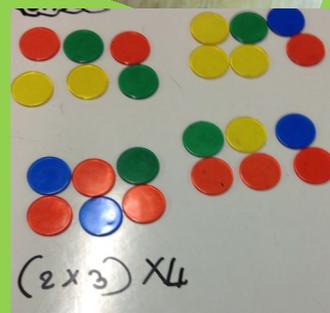
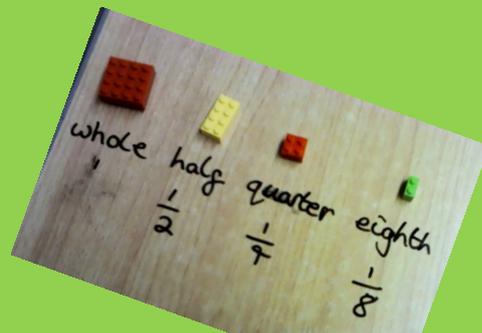




Hemyock Primary School Policy for Teaching Mathematics



Philosophy of Mathematics Teaching at Hemyock School

Our approach to teaching mathematicsThrough maths teaching, children can further their experiences through the acts of reasoning, organising, explaining and predicting in order to make sense of the real world. Children are given the experience to think logically and deal with abstract concepts and skills that are used across the whole curriculum. Children demonstrate their knowledge and understanding by being provided with the opportunity to use and apply the skills and knowledge they have gained.

Rationale

Our aim is to inspire children by giving them a lively sense of interest and enjoyment in mathematics, with an understanding of its practical and creative use in everyday life.

To provide opportunities to:

- Build a firm, broad foundation of mathematical knowledge, skills and understanding.
- Develop a positive attitude to maths increasing confidence and enjoyment.
- Receive (inter) active teaching encouraging the children to develop their mathematical understanding.
- Receive daily practise of basic skills, techniques and strategies.
- Take an active involvement in discussing and describing strategies to deepen mathematical knowledge.
- To share their thinking and learn from each other's responses.
- Be exposed to ways of working that challenge children of all levels.
- Work in an environment where it is safe to make mistakes which can be learnt from.
- To work with maths that has practical applications that directly relate to other areas of the curriculum.

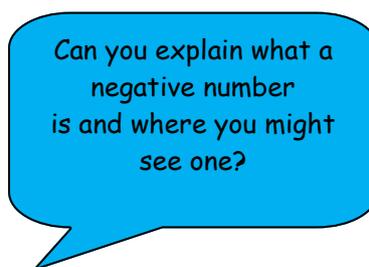
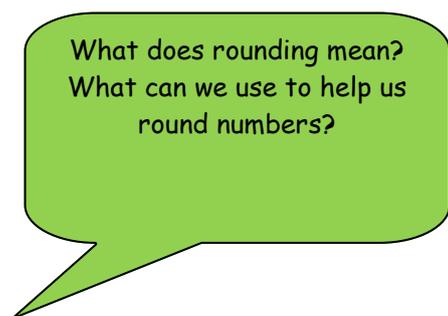
Questioning

Quality questioning underpins our philosophy for teaching maths. At the start of every sequence and lesson questioning enables us to assess where the children are in their learning and provides assessment for the future needs of the children.

Questions are open ended and used as a basis for further questioning, to unpick misconceptions and deepen the children's knowledge and understanding. No ceiling is put on the questions as this enables all children to exceed expectations and adds depth of their understanding. Teachers need to be able to adapt their teaching to the needs of the children.

Each lesson starts with a question that can be opened up for discussion by groups of children. This provides the opportunity for the teacher to unpick the children's understanding which may need further questioning from the teacher to support this.

Teaching assistants are vital to this process as they ask additional questions if required during the group discussion process.



Talk for Maths

Talking about maths is a fundamental part of our maths philosophy. It allows children to gain a deeper understanding of concepts. Discussing their learning allows the children to consolidate their understanding and discuss and address any misconceptions they may have.

Children are expected to talk about their work and discuss their findings. The discussion provides a rich environment for Assessment for Learning.

I think that if an odd number isn't prime it will be a square number.

Our prediction was wrong as 21 isn't a square number.

(Ruby, year 5)

2 isn't a factor of 21 because it's not even. Because it doesn't end in a five, 5 isn't a factor. (Child working below aged-related expectation.)

Planning

Rising Stars Primary Maths Planning Framework is the basis to our planning alongside our Progression in Calculations policy. Our planning is presented on whiteboard files which allows for adaptation and flexibility throughout the sequence. This is further enhanced by:

- Open ended questions.
- Talk and discussion in every lesson.
- Using and applying in most lessons.
- Adaptable to meet the needs of the children.
- Cross-curricular links to our topic.
- Annotated whiteboard files that feed into assessment for learning.
- Use of equipment.
- Open ended activities that allow children to explain their reasoning through written explanations and broaden their thinking.
- Planned for purpose or real life experience.

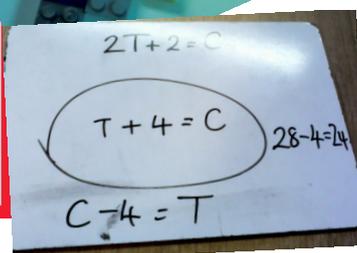
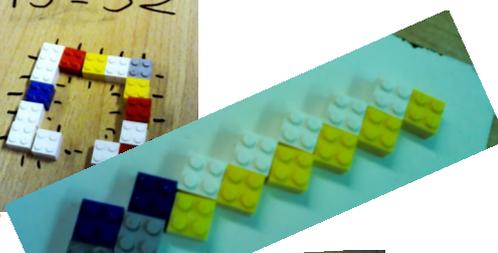
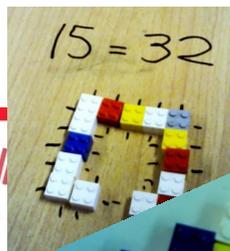
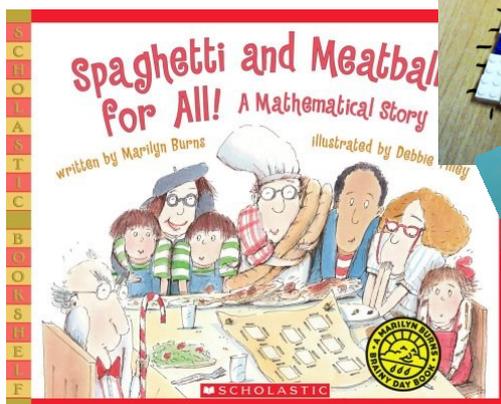
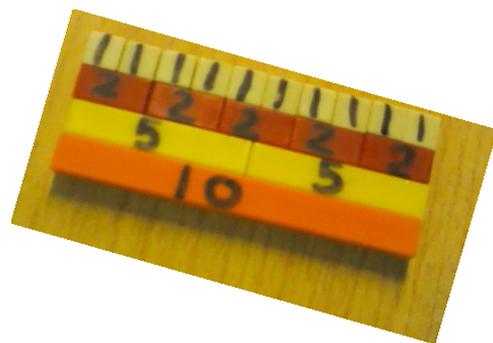
Concepts that require revisiting need to be planned for with mapping and gapping, practise and interventions. Remember all maths concepts are revisited in future sequences.

Using equipment

Using equipment helps to deepen understanding and creates visual and concrete images from abstract concepts. All classes from reception through to year six are expected to use equipment in most lessons. A variety of different equipment needs to be used when learning the same concept to create a range of images, for example:

- Number- Numicon, dienes apparatus, counters, multilink, gloves, dominoes, dice, bead strings, Lego, cuisinaire
- Shape: polydron, skeleton straws, flat and 3d shapes, Lego
- Measure: scales, balances, tape measures, trundle wheels, metre sticks, measuring containers, timers and clocks.

Equipment is used in a purposeful context as far as possible and adds a concrete experience to the learning.



Practise

Provision for practising skills is provided by small group work on a daily basis. Practise meets the needs of the children therefore the children will practise differentiated skills according to their need. Practise is used to map, gap and consolidate learning that has already taken place.

Practise sessions provide opportunity for children to practise:

- times tables
- number bonds
- calculation methods
- counting
- number properties etc.

Interventions

Any gaps in a child's learning or a lack of progress are identified through assessment for learning and skills mapping. Interventions are put into place to close these gaps through various methods:

- Teacher intervention whilst children carry out independent tasks or while the teaching assistant teaches the class.
- Gap identified and immediate delivery of intervention through direct teaching from a teaching assistant.
- Long term small group or individual intervention planned for by the teacher and delivered by a teaching assistant.

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Interventions are monitored for effectiveness regularly.

Assessment

Assessment for learning is the basis for our planning and assessment cycle. Effective assessment for learning is facilitated by direct teaching. When working with a guided group, effective questioning, rich discussion and extension is used to broaden the children's understanding of mathematical concepts.

Targets are set at the beginning of each sequence based upon the outcomes required for that sequence. These are differentiated to meet the needs of the children. The children respond to say whether they have met these. The outcomes from these targets are used to inform future planning and intervention provision.

Assessments are completed by the class teacher, every half term using assessment for learning, and termly through formative and teacher assessment, to monitor the children's progress. It is from these assessments that some children are identified as needing long term interventions based upon their gaps.