

CHEADLE PRIMARY SCHOOL MATHEMATICS POLICY

Rationale

Mathematics forms an essential part of the primary curriculum and plays an intrinsic part in our daily lives. It provides a powerful and concise means of communication. It provides a source of delight and wonder, and an opportunity for all pupils to achieve mathematical capability. Mathematics helps to equip children with qualities and skills such as problem solving, communicating, reasoning and creativity. Through participating in class, group, paired and independent work, mathematics also provides a chance to enhance pupils' social skills and qualities.

In Cheadle Primary School we are committed to providing a programme of study which provides all pupils with relevant and appropriately challenging work at each key stage as outlined in the Inclusion policy.

Aims

At Cheadle Primary School we aim to achieve the highest possible standard of mathematics by helping all children to master the basic skill of numeracy set out in the Primary Framework for Mathematics.

We aim to:

1. Encourage a positive attitude towards mathematics, promoting the ability to think logically and creatively, with independence and flexibility.
2. Help pupils to understand, and be able to use, a whole range of methods and strategies to assist with their written and mental calculations.
3. Enable pupils to understand and use appropriate mathematical vocabulary.
4. Equip pupils with the skills necessary to apply mathematical methods to problems interacted in daily life.
5. Help each child to achieve his/her mathematical potential in an environment that is happy, stimulating and challenging.
6. Encourage the active participation of parents in their child's learning of mathematics through homework, consultations and workshops.
7. Encourage pupils to share ideas and strategies with their peers, and listen to explanations from others.
8. Value children's work and efforts.

9. Ensure by appropriate planning that every child is set suitable learning targets according to the child's present level of achievement which may mean choosing knowledge and skills from a previous or later Key Stage as outlined in the Inclusion Policy. This will give every pupil the opportunity to experience success in learning and to achieve as high a standard as is possible.

As stated in the school aims: 'The school will have the highest standards in Literacy and Numeracy' and will aim to achieve the national norms, and above in these and other areas of the curriculum.

Objectives

We are following the objectives laid out in the Primary Framework for Mathematics for teaching mathematics from Year 1 to Year 6, and the Programmes of Study as listed in the National Curriculum. In Foundation Stage we teach objectives around EYFS outcomes and early learning goals. For Early Years see the Foundation Stage School Policy.

School Organisation

The Primary Framework for Mathematics forms the foundation of the mathematical teaching within the school curriculum. Each Year Group has been provided with the National Numeracy Framework for teaching mathematics, a New Primary Strategy Framework with disc, and the Mathematical Vocabulary booklet listing the important vocabulary for each year group. They are also provided with the progression in the four operations, which are followed by the school. Classroom teachers are responsible for deciding which children need to take part in the securing levels and overcoming barriers and the organisation of the delivery of these in their classrooms.

Each class teacher delivers mathematics in their own classroom and the immediate environment. It is taught every day for approximately forty-five minutes to one hour.

In Foundation stage teachers teach objectives around EYFS outcomes and early learning goals in ability groups in classes. In Year 1 the Primary Framework for Maths is taught in ability groups by each class teacher.

From Years 2 to 6, classes are in ability groups. The ability groups are selected via assessments and tracking data and reviewed at least every half term.

Classroom Organisation

All pupils should experience a wide variety of teaching styles and organisation. It is necessary to ensure that the needs of all children are met by the inclusion of differentiation in lessons. All pupils should have a daily lesson dedicated to mathematics to allow for direct teaching and to secure a good balance between teaching styles. For Early Years mathematics please refer to the Foundation Stage policy.

Pupils should be working in a happy and stimulating environment, with access to appropriate resources. Pupils' work should be valued through interesting and interactive displays. All pupils should feel that their contributions are highly regarded to ensure that further learning and understanding takes place, and to increase the pupils' self esteem.

Resources

Each year group shares a selection of mathematical resources, which are based in their classrooms. In addition there is also a central store equipped with a variety of resources for general use. Teachers also use ICT and websites to support teaching.

The Role of the Co-ordinator

- To offer help and support to all members of staff (including Teaching Assistants) in their teaching, planning and assessment of mathematics.
- To maintain resources and advise staff on the use of materials, equipment and books.
- To monitor classroom teaching or planning following the schools rolling programme of monitoring.
- To monitor the children's mathematical work, looking at samples of different abilities.
- To manage the numeracy budget.
- To lead staff training on new initiatives.
- To attend appropriate in-service training and keep staff up to date with relevant information and developments.

- To have enthusiasm for mathematics and encourage staff to share this enthusiasm.
- To keep parents and governors informed on the implementation of mathematics in the school.
- To liaise with all members of staff on how to reach and improve on agreed targets
- To help staff to use assessment to inform future planning.

The Role of the Class Teacher

To plan and deliver the requirements of the EYFS outcomes and early learning goals or Primary Framework for Mathematics to the best of their ability. In Cheadle Primary School we set high expectations for our pupils and provide opportunities for all pupils to achieve, including girls and boys, pupils with educational special needs, pupils with disabilities pupils from all social and cultural backgrounds, and those from diverse linguistic backgrounds. The class teacher ensures success by

- a. Creating effective learning environments.
- b. Securing their motivation and concentration
- c. Providing equality of opportunity through teaching approaches.
- d. Using appropriate assessment approaches
- e. Setting suitable targets for learning as outlined in the Inclusion Policy.

The class teacher's role is a vital role in the development of mathematics throughout the school and will ensure continued progression in learning and understanding.

To keep up to date assessment records (see policy document).

Assessment and record keeping (see Assessment Policy)

Assessment in mathematics needs to be on-going and will be both formal and informal. Informal assessment can be carried out through use of open and closed questioning, observation, listening to discussions and explanations and samples of work. APP was introduced in September 2009 and modified in Spring 2013 where teachers worked collaboratively to use a body of children's work to assess against the APP termly. Focused guided group work was also introduced to support APP.

At the end of each piece of work the teacher will assess the child's progress with regard to the objective for that lesson and will mark the work with A – achieved, W – working towards or N – not achieved in accordance with the Assessment Policy. In addition to this the children will be encouraged to assess their own work or that of a numeracy partner. This assessment will take the form of the child looking at the work against an objective set by the teacher and annotating the work as is appropriate. E.g. a smiley, straight or sad face may be used or older children might be asked to comment briefly against set criteria.

Statutory assessments take place at the end of Key Stage 1 and 2.

In Reception the children are assessed according to the EYFS outcomes and early learning goals and Year 1 use APP to assess all children. Optional SATs are undertaken regularly in years 3-5.

These results are used to support teacher assessment through APP and guided group work.

Staff follow medium term plans with objectives set out in the Primary Framework for Mathematics and use the same format for their weekly planning sheet.

A minority of children will have particular learning and assessment requirements which go beyond the provision described above and, if not addressed, could create barriers to learning. These requirements are likely to arise as a consequence of a pupil having a special educational need or disability or may be linked to a pupil's progress in learning English as an additional language. Teachers must take account of these requirements and make provision, where necessary, to support individuals or groups of pupils to enable them to participate effectively in the curriculum and assessment activities. During any assessments teachers should bear in mind that special arrangements could be made available to support individual pupils. This is in line with the school inclusion policy. These children should be identified and discussed at pupil progress meetings to ensure appropriate provisions or interventions are put into place.

Special Needs (see Special Needs Policy)

We cater for the needs of all pupils by way of differentiated tasks, although the subject matter will remain the same. We also implement dyslexia

friendly strategies. Individual Educational Plans will be implemented wherever necessary with the assistance of the Special Needs Co-ordinator.

Equal Opportunities (see Equal Opportunities Policy)

Cheadle Primary School will ensure that all children are provided with the same learning opportunities regardless of social class, gender, culture, race, disability or learning difficulties. As a result we hope to enable all children to develop positive attitudes towards others.

Links with Other Subjects

ICT

ICT includes calculators as well as computers, and extends to the whole range of audio-visual aids, including audio cd, dvd and educational broadcasts.

The whole range of ICT can be used in various ways to enhance the teaching of mathematics:

- To motivate children's learning.

It can help teaching and learning mathematics in several ways, including;

- Exploring, describing and explaining number patterns.
- Practising and consolidating number skills.
- Exploring patterns in data.
- Estimating and comparing measures of distance, angle, time, and so on.
- Experimenting with properties of shapes and geometric patterns.
- Developing mathematical vocabulary, logical thinking and problem-solving skills.

These areas are covered in more detail in the Primary Framework for Mathematics for using ICT to support mathematics in primary schools.

The teaching of mathematics is enhanced by the use of the Interactive Whiteboards. For use with these boards each teacher has been provided with some ITP's on a CD for use in their classroom. In addition all year groups, Foundation- Year 6, have Collins Primary Math software available as well as access to education city and espresso.

Science and Basic Subjects

All subjects make use of mathematics. They have occasion to collect and interpret data, to look for patterns, to make precise measurements of

temperature, mass, speed, length etc. They often need to look at charts and graphs etc and make some judgement about the information contained in them.