**King Edward VI Camp Hill School for Girls**

**NUMERACY POLICY**

**Rationale:**

Numeracy is a proficiency which is developed mainly in mathematics but also in other subjects. It is more than an ability to do basic arithmetic. It involves developing confidence with numbers and measures. It requires an understanding of the number system, a repertoire of mathematical techniques, and an inclination and ability to solve quantitative or spatial problems in a range of contexts. Numeracy also demands understanding of the ways in which data are gathered by counting and measuring, and presented in graphs, diagrams, charts and tables.

Our policy will enable pupils to transfer their skills from mathematics lessons into other subject areas.

1. **Aims and Objectives**
2. To secure high standards in numeracy for pupils across the school. This includes:
   * improving accuracy, particularly in calculation, measurement and graphical work;
   * improving interpretation and presentation of graphs, charts and diagrams;
   * improving reasoning and problem solving;
   * assisting the transfer of pupils’ knowledge, skills and understanding between subjects.
3. To record good practice of the use of numeracy in departments, including ensuring that:
   * all staff have a positive attitude to numeracy and actively promote the development of numeracy across the curriculum;
   * all staff, but particularly those in key departments (e.g. Science, Geography and Technology), are aware of the range of mathematical skills that pupils bring to their lessons;
   * staff in departments are aware of the mathematical demands of their own subject and ensure that this is reflected in their scheme of work;
   * staff in departments provide opportunities for pupils to develop and apply their numeracy skills in their own subject;
   * pupils do not experience any discontinuity from subject to subject either in the way certain mathematical methods and strategies are taught, or in relation to the level of difficulty of mathematics expected of them.

To achieve these aims the school is committed to:

* + the ongoing training of staff in numeracy, both at a whole school level and at department level;
  + promoting a positive image of the value of being numerate;
  + boosting pupil self-esteem through the reward systems in school;
  + not reinforcing stereotypes in line with the Equal Opportunities Policy.

1. **Roles and Responsibilities** 
   * Numeracy developments will be co-ordinated and documented by the Mathematics Subject Leader supported by the curriculum leaders.
   * The Mathematics Subject Leader is responsible for regularly auditing the needs of other departments and ensuring that the Mathematics department schemes of work provide appropriate opportunities for students to develop the numeracy skills required across the school;
   * Departments will be expected to have a statement on numeracy in their departmental handbook and adhere to this at all times.
2. **Principles and Practice: Mathematics Department Provision**

**The Mathematics Department is committed to**:

* + building on KS2 teaching approaches;
  + revising and updating its KS3 schemes of work in line with national changes;
  + focusing on setting individual pupil targets as appropriate and monitoring the attainment and progress of pupils through school procedures;
  + identifying any pupils for whom numeracy is a problem and arranging suitable support;
  + liaising with other departments on the understanding that the development of pupils' numeracy is a shared responsibility;

**The Mathematics Department recognises that:**

* + pupils’ attainment in numeracy is a factor in their capacity to learn in subjects across the curriculum;
  + individual subjects create different mathematical demands, which need to be identified and addressed within those subjects;
  + other departments have an important role to play in supporting pupils' mathematical development.

1. **Principles and Practice: Cross-Curricular Provision**

**Departments should:**

* + identify numeracy skills required in their schemes of work;
  + liaise with the Mathematics Department to ensure mathematical requirements are known, together with pupils’ likely methods of solution;
  + ensure that all department members are confident in the delivery of any numeracy skills required, using maths department members for CPD if needed.

**Teachers of all subjects should:**

* + use and explain mathematical vocabulary whenever it will enhance pupils' knowledge, skills and understanding of the topic;
  + use and explain appropriate calculations whenever it will enhance pupils' knowledge and understanding of the topic;
  + liaise with the Mathematics Subject Leader if mathematical skills are required earlier than met in the mathematics schemes of work;
  + not attempt to impose unfamiliar methods on pupils that are different from those used by the pupils (unless the pupil's method doesn't work);
  + encourage the use of mathematical methods that have been taught in mathematics lessons and not resort to "tricks", as otherwise transfer of skills will not take place and the opportunities for pupils to apply their mathematics will be reduced;
  + never disparage a method used by pupils because it appears different from what the teacher was taught or uses.

**Teachers of all subjects should aim to:**

* + agree the methods of calculation to be used;
  + agree the methods of drawing graphs;
  + agree on what can be expected and when;
  + agree to alert the mathematics department when problems arise so that a joint approach may be taken;
  + try to ensure that skills are transferred from one lesson to another;
  + share similar expectations;
  + try to use the same strategies and terminology;
  + remind pupils to apply skills that someone else has taught them.
  + encourage a view that pupils can manage calculations by thinking about them and persevering.

**Teachers of all subjects should expect pupils to:**

* + make correct use of mathematical symbols and vocabulary when providing oral and written answers or when asking questions;
  + set their work out systematically and with care; (calculations should be set out so that the method is clear. Graphs should be drawn with suitable labelled axes and have a title);
  + learn multiplication tables and other facts; (teachers should appear surprised when a pupil does not know her tables and suggest that the pupil really ought to learn them);
  + use mental arithmetic or a calculator as appropriate in calculations. In all cases a mental estimate of a calculation is to be encouraged; (it will be helpful if teachers can take the time to ask pupils how they worked out a calculation and listen to their response);
  + not to use a calculator inappropriately (Mental skills are encouraged).

**Management of Provision and Quality Assurance:**

The Curriculum Deputy will monitor and evaluate the impact of this policy.

The policy will be reviewed on a three-yearly basis.

July 2016