



School of Education

EDST6922  
Science Method 1

Term 1, 2020

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## 1. LOCATION

Faculty of Arts and Social Sciences  
School of Education  
EDST6922 Science Method 1 (6 units of credit)  
Term 1 2020

## STUDENT LEARNING OUTCOMES

Outcome	Assessment/s	
1	Identify foundational aspects and structure of the <i>NSW Science K-10 Syllabus</i> and the depth of subject knowledge required to implement the syllabus with specific emphasis on stages 4 and 5	1,2
2	Evaluate how student characteristics affect learning and evaluate implications for teaching students with different characteristics and from diverse backgrounds	1,2
3	Use a range of strategies to plan and teach effective lessons to engage all students, address relevant syllabus outcomes and ensure a safe learning environment	1,2,3
4	Plan teaching strategies which effectively communicate scientific thinking and problem-solving techniques; planning, conducting and communicating results of investigations; and central ideas in Science and common student misconceptions	1,2

3.4.1	Demonstrate knowledge of a range of resources including ICT that engage students in their learning.	1,2,3
3.5.1	Demonstrate a range of verbal and non-verbal communication strategies to support student engagement.	1,2,3
3.6.1	Demonstrate broad knowledge of strategies that can be used to evaluate teaching programs to improve student learning.	2
4.2.1	Demonstrate the capacity to organise classroom activities and provide clear directions.	1,3
4.4.1	Describe strategies that support students' wellbeing and safety working within school and/or system, curriculum and legislative requirements.	1
5.1.1	Demonstrate understanding of assessment strategies, including informal and formal, diagnostic, formative and summative approaches to assess student learning	2
6.3.1	Seek and apply constructive feedback from supervisors and teachers to improve teaching practices.	2,3
7.1.1		3

#### NATIONAL PRIORITY AREA ELABORATIONS

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Priority area

Assessment/s



## 6. COURSE CONTENT AND STRUCTURE

Module	Lecture	Tutorial
1	<p><b>Introduction to course</b></p> <p>Introduction to structure and requirements            Developing contexts: (1) making Science relevant in the broader school curriculum and (2) incorporating the nature of scientific thinking, the history of science and skills for working scientifically            Physical, social and intellectual development of students and how this affects their engagement in learning</p>	<p>What should be the nature of Science teaching in contemporary schools?            Research on how students learn</p> <p><b>Nano teaching</b></p>
2	<p><b>Stage 4/5 Syllabus</b></p> <p>Transition from Stage 3 to Stage 4 Science            Deconstructing the Stage 4/5 Syllabus: structure,eir en</p>	

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Using data loggers



## 7. RESOURCES

### Textbook details

Each student is required to obtain from the NESA website the following documents: Stage 4/5 Science Syllabus and the Stage 4/5 Support Documents.

It is not necessary to purchase Science textbooks for this course. Textbooks will not usually be used during tutorials.

### Optional Junior Textbook

Jenny Zhang, Diane Alford, David McGowan, Craig Tilley (2013) Oxford Insight Science 9 &10 (eBook version)

### Additional readings

Anstey, M. & Bull, G. (2006) *Teaching and learning multiliteracies: Changing times, changing literacies*. Curriculum Press, Melbourne.

Attwood, B. (2005), *Telling the truth about Aboriginal history*. All and Unwin, Crows Nest.

**Bryson, B. (2004) A Short History of Nearly Everything, Black Swan, London**

Finger, G., Russell, G., Jamieson-Proctor, R. & Russell, N. (2006) *Transforming Learning with ICT Making IT Happen*. Pearson Australia

Gibbons, P (2002) *Scaffolding language, scaffolding learning: Teaching second language learners in the mainstream classroom*. Portsmouth, Heinemann

Hazzard, J. (2004) *The Art of Teaching Science: Inquiry and Innovation in Middle School and High School*

Henderson, R. (2012).





## Assessment Task 2 -



UNSW SCHOOL OF EDUCATION  
 FEEDBACK SHEET  
 EDST6922 SCIENCE METHOD 1

Student Name:

Student No:

Assessment Task 1 – Lesson Plan, Stage 4

SPECIFIC CRITERIA	(-)  (+)				
<p><b>Understanding of the question or issue and the key concepts involved</b>            Rationale for lesson plan addresses the questions:            What do I want the students to learn?            Why is it important?            What strategies will I use?            What assessment for learning strategies will I use to monitor progress?            Rationale supported using references indicating your professional reading</p>					
<p><b>Depth of analysis and/or critique in response to the task</b>            appropriate topic choice for the year group            appropriate choice of outcomes and lesson content            appropriate choice of context            demonstrates knowledge of effective teaching and learning strategies            appropriate selection of student activities            depth of knowledge of the NSW syllabus documents and other relevant curriculum documents            links between syllabus outcomes and the chosen activities evident</p>					



Microteaching Feedback Form for Pre-service Teacher

**STUDENT TEACHER**

Name: \_\_\_\_\_ zID: \_\_\_\_\_ Date: \_\_\_\_\_

Details			
Method		Topic/level	
Standards		Comments	

A. Teachers know their