

Dalmeny Primary School

A Country School in the City of Edinburgh

Mathematics and Numeracy Policy

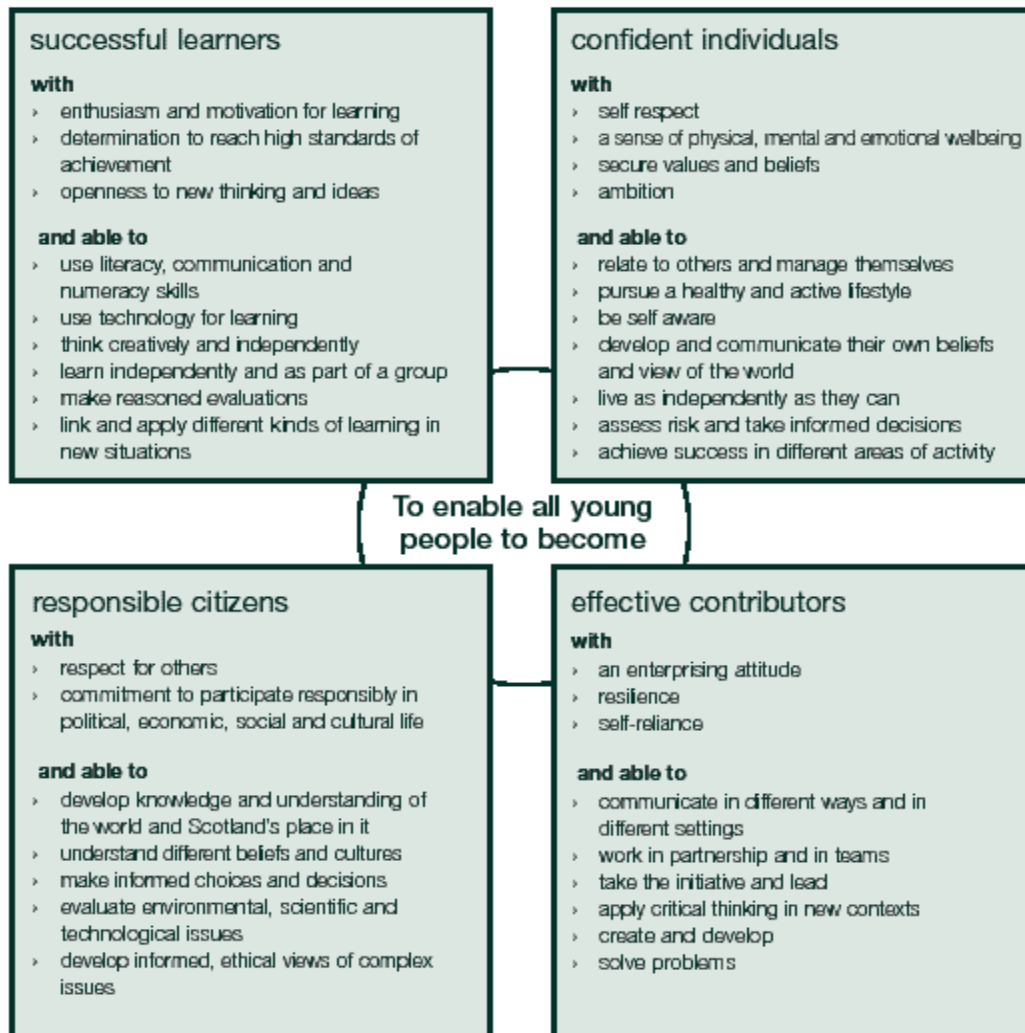
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Vision Statement

We work to build a culture of learning where the attitude, skills and knowledge will be developed not only to enable understanding of mathematics for our scientific culture, but also to ensure a thorough grasp of ‘Numeracy’ or everyday maths. To assist us in designing this programme we have the Curriculum for Excellence which outlines the purposes and principles we need to heed.

Purposes of the curriculum from 3 -18

Our aspiration for all children and for every young person is that they should be successful learners, confident individuals, responsible citizens and effective contributors to society and at work. By providing structure, support and direction to young people's learning, the curriculum should enable them to develop these four capacities. The curriculum should complement the important contributions of families and communities.



Principles for curriculum design

Challenges and enjoyment

Young people should find their learning challenging, engaging and motivating. The curriculum should encourage high aspirations and ambitions for all. At all stages, learners of all aptitudes and abilities should experience an appropriate level of challenge, to enable each individual to achieve his or her potential. They should be active in their learning and have opportunities to develop and demonstrate their creativity. There should be support to enable young people to sustain their effort.

Breadth

All young people should have opportunities for a broad, suitably-weighted range of experiences. The curriculum should be organised so that they will learn and develop through a variety of contexts within both the classroom and other aspects of school life.

Progression

Young people should experience continuous progression in their learning from 3 to 18 within a single curriculum framework. Each stage should build upon earlier knowledge and achievements. Young people should be able to progress at a rate which meets their needs and aptitudes, and keep options open so that routes are not closed off too early.

Depth

There should be opportunities for young people to develop their full capacity for different types of thinking and learning. As they progress, they should develop and apply increasing intellectual rigour, drawing different strands of learning together and exploring and achieving more advanced levels of understanding.

Personalisation and choice

The curriculum should respond to individual needs and support particular aptitudes and talents. It should give each young person increasing opportunities for exercising responsible personal choice as they move through their school career. Once they have achieved suitable levels of attainment across a wide range of areas of learning the choice should become as open as possible. There should be safeguards to ensure that choices are soundly based and lead to successful outcomes.

Coherence

Taken as a whole, children's learning activities should combine to form a coherent experience. There should be clear links between the different aspects of young people's learning, including opportunities for extended activities which draw different strands of learning together.

Relevance

Young people should understand the purposes of their activities. They should see the value of what they are learning and its relevance to their lives, present and future.

Planning:

For term planners we mainly use the Edinburgh Maths Planner sheets which already ensure that most of the principles above are being met.

- These sheets should be highlighted and dated section by section for each group. They will be placed onto the shared server if possible when evaluative comments and changes/updates will be able to be made by teachers online when necessary. (Note that websites change frequently and this is an area where the sheets will need to be kept up to date by staff using them)
- Mental maths should be taken from these planners following the highlighted sections where possible and given out each week. Mental maths can be carried out daily as a quick routine in a 5 minute period at the beginning or end of each maths lesson.
- The medium term planners refer to Teachers' notes and these notes should be a significant part of short term planning.
- Not all the Heinemann pages referred to need to be used. Where mastery can be achieved using part of the Heinemann Resources – then that should be noted on the planner for that group and/or on the back of the Heinemann Workbook assessment checklist
- Evaluation sheets can be helpful if they indicate next steps for the teacher or indicate suggested changes for the planning sheet/policy. In the latter case evaluative comments should be communicated to colleagues to be useful.

Short term (daily planners) should indicate:

- Groups being taught
- The section of the Edinburgh Planner being used e.g. B9.3 (Level B, Module 9, part 3).
- They should also indicate any **resources** that might be necessary (as an aide-memoir) e.g. which page of the teachers' manual, which pages of the Heinemann Scheme.
- They should indicate **Outcomes** expected.
- What main type of teaching/learning is taking place – exposition/practise, exploration, revision – and a rough indication of time. (e.g. perhaps 10% exposition 90% practice.

Tee-Jay resources are being trialed at this time. (Spring -Summer Term 08) A separate planning sheet is in use for that resource.

Further notes on Planning:

Pupils are taught in ability groups and set.

It should be possible to relate the daily plan back to the medium term planner on any particular day.

Evaluative comments on planning sheets can be added once the sheets are online and if these would be of help to other teachers.

Evaluative comments on how any lesson has gone are for the teacher's own use but would usually be written on the short term planner.

Problem solving should be carried out as often as possible using the Heinemann materials and any other found suitable. Wherever possible pupils should be encouraged in seeing how maths can be relevant to real life.

Assessment:

Pupils' work is marked in the jotters. Partly this is done with pupils as the teacher moves around. Sometimes work will be marked as a group or by the pupils themselves as they become responsible. The teacher needs to record using ++, + or _____ in the back of the Heinemann Workbooks or on Tens Sheets/other how work on any particular page has been mastered. ++ means that the concept has been mastered. + that the concept is almost mastered (a note of explanation by the side can help for future reference) _____ That the work needs to be revisited. An 'X' in the box denotes that the pupil has no need in the teacher's opinion, to cover that page of work. 'NR' denotes that the page was not completed or need corrections. **(Personalisation)**

Most useful assessment is carried out verbally either one to one or in small groups with the teacher moving from group to group. A note by the teacher in the pupil's jotter acts then as an aide-memoir both for teacher and pupil. On monitoring maths books these notes would be expected. Parents and pupils should be able to understand these short formative notes. **(Personalisation)**

End of unit assessments are recorded on the Edinburgh Planner sheet for that purpose and kept in the assessment file. End of unit assessment sheets should be passed to the HT for information. Any pupil scoring less than 80% in such a test will be looked at for possible support. **(Progression)**

Mental Maths should be tested weekly and results kept in the assessment file. The HT will sample test aspects of mental arithmetic regularly. Mental maths can be fun! Use games & challenges. **(Challenges and enjoyment)**

Resources:

A list of what resources are available and where is attached as an appendix. One LA has responsibility for the care of resources but every teacher using them should ensure that they are kept in good order. Please report any breakages, missing material to the LA responsible to allow a replacement to be made.

Use materials whenever possible.

Extension work should be available for pupils who complete the task early. The school will make every effort to finance these to a high level so that maths games, problem solving sheets, technology, IT and other can be used to encourage pupils to use their time to follow interests. **(Challenges and enjoyment)**

Pupils who clearly understand a concept should not be asked to 'do more sums'! Parts of pages or whole pages can and should be skipped to allow pupils access to material of more immediate use and interest to them. **(Challenges and enjoyment)**

Calculators are used from P1 and labelled for each room.

Presentation of work:

Work should be dated and titled with page numbers. This should be neatly underlined. Work should be presented very neatly. Rubbing out is not usually allowed (except perhaps where a drawing is necessary)

Most investigative work and problem solving will require written explanations by the pupils.

Unfinished work should not usually be sent home unless this has been agreed with the parents and HT. If work is regularly not completed by a pupil discuss with HT. Ensure that every pupil has regular practice with problem solving – which in Heinemann is often the final question on a page.

Organisation in the classroom.

Pupils should not have to queue for resources. They should be responsible for keeping the classroom tidy. Maths lessons should not be delayed by any appreciable time because jotters or other resources are not available. This means that tight organisation of the class base is required.

There should not be marking queues. Marking should be carried out where possible as the teacher moves around the classroom. Marking can also be carried out by pupils themselves and as a group effort so that plenary time can be spent discussing results.

Use the traffic light system or other to allow pupils who need advice help to alert the teacher to this need without having to queue. If one group regularly demands so much attention that the teacher is unable to focus on other groups a colleague or HT should be called in for second opinion. **(Progression)**

Maths is conducted in ever increasing quietness as pupils get older. Unless a pupil needs to confer as part of the work then by P3/4 and up the sounds in a maths lesson will mainly be quiet discussion between teacher and individual pupil(s) apart from the brief direct teaching periods.

Pages in a book – or loose resource pages are not given out unless preparatory work has been done - Teachers' Handbook activities are fundamental to good teaching.

All of a set group would be expected to be on the same page except in very unusual circumstances.

Evaluation & Monitoring:

Monitoring will mainly be carried out through a trawl of maths books, assessment notes, and folders of any loose sheets (which are kept in date order under individual names) referring to planners. Once a year there will be direct observation of maths teaching unless there is cause for more frequent monitoring e.g. Request by staff, concerns raised from parents or other.

Teacher self evaluation is expected to be carried out as part of good teaching. If a teacher feels that he/she has then an issue with aspects of the maths policy, or suggestions for improvement then the evaluation should be discussed with the HT. Otherwise evaluations are for personal professional use. **(Personalisation)**

Pupil self evaluation can be carried out using the traffic light system. Pupils should be expected to evaluate their work frequently and be prepared to give reasons (in writing for their evaluation. **(Personalisation)**

A few final thoughts:

- Tackle problem solving every day in some way. Heinemann pages can often be started with the problem solving questions. Pupils should often explain in their books how they got answers.
- Use word questions translating words into maths & vice versa as often as you can.
- Maths should be fun!
- Don't give answers to problems. Pupils must expect that they are going to have to work things out.
- If a pupil is slow reduce the workload. Then encourage them to set themselves higher targets.
- Link personal learning plans to maths lessons.
- You can often understand what a child is thinking by listening. Stop talking!
- Use pupils as teacher helpers – pupils understand pupils – and it's good for their thinking to try to explain.
- There's sometimes more value in a few corrected pieces of work where the pupil has seen the error and changed their approach than in pages of correct sums!
- Use Active learning as often as you can. Use volume/mass/area/time/money/length/shape equipment/fractions equipment.

If one pupil in your group makes a few errors – perhaps that pupil failed to understand.

If two pupils in your group make a few errors – perhaps those pupils failed to understand.

If three or more pupils in your group make errors – perhaps the teacher failed to understand!

Maths is a language and perhaps a universal one.