TEAC 7099 PRIMARY SCIENCE & TECHNOLOGY

Credit Points 10

Legacy Code 101583

Coordinator Lesley Gough (https://directory.westernsydney.edu.au/search/name/Lesley Gough/)

Description This subject will focus on developing scientific and technological pedagogical content knowledge appropriate for teaching science and technology for students in the K-6 years. It models appropriate pedagogical and pedagogical content knowledge. Students use collaborative social learning situations to develop content knowledge, along with interpersonal and communication skills. The pedagogies modelled will be inclusive and demonstrate how scientific and technological learning experiences can be developed to cater for the needs of the diverse groups of student learners in primary schools. Students learn about engaging science and technology activities that empower primary school students and create futures for students where the capacity to engage with and critically evaluate scientific and technological activity will become increasingly necessary. Students focus on themselves as learners and reflect on the implications of their learning and the learning of others in their future professional practice. This subject is included in the Development Phase of the Master of Teaching program.

School Education

Discipline Teacher Education: Primary

Student Contribution Band HECS Band 1 10cp

Check your fees via the Fees (https://www.westernsydney.edu.au/currentstudents/current_students/fees/) page.

Level Postgraduate Coursework Level 7 subject

Restrictions

Students must be enrolled in the 1691 Master of Teaching (Birth-12 Years), 1781 Master of Teaching (Primary), or 1783 Master of Teaching (Birth - 5 Years/Birth - 12 Years).

Learning Outcomes

On successful completion of this subject, students should be able to:

1. Explain central concepts in science and technology and understandings of the processes of investigating, designing and making and using technology.
2. Demonstrate research-based knowledge of the pedagogies appropriate for science and technology education in primary schools.
3. Apply appropriate strategies to create a positive environment supporting student effort and learning and to engage students as well as address student needs when implementing learning experiences in science and technology.
4. Implement learning experiences that demonstrate an in-depth knowledge of the NSW Syllabus for the Australian Curriculum: Science K-10 (incorporating Science and Technology K-6), including Aboriginal and Torres Strait Islander perspectives, and a range of pedagogies appropriate for science and technology education in primary schools
5. Demonstrate proficiency and the capacity to use a variety of ICTs (including IWBfs, digital cameras/microscopes etc. and a variety of software) in the context of science and technology education.
6. Identify and articulate clear learning goals in preparing learning experiences for science and technology education that are appropriate for the cognitive, social and language abilities of students in primary schools.
7. Plan and implement coherent lessons and lesson sequences that are designed to engage students and improve learning outcomes in science and technology.
8. Utilise knowledge of a range of resources appropriate to science and technology education.
9. Reflect on the process of production involving the designing and making of an artefact for a Primary science and technology classroom, and consider how this process has influenced their attitudes towards teaching science and technology.

Subject Content

1. The nature of science and technology as 'disciplines and the strategies of investigating, designing and making and using technology'
2. The nature of the NSW Science and Technology K-6 syllabus, its outcomes for Skills: (Working Scientifically, Design and Production), Knowledge and Understanding Strands (Digital Technologies, Physical World, Earth and Space, Living World, Material World).
3. Affective issues in science and technology education – gender, culture, attitudes, beliefs etc.; responding to student perceptions and attitudes towards Science and Technology.
4. Problem solving, investigating, designing and making in science and technology.
5. Understandings of concepts and concept development and strategies for developing sound conceptual understandings and skills.
6. The structure, aims and objectives, outcomes and content of the NSW Science and Technology K-6 syllabus.
7. Preparing teaching and learning experiences and programming for effective science and technology education.
8. The role of ICTs in science and technology education.
9. Integrating science and technology in other curriculum areas and for integrating other curriculum areas into science and technology.
10. Practical experiences associated with a number of content strands in science and technology including Digital Technologies.

Assessment

The following table summarises the standard assessment tasks for this subject. Please note this is a guide only. Assessment tasks are regularly updated, where there is a difference your Learning Guide takes precedence.

Type	Length	Percent	Threshold	Individual/ Group Task
Applied Project	10 minutes, 800 words	50	N	Individual
Professional Task	3,000 words	50	N	Individual

Prescribed Texts

- NSW Syllabus for the Australian Curriculum: Science and Technology K-6 Syllabus. Retrieved from http://syllabus.bos.nsw.edu.au/

- Skamp, K., & Preston, C. (2021). *Teaching primary science constructively* (7th ed.). Cengage Learning Australia.

Teaching Periods

Autumn (2024)

Bankstown City

On-site

Subject Contact Lesley Gough (https://directory.westernsydney.edu.au/search/name/Lesley Gough/)

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=TEAC7099_24-AUT_BK_1#subjects)

WSU Online TRI-2 (2024)

Wsu Online

Online

Subject Contact Lesley Gough (https://directory.westernsydney.edu.au/search/name/Lesley Gough/)

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=TEAC7099_24-OT2_OW_2#subjects)

Spring (2024)

Bankstown City

On-site

Subject Contact Lesley Gough (https://directory.westernsydney.edu.au/search/name/Lesley Gough/)

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=TEAC7099_24-SPR_BK_1#subjects)