



The University of Southern Queensland

Course specification

The current and official versions of the course specifications are available on the web at <http://www.usq.edu.au/coursespecification/current>.
Please consult the web for updates that may occur during the year.

Description: Physical Science for Teachers

Subject	Cat-nbr	Class	Term	Mode	Units	Campus
EDU	2432	79009	2, 2008	ONC	1.00	Toowoomba

Academic group:	FOEDU
Academic org:	FOE002
Student contribution band:	National Priority Teaching
ASCED code:	070103

STAFFING

Moderator: Leisa Holzheimer

OTHER REQUISITES

State law in Queensland (Australia) requires that all adults working/undertaking professional experience/researching with children under the age of 18, in the state of Queensland are required to possess a current suitability card (Blue Card). (See "Other Requirements" for further information.) Also see: <http://www.childcomm.qld.gov.au/employment/bluecard/informationSheets.html>.

RATIONALE

Teachers need to become more confident in developing learning in early childhood and primary students and to engage them in meaningful and authentic learning. They need the opportunity to investigate fundamental concepts of materials and systems in the context of the curriculum synopsis.

SYNOPSIS

This course will focus on investigation of how characteristics of materials can influence the nature of the technological products, and how systems and their associated factors have potential to impact upon local and global environments. Through exploration of simple systems, with a particular focus on movement and movement mechanisms learners will discover how a variety of systems operate and construct their own simple systems products. They will investigate curriculum resources available for teaching particular science topics, including written materials, multimedia, computer software and industry and community support services.

OBJECTIVES

The course objectives define the student learning outcomes for a course. The assessment item(s) that may be used to assess student achievement of an objective are shown in parenthesis. On completion of this course students will be able to:

1. manipulate materials and investigate how characteristics of materials can influence the nature of the technological products (Assignment 1 and 2)

2. demonstrate understanding of the way systems and their associated factors have potential to impact on local and global environments (Assignment 1 and 3)
3. understand the functioning of simple systems, with a particular focus on movement and movement mechanisms (Assignment 2 and 3)
4. select appropriate curriculum resources for teaching particular science topics, including written materials, multimedia, computer software and industry and community support services. (Assignment 1, 2 and 3)
5. Demonstrate competence in written language and scholarly writing including correct spelling, grammar, and bibliographic referencing.

TOPICS

	Description	Weighting (%)
1.	Exploration of simple systems, with a particular focus on movement and movement mechanism	20.00
2.	Physical change processes	20.00
3.	Identifying and evaluating appropriate curriculum resources available for teaching particular science topics, including written materials, multimedia, computer software and industry and community support services	20.00
4.	Identifying and addressing students understanding of physical science topics	20.00
5.	Developing and implementing teaching strategies that promote conceptual change in children	20.00

TEXT and MATERIALS required to be PURCHASED or ACCESSED

ALL textbooks and materials are available for purchase from USQ BOOKSHOP (unless otherwise stated). Orders may be placed via secure internet, free fax 1800642453, phone 07 46312742 (within Australia), or mail. Overseas students should fax +61 7 46311743, or phone +61 7 46312742. For costs, further details, and internet ordering, use the 'Textbook Search' facility at <http://bookshop.usq.edu.au> click 'Semester', then enter your 'Course Code' (no spaces).

REFERENCE MATERIALS

Reference materials are materials that, if accessed by students, may improve their knowledge and understanding of the material in the course and enrich their learning experience.

Whether you are on, or off campus, the USQ Library is an excellent source of information

<http://www.usq.edu.au/library/> . The gateway to education resources is here...

<http://www.usq.edu.au/library/faculties/education/default.htm>

Fleer, M & Hardy, T 2006, *Science for children*, 3rd edn, Pearson Education, Sydney.

Fleer, M & Jane, J 2004, *Technology for children: developing your own approach*, 2nd edn, Pearson Education, Frenchs Forest, NSW.

Peters JM & Gega PC 2006, *Concepts and inquiries in elementary science*, 5th edn, Pearson/Merrill/Pearson Education, Upper Saddle River, NJ.

Skamp, R 2007, *Teaching primary science constructively*, 3rd edn, Thomson Learning, South Melbourne.

Wenham, M 2005, *Understanding primary science*, 2nd edn, Paul Chapman Publishing, London.

STUDENT WORKLOAD REQUIREMENTS

ACTIVITY	HOURS
Assessments	50.00
Lectures	20.00
Private Study	75.00
Workshops	20.00

ASSESSMENT DETAILS

Description	Marks out of	Wtg (%)	Due date
ASSIGNMENT 1	30.00	30.00	29 Aug 2008 (see note 1)
ASSIGNMENT 2	30.00	30.00	26 Sep 2008
ASSIGNMENT 3	40.00	40.00	30 Oct 2008

NOTES

1. The examiner will advise the due dates for all assessment items.

IMPORTANT ASSESSMENT INFORMATION

- 1 Attendance requirements:
It is the students' responsibility to attend and participate appropriately in all activities (such as lectures, tutorials, laboratories and practical work) scheduled for them, and to study all material provided to them or required to be accessed by them to maximise their chance of meeting the objectives of the course and to be informed of course-related activities and administration.
- 2 Requirements for students to complete each assessment item satisfactorily:
To satisfactorily complete an individual assessment item a student must achieve at least 50% of the marks.
- 3 Penalties for late submission of required work:
If students submit assignments after the due date without (prior) approval of the examiner then a penalty of 5% of the total marks gained by the student for the assignment may apply for each working day late up to ten working days at which time a mark of zero may be recorded. No assignments will be accepted after model answers have been posted
- 4 Requirements for student to be awarded a passing grade in the course:
To be assured of receiving a passing grade a student must achieve at least 50% of the total weighted marks available for the course.
- 5 Method used to combine assessment results to attain final grade:
The final grades for students will be assigned on the basis of the aggregate of the weighted marks obtained for each of the summative assessment items in the course.
- 6 Examination information:

- There is no examination in this course.
- 7 Examination period when Deferred/Supplementary examinations will be held:
As there are no examinations in this course, there will be no Deferred or Supplementary examinations.
 - 8 University Regulations:
Students should read USQ Regulations 5.1 Definitions, 5.6. Assessment, and 5.10 Academic Misconduct for further information and to avoid actions which might contravene University Regulations. These regulations can be found at the URL <http://www.usq.edu.au/corporateservices/calendar/part5.htm> or in the current USQ Handbook.

ASSESSMENT NOTES

- 1 The due date for an assignment is the date by which a student must despatch the assignment to the USQ. The onus is on the student to provide proof of the despatch date, if requested by the examiner.
- 2 Students must retain a copy of each item submitted for assessment. This must be produced within twenty-four (24) hours of receipt of request being made by the examiner. The student must retain this copy until the grade for this course has been finalised.
- 3 In accordance with the University's assignment extension policy (Regulation 5.6.1), the examiner may grant an extension of the due date of an assignment in extenuating circumstances.
- 4 The Faculty will normally only accept assessments that have been written, typed or printed on paper-based media. The Faculty will NOT accept submission of assignments by facsimile. Students who do not have regular access to postal services or who are otherwise disadvantaged by these regulations may be given special consideration. They should contact the examiner of the course to negotiate such special arrangements.
- 5 Students who have undertaken all of the required assessments in a course but who have failed to meet some of the specified objectives of a course within the normally prescribed time may be awarded the temporary grade: IM (Incomplete - Make up). An IM grade will only be awarded when, in the opinion of the examiner, a student will be able to achieve the remaining objectives of the course after a period of non-directed personal study.
- 6 Students who, for medical, family/personal, or employment-related reasons, are unable to complete an assignment or to sit for an examination at the scheduled time may apply to defer an assessment in a course. Such a request must be accompanied by appropriate supporting documentation. One of the following temporary grades may be awarded IDS (Incomplete - Deferred Examination); IDM (Incomplete - Deferred Make-up); IDB (Incomplete - Both Deferred Examination and Deferred Make-up).
- 7 When there is more than one marker for a single item of assessment, the distributed patterns and means for the different markers will be compared and marks adjusted if necessary.
- 8 Marking criteria are provided in course material as mark sheets/guides or as part of assignment specifications.
- 9 Summative assessment items will receive a numerical score. Any ungraded assessment requirement will receive a Pass, Fail or Incomplete.

OTHER REQUIREMENTS

- 1 **IMPORTANT NOTE: Working with Children:** State law in Queensland requires that all adults (including university students, pre-service educators, trainers, vocational teachers, industry educators) working with children under the age of 18, in the State of Queensland*,

obtain approval before commencing such work. Many education courses include a practical component (professional experience, project work, research, assessment etc.) that may require engagement with children under the age of 18. It is your responsibility to ensure that you possess a current suitability card (Blue Card) before commencing any practical components of this course. **DO NOT PARTICIPATE IN ANY PRACTICAL EXPERIENCE WITH CHILDREN UNDER 18 UNLESS YOU POSSESS A CURRENT 'BLUE CARD'**. For further information:
<http://www.childcomm.qld.gov.au/employment/bluecard/informationSheets.html> *If you are undertaking practical experience outside the State of Queensland, Australia you should check local requirements.
