



# KEELMAN'S WAY SCHOOL, CAMPBELL PARK ROAD, HEBBURN, TYNE & WEAR, NE31 1QY

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Date: 11 March 2019

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## **Maths Policy- Keelman's Way School**

### **Aims**

The skills developed in mathematics provide pupils with tools for exploring, investigating and understanding the world. At each developmental level the student is given opportunities and experiences to compare objects, materials and events. To find differences and similarities, to notice the relationships and connections between things and use this knowledge to further guide their learning. At first these opportunities will be of a sensory and perceptual nature, becoming gradually more concrete and varied, thus helping students make sense of changes in space, time, pattern and quantity. Later on in their development, the skills learnt will aid representational thought and the ability to anticipate, predict and problem solve, allowing them to plan ahead, to evaluate, improve own learning and begin to use number in a representational way.

We encourage our students to understand the world around them through play and exploration. This is an essential process for all complex needs students. Only when understanding of the world through the application of schema is achieved can further learning progress.

- Many of our pupils/students have visual, auditory or physical disabilities and some are multi sensory impaired. It is therefore important that our pupils/students have access to a range of mathematical activities that accommodate their individual needs and allow individuals to reach their potential within the subject. Our students use a range of ICT/ communication systems and resources to access a wide variety of mathematical activities.

## Curriculum Organisation

Mathematics will be taught as a standalone subject and through a cross curricular approach. Lessons will usually have a whole class beginning, some small group and individual work and finish with a plenary session to evaluate what has been learnt. Within each class there will be a pure number focus at least in one lesson per week. The number lesson will be based upon the number progression documentation that has been designed to support their progress. Using and applying mathematics is embedded through all mathematics that we do.

### **Early years**

**Children in the Early Years** will follow the Early Years Framework which covers the following areas:

#### **Prime areas:**

- Communication and language
- Physical development
- Personal, social and emotional development

#### **Specific areas**

- Literacy
- Mathematics
- Understanding the world
- Expressive arts and design

A continuous provision is provided and within this there will always be opportunities for mathematical learning through the kinds of activities and investigations available to the children. Some weekly sessions will be geared more specifically to mathematical activities and there will be group work or focused individual work for students who will benefit from this.

**Key stages 1 – 3** pupils will be identified as being Pre KS NC and Subject Specific Learners.

Children who have been identified as being Pre KS NC learners will have targets set relating to their individual needs. They will still experience maths related activities but the focus will be on their individual targets.

Children who have been identified as Subject Specific Learners will be taught Mathematics using Keelman's Way School's mathematics curriculum. Children will be planned for with their achievement as the main focus. Long term planning will ensure that all areas of the mathematics overview are covered.

Staff should teach knowledge, skills and understanding in ways that match and challenge their pupil's abilities. Planning is done on an annual, half termly and weekly/daily basis. Staff will use the progression documentation to follow the progression steps.

**Key stage 4 and Post 16** pupils will follow the **Moving On curriculum**.

This covers the following areas of learning:

- World Studies
- Life Skills
- Vocational Studies

Mathematics is a KEY SKILL in this curriculum.

The following mathematics qualification options are available for more able students' dependant on need:

AQA entry level 1, 2 and 3

Functional Skills

Pupils will have one discreet Number lesson per week in ability groups. This will be focussed on learning and reinforcing the number skills which students will then apply throughout the week as part of the life skills curriculum. Subject Specific learners progress is assessed through the use of PIVAT's.

Pupils will develop their own understanding of numeracy through the life skills curriculum – there will be a strong focus on : **using money**, e.g. shopping, enterprise, paying to get into centres, paying travel fares etc.; **using time**, e.g. daily routines, cookery times, session times, timetables, bus times, etc.; **using measure**, e.g. cookery, craft and enterprise, etc. Problem solving skills will be developed across all areas and throughout the curriculum.

### **Teaching Styles**

It is important to use a range of teaching styles to reflect the different learning abilities of individuals in any group of children. Teaching will be delivered on an individual basis, small groups or whole class groups as appropriate.

### **Teaching content**

Mathematics is a developmental subject and will be taught to the developmental level of understanding of individual students.

Breadth and variety of experience will be maintained through the use of imaginative and motivating resources and activities.

At the early stages the focus will be on early developmental schema, as exemplified by the long term curriculum guidance.

As children progress they will continue to explore their environment in a concrete way and will be beginning to use this to develop thought internalised action. They will be encouraged and given opportunities to use symbolic thought to interact with the environment and consider the relationships and patterns therein.

As they become more confident, concrete explorations and demonstrations will still be important but more emphasis will begin to be placed on symbolic number work and representational images, using these to find and describe relationships and connections.

Throughout all of the stages students will be given opportunities to:

- Explore their environment and a wide range of materials and objects with a particular emphasis on opportunities to develop their schema through the provision of activities to encourage and support this. This includes any schema that individual children are motivated by but particularly the more common ones of trajectory, orientation, connecting, rotation, enclosing, enveloping, positioning, transporting, thought internalised action and play.
- Explore their environment to get concrete experience of similarities and differences in space, shape and quantity.
- Explore their environment to develop an awareness of objects that are always present and those which can change and the rules and patterns surrounding this.
- Use this awareness to anticipate and predict across a wide range of experiences and activities.

### **Performing, Recording, assessing & recognising progress.**

Assessment is built into the teaching and learning process for all pupils, it is a valuable tool for informing staff of the next steps in learning. Assessment at Keelman's Way is ongoing and is designed for individuals needs.

Children who are Pre KS NC learners will be assessed against their targets that are related to their Personal Educational Plan. The evidence of progress will be recorded through observations using the Evidence for Learning APP.

Children who are Subject Specific Learners assessment is based on the Pivots 5 assessment tool and also using the Keelman's Way Progression guidance. Evidence for progress will be in individual books and also through the Evidence for Learning APP.

Observation is also used as an assessment tool. Photographs, observational stories and other forms of qualitative assessment demonstrate progress. This formative assessment process helps staff understand how each child is learning and informs further planning and progression.

The plenary at the end of each session is used as an opportunity for staff to share learning, progress and meeting of targets about individual children.

Learning objectives are set based upon if they are a Pre KS NC pupil or a Subject Specific Learner. Pre KS NC pupils targets are based upon their Personal Education Plans which are set termly. Subject Specific Learners targets are based upon Pivat 5 and progression documentation then they are reviewed. These will be evaluated weekly or termly as appropriate.

Progress in mathematics is reported to pupils, parents, carers through Personal Education Plans which are updated termly, Education Health Care Plans, Records of Achievement, portfolios and videos.

Achievement is reflected in accreditation and qualifications:

- Entry Level maths 1, 2 and 3.
- Functional maths.

Achievement is also reflected in displays, ICT work, school fairs and assemblies.

### **Planning for progression**

Careful and deliberate sequencing of curriculum content and experiences build on previous learning and achievements to promote future learning. Long and medium term curriculum plans should therefore show progression from age group to age group and within each key stage. This progression can be shown through the application of skills and experiences.

Planning for progression for individuals or groups might focus on:

- Skill development
- Breadth of curriculum content
- A range of contexts for learning
- A variety of support equipment
- A range of teaching methods

- Negotiated learning
- Application of skills, knowledge and understanding in new setting
- Strategies for independence

For our pupils progression is not necessarily only movement up a hierarchical ladder of skills and knowledge. Horizontal progression is also important.

### **The Role of the Curriculum Leader for Mathematics**

- To provide guidance and support in implementing schemes of work.
- To keep up-to-date by attending courses and feedback sessions organised by LA cluster groups or other colleagues.
- To encourage and assist in-service training.
- To monitor mathematics throughout the school.
- To promote liaison between schools (moderation etc.).
- To offer specialist advice and knowledge for special needs and gifted pupils.
- To encourage ways of involving parents in their children's learning
- To advise the Head teacher of action required (e.g. resources, standards etc.).
- After consultation, to co-ordinate recording and presentation throughout the school.
- To purchase, organise and maintain teaching resources.
- To manage a delegated budget and keep spending within it.

The over-riding task must be to provide support for all who teach mathematics and so improve the quality and continuity of mathematics teaching and learning throughout the school.

Signed

D.Camps  
28<sup>th</sup> February 2019  
To be reviewed- February 2021