AT WILLIAMSTOWN HIGH SCHOOL WE VALUE:

- Excellence and creativity in our achievements and ambitions.
- Integrity and honesty in our actions and relationships.
- Diversity in our curriculum, in each other and in our community.
- Strong and open communication between our school and our homes, and between our teachers, our students and our families.
- A commitment to social justice and a passion to protect and improve our environment and our community.

Rationale

At WHS we are committed to ensuring that all students develop the skills necessary to achieve academic success and to prepare them for lifelong learning after school so they can fully participate in society. Effective numeracy skills are vital to meet the inherent mathematical demands that exist in all subject areas at school and to meet the greater demands on numeracy in the increasingly technological society in which we live.

Definition

There are various definitions of numeracy (referred to as mathematical literacy in some countries) within Australia and around the world, so in 1997 the Commonwealth and the states agreed upon a shared definition for Australian use. This definition stems from the Numeracy Education Strategy Development Conference that took place in 1997 and is the definition adopted by the AAMT (Australian Association of Maths Teachers). WHS also adopts this definition of numeracy. The definition states:

“Numeracy involves using mathematics effectively to meet the general demands of life in various contexts, such as at home, work and community.” (AAMT, 1997, cited in Doig 2001)

The whole school community is involved in creating an environment where numeracy is explicitly addressed and valued. The college's beliefs about the importance of teaching numeracy skills explicitly are under-pinned by DEECD policy and the WMR Blueprint as well as the initiatives outlined in the College Strategic Plan and AIPs. Each subject area incorporates aspects of numeracy so all teachers have a responsibility to teach how these skills are applied in their subject area. In addition, Mathematics has a particular but not exclusive role in developing numeracy.

At Williamstown HS we believe that:

- every teacher is a teacher of numeracy
- students need to have their numeracy learning differentiated
- a balanced and integrated approach to teaching numeracy is essential
- teacher knowledge of relevant numeracy strategies and the numeracy and mathematical demands in their subject area is essential
- student learning needs will be identified and acted upon
- effective instruction requires systematic monitoring and use of assessment data

Purpose

This policy is being developed to support improved numeracy outcomes across both campuses of the college. If we share a commitment to teaching the numeracy skills needed to meet the academic demands in school and life-long learning and implement this consistently across all classrooms at both campuses, then student learning will improve. In order to do this, we need to have common understandings about numeracy acquisition, clear definitions of what the most effective numeracy strategies are and agreed processes for identifying the skills that need developing as well as tracking the level of improvement. We need to speak a common language to define our understanding of numeracy practices and beliefs about numeracy acquisition. We need a program of professional learning to develop consistency in implementing practices that are supported by research as delivering the best outcomes for students. We also need to allow for innovation and accommodate a diversity of approaches which address the common need. This policy aims to provide a common base for developing this consistency of practice.
Implementation

Numeracy is a whole school priority and will be supported and resourced by allocation of funding, professional development for all staff and given status within the leadership structure.

a) Curriculum provision and documentation reflects effective instruction as outlined in this policy
Students will make the greatest progress where teaching is consistently delivered across classrooms and all subject areas plan to address the specific numeracy (and mathematical demands) of their content area. The College Course Accreditation process will ensure that Curriculum Area Teams (CAT’s) specifically address the numeracy (and mathematical demands) of their content areas

Allocation of curriculum time for skill development is a key element in allowing students to build and consolidate skills. Maths classes will be allocated a minimum of 5 periods per week at Years 7 to 9. Of this time at least one period per fortnight will be allocated to a numeracy program where students are actively guided in their numeracy development by the class Maths teacher. This will include regularly monitoring student progress through conferences and diagnostic assessment according to the College assessment schedule.

b) Development of a Numeracy Plan
A numeracy plan will be developed from the goals in the School Strategic Plan. This document will focus on a range of effective numeracy strategies to work on each year to meet the specified targets.

c) Professional learning at whole school and campus level as well as through coaching of small groups and individuals
Systematic professional learning will be delivered both at a whole school level and to teams and individuals through coaching sessions. Priorities for professional learning will be identified through the College's whole school plan and further refined in the College Numeracy Plan in order to have a focused approach which allows teachers the chance to consolidate and fully implement new learnings. The goal of all professional learning is to see changed practices evident in classrooms consistently across the college.

d) Professional dialogue about practice through Professional Learning Teams (PLT’s), including CAT's.
Opportunities need to occur for professional dialogue about the learning needs of specific students and strategies which can help to address these needs. This will occur through CAT meetings based on information collected through the diagnostic assessment schedule as well as through other PLTs formed for this purpose.

e) Identifying and tracking student progress.
A Diagnostic Assessment Schedule will be developed to ensure that student numeracy learning needs are identified and that progress is tracked to allow targeted teaching to address student learning needs.

f) Develop a numeracy culture
Opportunities for numeracy development will be created within class time. The Year 7 to 9 mathematics program will devote at least one period a fortnight of class time for independent numeracy development where numeracy skills are explicitly taught. All subject areas have a responsibility to promote wider numeracy development and to reinforce the numeracy strategies relevant to their subject area.
Roles and responsibilities

The Numeracy Leader
The Numeracy leader is responsible for:
- Managing the implementation of the Numeracy Program across the college
- Managing the development of a support program for students with additional numeracy needs
- Managing the collection, use and distribution of data and developing protocols for the use of this data
- Coordinating the analysis of numeracy diagnostic assessment data for whole school, year, class and individual levels.
- Establishing and resourcing classrooms that support Numeracy
- Supervising the Numeracy Coaches program
- Conducting Professional Learning sessions for all staff to develop consistent numeracy practices

Numeracy Coaches
Numeracy coaches are responsible for supporting teachers to change practice to implement effective numeracy procedures by working with teachers and their students in classrooms and with teachers outside of the classroom. Coaches work to support teachers to work more effectively to address the learning needs of their students, not to directly support individual students.

Coaches will work with teachers to review how they address the numeracy demands in their curriculum units and use the coaching cycle to conduct substantive discussions with teachers to identify areas to work on, modelling and observing numeracy strategies and de-briefing after the lesson to draw out the learning.

CAT Leaders
CAT leaders are responsible for identifying the numeracy demands of their subject areas and planning to address this through the curriculum. This involves working with the numeracy support team to identify and implement effective classroom strategies.

CAT leaders, with the support of the Numeracy Leader and Coaches, will coordinate the development of curriculum units for a whole year level and additions/modifications to curriculum units for groups of students that target the numeracy gaps and misunderstandings of students in their CAT area.

Classroom teachers
All teachers have a responsibility to teach numeracy and support the numeracy development of students. Continued numeracy development occurs when:
- Teachers model and explicitly explain the tasks and the numeracy components, alongside the content they are teaching
- Student learning is differentiated to achieve success and students are provided with feedback to improve all their skills, including numeracy
- Students are given frequent opportunities to practice and develop their numeracy knowledge and skills
- Formative assessment (of a formal and informal nature) is used across all content areas to give students feedback on growth in numeracy skills as well as content knowledge.

Parents
Partnerships that link the home, the school and the community are significantly important. Parents can support the numeracy development of their children by taking an interest in the numeracy components of their child’s school work and by exploring and discussing the numeracy skills that are needed around the home and in everyday life.

Students
Regular practise of numeracy skills significantly improves student performance. Students will be provided opportunities to practise their numeracy skills at school and will be encouraged to do regular weekly practise at home in line with the College Homework Policy.
Specific procedures

Identifying student needs and tracking progress

All students will be tested during the year using a variety of formal diagnostic numeracy tools, which will include as a minimum the following assessments: PAT Numeracy (each year) and the diagnostic assessment for Scaffolding Numeracy in the Middle Years (years 7 and 8). These results will be triangulated with the NAPLAN data and observed data from additional assessments performed by the Maths teachers.

Data will be made available electronically for easy access, either through the Student Management Tool or an alternative platform.

Teachers will have an opportunity in CAT meetings and PLTs to consider the students in their classes and plan for addressing their needs.

This data will be analysed by the Numeracy Leading Teacher to identify students with significant learning needs. According to the results, student needs will be addressed through either a Year Level, Group or Individual learning plan.

**Year level** – All CATS will be provided with an analysis of the learning needs of the cohort based on earlier NAPLAN testing and current diagnostic assessments. This will be used to identify general skills that should be addressed through the curriculum.

**Group** – Students who are between 1 and 2 years behind or more than one year ahead will have a Group plan that details the specific numeracy areas the students are struggling with. This will be distributed to class teachers for their planning.

**Individual** – Students who are greater than 2 years behind or above the expected level will have an individual learning plan developed in line with the AEN policy framework. Individual teachers will be supported to develop and implement strategies that scaffold the learning of the students greater than 2 years below the expected level.

Interventions

Individual numeracy learning plans and additional support will be provided for all students two or more years below or above the expected AUS Vels level.

Coaching support

The school will make provision for a team of numeracy coaches to be employed each year. These coaches will work with both Maths teachers and across the curriculum to embed effective numeracy practices.

This specific process is set out in the flowchart on the following page.
Tracking and monitoring student numeracy progress

**Data collection**
Student diagnostic assessment according to assessment schedule and relevant transitional data as new students enrol

Results uploaded to Central database.

**Analysis of results**
Analysis of results to identify individual needs and general trends.

Supporting students with individual needs

Addressing general trends

**Planning**

- **Individual learning plans** for students > 2 years below or above expected
- **Group learning plans** for students between 1 and 2 years below or > 1 year ahead
- **Year level plans** Address learning needs through course accreditation process

- **Class teachers** who are supported by Lit/Num/DL/ICT Leading Teachers to develop Individual learning plans.
- **Class Teachers** who are supported by the CAT leaders who are in turn supported by Lit/Num/DL/ICT leading teachers to differentiate the curriculum to cater for the students learning needs.
- **Maths CAT Leaders**
  - Explicit teaching of skills and strategies
- **Other CAT leaders**
  - Reinforcing skills and addressing subject specific demands

**Ongoing tracking**
Re-assessment to measure progress
**EVALUATION AND REVIEW:**

As part of an ongoing evaluation process the Numeracy Leader will review the effectiveness of the Numeracy Policy at the conclusion of each year. Improvements to the processes and procedures will be adapted when required. Once ratified by School Council, this policy will be reviewed in line with the school's strategic plan.

This policy will be reviewed in line with the new school Plan being developed in 2013.

**CONSULTATIVE PROCESS**

Numeracy Leader review current policy

Campus, Curriculum and CAT meetings: Feedback and input from staff about draft Literacy policy

EDPOL notified of attendance policy review

School Council: Numeracy Policy presented to school council to be ratified.

College Meeting: Final Numeracy Policy presented to staff