



MATHEMATICS & NUMERACY POLICY

**SPRING COMMON ACADEMY TRUST
AMERICAN LANE, HUNTINGDON, CAMBRIDGESHIRE. PE29 1TQ**

PHILOSOPHY

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, P-levels and other schemes, has been used as the basis for establishing the Spring Common Academy Trust 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.

Early Years use the Practice Guidance for the Early Years Foundation Stage and P-levels, Key Stages 1 and 2 use our own schemes of work which blend the revised National Numeracy Strategy with P-levels. Key stage 3 use a version of this with the focus on the key process skills. Key stage 4 use QCA Unit Awards, Spring Common schemes of work as well as QCA Entry Level maths for those it is appropriate to on site. Access to GCSE maths can be available at the local secondary school. Within Post 16 some students use the OCR accreditation for Life and Living, OCR National skills Profile and 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 Trust 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 Trust 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 Trust we have 'Teaching Groups' in Key Stage 3 and 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.

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 National Curriculum level of attainment, or P-level. 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 OCR functional skills 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'.

For pupils working within the P Level range, we use the B-Squared online assessment tool to track progress in Number, Measurement and Geometry. If, however, a pupil is working towards a National Curriculum level, we track progress using special assessment grids (see example below*). As a Special School, the majority of our pupils do not make progress at the rate of their peers in mainstream and therefore these grids break down the National Curriculum strands into smaller steps so that it is easier for us to track pupil progress through the National Curriculum.

**Example of a National Curriculum Assessment Grid for Measurement*

Pupil A		
Numeracy: Measurement: Advanced (end of Year 1)		
Weight		
Solves practical problems involving mass/weight.	nyd	
Records mass/weight of an object.	dev	
Uses scales independently.	dev	
Capacity		
Solves practical problems involving capacity.	nyd	
Uses the term 'half full'.	nyd	
Uses the term 'quarter full'.	nyd	
Measures and compares capacities of different containers.	dev	
Money		
Knows the value of coins to £2.	est	
Adds two numbers to make 20.	est	
Subtracts one number from 20.	nyd	
Counts in 5s to 100.	nyd	
Length		
Compares length/height of more than two items.	est	
Uses standard units to measure height or length	nyd	

Nyd – not yet developed dev-developing est – established

PLANNING PROCESS, PROGRESSION AND CONTINUITY

Weekly planning sheets are completed from the medium term planning sheets held on the server and 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 IEP and reference needs to be made to these in short term planning.

Short term, or weekly, planning details the 3 part lesson - an oral mental starter, main activity set for each small group or individual and a plenary.

Students will need to learn how to participate in a plenary over the course of time so for some young students this may have to be on an individual basis. The plenary enables each pupil to show, describe or explain his or her work and thinking from the lesson. 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. In the plenary, we aim to acknowledge individual / class achievement and effort and remind pupils about their targets. The plenary is also a good time to firm up short-term assessments by asking probing 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 and 2 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 3 has three one hour Maths sessions a week, some of which are in Teaching Groups.

Key stage 4 has up to three 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, P- levels, 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: JUNE 2017

Signed on behalf of the Trustees _____

Committee: CURRICULUM

Author: DAVID HORNE

Review date (optional): _____

Website **Y**/N