

Changing places: Changing global environments

Strand

Time, Continuity and Change

Place and Space

Systems, Resources and Power

Core learning outcomes

Time, Continuity and Change

TCC 4.2 Students illustrate the influence of global trends on the beliefs and values of different groups.

TCC 4.5 Students review and interpret heritages from diverse perspectives to create a preferred future scenario about a global issue.

Place and Space

PS 4.2 Students predict the impact of changes on environments by comparing evidence.

PS 4.4 Students use latitude, longitude, compass and scale references and thematic maps to make inferences about global patterns.

Systems, Resources and Power

SRP 4.5 Students classify values that underpin campaigns and organisations associated with human or environmental rights.

Purpose and overview

Activities assist students to use a range of sources to explore global environments. Through an investigation of deforestation in Indonesia, students gain an understanding of the impact such change has on people and the environment.

Students use a variety of primary and secondary sources to gain an understanding of the impact that such change has had on the beliefs and values of different groups and the environment.

A variety of maps are used to observe vegetation coverage in countries before and after deforestation. Students explore climatic patterns to predict the impact of climatic change on rainforests.

Students investigate environmental organisations and reflect on the key values they promote.

Phases	Activities	Core learning outcomes	Assessment opportunities
1. Identify the issue	Students identify and explore global environmental issues.	PS 4.4	Using thematic maps to make inferences about global patterns related to environmental issues may provide evidence of students' demonstrations of PS 4.4.
2. Locate, organise and analyse evidence	Students use a variety of resources to investigate Indonesia's 'disappearing' rainforests and the impact this has on humans and the environment.	TCC 4.2 TCC 4.5 PS 4.2 PS 4.4	<p>Using thematic maps to make inferences about forestation and global patterns may provide evidence of students' demonstrations of PS 4.4.</p> <p>Predicting the impact changes could have on environments may provide some initial evidence of students' demonstrations of PS 4.2.</p> <p>Investigating the impact that using technology has on rainforests may provide evidence of students' demonstrations of PS 4.2.</p> <p>Considering the perspectives of different groups on the preservation or use of rainforests may provide evidence of students' demonstrations of TCC 4.5.</p> <p>Using thematic maps to compare the amount of rainforest in Indonesia with the amount of rainforests worldwide may provide further evidence of students' demonstrations of PS 4.4.</p> <p>Using vegetation maps to illustrate the causes of deforestation in Indonesia may provide evidence of students' demonstrations of TCC 4.2.</p> <p>Investigating the development of Indonesia's forestry industry and presenting the perspectives of different interest groups may provide evidence of students' demonstrations of TCC 4.2 and TCC 4.5.</p> <p>Considering global rainforests from the perspectives of different conservation or environmental groups may provide evidence of students' demonstrations of TCC 4.5.</p> <p>Predicting the impact of changes on environments by comparing evidence may provide initial evidence of students' demonstrations of PS 4.2.</p> <p>Using maps to make inferences about the global patterns of biosphere reserves within rainforests may provide evidence of students' demonstrations of PS 4.4.</p>
3. Evaluate, synthesise and report conclusions	Students evaluate evidence to draw conclusions about the sustainability of global rainforests. Organisations and their campaigns to promote reforestation are analysed and reflected on. Students reflect on their investigations to consider their preferred future for rainforests.	TCC 4.5 SRP 4.5	<p>Considering global rainforests from the perspective of different conservation or environmentalist groups may provide some evidence of students' demonstrations of SRP 4.5 and/or TCC 4.5.</p> <p>Analysing and reflecting on values that underpin campaigns and organisations may provide evidence of students' demonstrations of SRP 4.5.</p> <p>Writing reflective reports that describe visions for the future of the world's rainforests may provide evidence of students' demonstrations of TCC 4.5 and/or SRP 4.5.</p>

Assessment

The assessment opportunities outlined are examples of how to assess students' demonstrations of the identified learning outcomes. As often as possible, negotiate assessment with students and support a variety of ways of demonstrating the learning outcomes. Reflect with students on evidence gathered when making judgments about their demonstrations of learning outcomes. Some students may require more time and/or other contexts in which to demonstrate these learning outcomes. Other modules may provide such time and/or contexts and the 'Levels 1 to 6 module learning outcomes maps' in the *Years 1 to 10 Studies of Society and Environment Sourcebook Guidelines* can be used to identify these modules.

Assessing learning outcomes at different levels

Activities in this module are designed primarily for students working towards demonstrations of Level 4 learning outcomes. Assessment opportunities may need to be modified or created to enable students to demonstrate core learning outcomes before or after this level. For example, consider the increasing sophistication of concepts and processes in the progression of learning outcomes.

Using this module

Activities would be enhanced by students' participation in the Level 4 module *Resources rich and rare: Australian resource management*. The finite and infinite nature of resources, particularly rainforests, are explored in this module.

Background information

Terminology

In this module students may have opportunities to become familiar with and use the following terminology:

beliefs	evidence	preferred future
biodiversity	global issue	proactive
campaigns	global patterns	reforestation
climatic maps	heritages	regeneration
climatic zones	Indigenous peoples	region
conservation	latitude	settlement
deforestation	longitude	values
environments	perspectives	vegetation maps

School authority policies

Be aware of and observe school authority policies that may be relevant to this module. Refer to the relevant school authorities for information regarding planning and conducting field excursions, and student access to websites.

Equity considerations

Activities take place in a supportive environment. They provide opportunities for students to increase their understanding and appreciation of equity through valuing diversity and challenging inequities. Activities encourage students to:

- develop an awareness and appreciation of the importance of rainforests as global ecosystems
- consider a variety of interest groups and their perspectives on environmental issues, particularly deforestation
- envision preferred futures for different environments, based on past and present evidence
- be aware of the power relationships between multinational companies and the governments of developing countries — short-term gain, long-term harm.

Some students with disabilities may need assistance with some activities. Advice should be sought from their support teachers. It is important that these equity considerations inform decision making about teaching strategies, classroom organisation and assessment.

Links

Studies of Society and Environment

This module is one of a suite of modules for Levels 1 to 6. See the Queensland School Curriculum Council website at www.qscc.qld.edu.au for more information.

This module has conceptual and process links to the following modules:

- Level 3: *Cattle, gold and sugar cane: Working in the past*
- Level 3: *Our future: Past and future study*
- Level 4: *Resources rich and rare: Australian resource management*
- Level 5: *A question of balance: Australian environments*
- Level 5: *Environment and development: World environments.*
- Level 6: *Asia–Pacific challenges: World environments.*

Refer to *Geography in Years 1 to 10 Studies of Society and Environment Key Learning Area* on the Queensland School Curriculum Council website for information about:

- the value of Geography to learning in Studies of Society and Environment
- geographical skills, processes and concepts
- the classroom environments that help to foster the development of geographical skills, processes and concepts
- practical steps for learning geographical skills, processes and concepts
- sample modules
- useful resources.

Other key learning areas

Activities may offer opportunities for planning across key learning areas. However, it is important that the integrity of the key concepts, organising ideas and processes within key learning areas is maintained.

Possible links to *Science* include:

- LL 4.1 Students examine the internal and external structure of living things (including animal respiratory systems and plant systems) and account for observed similarities and differences in terms of adaptation.
- LL 4.2 Students identify and analyse similarities and differences in the ways that different living things reproduce.
- LL 4.3 Students make generalisations about the types of interactions which take place between the living and non-living parts of the environment.

Possible links to *The Arts* include:

- VA 4.1 Students deconstruct and reconstruct images and objects to manipulate meaning through explorations of elements and additional concepts.
- VA 4.2 Students make and display images and objects, considering purposes and audiences.
- VA 4.3 Students analyse elements and additional concepts evident in images and objects from a variety of cultural and historical contexts.

Possible links to *Technology* include:

- TP4.1 Students use consultative methods to gather knowledge, ideas and data when researching alternatives within design challenges.
- TP4.2 Students generate design ideas through consultation and communicate these in detailed design proposals.
- TP4.3 Students identify and make use of the practical expertise of others when following production procedures to make products for specific users.
- TP4.4 Students gather feedback to gauge how well their design ideas and processes meet design challenges and how effectively products meet the needs of specific users.
- I4.1 Students analyse sources and forms of information and match these to the requirements of design challenges.
- I4.2 Students apply techniques for transforming and transmitting information for different audiences.

Evaluation of a unit of work

After completion of units of work developed from this module, collect information and make judgments about:

- teaching strategies and activities used to progress student learning towards demonstrations of core learning outcomes
- opportunities provided to gather evidence about students' demonstrations of core learning outcomes
- future learning opportunities for students who have not yet demonstrated the core learning outcomes, and to challenge and extend those students who have already demonstrated the learning outcomes
- the extent to which activities matched needs of particular groups of students and reflected equity considerations
- the appropriateness of time allocations for particular activities
- the appropriateness of resources used.

Information from this evaluation process can be used to plan subsequent units of work so that they build on, and support, student learning. The evaluated units of work may also be adapted prior to their reuse. For further information, refer to the 'Curriculum evaluation' section in the sourcebook guidelines.

Activities

Phase 1 — Identify the issue

Core learning outcomes emphasis: PS 4.4

Students identify and explore global environmental issues.

	Activities	Assessment opportunities
<p>Resource 1 Support materials and references</p>	<ul style="list-style-type: none"> • Assist students to analyse newspaper articles and/or news footage about global environmental issues (Resource 1). Discuss these news reports and encourage students to share their ideas about what is meant by an environmental issue. Compare students' responses with the following statement: 'Issues arise when people hold differing opinions on a topic. Sometimes these differing viewpoints result in conflict. An environmental issue relates to situations that involve the interaction between people and their environment' (Allen & Wright 1998, p. 8). Discuss terms such as 'sustainability', 'biodiversity', 'deforestation', 'reforestation' and 'regeneration' as they arise in the news reports. • Ask students to add the places identified in the news items to a blank world map and to add captions that describe the environmental issues — for example: <ul style="list-style-type: none"> – land: degradation – forest: loss and degradation – biodiversity: loss and habitat fragmentation – fresh water: access and pollution – marine and coastal zones: degradation – atmosphere: pollution – urban and industrial contamination: waste. • Use the map plus a range of thematic maps to discuss possible global patterns related to environmental issues. (Refer to the elaborations of PS 4.4 in the sourcebook guidelines for further information.) • Discuss the environmental issues identified in the news items and explain that students will be investigating rainforests. (Activities will need to be modified if investigating other environmental issues.) • Introduce rainforests and forest clearing by presenting and discussing news items that describe the issue of forest clearing. Questions to consider include: <ul style="list-style-type: none"> – Where does this environmental issue occur? – What are the causes of the issue? – Who is involved in this environmental issue? – What viewpoints are presented on this environmental issue? How are these viewpoints supported — with evidence or emotion? Whose viewpoints are presented? Whose are silenced? – What is your opinion? – Who is responsible for managing this issue? 	<p>Using thematic maps to make inferences about global patterns related to environmental issues may provide evidence of students' demonstrations of PS 4.4.</p>

Phase 2 — Locate, organise and analyse evidence

Core learning outcomes emphasis: TCC 4.2, TCC 4.5, PS 4.2, PS 4.4

Students use a variety of resources to investigate Indonesia's 'disappearing' rainforests and the impact this has on humans and the environment.

	Activities	Assessment opportunities
Support materials and references	<ul style="list-style-type: none"> • Discuss with students how they might investigate the environmental issue of deforestation of rainforests. Assist students to consider whose viewpoint they may wish to present — for example, a plantation owner, timber miller, zoologist, conservationist. • Assist students to locate and organise information they can use to define the environmental issue and frame a research report. • Display posters of rainforests from around the world. Ask students to write 'one-word' responses that describe this environment, and attach them to the posters. During a class discussion, invite students to share their thoughts and feelings about and experiences of rainforests. • Draw a map that shows the location of the world's major rainforests. Assist students to note the latitude and longitude of these areas. Relate climatic zones to the needs of rainforest vegetation. Consider temperature and rainfall readings. • Ensure students understand the importance of rainforests — as a habitat for extremely diverse groups of animals and plants, as a form of climate control for local and global environments, and as a place for different groups of people to live. Discuss beliefs and values of different groups concerning the importance of rainforests. • Use land use and vegetation maps (see <i>SOSE for Queensland 1</i>, McCauley, Brown & Mills 2000) to identify biosphere reserves that have been established in rainforests to help preserve ecosystems and biodiversity. These reserves assist animal species to survive. • Ask students to gather primary and secondary sources (such as texts, newspapers, news footage and case studies) that provide information about deforestation. Assist them to use these sources to investigate the impact the timber industry has had on rainforests. Encourage them to investigate changes to the physical make-up of the rainforests and the impacts these changes have had on people and the environment. • Use global vegetation, land use and other maps to assist students to explore any statistics they may have collected. Students could consider: <ul style="list-style-type: none"> – In which countries is large-scale clearing of rainforests occurring? – Which countries contain more than half of the world's rainforests? – How much of the world's rainforest is cleared each year? • Use the Wilderness Society website to compare maps of Australia's forest and woodland coverage before European settlement with present-day coverage. • Discuss news articles that present different viewpoints about global forest-clearing practices in the past and present. 	<p>Using thematic maps to make inferences about forestation and global patterns may provide evidence of students' demonstrations of PS 4.4.</p> <p>Predicting the impact changes could have on environments may provide some initial evidence of students' demonstrations of PS 4.2.</p> <p>Investigating the impact that using technology has on rainforests may provide evidence of students' demonstrations of PS 4.2.</p> <p>Considering perspectives of different groups on the preservation or use of rainforests may provide evidence of students' demonstrations of TCC 4.5.</p> <p>Using thematic maps to compare the amount of rainforest in Indonesia with the amount of rainforests worldwide may provide further evidence of students' demonstrations of PS 4.4.</p> <p>Using vegetation maps to illustrate the causes of deforestation in Indonesia may provide evidence of students' demonstrations of TCC 4.2.</p> <p>Investigating the development of Indonesia's forestry industry and presenting the perspectives of different interest groups may provide evidence of students' demonstrations of TCC 4.2 and TCC 4.5.</p> <p>Considering global rainforests from the perspectives of different conservation or environmental groups may provide evidence of students' demonstrations of TCC 4.5.</p>

This table is continued on the next page ...

Activities	Assessment opportunities
Support materials and references	<p>Predicting the impact of changes on environments by comparing evidence may provide initial evidence of students' demonstrations of PS 4.2.</p> <p>Using maps to make inferences about the global patterns of biosphere reserves within rainforests may provide evidence of students' demonstrations of PS 4.4.</p>
Support materials and references	
<ul style="list-style-type: none"> • Assist students to investigate the development and use of technology, particularly mechanisation, and its impacts on rainforests. • Assist students to investigate groups or organisations that are involved in rainforest protection. Ask students to record information about these groups and to consider why they are often not based in the country with the issue. • Assist students to analyse evidence about deforestation as a global trend. Discuss the beliefs and values of different groups in relation to such a trend. Refer to the Planet Ark website for an archive of reports from different interest groups about deforestation in Indonesia. • Use land use and vegetation maps to identify and discuss the extent and distribution of Indonesian rainforests in the past and present. • Assist students to investigate the importance of Indonesia's rainforests and an event that caused catastrophic devastation of this region (refer to the '1997 Smog Disaster' in <i>SOSE for Queensland 1</i> and <i>Heinemann SOSE for Queensland Book 2</i>). • Ask students to write investigative reports on the management of the Indonesian rainforest region from a number of different perspectives — for example: <ul style="list-style-type: none"> – You are the owner and manager of a transnational forestry company. You have bought land in Sumatra and plan to establish a palm oil plantation. You have been sent a huge tax bill for holdings on this land. A meeting of your company's administrators will be held soon to consider the tax bill and make decisions about the size of land to be held. – You are an Australian zoologist hired by the Indonesian government to investigate the short- and long-term effects that deforestation and forest fires have on the survival of endangered bird life, elephants, tigers, gibbons and tapirs. You have been asked to suggest actions for the present and future that will help save the Indonesian rainforests. – You are a conservationist involved in negotiations with the Indonesian government to save the nesting beach used by the rare leatherback turtle near the town of Sorong. Logging companies plan to build a log pond on this beach where logs can be stored before they are shipped. • Assist students to investigate practices that are currently used in countries around the world to aid forest management. Encourage them to consider the effects these practices have on the local people and on the government of the country and multinational companies operating in the country. Assist students to use the Internet to locate information about organisations and agencies that promote forest management practices such as regeneration, reforestation, agroforestry, plantations, selective logging, creation of reserves and conservation of forests for medicine. Ask students to select one of these forest management practices and create a model or other self-selected representation that shows how this practice is carried out. • Use the 'what if' strategy to assist students to discuss possible impacts deforestation may have on environments. 	

Teaching considerations

A field excursion to a rainforest area would assist students to observe and experience features of a rainforest. It may also assist them to develop an awareness and appreciation of the complexity of this ecosystem.

Phase 3 — Evaluate, synthesise and report conclusions

Core learning outcomes emphasis: TCC 4.5, SRP 4.5.

Students evaluate evidence to draw conclusions about the sustainability of global rainforests. Organisations and their campaigns to promote reforestation are analysed and reflected on. Students reflect on their investigations to consider their preferred future for rainforests.

	Activities	Assessment opportunities
Support materials and references	<ul style="list-style-type: none"> • Encourage students to present the investigative reports they wrote in the previous phase at a forum such as a parents'/carers' evening or year level assembly or at a community event, such as National Tree Day or Arbor Day. • Ask students to use their research on rainforests in Indonesia to reflect on which forest management practices are currently being used in this region. Encourage students to suggest and explain what other forest management practices would benefit Indonesia. • Ask students to select a conservation or environmental group related to deforestation (such as Wilderness Australia, Australian Rainforest Conservation Society, WWF, World Rainforest Movement or Planet Ark) and to reflect on how the organisation's campaigns have increased global environmental awareness. As part of this reflection, assist students to analyse the purposes/aims and structures of the organisation according to the key values of democratic process, social justice, ecological and economic sustainability and peace. (Ensure students understand the meaning of these values in the context of investigation of deforestation.) Consider: <ul style="list-style-type: none"> – Whose interests does the organisation have at heart? – Does it consult with the local people, governments and companies? • Assist students to reflect on their research and to consider possible, probable or preferred futures for: <ul style="list-style-type: none"> – the local people – the Indonesian government – multinational companies – the world community. • Ask students to write reflective reports about their vision for the future of the world's rainforests and to send them to a conservation organisation or agency if appropriate. Encourage students to reflect on and discuss how their visions may or may not match those promoted by the conservation groups. 	<p>Considering global rainforests from the perspective of different conservation or environmentalist groups may provide some evidence of students' demonstrations of SRP 4.5 and/or TCC 4.5.</p> <p>Analysing and reflecting on values that underpin campaigns and organisations may provide evidence of students' demonstrations of SRP 4.5.</p> <p>Writing reflective reports that describe visions for the future of the world's rainforests may provide evidence of students' demonstrations of TCC 4.5 and/or SRP 4.5.</p>

News articles recording template

Resource 1

Analysis of the news article/news footage	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
When did this event occur?						
Where did this event occur?						
What viewpoints are presented?						
Whose viewpoints are silenced?						
Were any actions taken as a result of this event or issue being reported? If so, what were they? If not, why not?						

Support materials and references

Ainsworth, G. & Mo, X. 2000, *Asia at a Glance: Studies of Society and Environment Curriculum Units — Secondary*, Curriculum Corporation, Carlton South, Vic.

Alexander, D. & Rouen, M. 2000, *Heinemann SOSE for Queensland — Book 2*, Heinemann, Port Melbourne, Vic.

Allen, A. L. & Holt, J. 1999, *Exploring North-East Asia: China, Japan, Korea*, Curriculum Corporation, Carlton South, Vic.

Allen, A. L. & Wright, J. 1998, *Australian Issues Collection — The Environment*, McGraw-Hill, Sydney.

Curriculum Corporation & The University of Melbourne 2000, *Studies of Asia: A Statement for Australian Schools*, 2nd edn, Curriculum Corporation, Carlton, Vic.

Gilligan, B. 1998, *Voices and Values: Citizenship in Asia*, Curriculum Corporation, Carlton, Vic.

McCauley, D., Brown, P. & Mills, M. 2000, *SOSE for Queensland 1: Studies of Society and Environment*, Jacaranda, Milton, Qld.

Triolo, R. 2000, *Go Global: Global Perspectives in the Secondary Classroom*, Curriculum Corporation, Carlton South, Vic.

Kits (including audiovisual)

Hyde, M. & Laurie, R. 2000, *Asia at a Glance*, Curriculum Corporation, Carlton, Vic. (Booklet and CD-ROM.)

Kiernan, J. 1995, *60 Degrees — 170 Degrees East*, Curriculum Corporation, Carlton, Vic. (A wall map of Asia, including Australia and New Zealand; a set of cards with maps and information about the countries of the region; a board game; a teacher information brochure; and a set of student challenge cards.)

Websites

(All websites listed were accessed in May 2002.)

Community Biodiversity Network. www.cbn.org.au/member/cbn/projects/bionet/BAIFW.html
Provides a list of links to websites that explore forestry issues, including Forest Action Network, Rainforest Information Centre, Cape Tribulation Tropical Rainforest Station and Australian Rainforest Conservation Society.

Planet Ark. www.planetark.org/index.cfm
Provides an archive of information about global environmental issues, including forest degeneration.

Wilderness Society of Australia. www.wilderness.org.au/projects/Forests/fringe.html
Provides information about Australian forests, including maps that compare Australia's forests and woodlands before European settlement with current distribution.

World Rainforest Movement. www.wrm.org.uy
Provides information about the state of the world's rainforests, causes of deforestation and international processes that aim to improve the state of the world's rainforests.

World Wildlife Fund Global Network. www.panda.org
Contains information about a variety of global issues. The section 'Forests for Life' reports on global forestry issues in the past and present.

This sourcebook module should be read in conjunction with the following Queensland School Curriculum Council materials:

Years 1 to 10 Studies of Society and Environment Syllabus

Years 1 to 10 Studies of Society and Environment Sourcebook Guidelines

Studies of Society and Environment Initial In-service Materials

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Queensland Studies Authority, PO Box 307, Spring Hill, Q 4004, Australia
Ground Floor, 295 Ann Street, Brisbane

Telephone: (07) 3864 0299

Facsimile: (07) 3221 2553

Website: www.qsa.qld.edu.au

Email: inquiries@qsa.qld.edu.au
