a common planning format and are monitored at intervals by the mathematics subject leader. EYFS planning is based on the medium term plans and delivered as appropriate to whole class or small groups with thought to where the children are now and what steps they need to take next.

All classes have a daily mathematics lesson, in key stage one lessons are 60 minutes and in EYFS the children receive a whole class 20 minute lesson each day. EYFS teachers ensure the children learn through a mixture of adult led activities and child initiated activities both inside and outside the classroom. Mathematics is taught through an integrated approach.

Calculation Policy

The White Rose Maths hub calculation policy is used at Dudley, a copy of which can be found in appendix 1.

Special educational needs and disabilities (SEND)

Daily mathematics lessons are inclusive to special educational needs and disabilities. Where required, children's School Based Action Plans incorporate suitable objectives from the National Curriculum for Mathematics or Development Matters and teachers keep these in mind when planning learning. These

targets may be worked upon within the lesson as well as on a 1:1 basis outside of the mathematics lesson. Maths focused intervention in school helps children with gaps in their learning and mathematical understanding. These are delivered by trained support staff and overseen by the SENCo/Inclusion Leader and/or the class teacher.

Within the daily mathematics lesson teachers have the responsibility to not only provide differentiated activities to support the children with SEND but also activities that provide sufficient challenge for children who are high achievers. It is the teachers' responsibility to ensure that all children are challenged at a level appropriate to their ability.

Lessons

In all lessons, learning objectives (WALTs) and success criteria are clearly displayed and discussed. The emphasis in lessons is to make teaching interactive and lively, to engage all children by encouraging them to talk about mathematics. Lessons involve elements of:

- Instruction-giving information and structuring it well
- Demonstrating-showing, describing and modelling mathematics using appropriate resources and visual displays
- Explaining and illustrating-giving accurate and well-paced explanations
- Questioning and discussing
- Consolidating
- Reflecting and evaluating responses-identifying mistakes and using them as positive teaching points
- Summarising-reviewing mathematics that has been taught enabling children to focus on next steps

Pupils' Recording

Children are taught a variety of methods for recording their work and are encouraged and supported to use the most appropriate and convenient. Children are encouraged to use mental strategies and their own jottings before resorting to more formal methods. In EYFS photographs are taken as evidence and displayed in learning journeys or maths books.

Marking

Marking of children's work is essential to ensure they make further progress. Work is marked against success criteria, in line with school marking policy, and includes next steps. Where appropriate children are encouraged to self-assess their work and given time to make corrections or improvements. Weekly responses to marking are made as close to work as possible (refer to the academy Marking and Feedback policy)

Assessment (refer to the academy Assessment policy)

Assessment is an integral part of teaching and learning and is a continuous process. Teachers make assessments of children daily through;

- Regular marking of work
- Analysing errors and identifying misconceptions
- Asking questions and listening to answers
- Facilitating and listening to discussions
- Making observations

Medium term assessments

Termly assessments are carried out across the school using the assessment materials for each year group provided by the White Rose Maths Hub in line with the schemes of learning. These materials used alongside judgements made from class work support teachers in making a steps assessment for each child which is in line with the assessment policy they enter onto Primary Target Tracker.

Pupil Progress meetings are timetabled each term for all classes. Progress of pupils is discussed and appropriate interventions considered and put in place where appropriate.

Long term

Year two complete the National Tests (SATs) in May.

Resources

Each class has a stock of core resources that are age appropriate. Additional mathematical equipment and resources are stored centrally.

Role of Maths Subject leader

- To lead in the development of maths throughout the school.
- To monitor planning, teaching and learning in mathematics throughout the school
- To help raise standards in maths.
- To provide teachers with support in the teaching of mathematics.
- To provide staff with CPD opportunities in relation to maths
- To monitor and maintain high quality resources
- To keep up to date with the new developments in the area of mathematics