

The Sanders Draper School Numeracy Policy (Draft June 2006)

Aim

To encourage staff and students to make meaningful links between skills learnt in mathematics lessons and other areas of the curriculum. To discover and employ the most effective methods to complete Numeracy tasks in all areas of student learning and experience. For students to experience a continuity of approach from their teachers coupled with high expectations.

Definition

Numeracy is a set of skills which involve confidence and competence with numbers and measures applicable to whole of the school curriculum and the wider world it requires understanding of the number system, a repertoire of mathematical techniques and the ability to solve number and special problems in a range of contexts. Numeracy demands practical understanding of the ways in which data is gathered by counting and measuring and its presentation on charts, graphs, diagrams and tables.

At the end of KS3 a Numerate Pupil should...

- Understand the size of numbers and where they fit into the number system.
- Recall certain mathematical facts confidently; examples might be number bonds, multiplication tables and calculation of doubles and halves.
- Be able to select the fact or formulae needed to solve problems.
- Be accurate and efficient in mental calculations and using in those supported by written notes.
- Know when it is best to use a calculator, or ICT, to handle and manipulate information.
- Measure and estimate measurements, choose suitable units, read information for a range of apparatus.
- Recognise suitable data for a purpose and suggest how it might be collected.
- Understand and use the measures of speed and time.
- Draw plain figures and appreciate the concept of scale in geometry, diagrams and maps.
- Draw, interpret and make predictions from graphs, diagrams, charts and tables.
- Explain the method they have used with correct mathematical terms.
- Judge when their answers are accurate and know how to check them.
- Give results to an appropriate degree of accuracy.

How do we do it?

All staff involved with students learning should...

- Know how and when numeracy is being taught, developed or practised in their subject.
To audit how graphs are taught across the curriculum in July 2006
- Use similar methods of calculation (from the National Numeracy Strategy) which should reflect best practice in the school.
- Encourage students to demonstrate and use the numeracy skills they have learnt in other subjects in different curricular contexts.
Independent learning using 'puzzles' in 'Communities week'

- Use the correct vocabulary and encourage the students to do the same!
- Encourage confidence and enjoyment of numeracy amongst the students.
- The puzzle club is well established. The Happy Puzzle Co. come in to school every November to Yr 7 to launch the schools puzzle club.
- Assemblies – aim to do one kinesthetic assembly to Yr 7's every term (Square number song, prime number 'gesticulation' angle dance.
- Fibonacci week takes place every year with Yr 7's across the curriculum.
- To develop further the 'swopping starters', particularly with the Science department in the first instance.
- Yr 7 embark upon a Science/Maths linked workbook, where the work is completed via both departments.

Teachers of Mathematics should...

- Adopt the structure of the three part lesson. Use starters and plenaries in a meaningful way. Attempt to bring some 'fun' into the lessons!
- Provide appropriate work which is challenging to the students.
- Use oral and kinesthetic activities to improve student's recall and calculation strategies.
- Question students effectively, giving them time to think and answer.
- Ask students to demonstrate their methods and uncover reasons for wrong answers.
- Make links between topics in Mathematics and other areas of the curriculum.
- Differentiate the curriculum, target and offer positive support to both the most able and lower achievers.
- Use of the interactive whiteboard in a positive visual and student – interactive way!

At The Sanders Draper School we are aiming...

To ensure consistency in...

- Use of correct mathematical language.
- Notation.
- Units.
- Method of calculation.
- Use of calculators.
- Approaches to commonly identified skills, data handling, graphs and formulae.

To help students recognise...

- That numeracy skills are transferable.
- Numeracy can be employable and enjoyable.

As staff we are working towards...

- Co-ordination of topics across the curriculum.
- Higher standards of numeracy supporting student achievement in our subjects.

Conclusion.

The development of numeracy should be the responsibility of the whole staff and students should be equipped with the key numerical skills that enable them to

continue into further education, or employment, confident in their use of number and measure.