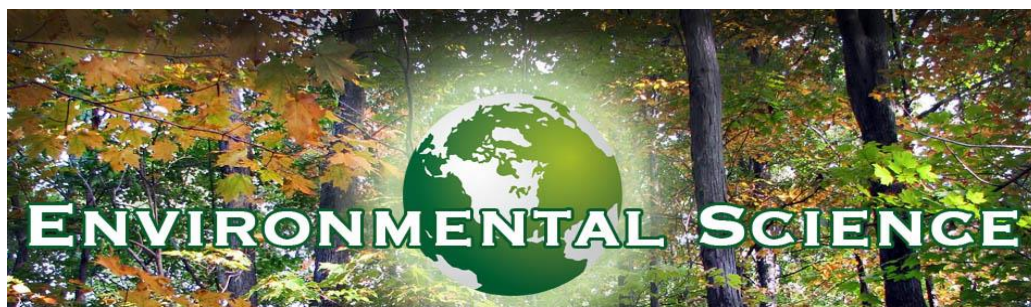


ESS315118

ENVIRONMENTAL SCIENCE

15 Points



Google images: <https://kaiserscience.wordpress.com/>

You will work through the following units as part of **Environmental Science**:

Unit 1: Ecosystem Concepts and Processes

Students will learn about living and non-living parts of ecosystems, flow of energy and species inter-relationships. A full day excursion to the Cluan Tiers is part of this unit.

Unit 2: Scientific Experiments and Investigations

Students design, set up and run individual investigations as part of this unit and learn how to use scientific equipment and sample components in ecosystems. A major Case Study is undertaken as part of this unit.

Unit 3: Ecosystem Changes

This unit looks at local and global changes to ecosystems, and examines the problems and issues related to fires, climate change, pollution and introduced species. Tasmanian biosecurity issues are examined.

Unit 4: Human Dependence and Impact on Ecosystems

Students study our reliance on ecosystems for food, water and energy, our ecological footprint and the impacts this has on local and global ecosystems. Reference to Tasmanian aquacultural, agricultural, and forestry industries are critically examined.

Unit 5: Ecological Sustainable Management of the Environment

In this unit, strategies for ecological sustainable development and management will be examined. Environmental law, international treaties and conservation strategies specific to Tasmania and Australia are examined.

How you'll be assessed:

Internal assessments in this course are:

- Unit tests and assignments
- Individual Project Report
- Laboratory Reports and worksheets
- A 2-hour Mid-Year Exam

The external assessment for this subject is a 3-hour exam. The dates for external exams in November are non-negotiable.

Success Criteria:

- Plan, monitor and evaluate completion of activities and meet deadlines
- Safely and competently use practical scientific techniques and equipment to collect data
- Use scientific inquiry skills to develop, conduct and evaluate experiments
- Apply discriminating research skills and the principles of academic integrity
- Explain and discuss personal, local and global interdependence of issues of social equity and environmental values

COMPLETION OF WORK POLICY

Assessment due dates are provided in the Program of Learning and on Canvas. Work must be submitted by the due date unless an approved extension has been granted. Unapproved late submissions will incur penalties as outlined in the *Completion of Work Policy*. Students needing extensions should contact their subject teacher before the due date with valid reasons, such as illness or unforeseen circumstances.

For more details refer to the Launceston College: [Completion of Work Policy](#).

ACADEMIC INTEGRITY

All senior secondary students in Tasmania are expected to uphold academic integrity, meaning they complete their work honestly and fairly. This includes properly referencing any ideas, images, or information borrowed from others, allowing teachers to distinguish between original and sourced content.

Assignments will be submitted through Canvas, email, hard copy as directed in the task sheet.

For more details, refer to the Launceston College: [Academic Integrity Policy](#).

REFERENCING

The **Harvard referencing system** is recommended for Environmental Science. The standards for **Criterion 3** state that a student must:

- create appropriate well-structured reference lists/bibliographies and use in-text referencing.
- clearly differentiates the information, images, ideas and words of others used in the student's work.
- referencing conventions and methodologies are followed with a high degrees of accuracy

COURSE DOCUMENT

The TASC website provides considerable information about the course: [Environmental Science - TASC](#)

OTHER COURSE REQUIREMENTS

- Exercise books or folders to keep work organised throughout the year
- The course textbook -Biozone Environmental Science Student Workbook Third Edition is a requirement to be purchased.
- Scientific calculators and personal laptops are recommended.
- Excursions are a requirement of this course and permission forms will be provided

Week	Date	Program of Learning 2025	Notes / Assessments
1	6 Feb	C5-Ecological Processes -Levels of organisation/Abiotic & Biotic Factors Forest Types/Producers/Photosynthesis	<i>Yr 11s and 12's return February 8 (Thursday)</i> C5 PPT Expt: Effect of Light on Photosynthesis
2	10 Feb	Roles of Consumers/Decomposers/Detrivores Inputs & Outputs/ Energy Flow/Energy Laws	C5 PPT & Worksheets
3	17 Feb	Ecological Pyramids/Food Chains & Food Webs Habitat & Niche-Range of Tolerance	C5 PPT & Worksheets C5 PPT/ C5 Assignment
4	24 Feb	Feedback Loops/Populations Features Population Regulation and Population Curves	<i>Wed 26 Feb – Launceston Cup</i> C5 PPT & Worksheets
5	3 Mar	Sampling Populations-Tamar River Field Trip	Tamar River Report Cr 5 Practice Test & C5 Test 1
6	10 Mar	C2- Scientific Method - Hypothesis writing Cluan Tiers Full Day Excursion	<i>Mon 10 Mar – Public Holiday</i> Cluan Tiers Report C2 PPT & Worksheets
7	17 Mar	Identifying Variables IV and DV Controls and Experimental Groups/Sample Size/Replication/Repetition	C2 PPT & Worksheets Expt: Seed Germination
8	24 Mar	Case Study-Proposal/Hypothesis Research of Topic	Case Study Report Expt: Measuring Abiotic Factors
9	31 Mar	Case Study-Materials and Risk Assessment Set-up investigations	Case Study Report
10	7 Apr	Case Study- Measure and Record Data Interpret Results	Case Study Report Cr 2 Practice Test & Test 1
Term 1 break – Saturday 12 April – Sunday 27 April			
1	28 Apr	Case Study- write-up of report Case Study-Finalisation of Report	Case Study Report
2	5 May	C6- Ecosystem Changes -Diurnal & Seasonal Changes The Role of Fire in Australia	Cr 6 PPT and Worksheets
3	12 May	El-Nino & La Nina Greenhouse Effect	Cr 6 PPT & Worksheets
4	19 May	Climate Change Impacts	Cr 6 PPT & Worksheets
5	26 May	Processes Threatening Biodiversity-Pollution -Habitat Destruction	Cr 6 PPT & Worksheets
6	2 June	Processes Threatening Biodiversity-Introduced Species Invasive Species Talk	Cr 6 PPT & Worksheets Cr 6 Assignment
7	9 June	Cr 6 Practice Test & C6 Test 1	<i>Mon 9 June – Public Holiday</i> Cr 6 Practice Test & Test 1
8	16 June	Cr 2,5,6 Revision	Cr 2, 5, 6 Revision
9	23 June	Mid-Year Exams	Mid-Year Assessments Level 3 & 4- Cr 2, 5, 6 <i>Tue 17 June – Orientation Day (LC st's work from home)</i>
10	30 June	Mid-Year Exams Exam Reflection	Mid-Year Assessments Level 3 & 4 Cr 4 Values Assignment-Brumbies in Koz. N.P.
Term 2 break – Saturday 5 July – Sunday 20 July			
1	21 July	C7- Human Impact & Dependence -Ecosystem Services Tragedy of the Commons	Cr 7 PPT & Worksheets
2	28 July	Ecological Footprint and Biocapacity Human Impact-Food & Agriculture	Cr 7 PPT & Worksheets
3	4 Aug	Human Impact-Fishing & Aquaculture	Cr 7 PPT & Worksheets Expt: CO2 in Water
4	11 Aug	Human Impact-Water Human Impact-Energy Resources	Cr & PPT & Worksheets Cr 7 Assignment
5	18 Aug	Pollution- Characteristics/Sources Pollution- Air/Water/Land	Cr & PPT & Worksheets Cr 7 Practice Test & Test 1
6	25 Aug	Cr 8 -Sustainable Management of the Environment Principles of Sustainable Development	Cr 8 PPT & Worksheets
7	1 Sep	Carbon Credits and MBI's E.I.A's and EMP's	Cr 8 PPT's & Worksheets Cr 8 Assignment
8	8 Sep	EPBC Act & Threatened Species Act Tamar Wetlands Excursion	Cr 8 PPT's & Worksheets Wetland Report
9	15 Sep	International Treaties-Ramsar/Cities/WHA's/MP's Challenges of Sustainability	Cr 8 Practice Test & Test 1
10	22 Sep	Cr 2 Revision -Test 2 & Retesting	Cr 2 Test 2
Term 3 break – Saturday 27 September – Sunday 12 October			
1	13 Oct	Cr 5 Revision -Test 2 & Re-Testing	Cr 5 Test 2
2	20 Oct	Cr 6 Revision -Test 2 & Re-Testing	Cr 6 Test 2
3	27 Oct	Cr 7 Revision -Test 2 & Re-Testing	<i>Fri 31 Oct - Moderation Day (LC students work from home)</i> Cr 7 Test 2
4	3 Nov	Cr 8 Revision -Test 2 & Re-Testing	<i>Mon 3 Nov – Public Holiday</i> Cr 8 Test 2
Exams begin (Monday 10th November) - Exams end (Thursday 20th November)			

ASSESSMENT

Criterion-based assessment helps students see how well they're meeting course outcomes at the end of their study. While there is continuous feedback to guide learning, final assessments focus on showing what students have achieved by the end. Ratings are given as 'A', 'B', or 'C', based on course standards. A 't' indicates partial achievement below a 'C', and a 'z' means no evidence provided.

Schools follow TASC's quality assurance to keep standards consistent. More details are on the [TASC website](#). Final awards are based on both internal and TASC-supervised external assessments.

Criteria

The assessment for *Environmental Science* Level 3 will be based on the degree to which a learner can:

1. apply personal skills to plan, undertake and complete activities
2. develop, interpret and analyse experiments and investigations*
3. collect, record, process and communicate information
4. analyse the application and impact of environmental science in society
5. apply ecological concepts and processes*
6. apply concepts and processes of ecosystem change*
7. apply concepts relating to human dependence and impact on ecosystems*
8. apply principles and processes related to ecologically sustainable management of the environment. *

[* = denotes criteria that are both internally and externally assessed]

Award Requirements

The final award will be determined by the Office of Tasmanian Assessment, Standards and Certification from 13 ratings (8 from the internal assessment, 5 from external assessment).

The minimum requirements for an award in *Environmental Science* Level 3, are as follows:

EXCEPTIONAL ACHIEVEMENT (EA)

11 'A' ratings, 2 'B' ratings (4 'A' ratings, 1 'B' rating from external assessment)

HIGH ACHIEVEMENT (HA)

5 'A' ratings, 5 'B' ratings, 3 'C' ratings (2 'A' ratings, 2 'B' ratings, 1 'C' rating from external assessment)

COMMENDABLE ACHIEVEMENT (CA)

7 'B' ratings, 5 'C' ratings (2 'B' ratings, 2 'C' ratings from external assessment)

SATISFACTORY ACHIEVEMENT (SA)

11 'C' ratings (3 'C' ratings from external assessment)

PRELIMINARY ACHIEVEMENT (PA)

6 'C' ratings

A learner who otherwise achieves the ratings for a CA (Commendable Achievement) or SA (Satisfactory Achievement) award but who fails to show any evidence of achievement in one or more criteria ('z' notation) will be issued with a PA (Preliminary Achievement) award.