

November 2000



# Quality Teacher Program

"Pedagogy for the future"

## Newsletter

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# What is the Quality Teacher Program?

The Quality Teacher Program has provided Commonwealth funding to all states and territories to strengthen the skills and understanding of the teaching profession.

The NSW QTP strategy was developed on behalf of the NSW Quality Teacher Program cross-sectoral management committee representing NSW Department of Education and Training, the NSW Catholic Education Commission, the NSW Association of Independent Schools, the NSW Teacher Education Council and the NSW Professional Teaching Council.

The NSW QTP strategy is a three year program of professional development initiatives in six priority areas:

- Literacy
- Numeracy
- Information Technology
- Mathematics
- Science
- Vocational Education and Training.

It will target teachers who have completed formal training ten or more years ago, casual teachers and teachers who are re-entering the teaching profession.

A suite of interrelated projects has been developed for each priority area that will address the learning needs of these teachers. The strategy contains a range of delivery options that reflect best practice in teacher professional development, including:

- workplace learning through action research, coaching and mentoring
- institutional learning to facilitate understanding of research findings and best practice
- online learning
- participation in formal award programs
- conferences and seminars.

The NSW Quality Teacher Program three year plan is designed to develop and implement new pedagogies, recognise the commitment of teachers to the value of life long learning, enhance the quality of teaching and learning, and as a result, improve the status of teaching as a profession.

## Contextual challenges

Schools, teachers and school leaders are faced with a number of significant contextual challenges as they prepare students for the future. These challenges include:

- significant changes in community expectations of schooling
- changes in the role of schooling in preparing students for the world of work, to be life long learners and to contribute as adults to a civil and democratic society
- new demands being placed on students in terms of the new basics – literacy, numeracy, information management and knowledge creation
- emergence and convergence of new learning technologies
- the growth of new knowledge, particularly in the sciences
- greater focus on the outcomes of schooling and the need for new ways to assess student learning and achievement
- increased understanding of the nature of the learning process and the need to ensure all students learn.

These challenges are occurring at a time when the status of teaching as a profession is under challenge. The Quality Teacher Program provides an opportunity for educators to renew the profession of teaching and promote optimal learning for all students.

## Pedagogy for the future

Meeting these challenges for schooling requires the refinement of existing effective pedagogies and the development of new pedagogies which:

- promote a commitment to life long learning and a spirit of enquiry in students and teachers
- ensure students understand the learning process and become independent, critical and reflective learners
- address the cognitive, moral, aesthetic, civic, emotional and physical learning needs of all students
- relate pedagogy directly to the curriculum to be taught
- take account of and extend the learning of all students
- change the focus of teacher work from information transmission to knowledge management, critique and knowledge creation
- arise from universities and schools working together on pedagogic issues in schools
- integrate the use of emerging learning technologies
- encourage all teachers to be teachers of literacy, numeracy and thinking skills
- can be applied in a range of learning contexts including the classroom, the community and virtual learning environments

- develop processes of formative assessment of students as part of the teaching learning process
- blur the distinction and enhance partnerships between work and school
- are underpinned by positive and enduring student teacher relationships and foster interactions characterised by mutual respect, trust, and a shared commitment to excellence, equity, social justice and the value of learning
- foster strong partnerships between school, home and the wider community.

### Implications for Teacher Learning

The importance and value of teacher development and learning must be demonstrated by a commitment to ongoing professional development and reflective practice. At the heart of the teacher learning process must be an acknowledgement that:

- the quality of student learning outcomes is directly dependent on the quality of the teacher, and
- the essential components of effective teaching are command of subject, and knowledge of and capacity to implement effective pedagogical practices.

Accordingly, effective teacher professional development:

- focuses on developing pedagogies for the future that ensure quality learning outcomes for all students
- fosters regular professional dialogue among teachers
- is workplace based, outcomes focused and relates to the learning priorities of teachers
- uses a range of delivery modes to ensure access and the involvement of teachers in decisions concerning the direction and processes of their learning
- complements the curriculum and assessment frameworks within which teachers work
- is relevant and timely
- uses the most appropriate resources for the task in hand whether they be located in schools, TAFE, university or the wider community
- addresses the needs of school leaders as well as classroom teachers.

## What are the projects?

The projects are grouped under the six focus areas:

- Literacy
- Numeracy
- Information technology
- Mathematics
- Science
- Vocational Education.

Several projects are being developed and implemented collaboratively by the three education sectors (Department of Education and Training, Catholic Education Commission and Association of Independent Schools).

Other projects are implemented by one sector only. The codes beneath each project title AIS, CEC and DET indicate sector access to the projects.

## For further information

For further information and updates access the Quality Teacher Program website at [www.qtp.nsw.edu.au](http://www.qtp.nsw.edu.au). You will be able to search for information on each project in the six focus areas, by subject, stage of schooling and sector. Each project page has a description of the project, project news and updates, links to resources, a discussion area and links to other sites that directly support the project.

## 1. Literacy

### 1.1: Enhancing Literacy in Stage 6 Through English

#### AIS / CEC / DET

There are two components to this cross sectoral project:

1. The development of quality resources to demonstrate best practice in the classroom through funded school-based projects.
2. 50 Local Interest Group (LIG) events led by school-based facilitators in 2001 and 2002.

Project manager: John Pettit  
[john.pettit@det.nsw.edu.au](mailto:john.pettit@det.nsw.edu.au)

### 1.2: Literacy Action Research Online

#### DET

Online professional development for DET school literacy teams to plan a whole school approach to literacy. An online facilitator will work with each group of 8-10 schools to promote an online environment in which teachers can collaboratively discuss relevant educational issues within their school, classrooms and students. Schools reflect on their learning using a journal and create a whole school learning portfolio which will form part of the evaluation.

Project manager: John Pettit  
[john.pettit@det.nsw.edu.au](mailto:john.pettit@det.nsw.edu.au)

### 1.3: “Teaching Literacy in . . .” Professional Development

#### DET

The online delivery of literacy support materials to provide subject-specific professional development for DET secondary teachers, demonstrating good practices in literacy teaching. Subjects targeted will include history, science, D&T, mathematics.

Project manager: Paul Hardage  
[paul.hardage@det.nsw.edu.au](mailto:paul.hardage@det.nsw.edu.au)

### 1.4: Middle Years Literacy and Numeracy Initiatives

#### DET

Ten middle years case studies focusing on the literacy and numeracy demands of all subjects in the curriculum, both DET primary and DET secondary schools.

Aspects of the research will include the implementation of a whole-school approach to effective transition from Year 6 to Year 7 (sharing programs and information about student achievement).

Project manager: Paul Hardage  
[paul.hardage@det.nsw.edu.au](mailto:paul.hardage@det.nsw.edu.au)

## 1.5: Literacy for Indigenous Students

### DET

A research project with academic mentors working with DET schools undertaking action research projects in successful cross cultural pedagogy. Best practice models will be developed for teachers to support indigenous students with literacy learning.

Project manager: John Pettit  
[john.pettit@det.nsw.edu.au](mailto:john.pettit@det.nsw.edu.au)

## 1.6: Early Literacy Online

### DET

An eight module training and development course in early literacy for teachers of Years 1 and 2. Help for teachers in identifying students' literacy difficulties and designing appropriate learning programs within their own classrooms. This course is delivered on the Internet using a trained online facilitator to assist individual teachers with pedagogical understandings and classroom implementation.

Project manager: John Pettit  
[john.pettit@det.nsw.edu.au](mailto:john.pettit@det.nsw.edu.au)

## 1.7a: Assessment of Outcomes for Stages 2 and 3 in Literacy

### AIS / CEC / DET

Materials to be designed to provide profiles of students achieving Stage 2 and Stage 3 outcomes. The materials will be designed for use by teachers at any time during the year. One option will be for the use of the materials at the beginning of the year when assessing the achievement of syllabus stages and outcomes by an individual student or group of students.

Project manager: Ian Chambers  
[ian.chambers@det.nsw.edu.au](mailto:ian.chambers@det.nsw.edu.au)

## 1.7b: Consistency of Outcomes and Stages Assessment in Literacy (COSA)

### DET

This project will support the implementation of materials designed to assist teachers to assess student achievement against stage outcomes standards in literacy from Foundation to Stage 3.

- DET schools will be supported for within-school and across-school professional dialogue and sharing.
- District Literacy Teams will be supported to promote professional dialogue and sharing with schools across and between districts.
- On-line availability of materials and examples of best practice.

Project manager: Ian Chambers  
[ian.chambers@det.nsw.edu.au](mailto:ian.chambers@det.nsw.edu.au)

### Literacy continued ...

#### 1.8: Literacy Learning and Teaching in the Classroom: Using development assessment to guide literacy learning & teaching across the curriculum

##### CEC

This professional development opportunity aims to assist teachers build a learning community to share and extend their current understandings and practices of developmental assessment and literacy learning and teaching. Teachers will be asked to teach groups of students behind a one way viewing screen or in the classroom for critical analysis by their colleagues.

Project manager: Rhonda Hoare  
[wwlit@webfront.net.au](mailto:wwlit@webfront.net.au)

#### 1.9: Supporting Effective Literacy Strategies

##### AIS

The program consists of professional development courses delivered online for teachers to enhance their classroom skills in support of successful literacy development by students.

It will include electronic publication of literacy classroom support materials for teachers to use to enhance their confidence in literacy teaching and provide internet links to other literacy support resources. The website will also provide professional development support for teachers to continue to focus on literacy beyond their current focus on the early and middle years.

Project manager: Meredith Howard  
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#### 1.10: Pilot of the *Stepping Out* Professional Development Resource

##### CEC

The project involves training selected teachers to be tutors in the *Stepping Out* resource. Training will be conducted over a seven-day period, at the end of which, these teachers will be qualified to implement the *Stepping Out* modules in their own classrooms as well as to present the modules and provide support to other teachers within their own schools.

Project manager: Berenice Kerr  
[bkerr@lism.catholic.edu.au](mailto:bkerr@lism.catholic.edu.au)

## 2. Numeracy

### 2.1: 123 Count With Me ...

#### DET

CD Rom and Online learning will provide training and development opportunities for teachers K-2 in rural schools to gain a thorough understanding of the Learning Framework within Count Me In Too program. Teachers will have opportunities to observe student's mathematical thinking, teacher dialogue and access to an academic whose role will be a mentor within the CD Rom. Links to On line discussions and Internet sites will be built into the CD Rom.

Project manager: John Pettit  
[john.pettit@det.nsw.edu.au](mailto:john.pettit@det.nsw.edu.au)

### 2.2: Count Me In Too — Expanding the Framework

#### DET

School teams (generally all teachers in one stage) will be involved in trialling tasks and teaching activities related to the areas of Space and Measurement. Academic researchers will support this process and selected district consultants facilitate professional meetings as necessary. The products of this research-in-action will be incorporated into an expanded learning framework for Count Me In Too. The project changes teachers' expectations of students by focused observation of students' thinking strategies. This is linked to teaching activities designed to build on the most developed strategies students currently have.

Project manager: Peter Gould  
[peter.gould@det.nsw.edu.au](mailto:peter.gould@det.nsw.edu.au)

### 2.3: Valuing Mental Computation Online

#### DET

A self-paced module of professional development activities to investigate the teaching of mental computation supported with a monitored bulletin board. The online delivery of Valuing Mental Computation will make use of vector-based animations.

Project manager: Peter Gould  
[peter.gould@det.nsw.edu.au](mailto:peter.gould@det.nsw.edu.au)

### 2.4: Count Me In Too — Indigenous Students

#### DET

School teams will be involved in semi-structured diagnostic interviews to determine the thinking strategies being used by indigenous students to solve mathematics questions. The district mathematics consultant and the Aboriginal Education Assistant will support the school team in developing relevant teaching activities. The teaching activities will be used to build on the most efficient solution strategies each student demonstrates. A school-based professional development model using relevant district consultants for facilitation will focus on the observation of students' thinking strategies. This will link to appropriate teaching activities designed to build on the most developed strategies these students currently have.

Project manager: Peter Gould  
[peter.gould@det.nsw.edu.au](mailto:peter.gould@det.nsw.edu.au)

### Numeracy continued . . .

#### 2.5: Focus on Numeracy K-8

##### CEC

Through the facilitation and support of an external consultant reference group committee who will coordinate clusters of school communities to develop School Numeracy Plans.

Key Reference Numeracy Teachers will be in schools to focus on classroom strategies that will work to improve numeracy skills with the emphasis on building up the internal expertise within the school in a practical, hands-on approach.

Project manager: Anne-Maree Kofod  
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#### 2.6: Building on to Learn

##### AIS

This project will provide support for teachers to explore their beliefs and understandings of how students develop their understanding of mathematical concepts. It will explore ways of supporting these findings through their teaching program and support this through classroom action research. The findings from the project will be collated and published online.

Project manager: Jan Stone  
[jstone@aisnsw.edu.au](mailto:jstone@aisnsw.edu.au)

#### 2.7a: Assessment of Outcomes for Stages 2 and 3 in Numeracy

##### AIS / CEC / DET

Materials will be designed to provide profiles of students achieving Stage 2 and Stage 3 outcomes. The materials will be designed for use by teachers when assessing the achievement of syllabus stages and outcomes by an individual student or group of students.

Project manager: Ian Chambers  
[ian.chambers@det.nsw.edu.au](mailto:ian.chambers@det.nsw.edu.au)

#### 2.7b: Consistency of Outcomes in Stages Assessment in Numeracy (COSA)

##### DET

This project will support the implementation of materials designed to assist teachers to assess student achievement against stage outcomes standards in numeracy.

- DET schools will be supported for within-school and across-school professional dialogue and sharing.
- District Literacy Teams will be supported to promote professional dialogue and sharing with schools across and between districts.
- On-line availability of materials and examples of best practice.

Project manager: Ian Chambers  
[ian.chambers@det.nsw.edu.au](mailto:ian.chambers@det.nsw.edu.au)

## 3. Information Technology

### 3.1: Support for Teachers of New HSC Syllabuses of Software Design and Development (SDD) and Information Processes and Technology (IPT)

#### AIS / DET

This project will support teachers to effectively implement the syllabuses of Software Design and Development (SDD) and Information Processes and Technology (IPT). The project provides four main components:

- Teachers will be able to use an online self-assessment tool to identify areas of professional development need and match to relevant opportunities for further study offered by universities, TAFE and other providers.
- Teachers will be able to participate in a one-day workshop held in venues across NSW. The workshops, with a comprehensive support document, will focus on teaching strategies to design, facilitate and assess student-centred, project-based learning.
- A series of online conferences will reinforce the workshops and establish local networks of IPD/SDD teachers for collaboration and ongoing support.
- A project best-practice report will also be developed.

This is a collaborative project but the support for access to the various aspects of the project will vary for Department, Diocesan and Independent teachers.

Project manager: Lyndall Foster  
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### 3.2: Using Learning Technologies In English, PDHPE, HSIE and Primary

#### AIS / CEC / DET

The projects will use mixed mode delivery with local workshops, video, online resources and program support, learning partner and workplace learning.

They will support teachers in the development of a project incorporating computer and information technology in the student learning process.

Teachers will be able to integrate the use of computer and information technology into the learning and teaching of their subject area.

Project manager: John Pettit  
[john.pettit@det.nsw.edu.au](mailto:john.pettit@det.nsw.edu.au)

### Information technology continued ...

#### 3.3: Supporting Online Learning: Learning to Teach and Learn Online

##### DET

This project will focus on good practice in online teaching and facilitate discussion on how online learners can be supported. It will deal with the issues surrounding assessment in online learning environments.

It will explore the role of critical friend and introduce teachers to a range of supporting technologies. Teachers will have hands on experience with video conference, video streaming, set top video and MOO environments in order to evaluate their effectiveness in promoting discussion and identify optimum ways of using each environment.

Project manager: John Pettit  
[john.pettit@det.nsw.edu.au](mailto:john.pettit@det.nsw.edu.au)

#### 3.4 : Consistent Teacher Judgement — Online

##### DET

The program centres on the concept of teams of teachers engaging in collaborative assessment of student work products online. Through structured questioning and constructive feedback teachers move through a process of inquiry and analysis of student achievement of stage outcomes.

The project will focus on improving student learning outcomes at various transition points with particular attention to Stages 3 and 4. Teachers will use a range of strategies to develop consistency of judgement around syllabus outcomes. They will work collegially in school-based enquiry methods over an extended period.

The program will use mixed mode delivery with local workshops, video conferencing and other online environments. Skills developed will include use of appropriate technology and a range of tools to enhance pedagogy. These include Strategic Questioning, NSN Protocols, critical reflection, giving and receiving constructive feedback and using assessment data to inform the development of teaching and learning programs.

Project manager: John Pettit  
[john.pettit@det.nsw.edu.au](mailto:john.pettit@det.nsw.edu.au)

### 3.5: Incorporating *Information Literacy* into the School Curriculum

#### AIS

The program will promote awareness of collaborative approaches that can be utilised by teachers and teacher-librarians to enhance student information research skills.

It will provide professional development opportunities for teachers that will familiarise them with the New Technologies New Literacies CD ROM resource and support them to implement an information skills project.

The project will provide teachers with support during school based projects that involve the implementation of whole school and/or subject specific information skills programs.

Project manager: Estelle Lewis  
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### 3.6: Quality in Learning and Teaching (QUILT)

#### CEC

This project will cater to the needs of 587 fulltime teachers who have been teaching in excess of ten years. Through professional development programs, it will enable teachers to increase their awareness of best practice and subsequently enable them to further develop programs and assessment schedules that will raise the achievement of student outcomes in relation to syllabus documents.

It is anticipated that teachers targeted in the Project will become involved in the development of school based and system initiated curriculum support materials, especially in the areas of Literacy and Numeracy, Assessment, and the integration of Learning Technologies into the classroom.

Project manager: Patricia Hales  
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### 3.7: Using Multimedia Technologies with Indigenous Students

#### DET

This project will focus on multimedia as communication, drawing on emerging evidence of the power of multimedia to engage Aboriginal students and enhance their learning outcomes. It will give teachers the skills and understanding to teach and promote local and global communication in the school, community and across state and national boundaries.

Project manager: John Pettit  
[john.pettit@det.nsw.edu.au](mailto:john.pettit@det.nsw.edu.au)

### Information technology continued . . .

#### 3.8: Linking Syllabus Outcomes and Information Skills

##### DET

This project will provide the foundations for a shared professional focus on the ways in which syllabus outcomes can be achieved by using an information skills process approach. Teacher-librarians will work with subject teachers (secondary) or classroom teachers (primary) in an online training program. Each online training course would focus on a specific KLA or subject area. Online facilitators (one a teacher-librarian and one a subject specialist) will provide support to participants.

During the course teacher-librarians and teachers will work collaboratively to:

- identify links between syllabus outcomes and information skills
- utilise an information process approach in teaching and learning activities to assist students to work towards the achievement of syllabus outcomes
- build a bank of exemplar teaching and learning activities that use an information process approach to assist students to work toward the achievement of syllabus outcomes. The exemplars will be posted on the web site.

Project manager: Michelle Ellis  
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#### 3.9: Acquiring Information Literacy

##### CEC

- An annual two-day conference led by a keynote speaker will be held for 20 teachers and key Diocesan personnel.
- Visits by a Diocesan trainer to each of the schools to demonstrate and explain information literacy, and to assist teachers in integrating technology into their classrooms.

Project manager: Ken Rodwell  
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#### 3.10: “Raising the Bar” — An Integrated Approach to Teacher Professional Development

##### CEC

“Raising the Bar” is a twelve month project aimed at updating and improving teachers’ skills in technology and the development of curriculum and system level support materials for the successful integration of learning technology into the classroom.

This initiative involves the provision of teacher school-based professional development, attainment of national (based on the Australian Qualifications Framework) and international recognised qualifications, and the development of curriculum and system level support materials, both on-line and in hard copy.

Project manager: Paul Meldrum  
[pmeldrum@ceo.parra.catholic.edu.au](mailto:pmeldrum@ceo.parra.catholic.edu.au)

### 3.11: Teaching at a Distance using Emerging Technologies

#### CEC

The project will require intensive skill development for teachers in innovative teaching practice and information technology.

The project will focus on experienced classroom teachers in rural schools to be able to deliver courses and programs, using current and emerging technologies, otherwise unavailable to students in such areas.

Project manager: Berenice Kerr  
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### 3.12: Reinvigorating Long-Serving Teachers

#### CEC

The project will focus in its first year on building the confidence and effectiveness of teachers in the group and in the second year on the skills of IT and integration of IT into teaching and learning programs.

Part 1: Three day intensive program – reinvigoration/confidence building.

Part 2: Four days – one per term. IT skills and classroom applications including between session activities/networking and use of a mentor in the school.

Project manager: Helen Cannon  
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### 3.13: Analysis and Strategic Planning for IT in Teaching and Learning

#### CEC

- Project developed by the TAS consultant in collaboration with Catholic Schools Office education officers and University of Sydney/UWS
- Literature search and development of research methodology and instruments and on line consultation
- Use of focus groups to surface issues and identify key local problems
- Survey of school communities K-12
- Strategic planning to address survey findings

Project manager: Mark Askew  
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### Information technology continued ...

## 3.14: Teaching Futures

### CEC

#### Developing Shared Vision and Professionalism

The teaching profession at the present time is characterised by a high degree of uncertainty. This uncertainty ranges from general feelings of unease about the pace of change in schools and the demands on teachers, to more specialised concerns about appropriate curriculum design, pedagogy and assessment practice.

The forces of change impacting on classroom life call for a refocusing of teachers' vision of their work and their sense of professionalism. We believe that by recognising these realities and providing appropriate opportunities for professional development, teachers will be better equipped to deal with change and to help shape the future with their students.

The outcomes of the project will be achieved over the course of three years through the implementation of a phased process, incorporating components of:

- orientation and design
- training and development
- focused research and application
- review, reflection and strategic planning.

Project manager: Mary Dorrian  
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## 4. Mathematics

### 4.1: Sharing Professional Knowledge in Maths 7-12

#### DET

This project will provide the foundations for a shared professional focus on incremental improvement to quality teaching in mathematics. Lesson-study can be used to share the wisdom of practice and to build a professional resource of shared classroom-tested lesson plans. The project can provide support for all levels of mathematics teaching 7-12.

School-based lesson study groups provide professional development using a model based on teacher-as-researcher with products available in electronic form to the broader teaching community. The facilitation process can also be provided electronically. Lesson-study reports published on a website act as models for other groups starting out with lesson study as well as forming a databank of professional knowledge.

Project manager: Peter Gould  
[peter.gould@det.nsw.edu.au](mailto:peter.gould@det.nsw.edu.au)

### 4.2: Collaborative HSC Mathematics Support

#### AIS / CEC / DET

Training of fifty facilitators to provide support to Local Interest Group (LIG) meetings for up to two mathematics teachers from every government and non-government high school.

Additional development to occur with revision of Mathematics 2 Unit, Extension 1 and Extension 2.

Facilitated local professional development (under the current LIG structure) in 2001 and 2002.

Project manager: John Pettit  
[john.pettit@det.nsw.edu.au](mailto:john.pettit@det.nsw.edu.au)

### 4.3: Development-Based Assessment and Instruction

#### CEC

This project is consistent with new trends in Australian education concerning standards-based performance indicators and the identification of course performance descriptors to describe students' understandings.

The project uses the professional development model referred to as ITAM (Improving Teaching Approaches to Mathematics), developed at the University of New England. Teachers: attend 2-day workshops; develop and trial items for use with their students; analyse and report on their findings to teachers in their own school and in different schools; are visited by support staff who work with teachers in their classrooms; are linked by the web to teachers in different schools, consultative and support staff; access appropriate support and information materials including most recent and relevant readings.

Project manager: Paul Holman  
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### Mathematics continued ...

#### 4.4: Assessment in an Outcomes-Based, Standards-Referenced Framework

##### AIS

The project will: promote awareness of assessment within an outcomes based and standards referenced framework. In particular it will focus on the principles of effective and informative assessment within the overall teaching / learning cycle. The program will provide opportunities for professional development for teachers through school based action research and development (project schools) in the development, trialing and evaluation of assessment strategies in mathematics. It will also plan geographically appropriate local forums where teachers from project schools can share their learnings with other teachers from within the sector.

Project manager: Alma Mansfield  
[amansfield@aisnsw.edu.au](mailto:amansfield@aisnsw.edu.au)

#### 4.5: Reflection, Empowerment and Learning in Mathematics (REAL Maths)

##### CEC

This two year project will assist:

- schools develop a shared vision of mathematics, mathematical learning leading to improved practice
- to encourage reflection on practice to guide future directions
- the empowerment of teachers and students as mathematical learners – connecting mathematical ideas, solving mathematical problems, sharing thinking and learning
- the development of teacher and school networks promoting mathematical teaching and learning.

Project manager: Jan Glazier  
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## 5. Science

### 5.1: K-6 Science and Technology Support

#### AIS / CEC / DET

The project will produce teacher reference materials that explain the content relevant for each stage of the six syllabus content strands of:

- Built Environments
- Earth and its Surroundings
- Information and Communication
- Living Things
- Physical Phenomena
- Products and Services.

In addition, the project will produce four professional development modules, one for early stage 1, stage 1, stage 2 and stage 3. Each module will provide practical ideas and strategies for using the teacher reference materials and for implementing the learning process outcomes of:

- investigating
- designing and making
- using technology.

A fifth professional development module will address school planning with a specific focus on developing whole school scope and sequence plans for science and technology.

This project will be collaboratively developed but will involve different implementation models for Department, Diocesan and Independent schools.

Project manager: Jim Scott  
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### 5.2 Teaching the Science Stages 4-5 Syllabus

#### AIS / CEC / DET

The project will produce up to eight professional development modules. All modules will include a contemporary view of how students learn science. The activities will be based on actual classroom work developed from the new syllabus. There will be video snapshots of teachers at work and activities that assist teachers to deconstruct their own practice. The expectation is that teachers will incorporate some of what they have seen into their own practice.

Each module will emphasise at least one element of effective teaching for learning in science. The focus areas will include:

- programming
- different approaches to teaching and learning in science, including working individually and in teams and working scientifically (investigating, problem solving and critical thinking)
- literacy issues in science
- using computer-based technologies.

The modules will be developed from a collaborative effort involving classroom teachers and university personnel with particular subject expertise.

The modules will be written to enable delivery by a variety of means ranging from self-paced individual learning to facilitated workshops.

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[jim.scott@det.nsw.edu.au](mailto:jim.scott@det.nsw.edu.au)

### Science continued ...

#### 5.3: TILT for Science Teachers

##### DET

The project is to increase the participation of science teachers in the science component of the TILT Plus program.

The planned outcomes are:

- increased knowledge and understanding of how computer-based technologies can be used to enhance teaching and learning in science
- improved capacity and willingness to use computer-based technology as learning tools in the classroom
- improved student learning outcomes in science.

Project manager: John Pettit  
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#### 5.4 Teaching the Stage 6 Science Syllabuses

##### AIS / CEC / DET

This project will produce a professional development module for each of the new Stage 6 Biology, Chemistry, Earth and Environmental Science, Physics and Senior Science syllabuses.

Each module will include background information and resources for teachers to assist them with the new content in the syllabuses.

All the new syllabuses require students to develop particular skills relating to the planning, conducting, assessing and evaluating and reporting of practical experiences. These requirements will be addressed in the modules and advice about how to teach these will be included.

The modules will be developed from a collaborative effort involving classroom teachers and university personnel with particular subject expertise.

The modules will be written to enable delivery by a variety of means ranging from self-paced individual learning to facilitated workshops.

Project manager: Estelle Lewis  
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## 6. Vocational Education and Training

### 6.1: Supporting Teachers to Deliver Quality Accredited Vocational Education in NSW Secondary Schools as Part of the New HSC

#### AIS / CEC / DET

- Teachers will be trained and accredited to deliver units of competency from national training packages in one or more industry areas. Some components of training will be accessible on line.
- Accredited VET teachers will be able to access industry placements to update and refresh their skills and maintain currency.
- Accredited VET teachers will be able to access ongoing professional development in competency-based teaching and workplace assessment.
- Accredited VET teachers will be able to establish peer mentor relationships with industry, VET or education sector colleagues to support their learning in, and delivery of, vocational education.

Project manager: Kaye Waddell  
[kaye.waddell@det.nsw.edu.au](mailto:kaye.waddell@det.nsw.edu.au)

### 6.2: Assessment and Workplace Training and Accreditation

#### CEC

The purpose of the project is to develop a process to provide an opportunity for all vocational education teachers in schools to gain Certificate IV in Assessment and Workplace Training.

The project will involve a flexible, non-face-to-face assessment process.

Project manager: Paul Rodney  
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### QTP New South Wales

#### Commonwealth Department of Education, Training and Youth Affairs

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#### Disclaimer

"The views expressed herein do not necessarily represent the views of the Commonwealth Department of Education, Training and Youth Affairs."

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