

Title: NUMERACY POLICY	Issue Date: April/Sept 2016
School: Al Ain Juniors	Next Revision Date:
Reference No.: AJS-GDC-001	Version No.: 6

NUMERACY POLICY

DEFINITION OF NUMERACY

“Numeracy means knowing about number and number operations. More than this, it requires an ability and inclination to solve numerical problems, including involving money or measures. It also demands familiarity with the ways, in which numerical information is gathered by counting and measuring and is presented in graphs, charts and tables. It relates to a sense of shape and movement”.

MISSION STATEMENT FOR NUMERACY

“In Al Ain Juniors we value every student and the contribution they have to make. As a result we aim to ensure that every child achieves success and that all are enabled to develop their skills in accordance with their level of ability.”

AIMS

The school agreed with these aims as realistic and appropriate for the pupils. It represents the benefits that the students can expect to gain result of learning Mathematics. The basic principles have been set upon where the teaching method of mathematics in the school was based.

- To foster a positive attitude to mathematics as an interesting and attractive part of the curriculum
- To develop the ability to think clearly and logically, with confidence, flexibility and independence of thought
- To develop a deeper understanding of mathematics through a process of enquiry and investigation
- To develop an understanding of the connectivity of patterns and relationships within mathematics
- To develop the ability to apply knowledge, skills and ideas in real life contexts outside the classroom, and become aware of the uses of mathematics in the wider world
- To develop the ability to use mathematics as a means of communicating ideas
- To develop an ability and inclination to work both alone and cooperatively to solve mathematical problems
- To develop personal qualities such as perseverance, independent thinking, cooperation and self confidence through a sense of achievement and success
- To develop an appreciation of the creative aspects of mathematics and an awareness of its aesthetic appeal

INTENDED OUTCOMES

Al Ain Juniors School students’ will learn to:

- Develop the appropriate mathematical language associated with number, shape and position;
- Use and apply mathematics in practical tasks, in real life problems and in acquiring further knowledge, skills and understanding in the subject itself;
- Understand and use the four operations of number in relevant contexts;
- Understand relationships between numbers learn basic number facts and develop a range of computational methods;
- Understand place value in our counting system and understand how it can be extended into numbers below zero;



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- Use their mathematical skills in simple problem solving;
- Collect, interpret and represent data in tabular, graphical and diagrammatic form;
- Develop mental methods of calculation;
- Recognize, describe and represent shapes and patterns in terms of their properties, location and movement;
- Measure quantities including length, area, volume/capacity, angle, temperature, time and mass;
- By the time children reach Year 6 they are introduced to ratio/ proportion and language of algebra as a means for solving a variety of problems.

The success on mathematical teaching is being measured according to:

- The motivation and interest displayed by our pupils
- Success in meeting targets
- Data analysis (Target Tracker)
- Book and planning scrutiny
- Observations of the teaching of mathematics

TEACHING AND LEARNING

All students are entitled to a broad mathematics curriculum in which their learning needs are identified and met. Pupils should experience a range of practical and written activities on number, measurement, geometry and statistics. The school operates the planning procedure agreed by the whole teaching staff based upon the National Curriculum Program of Study 2014 and the EYFS. Classrooms are rich in discussion between pupils and between teacher and pupils. Some facts will need to be memorized; others will need to be practiced.

Medium and long-term planning is informed by these documents which map out the mathematics curriculum for each year group. From there, daily and weekly plans is developed which give specific details of learning objectives and appropriate differentiated activities.

The pupils in each year group in KS1 and KS2 are taught in mixed ability classes and are provided with differentiated activities to ensure tasks are set according to their individual levels.

Each lesson has the following structure:

- A short mental/oral starter
- The main teaching
- Opportunities to apply new learning through differentiated activities.
- Plenary

Cross Curricular Links

Mathematics is an integral part of our daily lives and therefore manifests itself in many areas of the curriculum. Links with ICT are continually developed through use of laptops, tablets and appropriate software.

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Assessment, Recording and Reporting

To develop learning, students shall be continuously assessed using a variety of strategies – observation, questioning, marking in accordance with our school assessment policy. In the EYFS, pupils shall be assessed and the foundation profile completed throughout the year.

In KS1 and KS2 children are tested using a range of set tasks designated as appropriate to test individual students, groups or a whole class on an individual or range of attainments.

Information shall be recorded onto the schools tracking system and then used to inform future planning, and to identify children for intervention and support.

The Class Teacher, Mathematics Coordinator, SENCo and Phase Coordinators keep records of assessments.

Each student shall have targets set and checked regularly. These shall be linked to the learning objectives for that year group.

Parent’s consultations are held each term where the teacher discusses children’s targets and progress in mathematics.

THE ENVIRONMENT

The school aims to provide a mathematically stimulating environment: through displays that promote mathematical thinking and discussion

- Through displays of students’ work that celebrate achievement
- By providing a good range of resources for teacher and pupil use.
- In every classroom, resources such as number lines, hundred square, place value charts and multiplication squares are displayed as appropriate and used as resources for whole class or individual work, for children to become confident in their use and understanding of the number system.

Mathletics – 3P learning

Children learn in different ways and Mathletics has something for everyone.

It’s no secret that students learn best in a multi-sensory learning space that engages them on visual, auditory and kinesthetic levels (VAK).

Mathletics help with mathematics; students can tailor their learning individually and do it in their own time at their own pace. The feedback they get, whether they have completed a level or earned points, tells them immediately what they have or haven’t understood.

If you need more practice you can repeat a key learning area until you get all the answers correct.

Additional information is presented again in new way with clever animations and math games supporting the learning with visual, as well as auditory information, and the opportunity to practice math problems to reinforce learning.

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YEARLY OVERVIEW

Year 1

- Numeracy is taught daily in Year One.
- Lessons begin with focus on mental arithmetic skills, particularly counting, number bonds and times tables. The aim is for the children to improve their mental arithmetic strategies, memory skills and the ability to recall number facts rapidly.
- The children have opportunities to work individually, with their learning partners, in groups and as a class.
- The children are provided with relevant resources which they are taught to use accurately.

Year 2 and Year 3

- Numeracy objectives are shared with the children on a daily basis.
- Numeracy teaching and learning can be individual, group or class based.
- Children or their teacher write their target into their books at the beginning of each new piece of work.
- Children assess their own progress towards their target at the end of a piece of work and record a colored smiley to reflect their personal assessments.
- Once a target has been achieved children identify the next steps in learning with support from their partner/teacher.
- Children are encouraged to self-mark where possible.
- Those children for whom basic numeracy and mental arithmetic skills are areas of weakness practice these skills on a regular basis whenever one to one support is available from students/volunteers.
- Regular practice of times tables. Assessment is made by a quick oral test with the teacher. Children can track their progress through the times tables in their numeracy jotter, and on a class wall chart.

Year 4

- Numeracy is taught every day.
- Lessons consist of a balance between mental arithmetic, key concepts, problem solving and shape, space and measure and data handling.
- The children have opportunities to work individually, with their learning partners, in groups and as a class.
- The children are provided with relevant resources. Practical equipment and games are also used to facilitate and reinforce learning.
- Basic skills are constantly reinforced in class in order to ensure that there are no gaps in children's learning.
- Children have time to work on manipulating numbers to consolidate their understanding of place value.



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- The children independently record their times table and make a decision to which times tables they learnt next. Each child has a time table test once a week, however, the children can ask for a test at any point they feel ready, to enable the children to progress at their own pace.

Year 5

- A particular drive is given on mental arithmetic with emphasis on concept of number, place value and times tables.
- Children are encouraged to play with numbers at their personal level, for example, numbers up to 100, 1000 etc.
- Children independently learn their times tables and make the decision to which times tables they learnt next. Every child has a times tables test once a week, however, the children can ask for a test at any point they feel ready, to enable the children to progress at pace.

Year 6

- A full range of resources are readily available to the children including ICT to support personalized learning.
- Children work from appropriately matched learning targets that can be found in the front of their exercise books. The main aims of these targets are to ensure there are no gaps in the children's learning. In addition to that some children work from broken down steps to help them learn progressively. The children are always involved in the decision making.
- Problem solving plays a vital role in the children's learning in mathematics. Once the children have mastered the written computation, they are encouraged to transfer their learning where they use their skills learnt to answer questions in the 'real life' context.