



# EDUC1090

## Science: Today and Tomorrow

Session 3, Fully online/virtual 2020

*Macquarie School of Education*

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#### Disclaimer

Macquarie University has taken all reasonable measures to ensure the information in this publication is accurate and up-to-date. However, the information may change or become out-dated as a result of change in University policies, procedures or rules. The University reserves the right to make changes to any information in this publication without notice. Users of this publication are advised to check the website version of this publication [or the relevant faculty or department] before acting on any information in this publication.

#### Notice

As part of [Phase 3 of our return to campus plan](#), most units will now run tutorials, seminars and other small group learning activities on campus for the second half-year, while keeping an online version available for those students unable to return or those who choose to continue their studies online.

To check the availability of face-to-face and online activities for your unit, please go to [timetable viewer](#). To check detailed information on unit assessments visit your unit's iLearn space or consult your unit convenor.

## General Information

Unit convenor and teaching staff

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Credit points

10

Prerequisites

Corequisites

Co-badged status

Unit description

This unit provides students who are studying primary teaching with opportunities to challenge their views about the nature of Science, to engage with Science in its many facets and to communicate ideas about Science. Students are exposed to Science enthusiasts and are encouraged to actively participate in hands-on practical work both inside and beyond the Science laboratory. Learning and assessment strategies are designed to maximise student involvement and to build capacity in more collaborative approaches to increasing science understandings. The unit supports students to make the transition from passive to active learners and to take a more self-directed role in communicating Science to a range of learners. This unit is subject to a quota. Limited places are available. Please refer to the Faculty for further information.

## Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at <https://www.mq.edu.au/study/calendar-of-dates>

## Learning Outcomes

On successful completion of this unit, you will be able to:

**ULO1:** Demonstrate understanding of basic science concepts across the four sciences.

**ULO2:** Reflect on your own science knowledge and understanding and how this was

acquired.

**ULO3:** Perform required laboratory tasks and conduct practical work.

**ULO4:** Gather, process and present scientific information to solve problems.

**ULO5:** Analyse and prepare science reports.

**ULO6:** Demonstrate your understanding of content covered in lectures and tutorials.

## General Assessment Information

General Assessment Information

### Assessment Presentation and Submission Guidelines

Please follow these guidelines when you submit each assignment:

- Allow a left and right-hand margin of at least 2cm in all assignments.
- Please type all assignments using 12-point font and 1.5 spacing.
- All assessments must be submitted through Turnitin in .doc format (or PDF format).
- It is the responsibility of the student to ensure that all assessments are successfully submitted through Turnitin.
- Faculty assignment cover sheets are NOT required.

### Draft Submissions & Turnitin Originality Reports

- Students may use Turnitin's Originality Report as a learning tool to improve their academic writing if this option is made available in the unit.
- Students are strongly encouraged to upload a draft copy of each assessment to Turnitin at least one week prior to the due date to obtain an Originality Report.
- The Originality Report provides students with a similarity index that may indicate if plagiarism has occurred. Students will be able to make amendments to their drafts prior to their final submission on the due date.
- Generally, one Originality Report is generated every 24 hours up to the due date.

#### Please note:

- Students should regularly save a copy of all assignments before submission.
- Students are responsible for checking that their submission has been successful and has been submitted by the due date and time.

### Assignment extensions

- In general, there should be no need for extensions except through illness or misadventure that would be categorised as serious and unavoidable disruption according to the University definition of same, see: <https://students.mq.edu.au/study/my->

### [study-program/special-consideration](#)

Applications for extensions must be made via AskMQ according to the Special Consideration policy. Extensions can only be granted if they meet the Special Considerations policy and are submitted via <https://ask.mq.edu.au/>. This will ensure consistency in the consideration of such requests is maintained.

#### **Late Assessment Penalty**

- Unless a Special Consideration request has been submitted and approved, (a) a penalty for lateness will apply – two (2) marks out of 100 will be deducted per day for assignments submitted after the due date – and (b) no assignment will be accepted more than seven (7) days (incl. weekends) after the original submission deadline. No late submissions will be accepted for timed assessments – e.g. quizzes, online tests.
- Students should keep an electronic file of all assessments. Claims regarding "lost" assessments cannot be made if the file cannot be produced. It is also advisable to keep an electronic file of all drafts and the final submission on a USB untouched/unopened after submission. This can be used to demonstrate easily that the assessment has not been amended after the submission date.

#### **Requesting a re-assessment of an assignment**

If you have **evidence** that your task has been incorrectly assessed against the grade descriptors you can request a re-mark. To request a re-mark you need to contact the unit convenor within **7 days** of the date of return of the assignment and provide **a detailed assessment of your script against the task criteria**. Evidence from your assignment must be provided to support your judgements.

Note: Failed assessments cannot be re-marked as they are all double-marked as a part of the moderation process.

#### **University policy on grading**

##### **Criteria for awarding grades for assessment tasks**

Assignments will be awarded grades ranging from HD to F according to guidelines set out in the University's Grading Policy. The following descriptive criteria are included for your information.

Please note: The outcome of a re-mark may be a **higher/lower or unchanged grade**. Grades are *standards referenced* and effort is NOT a criterion.

##### **Descriptive Criteria for awarding grades in the unit**

In order to meet the unit outcomes and successfully pass this unit, students must make a genuine attempt at all assessment tasks. Where any submitted assessment task is considered to be unsatisfactory in this regard, the highest possible final grade that can be awarded for the unit will be 45.

Students will be awarded grades ranging from HD to F according to guidelines set out in the

policy: <https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policies/assessment-in-effect-from-session-2-2016>

### Withdrawing from this UG Unit

If you are considering withdrawing from this unit, please seek academic advice via <https://ask.mq.edu.au> before doing so as this unit may be a co-requisite or prerequisite for units in the following sessions and may impact on your progression through the degree.

### Results

Results shown in iLearn, or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in [eStudent](#). For more information visit [ask.mq.edu.au](https://ask.mq.edu.au).

## Assessment Tasks

Name	Weighting	Hurdle	Due
<a href="#">Online Quiz/Test</a>	40%	No	Exam Period
<a href="#">Perceptions of Science</a>	20%	No	11 Dec 2020
<a href="#">Communicating Science</a>	40%	No	8 Jan 2021

### Online Quiz/Test

Assessment Type <sup>1</sup>: Quiz/Test

Indicative Time on Task <sup>2</sup>: 2 hours

Due: **Exam Period**

Weighting: **40%**

Online Quiz/Test will be conducted at the end semester

On successful completion you will be able to:

- Demonstrate understanding of basic science concepts across the four sciences.
- Demonstrate your understanding of content covered in lectures and tutorials.

### Perceptions of Science

Assessment Type <sup>1</sup>: Essay

Indicative Time on Task <sup>2</sup>: 20 hours

Due: **11 Dec 2020**

Weighting: **20%**

Students were asked to draw a scientist then compare your drawing with that of others. Reflect on the images of scientists portrayed in those drawings compared to scientists living and working today (500 - 800 words) .

On successful completion you will be able to:

- Reflect on your own science knowledge and understanding and how this was acquired.

## Communicating Science

Assessment Type <sup>1</sup>: Essay

Indicative Time on Task <sup>2</sup>: 53 hours

Due: **8 Jan 2021**

Weighting: **40%**

This assignment provides an opportunity for students to formalise their fieldwork experience in the form of two reports that will communicate your identification of an issue that needs to be addressed as part of on-campus sustainable management practice at the university in particular (Field Report: Part A 25%, max 1500 words) and in the general community (Media article: Part B 15%, max 500 words).

On successful completion you will be able to:

- Perform required laboratory tasks and conduct practical work.
- Gather, process and present scientific information to solve problems.
- Analyse and prepare science reports.

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<sup>1</sup> If you need help with your assignment, please contact:

- the academic teaching staff in your unit for guidance in understanding or completing this type of assessment
- the [Writing Centre](#) for academic skills support.

<sup>2</sup> Indicative time-on-task is an estimate of the time required for completion of the assessment task and is subject to individual variation

## Delivery and Resources

This unit has a full web presence through iLearn.

There are regular Zoom sessions for EDUC1090. Please refer to the unit iLearn page for

details.

Students will need regular access to a computer and the Internet to complete this unit.

Weekly access to iLearn is compulsory for all students. Important assessment information will be posted here, as will other relevant unit notices and materials, including a reading template and guide to lecture note taking to assist your studies.

Various activities and materials for discussion and critical reflection are included. Please check the iLearn unit regularly.

### **Access and technical assistance**

Information for students about access to the online component of this unit is available at [ilearn.mq.edu.au/login/MQ/](https://ilearn.mq.edu.au/login/MQ/). You will need to enter your student username and password.

Please do NOT contact the Unit Convenor regarding iLearn technical help.

No extensions will be given for any technical issues. Allow enough time for your submissions.

Assistance is available from IT Helpdesk ph: 1800 67 4357, or log a request at [help.mq.edu.au](https://help.mq.edu.au). OneHelp is the online IT support service for both students and staff.

This unit requires students to use several ICT and software skills:

- Internet access: The iLearn site contains materials for this unit; it is also required for the online submission of all Assessment Tasks, and for the use of Turnitin submission for ALL tasks.
- Word processing, visual representations, and document formatting: You are required to use an appropriate form of software to present your assignments.
- Uploading of assessment tasks to iLearn.

### **Structure**

Science: Today and Tomorrow (EDUC1090) is a 3-credit point unit. EDUC1090 has three online contact hours per week – two lectures and one tutorial each of one-hour duration. Lectures (online) are at 12:00 - 1:00 pm on Tuesday and 12:00 -1:00 pm on Wednesday. Tutorials (online) are held at 2:00-3:00 pm on Wednesdays. Due to teacher education students being off-campus for their professional experience in schools, lectures and tutorials start in the week of 10 August and 17 August each. It has been developed as a science-based unit to assist beginning teachers with the science content that is required at both primary and high school levels and for undergraduate students who are not directly involved with teaching but nevertheless are interested in science. This unit provides students with opportunities to challenge their views about the nature of science, to engage with science in its many facets and to communicate ideas about science.

### **Prescribed texts**

Skamp, K. (Ed.) (2017). [Teaching primary science constructively \(6th ed.\). Melbourne: Thomson.](#)

: Primary teacher education students may choose to purchase this text which will support their work in science and technology throughout the degree and beyond. Copies of this text are available on-line through the library and in the closed reserve section of the library.

Sydney Morning Herald. Daily Newspaper. [For regular science-based articles.](#)

### **Background readings in science**

Ackerman, D. (2014). *The human age*. New York: W. W. Norton & Company.

Bryson, B. (2004). *A short history of nearly everything*. London: Black Swan.

Carson, R. (1962). *Silent spring*. Boston Mariner Books.

Cox, B. (2010). *Wonders of the solar system*. London: HarperCollins Publishers

Darwin, C. (1859). *The origin of species*. London: Penguin.

Dawkins, R. (1991). *The blind watchmaker*. London: Penguin.

Dennett, D. (1995). *Darwin's dangerous idea: Evolution and the meanings of life*. London: Penguin.

Halvorsen, R. (2007). *The truth about vaccines*. London: Gibson Square.

Hawking, S. (2008). *A brief history of time*. Chatham: Bantam Press.

Horsfall, M. (2008). *Creating your eco-friendly garden*. Collingwood: CSIRO Publishing.

Lindenmayer, D. (2008). *On borrowed time: Australia's environmental crisis and what we must do about it*. Camberwell, Victoria: CSIRO/Penguin.

Rosser, S. (2008). *The A-Z of global warming*. London Schmall World Publishing.

Sagan, C. (1995). *The Demon-Haunted World: Science as a Candle in the Dark*. New York: Random House.

Sobel, D. (2005). *The planets*. London: Fourth Estate.

Trefil, J. (2008). *Why science?* New York: Teachers College Press

## **Unit Schedule**

See iLearn Page.

## **Policies and Procedures**

Macquarie University policies and procedures are accessible from [Policy Central \(https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central\)](https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central). Students should be aware of the following policies in particular with regard to Learning and Teaching:

- [Academic Appeals Policy](#)
- [Academic Integrity Policy](#)



- [Academic Progression Policy](#)
- [Assessment Policy](#)
- [Fitness to Practice Procedure](#)
- [Grade Appeal Policy](#)
- [Complaint Management Procedure for Students and Members of the Public](#)
- [Special Consideration Policy](#) (**Note:** *The Special Consideration Policy is effective from 4 December 2017 and replaces the Disruption to Studies Policy.*)

Students seeking more policy resources can visit the [Student Policy Gateway](https://students.mq.edu.au/support/study/student-policy-gateway) (<https://students.mq.edu.au/support/study/student-policy-gateway>). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

If you would like to see all the policies relevant to Learning and Teaching visit [Policy Central](http://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central) (<http://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central>).

## Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: <https://students.mq.edu.au/study/getting-started/student-conduct>

## Results

Results published on platform other than [eStudent](#), (eg. iLearn, Coursera etc.) or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in [eStudent](#). For more information visit [ask.mq.edu.au](http://ask.mq.edu.au) or if you are a Global MBA student contact [globalmba.support@mq.edu.au](mailto:globalmba.support@mq.edu.au)

## Student Support

Macquarie University provides a range of support services for students. For details, visit <http://students.mq.edu.au/support/>

## Learning Skills

Learning Skills ([mq.edu.au/learningskills](http://mq.edu.au/learningskills)) provides academic writing resources and study strategies to help you improve your marks and take control of your study.

- [Getting help with your assignment](#)
- [Workshops](#)
- [StudyWise](#)
- [Academic Integrity Module](#)

The Library provides online and face to face support to help you find and use relevant information resources.

- [Subject and Research Guides](#)

- [Ask a Librarian](#)

## Student Services and Support

Students with a disability are encouraged to contact the [Disability Service](#) who can provide appropriate help with any issues that arise during their studies.

## Student Enquiries

For all student enquiries, visit Student Connect at [ask.mq.edu.au](http://ask.mq.edu.au)

If you are a Global MBA student contact [globalmba.support@mq.edu.au](mailto:globalmba.support@mq.edu.au)

## IT Help

For help with University computer systems and technology, visit [http://www.mq.edu.au/about\\_us/offices\\_and\\_units/information\\_technology/help/](http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/).

When using the University's IT, you must adhere to the [Acceptable Use of IT Resources Policy](#). The policy applies to all who connect to the MQ network including students.