



Maths Policy

Agreed January 2021
To Be Reviewed January 2024

Maths Policy

Incorporating Appendix A – Mathematical Calculations Progression

Vision:

At Castle Hill Infant School we want our learners to be confident mathematicians who are able to communicate using accurate mathematical vocabulary. We aim for maths to be an integral part of our curriculum and for children to understand the importance of maths in everyday life. Our children will be given the foundation for reasoning mathematically and thinking creatively to solve problems.

Mathematics will be planned and delivered using the National Curriculum in England Sept 2013 and our school policies for teaching, learning, assessment, special needs and equal opportunities. Early Years plan and teach in line with Early Years Foundation Stage.

Our mathematics curriculum offers a broad range of mathematical experiences designed to provide pupils with the understanding, skills and knowledge needed to deal with everyday situations.

We believe that mathematics

- is a creative activity that is enjoyable
- is a means of communicating information and ideas
- involves generalising and reasoning
- develops the skills of problem solving
- enables decision making

We know that children learn mathematics best when

- the knowledge and skills which they bring with them to school are recognised, valued and built upon
- they meet the same mathematical ideas in a wide variety of situations
- they have the opportunity for developing their understanding and skills through exploring, investigating and working practically
- they see the importance and relevance of mathematics in everyday life
- they have time to reflect on their experiences in order to see how a new idea is related to ones already learnt
- they use mathematics within other subjects
- when they are involved in, and are given time for, making decisions about mathematics
- they have opportunities for exploring and discussing mathematical ideas with others

We aim to

- develop positive attitudes, enthusiasm and confidence
- help the children develop clear and logical thinking
- provide tasks which develop their understanding and use of mathematical language
- value different ways of recording
- encourage the children to explore a variety of mental strategies to enable flexibility in calculations

- provide opportunities for sharing mathematical thinking and time for reflection

To develop the children's use of language in Maths we will provide opportunities for the children to:

read, write, speak and listen to

- numbers
- mathematical terminology (e.g. add, subtract, equals)
- comparative language (e.g. long, longer, longest)
- positional language (e.g. above, behind, under)

read/write

- mathematical symbols and diagrams (Venn, Carroll) (e.g. +, =, x)

discuss using mathematical and non-mathematical language

- the methods they have used
- their reasoning
- their choice of apparatus
- their method of recording

read

- to interpret information
- mathematical dictionaries

Planning:

Long term plan

Shows the order of units to be taught and the number of weeks allocated to each unit.

Medium term plans

Medium term plans are created in line with our integrated curriculum projects. The maths co-ordinator will ensure there is a coverage of skills across all year groups and in line with our calculations policy.

Weekly planning

A weekly planner needs to be completed at the beginning of each week. This will show what will be covered on each day. Although this may be adapted throughout the week to suit the needs of the class.

Resources:

Resources which are not stored in the classroom are located in the Maths cupboard in Class 6.

All Maths resources in classrooms should be clearly labelled and accessible to the children.

The Maths Manager monitors the resources termly and has a budget to replace worn out equipment and to purchase new equipment. Teachers must advise the Maths Manager about any resource needs not identified through routine monitoring.

Opportunities for using ICT are identified in the framework including links to ITP's and excel. Each classroom should display an appropriate number line, and Year 1/2 classes should also have a 100sq. Individual number lines, 100sq and bead strings and resources to support place value should be available for children to access independently.

Organisation:

The children will spend between four to five hours a week on mathematical activities.

Whole class teaching

Whole class teaching should be used when appropriate to:

- introduce a topic or an idea
- develop mental calculation activities
- review and share a session's work
- draw together a sequence of activities

Mental work needs to be:

- planned for the beginning of each session
- related to the lesson
- supported by opportunities to visualise objects, number lines and 100 squares
- an opportunity to do fun, engaging activities to aid recall of number facts

Calculations - Pencil and paper procedures

The mental methods in the *Primary Framework for teaching mathematics* will be taught systematically from EY onwards and pupils will be given regular opportunities to develop the necessary skills. However mental calculation is not at the exclusion of written recording and should be seen as complementary to and not as separate from it. In every written method there is an element of mental processing. Sharing written methods with the teacher encourages children to think about the mental strategies that underpin them and to develop new ideas. Therefore written recording both helps children to clarify their thinking and supports and extends the development of more fluent and sophisticated mental strategies.

Informal written recording in maths should take place regularly and is an important part of learning and understanding.

During their time at this school children will be encouraged to see mathematics as both a written and spoken language. Teachers will support and guide children through the following important stages:

- developing the use of pictures and a mixture of words and symbols to represent numerical activities;
- using standard symbols and conventions;
- use of jottings to aid a mental strategy;
- use of pencil and paper procedure

This policy concentrates on the introduction of standard symbols, the use of an unstructured number line as a jotting to aid mental calculation and on the introduction of pencil and paper procedures. Children will always be encouraged to

look at a calculation/problem and then decide which is the best method to choose – pictures, mental calculation with or without jottings, or structured recording. Our long-term aim is for children to be able to select an efficient method of their choice (whether this be mental or written) that is appropriate for a given task. They will do this by always asking themselves:

‘Can I do this in my head?’

‘Can I do this in my head using drawings or jottings?’

‘Do I need to use a pencil and paper procedure?’

Appendix A shows Mathematical calculations progression for addition, subtraction, multiplication and division.

Feedback:

Formative feedback is both written and oral. It should consist of three main elements

1. Celebration of achievement
2. Relate back to the learning objective
3. State the next step

See oral and written feedback policy.

Assessment:

APP and Hampshire sub level descriptors will allow the class teacher to get a snapshot of the class at three termly intervals and will highlight areas for whole class consolidation and development. It will also allow for the monitoring of individuals to ensure that every child progresses throughout the year.

APP and Hampshire sub level descriptors will also be used by the Maths Manager and teaching staff to moderate and agree levels.

Year group teams should also moderate their results at regular intervals.

Year 2 children complete the SATs as statutory required.

Monitoring:

As part of the curriculum responsibilities the Maths Manager undertakes monitoring of the mathematics curriculum.

Moderation:

Moderation of a particular area of maths will take place each term. The focus will be decided by the Maths Manager; however every staff member will be involved in the moderation.

Linked Policies:

- SEN Policy
- Able Child Policy
- Single Equality Policy
- Oral and Written Feedback Policy
- Curriculum Policy