

Numeracy Policy

Rationale

Our Numeracy Policy is set to reflect the philosophy that numeracy, like literacy, is a key skill in which all students at Westlands should experience success. Numeracy is not just about dealing with numbers but encompasses wider mathematical issues. Significantly, numeracy is not only the acquisition of mathematical skills but more importantly the application of those skills. Progression in numeracy is usually marked by the increasing level of complexity of the nature of the task to which the skills are applied. Numeracy is therefore a set of skills that range across all subject areas of the school.

Aims

1. To improve the mathematical and numeracy skills of all Westlands' students.
2. To improve the standard of mathematical knowledge and understanding for all students by making maths real to life.
3. We want students to be 'functional' in Maths. That is a learner who can consider a problem or task, identify the functional maths that will help them tackle it, select from the range of skills in which they are competent in (or know what help they need and who to ask), and apply them appropriately.
4. We want to engage all students through student centred learning.

Departmental Strategies

As a department, we shall

1. Encourage the use of mental work in the classroom. Routinely ask students how they worked something out. Encourage students to be clear about their strategies. Encourage talk by questioning to help internalise ideas, flesh them out and offer other strategies. Provide ample opportunities for discussion to explore ideas and enable students to learn from each other and from their teachers by sharing and comparing ideas. Let students use their own methods if they are confident about them.
2. Use discussion to focus on the ways in which the answer was/can be calculated and the most efficient way of doing so.
3. Encourage students to work answers out mentally or using pen and paper as a first resort. Allow the use of calculators when it is more efficient or it slows up work on other content areas (e.g. algebra).
4. Provide opportunities for students to choose or devise their own methods. Query these methods when they are very inefficient (or wrong!).

5. Have regular 10-minute slots at the start of the lesson. Encourage the learning of facts and skills.
6. Regularly ask students to consider “rough answers”. Invite them to estimate answers by approximating and using “nice” numbers.
7. Sometimes give a quick mental test to check that students have done a learning homework.
8. Encourage the learning of number facts. Provide regular short practice (and some homeworks) on the times tables (to 10 x 10), compliments to 10 and doubles of all of the digits. Have occasional quizzes on words: even, square, factor, prime, multiple etc.
9. Use diagrams (e.g. a decimal scale) and equipment (e.g. interlocking cubes) wherever possible to aid understanding, but recognise that language is probably vital to abstract ideas and make sense of such experience.
10. Have a directed number line above the board in all classrooms (and also possibly a height measurer).
11. Use common words at first, if necessary, then move quickly into “proper” mathematical words. Put key words on the board and explain them clearly.
12. Encourage the use of On-line material both in school and at home.
13. Use laptops in the classroom, where appropriate, to consolidate learning and to provide a practical application to mathematical skills.
14. Give all GCSE students the opportunity to gain an Adult Numeracy qualification.

Conclusions

With Westlands being a maths and computing college, we strive to keep up to date with new initiatives and technology to aid teaching and learning. We cater for all abilities and as such the need to ensure the relevant practical applications of situations is very important. Indeed the use of practical applications and their reinforcement from as wide a context as possible should be available to all students. The development of good links between the Mathematics Department and other subject areas within the School can do much for the experience of its students.