EDUC90860 Science and Technology in Practice

Credit Points:	12.5
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2016, Parkville This subject commences in the following study period/s: Semester 1, Parkville - Taught on campus.
Time Commitment:	Contact Hours: 36 hours Total Time Commitment: 170 hours
Prerequisites:	A score of at least 75 in EDUC90778, and previous tertiary studies in science, as deemed sufficient by the Subject Coordinator.

Subject	Study Period Commencement:	Credit Points:
EDUC90778 Primary Mathematics Education 1	February	12.5

Corequisites:

Subject	Study Period Commencement:	Credit Points:
EDUC90489 Professional Practice and Seminar Prim 3	Semester 1, Semester 2	12.5

Recommended Background Knowledge:	None

Non Allowed Subjects:

Subject	Study Period Commencement:	Credit Points:
EDUC90376 Science and Technology Education	February	12.5

Core Participation Requirements:

For the purposes of considering request for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Student Support and Engagement Policy, academic requirements for this subject are articulated in the Subject Overview, Learning Outcomes, Assessment and Generic Skills sections of this entry. It is University policy to take all reasonable steps to minimise the impact of disability upon academic study, and reasonable adjustments will be made to enhance a student's participation in the University's programs. Students who feel their disability may impact on meeting the requirements of this subject are encouraged to discuss this matter with a Faculty Student Adviser and Student Equity and Disability Support: http://services.unimelb.edu.au/disability

Coordinator:	Dr Christine Redman
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Subject Overview:

This subject will develop and consolidate teacher candidates' understanding of major science concepts through an examination of children's everyday experiences. This development in science conceptual understandings will occur through the dynamic exploration of phenomena such as weather, motion and food, and understandings of students' motivations to learn science, and their curiosity about the natural world.

Teacher candidates will be introduced to key resources for science teaching in the form of activities, artefacts and technologies that will help them;

1 plan for teaching science and technology concepts effectively in the classroom and
2 respond to the learning needs, curiosity and interests of primary students and
3 design a sequence of learning experiences

Teacher candidates will also be assisted to design and test, and then evaluate and refine a sequential, balanced teaching unit in a particular science topic area for primary students. Teacher candidates will be assisted to become familiar with, and know how to utilise, the

	educational research that addresses science conceptual teaching challenges and appropriate pedagogical approaches that respond to the well - documented learning needs of primary aged students. Working with experts, and peers, the teacher candidates will collegiately design, ready for implementation, a large well-resourced unit.
Learning Outcomes:	At the conclusion of this subject teacher candidates will be able to: # Explain key scientific concepts # Understand conceptual challenges in science # Develop appropriate curriculum approaches and materials that respond to student learning needs and interests # Appreciate the nature of science and its reliance on evidence # Plan and conduct effective science teaching in primary classrooms # Use Information and Communication Technologies that support science learning/teaching.
Assessment:	Sequenced development of a unit of work (2000 words) targeting key science concepts, due mid semester, 50% Report on implementation of a unit (2000 words), end of semester 50% This subject has a minimum hurdle requirement of 80% attendance at all tutorials, seminars and workshops.
Prescribed Texts:	None
Breadth Options:	This subject is not available as a breadth subject.
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Generic Skills:	On completion of this subject, teacher candidates will have the knowledge, skills and understanding to enable them to: # Be skilled communicators who can effectively articulate and justify their practices as knowledgeable agents of changes; # Be flexible and able to adapt to change through knowing how to learn; # Understand the significance of developing their practice on the basis of research evidence; # Work in teams with skills in cooperation, communication and negotiation; # Be independent of mind, responsible, resilient, self-regulating; # Have a conscious personal and social values base.