QUEEN ELIZABETH HIGH SCHOOL

LITERACY AND NUMERACY POLICY

1. Rationale

- Every individual student needs high standards of written and spoken communication if he/she is to succeed at school and in life beyond school.
- Every individual student needs high standards of mathematical skills if he/she is to succeed at school and in life beyond school.
- Our students will be entering a challenging world in which it will be difficult to lead a fulfilling life without well-developed literacy and numeracy.
- QEHS expects that these skills will be enhanced, whatever their entry level, and that every teacher and member of the school community has a responsibility towards achieving this.

2. Aim

To ensure that all teachers and members of the school community support the teaching and development of literacy and numeracy across the curriculum and in the wider life of the school.

3. Definitions and Practice

Speaking and Listening

QEHS students need to articulate their ideas and findings; to try out sentences and ideas in talk before committing them to writing; to ask and answer questions and to function in social situations.

To ensure high quality speaking and listening across all subjects teachers should

- Provide opportunities which will engage students in purposeful talk and attentive listening e.g. discussions, debates, explanations, presentations, role playing, hot seating, scaffolding writing through talk.
- Explain the success criteria in each of these types of activities.
- Emphasise that speaking and listening is as important as other types of learning activity in the school. Listening is also as important as speaking in this relationship.
- Act as role models in the ways that we conduct ourselves verbally – particularly in the use of Standard English (avoiding dialectical phrases and colloquialisms).
- Be taught to use spoken language that reflects the best oral communication in your discipline.

Reading

Reading does not simply imply the ability to read words on a page or screen. It means the ability to read with understanding. Students need to be able to locate and use information, to follow instructions or an argument, to summarise and analyse what they have read in order to access meaning. Without these skills, students will be impoverished in an information rich world. Consequently we have a responsibility at QEHS to encourage and support reading in many different forms e.g. text books, the Internet, newspapers, magazines, reference books, biographies, autobiographies, fiction, poetry and drama.

To ensure the support of high quality reading across all subjects teachers should

- Continue the process of learning to read with understanding that started at first and middle school.
- Read texts aloud for the students to follow. Teachers should be reading role-models. Teachers should talk about reading to encourage different ideas and interests.
- Be aware of initial reading ages / abilities of all of our students and know how to develop these further.
- Differentiate reading material for all abilities. Material should expand and develop vocabulary and stretch the thinking processes associated with reading for understanding.
- Teach key vocabulary relevant to our subject areas.
- Develop the skills to enable students to research and understand information independent of their teachers.
- Encourage reading as a homework activity.
- Encourage reading for pleasure.

Writing

All students need to be taught how to write to address the particular audiences and to fulfil the specific purposes demanded by our subjects. It cannot be assumed that students will automatically possess these skills. Writing includes the use of a keyboard as well as work produced in a students' own handwriting.

To ensure the development of high quality writing all subject teachers should

- Be aware of the types of texts we are asking our students to produce.
- Teach the skills needed to produce these texts so that they are in the relevant formats for different subjects.
- Encourage our students to structure their work correctly using headings, sib-headings, paragraphs and a variety of sentence structures with appropriate punctuation.
- Provide opportunities for students to produce extended writing wherever appropriate.
- Encourage students to draft and re-draft (where appropriate) after feedback.
- Encourage accurate and legible cursive writing where this is appropriate.
- Stress that layout, presentation and awareness of audience are important in written work.
- Act as role-models by communicating with the same level of expectation. Feedback via AIMSS should reflect this level of care.
- All materials produced to support learning (work sheets, written resources etc) should be written with the appropriate grammar, spelling and punctuation.
- All display materials (posters, examples of student work etc) should be written with the appropriate grammar, spelling and punctuation.

Arithmetic

This forms the basis of calculating solutions to number problems. Students should be encouraged to use their skills learned in mathematics lessons to solve number problems across school. Different methods can be effectively used for different calculations; it is important for the students to see different methods relevant to each subject. The point is that they understand calculations are relevant in all areas and that they transfer their skills.

Geometry

It is important that correct notation is used wherever geometry skills are used. Be aware that the names of shapes, where used, should be correctly referred to; references, bearings, scales in drawing or on maps need to be referred to as areas of knowledge practised in mathematics lessons. Students should be encouraged to use the terminology and explain these concepts using their prior knowledge.

Algebra

Algebra aids problem solving in the use of formulae for different calculations. Students should similarly be encouraged to acknowledge the skills learned in mathematics lessons if used in other subjects. A more widely used aspect of algebra might be the employment of graphs. Here, the terminology and use of x and y axes should be consistent; the description of relationships and patterns seen in graphs should be encouraged so that students can experience the relevance of the skill.

Probability

Description and discussion about probability should always employ particular vocabulary: 'likely', 'unlikely', 'even chance', 'certain', 'impossible'. This should be consistent so that students are fluent with the concept.

Problem Solving

To solve any problem requires a logical approach. All students should have opportunities to exercise and extend their ability to plan the best response to a problem and see how to achieve a solution. This goal needs to be shown as a process, not a coincidence. Patterns need to be established for students to be able to see how such a skill is transferrable. The three main areas are:

Decision making **-** There are different methods of finding solutions to problems, whether it be a relevant formula or a tried and tested process to undertake. Students need to be able to see the method relevant for the problem and identify the data needed to solve it. They must be shown that such skills are relevant and transferrable to different subject areas. They should also be able to justify the process they have use and judge its effectiveness.

Reasoning - Approaching a problem effectively requires a logical approach. Students should be able to develop their ability to reason out a solution wherever possible and justify outcomes wherever appropriate.

Handling information - Data in its many forms is part of every subject studied. It is essential that students are taught how to interpret this and to consider what useful information can be extracted from it. This is the same as the skills of making inference in reading. There is also a necessity to model the presentation of data in the format most relevant for the circumstance and to use and make reference to data when answering a specific question.
To ensure the development of high quality numeracy skills across all subjects teachers should

- Provide tasks where a problem can be broken down and dealt with in logical steps. Consider and discuss the use of good sense in approach to a problem and its solution: making sense of and checking information. Encourage the question, 'Is this answer sensible'?
- Ensure that the data needed as part of the solution is discussed and is either presented clearly or the students are taught how to find them effectively.

- Ensure students have the opportunity to plan the best approach to a problem, even if they have to try more than one method before reaching a decision about the best way forward.
- Plan to encourage students to consider their approach systematically. They should have the opportunity to identify and discuss patterns in approaches and solutions that work.
- Build in ways of discussing likely outcomes and making estimates and judgements based on reasoned thinking.
- Ensure that students are taught how to support decisions with evidence, figures or other data.
- Teach and model the interpretation of data and making inferences.
- Teach and model the best way of presenting data and using correct notation.
- Encourage tasks where sorting is developed as a reasoned skill – into groups or order and then considering comparisons.
- Look for ways of seeking patterns and relationships between numbers and values.
- Giving any opportunity to exercise skills in measuring and calculating: adding, subtracting, dividing and multiplying, particularly without calculators.