



NUMERACY POLICY

Literacy and Numeracy are every school's core business. All concerned need to be aware that ensuring that their students are literate and numerate is a highly important whole school responsibility.

Numeracy at PCSA

There are many definitions of numeracy and mathematics both in respect of their sameness and their differences. Our school takes the view that all staff share responsibility for our students' development of numeracy. Numeracy is a proficiency, which involves confidence and competence with numbers and measures. It requires an understanding of the number system, a repertoire of computational skills and an inclination and ability to solve number problems in a variety of contexts. Numeracy also demands practical understanding of the ways in which information is gathered by counting and measuring, and is presented in graphs, diagrams, charts and tables. (National Framework for teaching Mathematics, 1999)

All, including mathematics teachers, must be aware of the demands their learning area makes on their students' numeracy. Those involved in teaching mathematics lay the groundwork, and other learning areas provide opportunities every day for students to build upon.

Aims and Objectives at PCSA

Numeracy should be promoted throughout all areas of the curriculum in a consistent and efficient manner. Also it should be noted that learning, teaching and assessment of numeracy should be appropriate to students' needs.

At PCSA our aim is to ensure that all students:

- ✓ Have the ability to make sense of more than just numbers.
- ✓ Are consistently developing mental strategies as well as pencil and paper methods.
- ✓ Are able to use correct mathematical language.
- ✓ Possess a confidence and competence in using and applying numeracy, recognising that skills are transferable across different subject areas and in a variety of contexts.

Rationale & Equal opportunities

Numeracy is an outcome of the programmes of study and is therefore a right for all students, not a privilege for some. At PCSA, we believe that students have entitlement to a numeracy rich learning environment in school, regardless of perceived ability, and that students' self-confidence and beliefs in both themselves and mathematics need to be high if success is to be maximised.

The Role of the Numeracy Co-ordinator

The role of the co-ordinator is:

- ✓ The development of numeracy throughout the school.
- ✓ To play a leading role in the design and production of a whole school policy for numeracy.
- ✓ To carry out an audit of the numeracy requirements/provision in all areas of study including tutor time 'number' sessions.
- ✓ To help identify training needs of staff in relation to numeracy and ensure that these training needs are met.
- ✓ To liaise with all subject departments to ensure that numeracy is developed in a coherent and consistent manner throughout the school, with numeracy targets appearing within their schemes of learning.
- ✓ To establish procedures to monitor and evaluate the numeracy provision for all students in the school.
- ✓ To establish procedures to monitor and review the implementation of the school's numeracy policy.
- ✓ To ensure all staff are aware of their responsibility that the acquisition of basic skills is a whole school issue, and not subject based.

ICT

The role of ICT will be continually reviewed as research has shown that students, particularly the low achievers, respond well and gain confidence from the use of ICT.

The use of ICT, and in particular spreadsheets along with databases, is seen as an integral part of the work carried out in mathematics. The Mathematics and Computing and Design departments will work closely together to develop these key skills of spreadsheets and databases, which then can be applied across the curriculum.

The Link Between Numeracy and Literacy

The role of language is important in numeracy and there will be regular contact between the Numeracy and Literacy Co-ordinators to ensure that both are aware of developments in their respective areas.

- ✓ Language is an important tool for learning mathematics. Explaining to oneself, or someone else 'putting it into words', can be a powerful means of working through and clarifying ideas.
- ✓ Students should use language as a tool for reflecting on their mathematical experiences and hence for their own mathematical learning.
- ✓ Students also need to develop the skills of recording their mathematics. The first forms of recording are likely to be in everyday language or in pictures or

- diagrams. Gradually these representations may be shortened, leading to the need to use symbols.
- ✓ Students will regularly be asked to write explanations of their workings and methodology, as well as being able to solve problems.

Monitoring and evaluating progress and provision

All staff will be involved in the regular monitoring and evaluation of the implementation of the numeracy policy.

Tutors will lead a weekly number session within tutor time from resources created by the Numeracy Co-ordinator. Learning Leaders will use Year Group Meetings to review their year groups number sessions.

The Central Leader of Mathematics and Numeracy Co-ordinator will in the autumn term plan for numeracy developments taking into account both Key Stage 3 results (from internal testing) and GCSE results and future learning and teaching requirements based upon the previous year.

An audit of the use of numeracy within all subjects of the curriculum will be undertaken during subject reviews. These will be undertaken by the Numeracy Co-ordinator and included within the faculty review report for that subject.

Role of all staff in the promotion of numeracy

All staff are considered to have a part to play in achieving a high standard of numeracy in the school and should recognise that numeracy is best promoted through purposeful teaching and enjoyable learning opportunities.

Teachers in all areas must be alert to opportunities that they can use deliberately to reinforce and augment their students' numeracy and to consider any opportunities for cross-curricular involvement. The purpose here is to try to lessen any complications or obstacles put in the students' way, which might lead to confusion or misunderstanding and hence hinder progress.

Some situations occur regularly and require people to identify shapes, compute, measure, interpret data or recognise relationships. Other situations, however, may call for the use of several mathematical strands together or of procedures that require painstaking effort. Numerate people are ready for any problem-solving situation, even one so new to them that they have no model to call upon and so must devise their own.

Each curriculum area has its own numeracy requirements, and students may not always have acquired from their study of mathematics the particular knowledge and skills needed to meet them. Teachers in other areas of study therefore have a responsibility to help their students attain the level of numeracy their areas demand. In this way all teachers contribute to their students' developing numeracy.

When deciding upon what strategies to use with their students, teachers will need to take into account:

- the aspect of numeracy they are helping their students learn (a spatial skill, for example, or an algorithm);
- the type of mental activity their students must engage in;
- the characteristics of their individual students (such as their prior understandings, their strengths and weaknesses, and their preferred style of learning);
- their classroom environment - including the learning resources at their disposal;
- the usefulness, for particular learning activities, of electronic aids such as calculators and computers;
- the need to assess their students in order to monitor their progress and confirm their achievement;
- finally, teachers will need to take into account and build upon their own teaching strengths and preferences.

When the foundation for numeracy is well laid in the mathematics classroom, teachers in other areas are better placed to build upon it. They are able to reinforce and add to what their students have learned by getting them to use their mathematical understanding in a variety of other contexts and situations, and as a result students become more numerate.

The Role of Parents

The parents' role in the numeracy and mathematics development of their children is crucial and to be encouraged. To do this effectively, parents should:

- ✓ Talk to children about their mathematics.
- ✓ Become informed about the nature of mathematics and numeracy.
- ✓ Make their children aware when they as parents are faced with mathematical demands in their everyday lives, and display a positive attitude when they face these demands.
- ✓ Ask their children to explain their mathematical thinking when doing maths homework or performing everyday mathematical tasks.
- ✓ Use the links on school website and GCSEPod, PiXL Maths App, MrBarton Maths, myMaths to aid their children's understanding.
- ✓ Build children's confidence and develop their interests in mathematics.
- ✓ Praise children when they notice some new development in their mathematics understanding and skills.
- ✓ Be patient in regard to their child's development and discuss concerns with the teacher.
- ✓ Look at attempts to record mathematics, responding to their ideas and then praising the progress towards standard mathematical representations.
- ✓ Show their children through their words, actions, and attitudes that they believe that the children will become confident and competent users of mathematics.

Policy Review:

The working of this policy will be reviewed by the Academy Council Learning and Progress Committee

As well as examining the specific review data, the policy statement will be checked for continuing relevance against any changed statutory requirements and LEA advice.

Date Policy Approved – November 2016

The name of the designated person is: Lucinda Crouch

The Policy is to be reviewed every 2 years and the next review is due in November 2018