

Unit Outline (Higher Education)

Institute / School: Institute of Education, Arts & Community

Unit Title: SCIENCE CURRICULUM 2

Unit ID: EDBED3129

Credit Points: 15.00

Prerequisite(s): (EDBED3029)

Co-requisite(s): Nil

Exclusion(s): (EDBED3020 and EDDDE3102)

ASCED: 070301

Description of the Unit:

This unit follows on from Science Curriculum 1 providing Pre-Service Teachers (PSTs) with further opportunities to development their confidence and competence in teaching Science at a secondary level. Within the theme of making Science relevant and interesting for all students it links Science and language; aims for a critical understanding of curriculum issues and curriculum planning skills including excursions and exploration of Science resources; the effective use of ICT for learning in Science; and knowledge of assessment issues and strategies.

Grade Scheme: Graded (HD, D, C, P, MF, F, XF)

Work Experience:

Not wholly work experience: Student is not undertaking work experience in industry or student is undertaking work experience in industry where learning and performance is directed by the provider.

Placement Component: No

Supplementary Assessment: Yes

Where supplementary assessment is available a student must have failed overall in the Unit but gained a final mark of 45 per cent or above, has completed all major assessment tasks (including all sub-components where a task has multiple parts) as specified in the Unit Description and is not eligible for any other form of supplementary assessment

Course Level:

Level of Unit in Course	AQF Level of Course					
	5	6	7	8	9	10
Introductory	■	■	■	■	■	■
Intermediate	■	■	■	■	■	■
Advanced	■	■	✓	■	■	■

Learning Outcomes:

Knowledge:

- K1.** Consider the nature of Science as a constantly developing field of knowledge and the processes of scientific thinking which support this development.
- K2.** Examine and apply contemporary curriculum policies and guidelines relevant to teaching and assessing Science in the middle years.
- K3.** Explore different approaches to assessment and their underlying philosophies, be able to apply these in practical situations, and examine their effectiveness.
- K4.** Examine a range of theoretical and pedagogical approaches, including constructivism, relevant to learning and teaching in Science and how they can be applied to practice.
- K5.** Know about a range of effective learning, thinking and teaching strategies related to Science.
- K6.** Apply critical, creative and practical understandings of the effective use of information technology in Science curriculum.
- K7.** Explore a range of resources to engage Science students in learning.
- K8.** Apply ethical practices and safe conduct in relation to Science practices.
- K9.** Identify how literacy and numeracy skills can be developed among students in Science.

Skills:

- S1.** Plan and construct teaching sequences which address current scientific understandings; the links between Science and society; students diverse backgrounds, abilities and needs; and curriculum policy requirements.
- S2.** Use a variety of effective teaching and learning strategies and resources including technology in teaching practice
- S3.** Articulate and justify teaching practices by making thoughtful connections to theory.
- S4.** Communicate effectively with learners and colleagues.
- S5.** Apply literacy and numeracy teaching strategies in the Science teaching area.

Application of knowledge and skills:

- A1.** Develop a teaching journal that provides evidence of the planning of learning sequences and reflection on practice including specific key teaching skills.
- A2.** Design a curriculum unit based on constructivist theory, contemporary curriculum guidelines, inclusion strategies and relevant instructional models.
- A3.** Research assessment strategies and construct an assessment plan related to a curriculum unit.

Unit Content:

Topics to be covered

- Examining Science as a field of human knowledge and endeavour, the links between Science and other areas of knowledge and between the traditional Science disciplines.
- Linking learning theories to curriculum planning, practice and assessment approaches.

- Further development and critical evaluation of teaching strategies in relation to constructivist theory and the achievement of authentic learning by individual students.
- Exploring, creating and organising resources and connecting to professional and discipline-based networks and community.
- Evaluation, assessment and feedback approaches.

Learning Task and Assessment:

Learning Outcomes Assessed	Assessment Tasks	Assessment Type	Weighting
K1, K2, K3, K4, K5, K6, K7, K8 S1, S2, S3, S4, S5 A1 APST 2.1, 2.2, 2.3, 2.5 3.1, 3.2, 3.3, 3.4, 3.5 4.1, 4.2, 4.4 5.1	Classroom observations, lesson plans, reflections on lessons, science department culture, and individual research and development of key teaching skills.	Preparation of a Teaching Journal	30-40%
K1, K2, K3, K4, K5, K6, K7, K8, K9 S1, S2, S3, S5 A2 APST 2.1, 2.2, 2.3, 2.5 3.1, 3.2, 3.3, 3.4 4.1, 4.2, 4.4	Preparation of a unit of work based on constructivist theory, contemporary curriculum frameworks, inclusion strategies and relevant Instructional Models.	Unit of Work	40-50%
K2, K3, K6, K10 S3 A3 APST 2.1, 2.3, 5.1	Research, preparation, analysis and commentary on assessment approaches used for the unit of work prepared in Assessment Task 2.	Assessment Plan	20-30%

Adopted Reference Style:

APA

Refer to the [library website](#) for more information

Fed Cite - [referencing tool](#)