

Oxley Park Academy

Policy for Mathematical Development



Rationale

Oxley Park Academy recognises that Mathematics is a core subject in the basic curriculum to which all pupils are entitled, in accordance with the 1988 Education Reform Act. We believe that mathematics should be taught to all pupils throughout the school in ways appropriate to their ability. We believe mathematics is a body of knowledge which provides a way of viewing and making sense of the world. To function in society, we all need to be able to communicate mathematically. A high quality mathematics education provides a foundation for understanding the world, the ability to reason mathematically, and a sense of enjoyment and curiosity about the subject. We must ensure that the children in our care leave our school with high standards of numeracy.

Aims

We aim for our children to:

- Develop an enjoyment and curiosity of maths
- Achieve a high standard in numeracy and a range of other mathematical skills, with a particular emphasis on mental strategies.
- During key stage 1, develop their knowledge and understanding through practical activity, exploration and discussion.
- During Key stage 2, use the number system with confidence and develop from counting reliably to calculating fluently with all four operations. Pupil should be able to apply these to practical activities and problem solving.
- Enjoy the subject and study it with confidence and a sense of achievement.
- Enable pupils to have opportunities for mathematical thinking and discussion
- Provide opportunities for pupils to demonstrate and use their mathematics
- Provide a role-model by using mathematics for practical purposes, organisational and administrative tasks.
- Give pupils opportunities to use mathematics in everyday situations
- Help pupils to understand that mathematics is a powerful tool for communication
- Help pupils recognise that mathematics is a search for pattern and relationship
- Encourage pupils to take responsibility for their own learning
- Provide children with the skills to reason mathematically

Planning

Mathematics in school will follow the requirements of the National and Foundation Stage Curriculums. As a school we have chosen to follow the Primary Framework for Mathematics. Teachers use provided medium term plans which follows the guidance and needs of the children based on assessment. Then short term plans are produced on a weekly basis which takes into consideration the learning needs of our children. All plans will include teaching and learning activities, differentiation, focussed support and vocabulary. The planning is monitored by the subject leader on a regular basis to ensure continuity, progression and consistency throughout the school.

Teaching and Learning

A range of styles of teaching is necessary for the teaching of mathematics. Across the school at different times children may be 'set' for maths to enable teachers to pitch lessons according to the needs of similar children. The impact of this on standards and achievement will be closely monitored by SLT and subject leader.

As detailed in our "Oxley Park Academy Policy for Learning and Teaching", teaching will be differentiated to meet individual needs. The daily Mathematics lesson may include:

- A main teaching activity, the direct teaching through demonstrating, modelling and discussion.
- Teachers use a variety of visual, aural and kinaesthetic resources and mathematical language.
- Children participate actively in practical activities related to their learning objectives.
- Pupils should be provided with the opportunity to apply these skills through problem solving in every lesson.
- A plenary of mini-plenary, where children are encouraged to reflect on their learning and provide assessment opportunities.
- Daily opportunities to practice mental arithmetic. This may include rapid recall of number facts.
- Use of ICT for example use of interactive whiteboard and whole school subscription to 'My Maths'.
- Opportunities for outdoor learning.

Teaching Assistants are used in Mathematics to assist:

- In providing extra help for children with particular needs.
- In teaching individual children and groups of children during interventions.
- To support whole class teaching and further the understanding of groups of pupils.

Mental Maths

All classes will have a 15 minute session of mental maths every day. This can take place wherever is most convenient in individual timetables. Resources have been purchased to support teachers in the daily teaching of mental maths. Teachers are required to plan these sessions on a simple planning grid which is accessible to all staff on the school network. This planning will also be regularly monitored by the subject leader. There will be opportunities throughout the day where teachers discretely reinforce mental maths within the classroom, for example chanting of times tables when lining up for break.

Assessment of Mathematics

Staff use the APP materials to assess children's progress in maths weekly, this information is then tracked using 'Classroom Monitor', evidence for the APP process is collected in 'independent maths folders'. Staff highlight the continuums in their year group's colour and make their summative level judgement about the children in their class. Children in Year Two and Year Six take the end of year statutory assessment tests. Children in Years 3, 4 and 5 complete the optional QCA tests at the end of each year.

Targets

Children will be set group targets focussing on mental maths. The targets have been taken from the new Mathematics curriculum and will be displayed in the classroom and shared with the children. Daily mental maths activities will give the children opportunities to rehearse the key mental maths skills/targets and frequent opportunities will be given for children to demonstrate that they have achieved it. The children must be able to demonstrate the target confidently on three separate occasions before they can move on to their next target.

Homework

All children are given homework at an age appropriate level. In Foundation stage children are given practical activities to complete with parental support, these activities will often have a mathematical focus. In Key Stage one, children are given one piece of recorded homework each week, alternating between a mathematics and literacy focus. Parents are encouraged to support their children with this. In Key Stage two children are given one piece of maths homework each week. All children will have access to 'My Maths' which is an online, interactive maths tool, teachers may use this to set homework and challenges for the children.

Equal Opportunities & Inclusion

At Oxley Park Academy we are committed to equality of opportunity and inclusion as detailed in school policy. We have a responsibility to provide a broad, balanced and relevant curriculum for all our pupils which sets suitable learning challenges, giving every pupil the opportunity to experience success in learning and to achieve as high a standard as possible including pupils whose attainments fall significantly below the expected levels and also those whose attainments significantly exceed those expected.

All staff will have high expectations of all pupils and provide opportunities for everyone to achieve, including boys and girls, pupils with special educational needs, pupils with disabilities, pupils from all social and cultural backgrounds, pupils of different ethnic groups including travellers, refugees and asylum seekers, and those from diverse linguistic backgrounds. Teachers should be aware that pupils bring to school different experiences, interests and strengths, which will influence the way in which they learn.

Children who are deemed to be gifted or able in mathematics are identified at an early age (by the end of Key Stage One typically, although not always) and added to the 'Gifted and Able register' (administered by the Inclusion Manager). They will be provided with additional teaching, individually or in small groups, to enable them to reach their full potential. They and their parents will be provided with a 'gifted and able provision' which shows exactly what support the teacher will put in place and the outcomes expected from the child. These will be revised termly.

Children with special educational needs in mathematics will be identified at the earliest possible time. They will be provided with an IEP, including targets focussed on their areas for development in basic maths skills. This will be reviewed termly.

Excellence in Mathematics

At Oxley Park Academy we believe it is important to share and celebrate success. To celebrate children in mathematics children may:

- Visit a member of the Management Team to share their work
- Receive a 'Mathematician of the day' certificate in class
- Be nominated for 'Star of the Week'
- Be mentioned on the Head Teacher's weekly blog

The Role of the Subject Leader

The role of the Subject Leader is to:

- Purchase, organise and maintain teaching resources
- Manage a delegated budget and keep spending within it
- Encourage and assist in training
- Keep up-to-date by attending courses and feedback sessions organised by LEA, Cluster groups or other colleagues
- Provide guidance and support in implementing NC and schemes of work
- To co-ordinate recording and presentation throughout the school after consultation with colleagues
- Advise the SLT of action required (eg resources, standards, etc.)
- Encourage ways of involving parents in their child's learning
- Provide support for all who teach mathematics and so improve the quality and continuity of mathematics teaching and learning throughout the school
- Two of our Subject Leaders are 'Mathematics Specialist Teachers' accredited by Northampton University.

Resources

The Subject Leader for Mathematics has an inventory of all equipment kept in school. All classes have a 'general' stock of maths resources which includes counting sticks, bead strings, number fans, hundred squares, number lines, calculators, 3D and 2D shapes, unifix, dominoes, coins, maths games and other age appropriate resources. Less used resources such as measuring cylinders, trundle wheels, scales and balances, timers and metre sticks are kept in Key Stage cupboards.

Health & Safety

At all times due care and consideration is given to health & safety as outlined in our Health & Safety Policy.

Written by: Amy McClaren

Date: July 2014

Approved by Governing Body:

Review date: July 2016