

Shape of ACT Senior Secondary Curriculum

Draft Outdoor and Environmental Education A/T/M

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1. PURPOSE

- **1.1** The Shape of ACT Senior Secondary Curriculum: Outdoor and Environmental Education will guide the writing of the Outdoor and Environmental Education A/T/M courses.
- 1.2 This paper has been prepared following the deliberations of the Outdoor Recreation writing team, and also in consultation with Dr John Rafferty (Associate Head of School, Environmental Science and Management, Charles Sturt University), Dan McNamara (Assistant Director, Outdoor Adventure Activities, ACT Education Directorate), and Lori Modde (Chief Executive Officers, Outdoors NSW and ACT).
- **1.3** The paper should be read in conjunction with The Shape of the ACT Senior Secondary Curriculum located at: http://www.bsss.act.edu.au/curriculum/bsss_course_development_consultation

2. INTRODUCTION

- **2.1** The *Outdoor and Environmental Education A/T/M* course will be the basis of planning, teaching, learning and assessment in ACT senior secondary schools.
- **2.2** The Shape Papers recognise that each subject features discrete knowledge, symbols, language, processes, and skills
- **2.3** The Shape Paper will guide the course development process. These courses will be the basis of planning, teaching, learning, and assessment in ACT senior secondary colleges.

3. BACKGROUND

- **3.2** Outdoor and Environmental Education develops outdoor skills and knowledge, but it is also about the environment in which outdoor activities take place and how to conduct investigations and environmental education programs in outdoor contexts. The course will be contemporary and highly relevant to senior secondary students in the 21st century.
 - All courses under development are required to meet Board design specifications and to align with Board requirements for the senior secondary curriculum. These specifications align with ACARA course design specifications and provide teachers with flexibility to plan, teach and assess according to the needs and interests of their students.
- 3.3 The Outdoor and Environmental Education course is to be developed under the Health, Outdoor and Physical Education Framework as it engages with concepts, theories and methodologies in emotional and physical health and wellbeing. Drawing on research from outdoor recreation and leadership literature, the Outdoor and Environmental Education course develops the technical, conceptual, interpersonal, and intrapersonal metacognitive skills required to enable students to successfully engage with, and lead in the growing outdoor recreation industry. In addition, Outdoor Environmental Education promotes a deep knowledge and appreciation of the environment and how to inspire an appreciation in others. The Health, Outdoor and Physical Education Framework is located at:
 - https://www.bsss.act.edu.au/ data/assets/pdf file/0014/413015/Draft Health Outdoor and Physical Education Framework.pdf
- **3.4** The rationale for the *Health, Outdoor and Physical Education Framework* that states:
 - Courses written under this framework enable learners to understand how health practices and physical activity participation are, in part, socially constructed and therefore require diverse strategies for gaining and maintaining positive outcomes for all. Such knowledge has the potential for students to enhance their own and others' health and well-being in varied and changing contexts.

Students develop their knowledge and understanding of theories, concepts, and perspectives to explain health, physical performances, participation, and performance. They analyse the nature and purpose of physical activity and develop insights into how values, behaviours, priorities, and actions reflect the complex contexts in which people live.

Students develop skills to improve their own and others' health, well-being, and physical activity opportunities. Students develop analytical and critical thinking skills and learn to question and challenge assumptions about physical activity. They develop skills to communicate effectively and present logical and coherent arguments.

(BSSS, Health, Outdoor and Physical Education, 2019, p. 4.)

- **3.5** All courses based on this framework should enable students to:
 - analyse health, outdoor and physical education theories, concepts, principles, methodologies, assumptions, perspectives, and ideas
 - analyse the nature and purpose of health, outdoor and physical education and the impact of factors that influence self, others, and well-being
 - analyse values and attitudes and evaluate their influence on health, outdoor and physical education
 - communicate in a range of modes and mediums for specific purposes and audiences
 - reflect on and apply concepts, skills, and strategies.

3.6 Concepts, knowledge, and skills from the Health, Outdoor and Physical Education Framework Concepts and knowledge

- learning through movement
- understanding movement
- physical movement
- contributing to healthy and active communities
- communicating and interacting for health and wellbeing
- being healthy, safe, and active.

Skills

- critical and creative thinking, analysis
- evaluation, reflection, and synthesis
- research
- leadership
- application of theories, concepts, models, and principles
- problems solving, and decision making
- communication
- use of technology
- logic and reasoning
- performance of physical skills
- work independently and collaboratively
- 3.7 All courses of study for the ACT Senior Secondary Certificate should enable students to develop essential capabilities for twenty-first century learners as proposed by the Alice Springs (Mparntwe) Education Declaration (2019) "to prepare young people to thrive in a time of rapid social and technological change, and complex environmental, social, and economic challenges" (2019, p. 3). This is in part developed in all ACT BSSS courses through the Australian Curriculum General Capabilities, which comprise an integrated and interconnected set of knowledge, skills, behaviours, and dispositions. (ACARA, 2016) The course will help students to develop consciously the clusters of

skills and dispositions that they can transfer from role to role as they adapt to a rapidly changing world and work context. (Snow, A, 2019)

Outdoor and Environmental Education integrates areas of study that address content across several learning areas. As such the General Capabilities of Personal and Social Capability, Literacy, Numeracy, Information and Communication Technology and Critical and Creative Thinking find place in its delivery.

Students develop Personal and Social Capability as they learn to understand themselves and others, and manage their relationships, lives, work and learning more effectively. Personal and Social Capability involves students in a range of practices including recognising and regulating emotions, developing empathy for others, and understanding relationships, establishing, and building positive relationships, making responsible decisions, working effectively in teams, handling challenging situations constructively and developing leadership skills.

The full reference can be found <u>here</u>.

In the Australian Curriculum, students become literate as they develop the knowledge, skills, and dispositions to interpret and use language confidently for learning and communicating in and out of school and for participating effectively in society. Literacy involves students listening to, reading, viewing, speaking, writing, and creating oral, print, visual and digital texts, and using and modifying language for different purposes in a range of contexts.

The full reference can be found here.

In the Australian Curriculum, students become numerate as they develop the knowledge and skills to use mathematics confidently across other learning areas at school and in their lives more broadly. Numeracy encompasses the knowledge, skills, behaviours, and dispositions that students need to use mathematics in a wide range of situations. It involves students recognising and understanding the role of mathematics in the world and having the dispositions and capacities to use mathematical knowledge and skills purposefully.

The full reference can be found here.

In the Australian Curriculum, students develop Information and Communication Technology (ICT) capability as they learn to use ICT effectively and appropriately to access, create and communicate information and ideas, solve problems, and work collaboratively in all learning areas at school and in their lives beyond school. ICT capability involves students learning to make the most of the digital technologies available to them, adapting to new ways of doing things as technologies evolve and limiting the risks to themselves and others in a digital environment. To participate in a knowledge-based economy and to be empowered within a technologically sophisticated society now and into the future, students need the knowledge, skills, and confidence to make ICT work for them at school, at home, at work and in their communities.

The full reference can be found here.

In the Australian Curriculum, students develop capability in critical and creative thinking as they learn to generate and evaluate knowledge, clarify concepts and ideas, seek possibilities, consider alternatives, and solve problems. Critical and creative thinking involves students thinking broadly and deeply using skills, behaviours, and dispositions such as reason, logic, resourcefulness, imagination, and innovation in all learning areas at school and in their lives beyond school.

The full reference can be found here.

Australian Curriculum General Capabilities can be found at: https://www.australiancurriculum.edu.au/f-10-curriculum/general-capabilities/

3.8 The importance of the senior years of schooling as a critical transition point for young people is highlighted in two extracts from the Alice Springs (Mparntwe) Education Declaration:

All Australian Governments and the education community need to support students in their senior years by helping them acquire the cognitive and social skills necessary for life after school and equip students to remain engaged in learning throughout life.

Australian Governments commit to working with the education community to provide a senior secondary education that equips young people with the skills, knowledge, values, and capabilities to succeed in employment, personal and civic life.

https://docs.education.gov.au/documents/alice-springs-mparntwe-education-declaration

4. THE CONTEXT OF THE ACT

- **4.1** Courses of study for the ACT Senior Secondary Certificate:
 - provide a variety of pathways, to meet different learning needs and encourage students to complete their secondary education
 - enable students to develop the essential capabilities for twenty-first century learners
 - empower students as active participants in their own learning
 - engage students in contemporary issues relevant to their lives
 - foster students' intellectual, social, and ethical development
 - nurture students' wellbeing, and physical and spiritual development
 - enable effective, respectful, and contributing participation in a diverse society.
- **4.2** Each course of study:
 - comprises an integrated and interconnected set of knowledge, skills, behaviours, and dispositions that students develop and use in their learning across the curriculum
 - is based on a model of learning that integrates intended student outcomes, pedagogy, and assessment
 - outlines teaching strategies which are grounded in learning principles and encompass quality teaching
 - promotes intellectual quality, establishes a rich learning environment, and generates relevant connections between learning and life experiences
 - provides formal assessment and certification of students' achievements.
- **4.3** In consideration of the ACT context, and in response to contemporary research and literature, the *Outdoor Recreation* and *Outdoor and Environmental Education* courses should include:
 - a student-centred pedagogical approach
 - an interdisciplinary approach
 - the educational needs of young people with respect to developing technical, interpersonal, intrapersonal, and metacognitive knowledge and skills
 - the Health, Outdoor and Physical Education Framework and Achievement Standards
 - the needs of different schools and sectors (government and non-government)
 - acquiring and practicing skills for own and others improved health and wellbeing
 - learning how own and others' attitudes and perspectives influence experiences
 - opportunities to apply learning and skills through engagement in the natural environment

5. AIMS OF THE OUTDOOR AND ENVIRONMENTAL EDUCATION CURRICULUM

5.1 Outdoor and Environmental Education A/T/M draws on and examines the interconnections between people and the natural environment. According to Sabet (2018) the value of outdoor education lies in the multitude of benefits it provides to those who participate and has historically been adventure-based education, with a focus on individual health and personal growth through camping and survival skills. However, recent trends in outdoor education are shifting the focus away from individual health and wellness goals to fostering environmental stewardship through connections to the outdoors.

Considering this shift, the *Outdoor and Environmental Education* course provides opportunity for students to develop knowledge and understanding of environmental stewardship through 'in place' experiences that connect individuals with nature. Sabet (2018) further poses that to produce students who will take care of the environment, and even work or make sacrifices toward mitigating global problems such as climate change and loss of biodiversity, outdoor educators are taking students outside and providing them with experiences that will help them feel connected to nature. In support Suzuki (2017) identifies that unfortunately, our lack of attention to the intricate and interconnected ways of nature has led to widespread devastation that now threatens the very systems that support human health and survival. We have become disconnected from our own true nature. *Outdoor and Environmental Education* builds connections for future environmental educators and action advocates.

Through the study and engagement of outdoor experiences, the *Outdoor and Environmental Education* course develops understanding of indigenous perspectives and cultural significance of local environments. Students consider indigenous perspectives and culture in their own and others engagement of outdoor experiences and in doing so, explore ways for people, as individuals and as a society, to live more sustainably on the land, in harmony with it (Sabet, M 2018).

Through the study of sustainable practices within the outdoor education and recreation industry, students understand the environmental responsibilities for the provision of and engagement in activity occurring natural spaces. According to Leung and Marion (2000) in what they term recreational ecology, future wilderness managers must effectively educate and regulate visitors and manage resources to avoid usage impacts. Further, Mullins (2014) proffers that a growing outdoor adventure industry—including outdoor and adventure education, recreation, and tourism—has been challenged to reduce its negative environmental impacts, develop sustainable approaches to global environmental changes. Students of *Outdoor and Environmental Education* examine environmental impacts to devise solutions for their management with continued recreational use.

Outdoor and Environmental Education develops citizenship and leadership of environmental issues and fosters communication between members of the community regarding action and change. The 'in place' pedagogical approach in Outdoor and Environmental Education, according to Significant Life Experiences (SLE) researchers Arnold, Cohen, and Warner (2009) suggest that environmental leaders attribute their involvement in environmental action to spending time in the outdoors or having negative experiences of environmental destruction. Here time spent in place significantly influences future actions and positive change.

According to Adkins and Simmons (2002) the goal of environmental education is to develop a world population that is aware of, and concerned about, the environment and its associated problems, and which has the knowledge, skills, attitudes, motivations, and commitment to work individually and collectively toward solutions of current problems and the prevention of new ones. Perhaps what distinguishes environmental education from outdoor and experiential education is its focus on developing the "core concepts" and "skills" that environmentally literate citizens need for responsible action. As such, the *Outdoor and Environmental Education* course provides opportunities for students to gain an awareness of issues within local and national environments. They examine these in the context of outdoor activities and to develop skills in the communication and mitigation of problems and issues.

Students of *Outdoor and Environmental Education* experience the natural environment through a variety of means, developing technical skills which facilitate their access, enjoyment, and connection to place. Such skills must be of sufficient level to minimise risk and maximise experience.

Outdoor and Environmental Education offers a distinctive practical approach to providing environmental studies concepts with aims to develop students' individual connection to natural spaces, understanding of cultural significance, develop sustainable practices, and advocate action in the community. Students become environmentally informed users and providers of outdoor recreational activities in natural spaces.

- **5.2** In *Outdoor and Environmental Education,* students are provided with the opportunity to develop skills, knowledge, and understandings in regard to:
 - knowledge and understanding of natural environments and ecosystems and people's relationships with them
 - knowledge, understanding of environmental and sustainability issues
 - skills to experience natural environments for educational and research purposes
 - personal and interpersonal skills and dispositions necessary to navigate natural environments and conduct research.
 - cultivate teamwork and collaboration skills
 - communication and presentation skills when engaging with the community around environmental topics
 - using critical and creative thinking skills and the capacity to make decisions
 - literacy and numeracy skills
 - research and analytical skills

6. STRUCTURE OF THE OUTDOOR AND ENVIRONMENTAL COURSE

The Outdoor and Environmental Education A/T/M course focuses on the underpinning knowledge and skills required to develop environmentally aware users and educators of natural environments to assist in the development of sustainable and culturally appropriate outdoor experiences and bring about environmental action. The course writers have been supported in their understanding of this area of learning by Dr John Rafferty (School of Agriculture, Environmental and Veterinary Sciences, Faculty of Science and Health, Charles Sturt University), Dan McNamara (Assistant Director, Outdoor Adventure Activities, ACT Education Directorate), and Lori Modde (Chief Executive Officers, Outdoors NSW and ACT).

Rationale

The study of Outdoor and Environmental Education should develop students understanding and awareness of environmental considerations and issues that are present in natural environments. They explore the impact of human activity, specifically recreational pursuits, and its impact on the environment.

Outdoor and Environmental Education provides opportunity for students to engage in and with the natural environment through *in place* experiences, building connections to the environment. It provides for the opportunity to scientifically study ecosystems and landscapes of local spaces and draw conclusions on their condition.

Students undertake investigations and develop technical skills to access natural environments, to develop insights enhance their own and other's experiences. Sustainability and cultural significances associated with natural spaces traditionally used for recreational activities are examined and applied when planning and undertaking expeditions and activities.

Connections to the environment through outdoor recreational activities are reinforced and utilised when communicating environmental awareness, change and action to individuals and the community for improved practice and mitigation of issues.

Outdoor and Environmental Education, with its focus on the environmental considerations of recreational activities undertaken in natural spaces, is complementary with the Outdoor Recreation course which develops outdoor recreation technical knowledge, understanding and skills. In combination, a student of these courses gains the ability to individually participate, or lead others in, the access of meaningful, environmentally, and culturally considered, educationally focused outdoor experiences.

Units

Understanding the Environment

Students investigate scientific knowledge of environments. They develop and refine the practical skills to go out into the environment safely and sustainably to interpret ecosystems for a researched inquiry. They critically analyse existing studies and research on landscapes and ecosystems and test those conclusions through analysis and the experiences of expeditions. Students synthesise technical skills and environmental knowledge to investigate a chosen context.

Connection to the Environment

Students investigate the relationship between culture and land, including First Nations Australian understanding of and connection to country. They critically analyse outdoor expeditions and programs to evaluate their cultural sensitivity and respect for the cultural meaning and function of landscapes. Students study the ethics of outdoor activities in relation to land and culture. They synthesise technical skills and knowledge to engage in outdoor education programs that demonstrate awareness of cultural considerations of landscapes. They reflect on their own experiences in natural environments and the connections they develop in these.

Sustainable Outdoor Practices

Students investigate environmentally sustainable concepts, methods, and techniques for accessing and studying the outdoors. They critically analyse case studies of outdoor education and tourism programs to evaluate their sustainability. Students evaluate the impact of climate change on chosen environments to evaluate the adaptability of existing outdoor programs to climate change. They develop technical skills to lead or undertake sustainable expeditions to better understand environmental issues.

Wilderness and Conservation

Students investigate wilderness management and conservation including National Parks and community conservation groups. They examine how innovations in ecotourism are used to sustain conservation efforts. Students critically analyse the benefit of wilderness ecosystem resources to the wider community. They develop the technical skills to access and conserve wilderness resources.

Independent Study

An Independent Study unit has an important place in senior secondary courses. It is a valuable pedagogical approach that empowers students to make decisions about their own learning. An Independent Study unit can be proposed by an individual student for their own independent study and negotiated with their teacher. The program of learning for an Independent Study unit must meet the unit goals and content descriptions as they appear in the course.

Independent Study units are only available to individual students in Year 12. A student can only study a maximum of one Independent Study unit in each course. Students must have studied at least three standard 1.0 units from this course. An Independent Study unit requires the principal's written approval. Principal approval can also be sought by a student in Year 12 to enrol concurrently in an Independent Study unit and their third 1.0 unit in this course of study.

7. CONSIDERATIONS

Incorporating a futures orientation

To equip students to engage in their future, they should examine them themselves, the processes, and systems at work in their world, how to learn, and how to respond to change. This intention follows the aims enunciated in the *Alice Springs (Mparntwe) Declaration*:

"The skills and knowledge that young people acquire are critical to their success and happiness. The scale and pace of change in society and the economy mean that now more than ever, the ability to learn and grow beyond the compulsory years of education and training is essential. Skills, knowledge, and capabilities will need to be renewed and updated throughout life." (Commonwealth Education Council, 2019, p. 10)

In addition, the intention of this course also follows the ACT's Future of Education plan.

"The Strategy is about developing capable adults who have learnt to learn, live productively in society, think, create, and work in an increasingly digital future... The Strategy also recognises that learning environments are places that bring people together as a community and enable relationships to form between people and services." (Berry, 2018)

Both the future orientations of the *Alice Springs (Mparntwe) Declaration* and the ACT's *Future of Education* plan find a presence in the purpose of this course in that it builds the capacity to engage with future changes and adversity, and the skills to build a meaningful life.

7.1 Equity and opportunity

The *Outdoor* and *Environmental Education* course provides flexibility and choice for teachers and students. Teachers will design programs of learning to develop the knowledge, understanding and skills outlined in the course. The factors that influence those programs include school and community contexts, local community learning opportunities, contemporary and local issues, and available learning resources.

7.2 Connections to other learning areas

Outdoor and Environmental Education incorporates knowledge and understanding across the curriculum for application in challenging and dynamic environments. These courses complement each other for the delivery of technical and scientific content for engaging in and with natural environments.

7.3 Role of digital technologies

Students and teachers integrate a variety of online information, tools and applications into teaching and learning in this course. These include a range of online resources including databases, reference materials and national organisations. Students will develop skills for industry and lifelong learning through digital resources.

7.4 Clarity of curriculum

The curriculum is substantial and flexible. It is sufficiently rich and descriptive to guide teachers with limited experience but avoids excessive prescription that would hamper experienced teachers from exercising their skills. The curriculum document is expressed clearly in terms that are accessible to a new teacher, while allowing all teachers to enhance it with their interests and expertise.

7.5 Breadth and depth of study

Content descriptions specify the knowledge, understanding and skills that students are expected to learn and that teachers are expected to teach. Teachers are required to develop a program of learning that allows students to demonstrate all the content descriptions.

A program of learning is what a college provides to implement the course for a subject meeting students' needs and interests. It is at the discretion of the teacher to emphasis some content descriptions over others. The teacher may teach additional (not listed) content if it meets the specific unit goals providing that it does not duplicate content in other units.

7.6 The nature of the learner

These courses address the needs of diverse learners and caters for Tertiary (T), Accredited (A) and Modified (M) levels of study.

7.7 General capabilities

Skills and understanding related to thinking skills and creativity, self-management, teamwork, and intercultural understandings are further developed. In addition, capabilities such as ICT and ethical awareness are represented in the courses in ways appropriate to that area.

7.8 Cross-curriculum perspectives

Each of these perspectives, Aboriginal and Torres Strait Islander Histories and Cultures, Australia's Engagement with Asia, and Sustainability, are represented in the course in ways appropriate to that area. Curriculum documents are explicit as to how the perspectives are dealt with in each course and how links can be made between learning areas. Both Outdoor Recreation and Outdoor and Environmental Education offers significant opportunities for students to engage with Aboriginal and Torres Strait Islander Histories and Cultures and, Sustainability when examining outdoor experiences in natural environments.

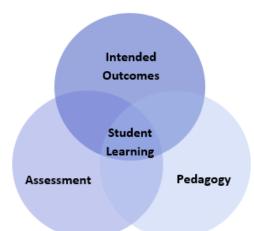


8. PEDAGOGY AND ASSESSMENT

The underpinning beliefs and learning principles for the development of the ACT Board of Senior Secondary School curriculum are as follows:

Underpinning beliefs

- All students are able to learn
- Learning is a partnership between students and teachers
- Teachers are responsible for advancing student learning.



Learning Principles

1. Learning builds on existing knowledge, understandings, and skills.

(Prior knowledge)

 When learning is organised around major concepts, principles, and significant real-world issues, within and across disciplines, it helps students make connections and build knowledge structures.

(Deep knowledge and connectedness)

3. Learning is facilitated when students actively monitor their own learning and consciously develop ways of organising and applying knowledge within and across contexts.

(Metacognition)

4. Learners' sense of self and motivation to learn affects learning.

(Self-concept)

5. Learning needs to take place in a context of high expectations.

(High expectations)

6. Learners learn in different ways and at different rates.

(Individual differences)

7. Different cultural environments, including the use of language, shape learners' understandings and the way they learn.

(Socio-cultural effects)

8. Learning is a social and collaborative function as well as an individual one.

(Collaborative learning)

9. Learning is strengthened when learning outcomes and criteria for judging learning are made explicit and when students receive frequent feedback on their progress.

(Explicit expectations and feedback).

9. CONCLUSION

The *Outdoor* and *Environmental Education* course is to be developed under the *Health, Outdoor* and *Physical Education Framework*. The course promotes critical and creative thinking and personal and social capabilities, equipping young citizens for developing improved health and wellbeing outcomes for themselves and others.

10. REFERENCES

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