



MATHEMATICS & NUMERACY POLICY

HORIZONS EDUCATION TRUST
AMERICAN LANE, HUNTINGDON, CAMBRIDGESHIRE PE29 1TQ

RATIONALE

Mathematics is a broad structure that helps us to make sense of our world, providing a means of communication using numbers, symbols and shapes. It is a language used to solve problems in everyday life. It also promotes enjoyment of using a range of mathematical skills in everyday life.

AIMS

We aim to:

- Encourage pupils to develop a love of mathematics by making the teaching and learning of maths enjoyable and fun.
- Develop every pupil's mathematical concepts, skills and knowledge, and the confidence to use them to the best of their ability.
- Provide opportunities and challenges for pupils to use and apply their numeracy skills in a wide range of 'real life' (functional) situations.
- Maximise opportunities for pupils to use mathematical language both within specific maths sessions, and also at other times in the day.
- Integrate a variety of teaching methods appropriate to individual/group learning styles. These will include visual and auditory stimuli, as well as the opportunity for kinaesthetic activity.

ORGANISATION

Mathematics is one of the core subjects of the National Curriculum. This, together with the Early Learning Goals and our own schemes of work, which link directly to Spring Common Academy Levels (SCALES), has been used as the basis for establishing the Spring Common Academy mathematics curriculum. This ensures that we have the appropriate breadth and depth of coverage for the full range of pupil need we have at Spring Common Academy.

Early Years use the Practice Guidance for the Early Years Foundation Stage, Key Stages 1, 2 and 3 use our own schemes of work which blend the National Numeracy Strategy with Pre-Key Stage Standards. Key Stage 4 use Spring Common Academy schemes of work as well as AQA Entry Level maths for those it is appropriate to on site. Within Post 16 students work towards the ASDAN Transition Challenge and OCR Functional Skills Entry Levels.

The different strands for maths are described separately in the Numeracy Framework but there are many links between them. Mathematics is not a group of isolate topics or learning objectives but an interconnected web of ideas, and the connections may not be obvious to the students. These need to be made explicit and good planning ensures that mathematical ideas are presented in an

interrelated way, not in isolation from each other. Awareness of the connections helps students to make sense of the subject, avoid misconceptions and understand what they have learned.

ENTITLEMENT, ACCESS AND INCLUSION

The pupils at Spring Common Academy have a range of learning abilities. Our pupils need a curriculum that is appropriate. For some pupils this will be a sensory curriculum, and for others it will be more academic work. They will follow a programme of study that is most appropriate to their learning needs. Teachers will differentiate the lesson content for pupils in order to address their specific needs. The right of all pupils at Spring Common Academy to take an active part in lessons is respected and this is reflected within the range of activities that occur during Mathematics lessons.

At Spring Common Academy we have 'Teaching Groups' in Key Stage 4 for Maths. The primary reason for these groups is to enable the teaching of Maths to be geared more specifically to the needs of particular groups of pupils.

TEACHING NUMERACY TO PUPILS WITH AUTISTIC SPECTRUM CONDITIONS (ASC)

General guidance on the approach to teaching and learning for pupils with ASC may be found within the *Spring Common Academy Autism Handbook*. In Numeracy, students with ASC demonstrate a range of learning characteristics and thinking styles and this informs our curriculum design and planning.

ASSESSMENT RECORDING AND REPORTING

This subject is assessed, recorded and reported in line with the school ARR Policy. Further details can be found in the policy document.

We assess children's work in Mathematics in Early Years and Key Stages 1, 2 and 3 by making informal judgements as we observe them during lessons, and recording these judgements on short term planning. Assessment opportunities are identified within our STP and MTP documentation, and evaluations are made by the class teacher at the end of a unit of work in relation to the SCALES level of attainment. Throughout the year a cross section is moderated by the NM.

At Key Stage 4, Year 10 and 11 pupils are streamed according to ability. These pupils work to complete AQA Entry Level qualifications, which can be achieved at an appropriate point from Year 10 through to Post 16. These qualifications are based around tests which are taken at the end of each year.

Trustees visit the school on a regular basis to see class sessions and to discuss targeted issues with school staff and subject leaders. We see this as a very useful tool, promoting the role of the governing body as a 'critical friend'.

SCALES (Spring Common Academy Levels) have been developed to allow us to track pupil progress from KS1 for pupils working below national expectations in Number and Geometry & Measurement. SCALES provide a developmental measure of progress linked to stages from the Early Years Development Matters through to Year 3 of the National Curriculum. They provide a continuum including transition points between Early Learning Goals, Year 1, Year 2 and Year 3 expectations. Each SCALE has a number of statements of key developmental milestones. These are also linked to Pre Key-Stage standards where applicable.

We use the SOLAR online assessment tool to track pupil progress through SCALES. As a Special School, the majority of our pupils do not make progress at the rate of their peers in mainstream and therefore our SCALES assessment system focuses primarily on functional skills.

**Example of SOLAR online assessment tool*

	Emerging	Developing	Established	Consolidated
1. Counts forwards and backwards to 20.	★	★	★	★
2. Counts to 50.	★	★	★	★
3. Counts in 10's to 100.	★	★	★	★
4. Identifies one more and one less from a given number to 20.	★	★	★	★

We assess pupil progress in SOLAR against each SCALES statement using the four following levels of mastery:

- **Emerging (Em):** Used infrequently, with little or no evidence of progress. A high level of prompt or support to initiate is required.
- **Developing (Dev):** Used occasionally, with sporadic evidence of progress. A low level of prompt or support to initiate is required, but may be spontaneous.
- **Established (Est):** Used frequently and maintained over time in one context. Mostly independent / spontaneous, only occasional reminders.
- **Consolidated (Con):** Used consistently and maintained over time in a range of settings/contexts and with a range of people. Independent and unprompted.

PLANNING PROCESS, PROGRESSION AND CONTINUITY

Medium term planning sheets held on the server are used for mathematics planning. In some cases more detailed short term plans are required and are saved on the server accordingly. Medium term planning contains direct links to SCALES and where semi-formal lessons are planned, formal extension activities are stated as required. Planning is checked by the relevant Assistant Head teacher at the end of each week. Students will often, but not always, have Numeracy targets as part of their EHCP and reference needs to be made to these in planning.

Pupils are always given the opportunity to express their feelings on their learning in lessons. During every lesson the class teacher will absorb and react to pupils' responses, see whether they are confident or hesitant with new work, decide whether they need extension work or more help, and offer immediate support. The class teacher will usually have teaching assistants in the session to assist in this work with pupils. Where difficulties or misunderstandings are noticed teachers adjust the lesson and address them straight away. At specific points in a lesson, we aim to acknowledge individual / class achievement and effort and remind pupils about their targets. These specific moments are also a good time to firm up short-term assessments by asking probing open questions to judge how well students have understood new work and to check again for any misconceptions.

IMPLEMENTATION

Daily Maths lessons in Foundation, Key Stages 1, 2 and 3 typically follow the format of the three part lesson; an oral mental starter, main activity set for each

small group or individual and a plenary which could be for the whole group, for each small group or for an individual.

Key Stage 4 has up to five lessons a week linked into the accredited learning the pupils undertake.

Students at Post 16 continue to benefit from Numeracy as part of their developing self-help skills. They for example, experience paying at checkouts and at cafeterias, count items when shopping, match when laying the table and weigh and measure in cooking. They may also, depending on ability, complete modules accredited by various exam boards. Some pupils also attend a Further Education college.

In many cases, individual pupil needs will be met through differentiation of tasks and materials, based upon planning from differing levels from the Numeracy framework, SCALES, and accredited courses but maintaining a shared theme from the chosen strand.

Differentiation in planning will be augmented with individual or group help within the main activity of the lesson. There might, for example, need to be help with the recall of mathematical facts, to enable those with difficulties of long or short term memory, possibly help with the interpretation of pictures shown in a pictogram or on a graph to enable those with difficulties of visual discrimination, sometimes access to tactile and other specialist equipment for work on shape and measures to overcome difficulties in managing or processing visual information, and for others help in interpreting or responding to oral directions. Mathematics has a strong practical and visual base with which the oral and written aspects must be interdependent.

Pupils with communication difficulties face particular challenges in mathematics. They need clear, effective teaching, which steadily builds their confidence and participation.

Pupils who have autistic spectrum condition (ASC) require well-structured lessons with clear routines and predictable parts. Pupils with ASC respond better when the language used is concise and consistent, teaching is explicit and challenges are direct and well-focused. The expectations for what these students will learn and do, both in the lesson overall and in each separate part or activity, need to be defined very clearly.

RESOURCES

The main bulk of Maths resources are held in a central curriculum store. The resources can be booked in and out through the teaching assistant responsible for resources. Some classes have other resources that are more specific to the pupils they have that they have purchased separately and keep in their class base. The

budget for the subject is managed by the subject manager, who will gain feedback from class teachers as to resources they would like to see in school. The school resources for Maths should be aimed at making Maths fun, accessible to all pupils, and facilitate learning evenly across the seven strands.

CROSS CURRICULAR LINKS

Numeracy is more than just mathematics and we plan for cross curricular links. For example in:

- Science e.g. measuring devices.
- Food technology e.g. Scales, oven temperatures, freezers which are shown working at negative numbers, microwaves count down in seconds.
- Geography e.g. maps, grids and compasses.
- P.E. e.g. stop watches, hoops, cones, rectangular mats and benches inclined at angles going up and down.
- Library has books of number rhymes and stories.
- We aim to involve parents in teaching aspects of maths such as sequencing, telling the time, spending money in shops.

MONITORING AND EVALUATION

The Mathematics policy will be continually monitored by the NM and SMT.

Policy agreed on: _22 JULY 2020_ _____

Signed on behalf of the Trustees _____

Committee: _CURRICULUM_ _____

Author: _DAVID HORNE_ _____

Review date (optional): _____

Website **Y**/N