



Inspiring Learners for their future

WHOLE SCHOOL NUMERACY POLICY

UPDATED 2010

Consultation History

Governors/staff/parents/students	Date
Executive (Leadership Group)	
Teaching and Non-Teaching Staff	
Curriculum Committee	
Full Governing Body	
Next Review of Policy	December 2012

The Ridgeway School & Sixth Form College

Whole School Numeracy Policy

It is intended that this document will provide information and guidelines for a uniform approach to numeracy across the school.

What is Numeracy?

- ❖ Much more than just knowing about numbers and number operations
- ❖ It requires practical understanding and an ability to cope with the mathematical demands of everyday life
- ❖ It encourages problem solving in a variety of contexts
- ❖ It develops and enhances an analytical approach in dealing with measurement and handling data.

Purpose of a whole school Numeracy Policy

- ❖ To ensure that students receive positive messages about numeracy when used across the curriculum
- ❖ To secure high standards of numeracy across the school
- ❖ To set out the school's agreed approach to the teaching of numeracy skills
- ❖ To provide a basis against which progress can be judged
- ❖ To record methods, vocabulary and notation that have been agreed
- ❖ To assist the transfer of pupil's knowledge, skills and understanding between subjects
- ❖ To indicate areas for collaboration between subjects and processes for facilitating such collaboration
- ❖ To fulfil a current OFSTED requirement.

Important points to consider:

- ❖ Mental arithmetic should be recommended as a first resort. Students should be encouraged to continue and develop mental skills learnt in KS2 into KS3 and beyond.
- ❖ Teachers are encouraged to seek and compare a range of calculation methods by asking students how they worked out a calculation and discussing their responses. (Link with Literacy).
- ❖ Students will gain more and remember much more if understanding is given prominence
- ❖ Students should be helped to develop their own methods of calculation, however pupils who are not confident numerically require consistency in approach when learning or practising such skills.
- ❖ Students are expected to have their own calculator

Identifying key mathematical requirements across the curriculum

Using and Applying Mathematics

Here students use a variety of thinking skills

- ❖ Breaking the problem down into more manageable parts
- ❖ Logical deduction
- ❖ Hypothesising
- ❖ Predicting and testing

Number

Key skills are

- ❖ Place value
- ❖ Presentation of calculations to encourage mental calculation or estimation
- ❖ Language i.e. consistency of mathematical terms
- ❖ Correct reading of numbers i.e. 5.12 as five point one two and not five point twelve
- ❖ An equals sign must only occur once in a line of working
- ❖ Develop working down, not across, a page
- ❖ Link between fractions, decimals and percentages
- ❖ Correct use of standard form notation, not calculator display!
- ❖ Addition
- ❖ Subtraction
- ❖ Multiplication
- ❖ Division

Shape, Space and Measure

- ❖ Similarity – in mathematics the word similar means shapes that are the same shape but not necessarily the same size, their dimensions are in proportion to each other.
- ❖ A knowledge of both imperial units and metric units is useful.
- ❖ Appropriate units must always be stated on measurements in solutions and also on axes.
- ❖ Distinction between mass and weight.
- ❖ Bearings: Measured in a clockwise direction from North
Described using at least 3 figures

Use of the degree sign, °.

Handling Data

- ❖ All graphs should have a title and labelled axes, with units marked.
- ❖ Students should recognise the scale used and be able to identify what each small square represents on each axis.
- ❖ Students should be able to spot misleading graphs.
- ❖ Pie charts – label sectors or give a key
- ❖ Bar charts are used to display discrete data (data which is counted). Histograms are used to display continuous data (data which is measured) and has no gaps.
- ❖ Labelling of axes, number line versus spacing.
- ❖ Averages- refer to the common *average* as the mean average, try to use the mode and median too.
- ❖ Probabilities should be written as a fraction, decimal or percentage and not as a ratio or described as 1 in 3 or 1 out of 3.

Calculators

- ❖ Use of calculators allows freedom from repetitive difficult calculations.
- ❖ Discourage use for simple calculations.
- ❖ Encourage students to estimate the answer before using the calculator.
- ❖ Sensible rounding
- ❖ Answers alone are not acceptable. Students must show the sequence of the calculation
- ❖ Beware of basic calculators v scientific when the rules of BODMAS are required (when the order of the calculation is important).