

WESTERN SYDNEY
UNIVERSITY



**EDUCATORS
GUIDE FOR
SUSTAINABILITY
TEACHING AND
LEARNING**

Western Sydney University acknowledges the peoples of the Darug, Tharawal, Eora and Wiradjuri nations. We acknowledge that the teaching, learning and research undertaken across our campuses continues the teaching, learning and research that has occurred on these lands for tens of thousands of years.

SUSTAINABILITY EDUCATION AT WESTERN

*Before we can do things differently we need to think differently.*ⁱ

This Guide offers a practical teaching and learning framework. It aims to support sustainability teaching and learning across the University and works towards fulfilling Western Sydney University's commitment to sustainability, including the [Sustaining Success 2021–2026 Strategic Plan](#) and [Sustainability and Resilience 2030 Decadal Strategy](#); and our deep institutional [commitment to the United Nations' Sustainable Development Goals](#) (SDGs).

APPROACHES TO SUSTAINABILITY EDUCATION AT WESTERN

Sustainability, whether, environmental, social, cultural or economic, is an unstable and contestable concept – which is a good thing. It's an ideal, and the pathways towards that ideal may change over time. At Western, we make several important distinction:

→ **Education about sustainability** focuses on learning about key issues such as climate change. This can also be expanded to include education *about* the Sustainable Development Goals (SDGs). It allows for our students to recognise relevant global challenges

and the SDGs (or at least ones specifically relate to their discipline) and to learn about and understand their larger global framework and purpose as well as the complexity of what this entails at a global and national level.

→ **Education towards the SDGs** is a crucial part of our commitment to teaching and learning. These are degree programs and specific learning activities that contribute to the intent of the SDGs at local and global levels. These allow our students to *acquire the knowledge and skills needed to promote sustainable development*, usually in relation to their discipline contexts.

→ **Education for Sustainability** spans all levels of formal, informal, professional and community education, using learning and change processes to help people critique and shape the decisions and social practices that influence our future as a global communityⁱⁱ. It includes substantive knowledge of sustainability however focuses on a wider set of skills attitudes, and practices necessary to respond to these issues, explicitly examining values and ethics, and taking a larger holistic approach to sustainable futures.

WHAT IS EDUCATION FOR SUSTAINABILITY?

Education for Sustainability (EfS) was articulated and actioned particularly during the UN Decade of Education for Sustainable Development (UNDESD). EfS provides the thinking skills and capabilities to equip learners to take critically informed action towards sustainable futures. It focuses on critical, reflective and creative thinking, systems and complexity thinking, futures thinking, values and world views, as well as participatory and partnership capabilities. EfS is really about pedagogy as much as content. While learning *about* sustainability issues like climate, biodiversity, energy, urban living, water quality and so on are vital, Education *for* Sustainability focuses on how we educate people as critical, creative, empowered citizens who can make change in the world. It is about transformative learning, which is often student-centred, experience-based, collaborative and lifelongⁱⁱⁱ.

ⁱGermein, S. (2022)

ⁱⁱTilbury (2011)

ⁱⁱⁱ Michel (2020); Redvers et al (2023)

It's more about how you teach than what you teach.

THIS GUIDE IS NOT ABOUT...

This Guide is not about burdening you with additional curriculum content. The fact is, that as passionate educators, you may already be using many of the EfS curricular and pedagogical strategies. In fact, the first thing to do is a stocktake. Look at what you are already doing with your classes, what successes can be amplified and what gaps need to be addressed. EfS pedagogy is diverse: both experiential and theoretical, student-centred and teacher-centred, and above all, participatory and transformative^{iv}. It doesn't work against what you are already doing; it works with it.

The Guide is not about inculcating students with an ecological worldview or towards climate change activism. EfS as transformative teaching and learning is about opening up a critical discourse about the world and its challenges; and about possible solutions for individuals, local communities and globally. The desired end result is graduates who think critically about the world and their place in it^v. EfS invites students to come out of their education arguing! That is, not emerging with 'the answers' (because to be honest we are not sure what they are when it comes to our planet's future) but to come out with the critical thinking skills and lively discourses to keep questioning and creating the future.

Finally, this Guide does not address the challenges of implementing sustainability education across a University. These challenges are well documented: structural, policy and compliance constraints, market forces - the list goes on^{vi}. Rather, the philosophy behind this Guide is guided by complexity thinking. Let's give teaching and learning a nudge or two, watch what happens, and amplify the positive^{vii}.

^{iv}Seatter & Ceulemans (2017); Michel, (2020); Viegas et al (2016)

^vSeatter & Ceulemans (2017); Dollin, Vermeulen & Germein (2022)

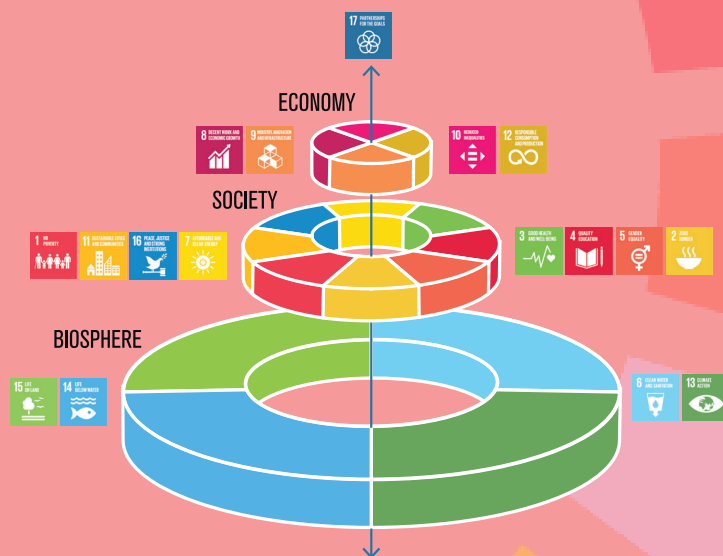
^{vi}Redvers (2023); Seatter & Ceulemans (2017); Gale et al (2015)

^{vii}Kuhn (2007)

THE SUSTAINABLE DEVELOPMENT GOALS

The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, provides a shared blueprint for peace and prosperity for people and the planet, now and into the future, achieved through partnership. The 17 Sustainable Development Goals (SDGs) are an urgent call for action to end poverty, improve health and education, reduce inequality, and spur economic growth – all while tackling climate change and working to preserve our oceans and forests. Achieving the 2030 Agenda however is challenging.

Our University has acknowledged our responsibility through our teaching and learning to equip the next generation of professionals and leaders to understand the global challenges facing the world and the role they can play in rising to meet these. The teaching of sustainability (and the SDGs) needs to equip graduates with the skills to bring about transformative change for a better future. This means envisioning new ways of viewing the Sustainable Development Goals by looking at how they are all linked together. The Stockholm Resilience Centre's 'Wedding Cake' illustrates this thinking. It demonstrates how economies and societies should be seen as embedded parts of the biosphere. This vision is a move away from the current siloed approach where social, economic, and ecological development are seen as separate parts - and needs to be reflected in our curriculum.



Stockholm Resilience Centre, Stockholm University CC BY-ND 3.0.

STRATEGIC THINKING FOR YOUR TEACHING

As a signatory to the Sustainable Development Solutions Network (SDSN) Higher Education Commitment since 2017, we have been committed to supporting and promoting the principles of the SDGs in our curriculum, operations, research and engagement. In thinking about Western's commitment to sustainability, adopting ideas from EfS pedagogy directly activates these principles from Western's 2021 – 2026 Strategic Plan, for example Sustainability (1.1, 1.2, 1.4); Equity (2.1, 2.3, 2.4); Transformation (3.1); and Connectedness (4.1, 4.2, 4.3). Adding EfS pedagogy and content to your teaching and learning toolkit makes good sense in terms of your School's contribution to the Strategic Plan.

GRADUATE ATTRIBUTE FOSTERING EFS CAPABILITIES

MAKING PROGRESS WITH OUR TEACHING AND LEARNING: GRADUATE ATTRIBUTES

As part of our strategic commitment, our teaching and learning mission is to educate and shape citizens who can make a positive difference in the world. Graduate attributes describe the knowledge, capabilities and traits that we aspire to for our graduating students. At Western, these are:

- Enacting the principles of intellectual enquiry.
- Applying knowledge and skills to curate and communicate ideas truthfully, with purpose and impact.
- Demonstrating a commitment to life-long learning.
- Actively collaborating in partnership, with respect and reciprocity.
- Acting ethically and responsibly with and for Indigenous Australian peoples and communities.
- **Contributing to a sustainable, diverse, and socially-just world.**

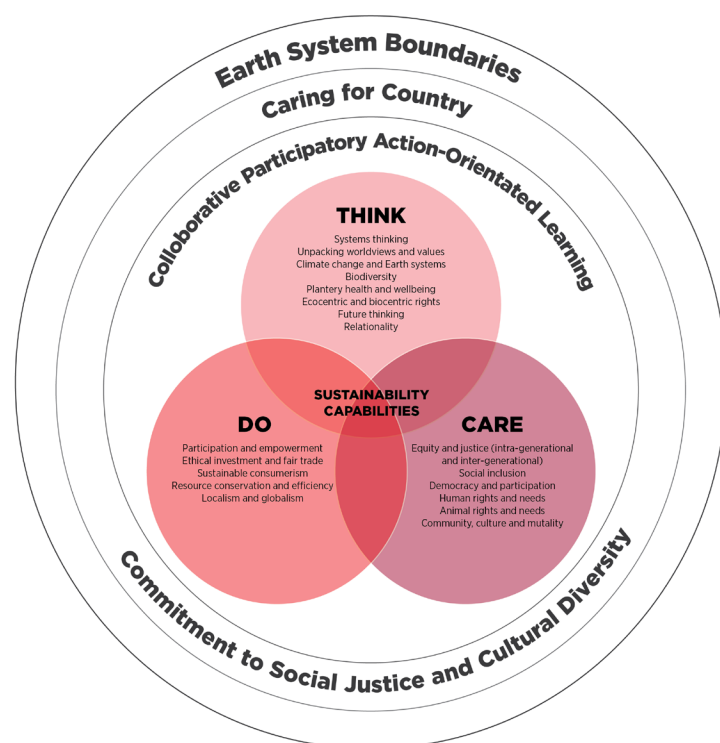
From the perspective of sustainability, we recognise that the sustainability graduate attribute includes the ability to critically envision better futures and take action towards that future. EfS, through its orientation towards positive change capability, is a natural fit with our teaching and learning work.

**It's our students who
are going to change
the world!**

SUSTAINABILITY CAPABILITIES AND EFS

Sustainability capabilities cut across all disciplines at Western in both our undergraduate and postgraduate curriculum. At the core, sustainability capabilities are reflective of the 'head, heart and hands' approach of several educational philosophies and the general notion of education that covers knowledge, capabilities (or attributes), and values.

At Western we have themed these capabilities as Think (cognitive), Care (socio-emotional) and Do (praxis) and suggested entry points that can be used to support collaborative, participatory and action-orientated learning as a framework for fostering sustainability capabilities and our graduate attribute^{viii}. These are situated within larger knowledge systems of Caring for Country, scientific Earth systems boundaries (like the SDG wedding cake) and a commitment to social justice and cultural diversity.



^{viii} Germein, S. (2022) adapted from Centre for Ecoliteracy (2022); Dollin, J. and Vermeulen, B. (2022).

SPOTLIGHT ON: THE SDGs, GRADUATE ATTRIBUTES & EFS FOR THE MATTER OF EFFECTIVE ASSESSMENT

Our graduates will be the next generation of industry leaders, and assessment as a pedagogical strategy has the potential to equip them to thrive. The field of protected cropping is a fast-growing, fast-changing industry. Dr Michelle Mak, School of Science, has therefore put a lot of thought into how she can make assessments relevant to this dynamic area of agriculture. She also thinks it important for her students to have confidence in activating the SDGs in their student experience and future work careers.

For their 40% final assessment project, Michelle asks her Master of Science students to prepare and deliver a “boardroom pitch”, in contrast to a traditional group presentation, on an emerging technology or innovation, while their peers act as the board members.

This project mimics what they will deal with in industry, with a significant portion of the task being applying their SDG knowledge in analyzing the impact of the chosen technology. There’s a lot for them to consider. The choice of an emerging technology is significant. They must be able to understand and explain the underlying science, consider the business risks and benefits, anticipate implementation issues, think about return on investment (ROI), longevity of the technology, environmental, social and governance (ESG) status of the supplier, and so on.

The assessment task is well scaffolded, with guidance through formative assessments and stop-go milestones along the way. Additionally, learning materials are delivered to cater for different sensory modes and learning styles. Michelle says that the learning and assessment ticks a lot of boxes in terms of SDG’s and GA’s, while being highly engaging. This kind of project is also very much in tune with EfS principles of active, collaborative, transformative, practice focused learning. Feedback from students has been positive, with an unexpected outcome being that they start to think more deeply about their career pathway and their potential as board of directors or industry advisory committee members.



 SCAN ME

SUSTAINABLE FUTURES, CRITICAL THINKERS

Sustainable Futures, an undergraduate subject at Western, is unpacking solutions for a sustainable future.

Scan the QR code to learn more, including from our students.

IMPLEMENTING EFS INTO TEACHING: CURRICULUM

CURRICULUM PATHWAYS

There are several ways to include EfS in your curriculum, including your existing curriculum, to prepare and develop well-rounded students who are prepared for the future of work. Curriculum pathways in your teaching could include:



Program levels, with majors and minors focused on sustainability and incorporating transformative teaching and learning.



Whole of subject focused on sustainability which can provide discipline-specific or generic sustainability understandings and capabilities.



Component within an existing subject such as case studies, assessments or student research projects based on real-world issues.



Professional practice, such as work-integrated learning experience, internship or outbound mobility programs, focusing on sustainability.



Interdisciplinary and transdisciplinary subjects or programs, including majors and minors, on sustainability issues and approaches.



Increasing complexity within levels of study as described in frameworks such as AQF and LTAS (see resource list for more tips on complexity).

SPOTLIGHT ON: INTERDISCIPLINARY COLLABORATIONS

From 1995–2004 Western Sydney University offered a Bachelor of Applied Science (Environmental Management and Tourism). This ended when the university's tourism programs moved to the School of Social Sciences. Fast forward to 2023 and Dr Garth Lean (Academic Workgroup Leader, Heritage and Tourism), and Dr Jason Reynolds (Senior Lecturer, Earth Sciences), have launched a collaboration between the School of Social Sciences and School of Science, in the shape of a shared major, entitled 'Sustainability, Tourism and Environment'. Garth sees the benefit as giving students more choice of subjects, but perhaps more importantly as enriching and deepening skills and knowledge on both sides.

Managing visitation in natural environments is something that both tourist professionals and eco-scientists would do. The tourism side is strengthened through understanding ecological values and impacts; and the science side is enriched through understanding visitor motivations and behaviours.

They really go hand in hand, and Garth notes that all of the tourism subjects offered at Western Sydney University are like that – inherently interdisciplinary and transdisciplinary. Building a collaboration takes perseverance, says Garth. It requires some appreciation of the intersective themes; networking and finding the right person to champion the project with you; and a strong rationale to help you navigate the approvals process. But it is worth it in terms of quality student outcomes: students emerge with a solid appreciation of the relationship between tourism and the natural environment, and with the knowledge and skills to work in the plethora of careers that intersect with tourism, sustainability and the environment.



SUBSTANTIVE CURRICULUM ENTRY POINTS

There are many substantive entry points for EfS, and the list will vary between disciplines. Climate change, water, energy, corporate social responsibility (CSR), environmental, social and governance (ESG), citizenship, health and wellbeing, global peace, food security, social justice, rural and urban development, poverty, gender equality.... to name a few.

Managing the entry point will vary. In some cases you already have these topics in your curriculum, in other cases you might add in some entry point content and pedagogy to your existing curriculum. For example a project-based assessment task on a specific industry could easily be reconfigured to focus on or include ESG, CSR or sustainability issues within that industry. A great example is the inclusion of Environmental Management and Sustainability in the Master of Business Administration (MBA) offering.

SPOTLIGHT ON: ENVIRONMENTAL MANAGEMENT AND SUSTAINABILITY

“Climate change is a business problem. As such it is critical that our students learn and apply environmental management concepts within a business context.” - Professor Yi-Chen Lan, Subject Coordinator, School of Business

Offered at our Vietnam and Parramatta campuses, students undertaking Western’s Master of Business Administration (MBA) explore a range of practices and strategies that underpin a sustainable business operation, learning why environmental sustainability is the world’s most challenging and complex issue. Using real-world case studies and emerging environmental management initiatives, such as the circular economy, natural capital accounting, and environmental and social profit and loss, students investigate first hand approaches and tools to analyse environmental management practices, determine environmental risks, and develop associated mitigation strategies.

IDEAS FOR CURRICULUM ENTRY POINTS

Alternative futures	Responses to climate change	Cultural diversity and equality	Human rights	Leadership and managing change	Citizenship, democracy, governance	Ecosystems and ecological principles
Corporate social responsibility	Waste, Water, Energy	Community resilience	Peace, security, conflict resolution	Millenium Development Goals	Globalisation of trade	Learning organisations and communities
Social justice	Biological diversity	Natural resources management	Accountability and ethics	Cultural heritage	Intercultural understanding	Food security
	Health and wellbeing	Rural and urban development	Consumerism and ethical trade	Ecotourism	AND MANY MORE!	

IMPLEMENTING EFS INTO TEACHING: PEDAGOGY

PEDAGOGICAL ELEMENTS OF EFS FOR YOUR CLASSROOM

While descriptions of these elements may vary slightly in the literature, the essential elements remain the same. Pedagogical strategies for Efs often involve learning environments and activities that are experiential, problem-based, learner-centred, collaborative, and transformative. Below is a list of the key elements and some ideas for what they might look like in your classroom and teaching practices:



Critical, reflective and creative thinking: Opening up an ongoing critical discourse, questioning values and assumptions, and generating alternatives.



Envisioning the future: Brainstorming, forecasting and backcasting, trend analysis, futures wheels, scenario construction, probable and preferable futures.



Systems thinking: Looking at lifecycle analysis, stakeholder analysis, impact and effects wheels, feedback loops, complexity models and cross-boundary thinking.



Participation and partnerships: Values and worldviews, student-centred and inquiry-based pedagogy, community engagement methods, networking and connecting.



Transformation and change: From transmissive towards constructivist and transformative; from teacher-centred to student-centred; critical and reflective discourse.



SPOTLIGHT ON: SUSTAINABLE PLACE-MAKING

'Frontiers in Tourism Practices and Places' is being developed by Dr Felicity Picken, as a core subject in the Master of Sustainable Tourism and Heritage. In conceptualising the subject, Felicity addresses the question: "How might Tourism fit with the Anthropocene?". She uses the term 'Frontiers' deliberately, wanting to challenge students to think through the possibilities and uncertainties of futures planning. She recognises that students need to be part of shaping the future in Tourism: to be change-makers.

The students will be asked to choose a future destination management plan scenario – something that speaks to their own area of interest. Via a range of futures thinking methodologies, they are asked to engage in critical analysis, thinking about, for example underwater hotels – and about the implications, uncertainties and possibilities for that destination.

Felicity is aware that we can too easily get seduced into short-term thinking, and captive to 3–4 year cycles delineated by marketing and institutional forces. In thinking about how we inhabit (and visit) our planet, we really need to re-learn long-term thinking. This approach is encapsulated in the Iroquois exhortation to think of the seven generations before you and seven generations after you, in your words, work and actions. In designing this course, Felicity and students confront the questions: "How do we get a grip on long term thinking?" and "How do we inject the long-term into our short-term scenarios?"

EFS PEDAGOGICAL APPROACHES ^{ix}

SHIFTING FROM:	MOVING TO:
Bolt-on additions to existing curricula	Innovation within existing curricula
Passing on knowledge & raising awareness of issues	Questioning and getting to the root of issues
Teaching about attitudes and values	Encouraging clarification of existing values
Seeing people as the problem	Seeing people as change agents
Sending messages about sustainable development	Creating opportunities for reflection, negotiation and participation
Raising awareness and trying to change behaviour	Challenging the mental models which influence decisions and actions
More focus on the individual and personal change	More focus on professional and social change
Negative 'problem-solving' approaches	Constructive creation of alternative futures
Isolated changes/actions	Learning to change

WHAT TO DO NEXT?

How can we work together to shape our teaching and learning to foster graduates who can contribute to a more sustainable, socially-just and diverse society? You can:

- Identify what is already working well and amplify it.
- Connect and partner with others in your discipline, across disciplines and externally.
- Just do it! Give it a go. Don't wait for the perfect circumstances.
- Stay in touch with us and search for resources on our [sustainability education website](#), or share your successes and challenges on our [Digital Engagement Platform](#). You can also email us on sustainability@westernsydney.edu.au



OUR OFFERINGS

At Western students from varying disciplines and levels can undertake a degree specialisations (minors or majors) that support transformative teaching for sustainability and towards the SDGs.

Scan the QR code to see our list of sustainability specialisations and 21C minors.

SPOTLIGHT ON: TEACHING EFS ACROSS THE DISCIPLINES

“This course really changed the way I think.”
– students reflections

Dr Annette Sartor teaches TEAC2018 Education for Sustainability in the School of Education. The subject sits within the Education Studies, Global Sustainability, and Creative Living and Cultural Wellbeing minors. While the majority of students enrolled in the subject are completing Pathways to Teaching programs, other frequent enrolments include students from Humanitarian and Development Studies, Planning, Business, Engineering, Policing, Health Science, Science and Zoology degrees. The curriculum examines the very notion of 'sustainability' and explores the interconnections between economic, environmental and social sustainability.

The subject is student-centred, involving flexible and dynamic group activities and the application of learning to everyday lives. Students bring rich interdisciplinary understanding and experiences to consider examples of sustainability approaches in their future work. They are provided opportunities to develop systems and critical thinking skills including reflecting on values informed practice and action related to sustainability. Underpinning the subject is transformative teaching to promote student learning and personal growth.

^{ix} Tilbury & Cooke (2005).

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PUBLISHED

June 2023

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Photos: Courtesy of Tsoutas, S. (2023), Western Sydney University photographer

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