Update February 2016

Castle School

Maths

Philosophy

At Castle school we strive to create an environment where learning is fun, engaging and contextualised. This takes place in a safe and engaging environment with staff that are enthusiastic and skilled. Children will participate, progress and excel in Maths not because they have to, but because it is enjoyable, relevant and engaging.

Aims

Our predominant focus, in both primary and secondary, is to put Maths into a context. Where skills can be used, not just in the structured settings of the classroom, but across the curriculum and generalised to all aspects of the students' lives. This ideal manifests itself in many different ways. From bespoke learning outcomes, to cross curricular 'Core' mornings. From teaching 'Maths Through Stories' to building relationships and partnerships with the community.

While achieving this we aim to encompass the three main areas of Maths according to the National Curriculum: Using and Applying, Shape Space and Measure and Number.

Our Aims for Teaching and learning of Maths are:

<u>Using and Applying</u>

- To teach and therefore learn that Maths in not simply classroom based but can be used throughout the fabric of everyday life.

- To put maths in a context where it is relevant to the pupil and related to their own interests.
- To give the pupils the tools and vocabulary to effectively communicate in a mathematical manner.

Shape Space and Measure

- Pupils will have the opportunity to explore and understand shape in a way that is relevant to the needs of the individual.
- To have an understanding that shape, pattern and form are all around us and to apply rules, processes and techniques to the 'real world'.
- To engage practically in measuring activities and be able to generalise these skills in a variety of contexts.
- Pupils will be able to use skills and techniques acquired from other areas of maths to inform them during measuring activities.
- To learn and teach time in a way that is both practical and relevant.

Number

- Pupils will have a clear understanding of that is relevant to their ability.
- To know and understand the correspondence between numbers and objects or things.
- To be able to reliably use number skills in a variety of contexts.
- To have and use communication skills to demonstrate an understanding of money.

Teaching and Learning

The Maths curriculum is delivered using a bespoke framework which is related to attainment and not the child's age. We aim to ensure that that there is a clear progression through the school starting from Early Years Foundation Stage and progressing through National Curriculum and into accreditation and exams. Below is a table of possible pathways;

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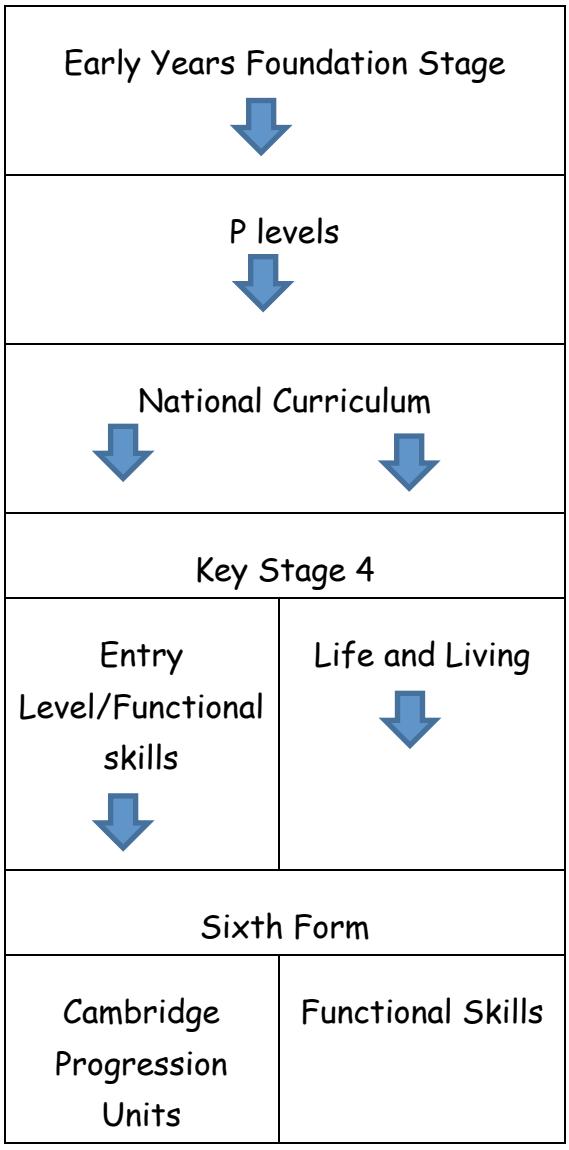

Primary Planning

The long term planning in Primary Mathsis a two year cycle of 4 topic related books per term, and this is part of a cross curricular core subject's morning, including English, Maths, Computing and PSHE. The medium term plan consists of a scheme of work for each story, which highlights activities ranging from P4 to National Curriculum level 2. Short term planning is then differentiated by class teachers to suit the learning styles and abilities of pupils in individual classes.

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Key stage 3 Planning

KS3 Pupils have three lessons a week following a three year programme based on the National Curriculum broken down into termly units. The short term planning and lessons are differentiated for pupils in order to address their specific needs and suit the learning styles and abilities.

Key Stage 4 and Sixth Form Planning

Long term planning is based on the accreditation for individual pupils.
KS4 pupils at NC1 and above work on the OCR Entry Level Mathematics Certificate where they can achieve from level 1 to 3.
Students working at P Levels to NC1 study maths as part of the OCR Life and Living Skills.
Students above NC1 study Cambridge Progression Units between Entry Level 1 and Level 2.
The short term planning highlights specific learning outcomes relating to the coursework which are differentiated to support learners accessing the different levels.

For pupils who have more complex learning needs, there is the opportunity to work on the acquisition of prerequisite skills across the curriculum, utilising and developing the use of their senses.

In the math lessons the work is differentiated for pupils in order to cover a range of learning styles and abilities. With more sensory learners we make use of sensory stories, PECS and other communication structures, to turn maths in a subject they can explore through play, and it's exciting, and they understand how math can fit into their daily lives.
For secondary students homework is set once a week.

Communication and Maths

Due to the varying nature of communication needs in Castle school it is vital that the pupils are given the correct tools to be able to communicate their understanding of Mathematical concepts. The strategies we use to support this are.

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- PECS
- Makaton
- Switches
- Indentiplay
- AAC Hardware - IPad, super talker
- Use of symbols and visual prompts

Cross curricular links

In Primary, Maths is taught as part of a core morning which links English, Computing and PSHE through the use of the same story book. These links between subjects make learning more meaningful and enjoyable for the children, and allows them to retain a greater understanding of the topic and related vocabulary.

In secondary we try to have clear cross-curricular links between numeracy and the subjects across the curriculum.

Starting with activities to do in form time that gives students the opportunity to apply and practise skills learnt across the curriculum and allows time for the class team to assess numeracy skills. And key numeracy skills are planned across the curriculum for pupils to practise, apply and transfer to all of their lessons, linking maths with other subjects, like ICT, science, cooking and PE.

Linking subjects has allowed students to better understand the importance of numeracy across the curriculum, not just in their mathematics classroom.

Maths Through Stories

Castle School work in conjunction with The Cambridge Maths Hub, on a scheme to teach and learn maths through a single text. This allows children to have a context to the learning of maths and serves to make maths more fun, engaging and relevant.

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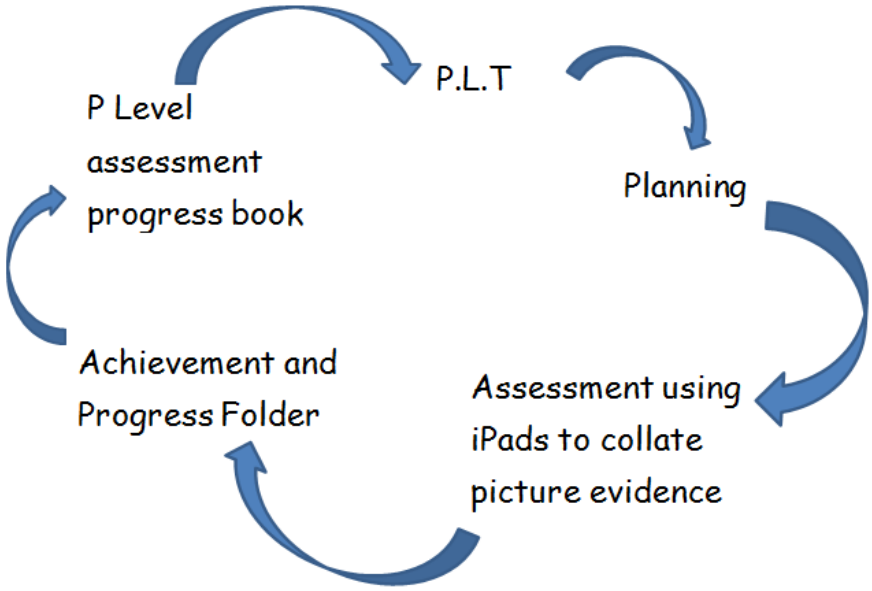
This is also a scheme that has brought other schools, both mainstream and special together on a cluster of courses to boost professional development. This is hosted and in part led by Castle School.

This is predominantly a primary initiative with one 'static class' from key stage three also delivering maths in this way.

Assessment and Target Setting

We assess progress through termly Personalised Learning Targets (PLT) which are individualised for each pupil as their next steps. These are closely matched to the learning outcomes and success criteria in lessons. Daily formative assessment is made to analyse small steps of progress, misconceptions and next steps in planning. Teachers make a summative assessment annually in all three strands.

Primary



Secondary

In secondary Assessing Pupil Progress grids are used for key assessed tasks to help pupils know the level they are working at and what they need to do to move on to the next level.

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Targets are set against pupils' previous learning and provide next steps in each child's progress and these are shared with parents and pupils through PLTs.
CASPA is the data tool being used to track pupil progress over time.
Pupils can track their own progress through stars in their folders to show when they meet a target. Adults support this through annotation and setting relevant areas for development.

Leadership and Management

Subject delivery is monitored through Learning Walks with the senior management team, moderation meetings within school and across the county and the delivery of schemes of work to support planning.

The Maths coordinators plan for resources and curriculum development through the Annual Development Plan which allocates a budget and key areas to be addressed through the year. This is monitored by the Deputy Head and through the Performance Review Process.

Appendices

A – Maths in Action Presentation

Monitoring and review
This policy will be reviewed and updated by the co-ordinator every two years.
It will be monitored by the Deputy Head teacher and approved by the Governing body in October 16.

The Next review is spring 18 for approval in Autumn 18.