Outdoor education – Option 1 Bushcraft and navigation in the outdoors



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## Focus

Students will learn the skills necessary to travel through, and be safe in, a range of outdoor environments. Students will develop navigation skills and use these within a practical context. This will include competent use of navigation equipment.

### Outcomes

A student:

* **OE5-4** explains and apply key considerations and skills related to planning and preparing for outdoor education activities
* **OE5-8** demonstrates actions and strategies that contribute to enjoyable participation in outdoor education activities

### Course content

Students develop and use navigational skills and equipment within a practical context, for example:

* types and features of maps
* map and chart reading skills
* using a range of mapping tools to plan a route and navigate
* compass features
* orienteering using a compass
* natural navigation methods.

Outcomes referred to in this document are from the [Outdoor education course document](https://education.nsw.gov.au/teaching-and-learning/curriculum/department-approved-courses/outdoor-education#/asset2) © NSW Department of Education for and on behalf of the Crown in the State of New South Wales (2021).

The information below can be used to support teachers when using this learning sequence for Outdoor education.

### Rationale

Outdoor education is based on experiential learning where students explore and gain a deeper understanding of their surroundings. Students learn through planning and participating in outdoor experiences and reflecting on their involvement.

Through participation in a range of outdoor activities, students will develop and apply their knowledge and skills to work together to be active and safe in a variety of outdoor environments. They learn to assess risk, identifying and applying appropriate management strategies and emergency response procedures.

Through studying outdoor education, students will develop personal wellbeing and a sense of place and connection as a result of a greater understanding and appreciation of the local natural environment. Outdoor education has the potential to explicitly promote and encourage on-Country learning and include Aboriginal perspectives.

Students learn skills that encourage them to minimise their impact on the environment and understand why this is so important. They will have opportunities to understand environmental management, including the ways Aboriginal Peoples manage and work to actively conserve environments.

The course has links with NSW Stage 5 HSIE, science and PDHPE curriculum.

The course will provide students with a pathway into 3 proposed Stage 6 courses:

* Course a: Outdoor and environmental studies (ATAR).
* Course b: Outdoor education general course.
* Course c: Certificate II in outdoor recreation.

The course is relevant to all students and will prepare students for pathways into further high school studies and subsequently tertiary or vocational education and training pathways. Career pathways include outdoor leadership and guiding, environmental interpretation, environmental planning, ecotourism, outdoor education and many of the evolving career paths of the outdoor industry.

### Aim

Outdoor education aims to enable students to develop:

* a range of interpersonal skills, self-management and specialised movement skills to participate safely in a range of outdoor activities and challenges
* technical knowledge, awareness and skills to plan and prepare for safe participation in a range of outdoor activities
* responsible attitudes towards respecting and protecting the natural environment
* positive habits and behaviours to connect with the natural environment and support lifelong health and wellbeing.

### Purpose and audience

This teaching resource is for teachers delivering or planning to deliver the course. The learning sequence demonstrates how a combination of outcomes can be used to develop teaching and learning activities. It also suggests a range of resources to support teachers when planning and/or teaching the course.

### When and how to use this document

Use this resource when designing learning activities that align with the course outcomes and content. The activities and resources can be used directly or may be adapted based on teacher judgment and knowledge of their students. Core modules must precede options in the delivery of the course, consult the course document for further details on timing of core and options.

This resource provides some suggested teaching strategies that could be used in your classroom. There is no requirement to use all (or any) of the activities, as they are suggestions only. Content may be adapted, modified, and supplemented to meet the individual requirements of students undertaking the Outdoor education course. The length and timing of each activity will be dependent on your class and teacher judgement.

The [supporting EAL/D students in the outdoors](https://education.nsw.gov.au/teaching-and-learning/curriculum/department-approved-courses/outdoor-education#/asset4) document provides further advice to support teachers and students when using this resource.

Blue feature boxes are used throughout the document for additional teacher notes to provide context and suggestions for the activities in each learning sequence.

The course supports the opportunity to explore a range of areas within the scope of Outdoor education. It is recommended that teachers should refer to the [Controversial Issues in Schools](https://education.nsw.gov.au/policy-library/policies/pd-2002-0045) policy.

## Types and features of maps

A map represents a flat surface of an area and can be presented in a range of forms, including paper or digital. It represents a story that is told by the individual who designs the map. People who design maps are called cartographers.

There are many types of maps that are used for different reasons. In outdoor education, maps are used to support the navigation of individuals getting from one point to another.

There are certain symbols and features that are called out in maps which are often explained in a key or legend. A key or legend on a map is used to keep a map detailed but not crowded. A key or legend uses symbols to direct the users’ understanding of land use and geographical features.

The word map may be interchanged with chart or plan depending on the features of the map.

In pairs, students brainstorm everything they know about maps, for example, types of maps they are aware of, features or landmarks that may be highlighted or represented on a map.

### Students investigate types of maps

**Types of maps:**

* general reference or planimetric
* topographical
* thematic
* climate
* geological
* physical
* road
* cadastral
* dot map
* political
* interactive
* mud
* Aboriginal languages maps.

**Map features:**

* contour lines
* specifications
* data dictionaries
* latitude
* longitude
* grid lines
* metadata
* scale
* magnetic north
* true north.

For each type of map, answer the following questions:

* How is the map classified?
* Outline the main features of this type of map. What does this type of map show?
* Who would use this type of map and for what purpose?
* Have you seen or used this type of map before? If so, when and what for?
* What makes this type of map unique, different or interesting compared to other maps? What would you like to explore further about this map?
* Is this map used more commonly in paper form or on digital platforms? How do you know?
* How can a map demonstrate bias? Justify your answer.

Record and discuss the features of a map with a partner.

* Define each feature.
* How will it be used for map design and in what ways is this important when designing maps?
* When will it be useful? Will it be used in all maps? Why not?
* In what situations will these terms be important as an outdoor education student?

### Maps and chart reading skills

Students will investigate [what is a topographic map](https://www.ga.gov.au/scientific-topics/national-location-information/topographic-maps-data/basics/what-is-a-topographic-map) to gain a deeper understanding of the features of these maps and how to use these when experiencing the outdoors.

Students engage with [Reading maps: What is a map? (2:51 min)](https://www.youtube.com/watch?v=q5h5xEZm2mw).

Answer these questions individually:

* What is a map?
* How does a map show a story?
* What is the significance of projection when individual’s design a map or read it?
* What happens when the map may not be facing north? What would change or be different?

Work collaboratively to consider these statements as a class. Explain what each statement means:

* a graphic and selective depiction of part of the earth’s surface
* maps are accurate and that it represents geographic reality
* maps are a selective document
* maps show bias.

Students explore essential elements of maps using [Think, Pair, Share](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/645#.YYMYKu-cd6Q.link). Use a variety of communication modes for diversity of students.

Elements of a map:

* border
* orientation
* legend
* title
* scale
* source.

For each element of a map, use the [Think, Pair, Share](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/645#.YYMYKu-cd6Q.link) outline below:

* **Think** – explain each element and provide interesting characteristics, features or examples. Explain how each element will support you in future outdoor education experiences.
* **Pair** – outline with a partner each element in relation to points above.
* **Share** – outline ideas with another pair and share as a class.

### Topographic maps

By the end of Stage 4, students are expected to develop and apply their understanding and skills through Geography K-10 to topographic maps. They should be able to use these maps to identify direction, scale and distance, area and grid references, latitude and longitude, altitude, area, contour lines, gradient, local relief.

This should be built on through the Outdoor education course content. Topographic maps are detailed representations that display the features of the land that appear on our earth’s surface. In outdoor education, these are the maps used to navigate when experiencing outdoor activities, particularly on bush walks, hikes or overnight camping experiences in various conditions.

The following activities will build student understanding of topographic maps. Identifying the prior learning and the point of entry of each student group is important.

Teachers may choose to use some of the activities below to consolidate or revise student knowledge and skills.

Use accurate and reliable information and resources (examples of websites could include the [Geoscience Australia website](https://www.ga.gov.au/education)) to explore the following content:

* What is a topographic map?
	+ What are its features?
	+ What does it show?
* Who designs topographic maps?
* How do you read a topographic map? What is the map scale?
	+ Why is it important to know which direction is north?
	+ What is map projection and how is it used in topographic maps?
	+ What symbols are used and how do we know what they mean?
	+ What are the coordinates of a topographic map? Why are they important? How will they be used?
	+ Are there any hints you can find to support you reading a topographic map? How will these help you?
	+ What types of features or places are represented in the legend of a topographic map? Give examples from a local map of your area.

Students investigate terms to gain a deeper understanding of features within a topographic map:

* What are contour lines and what do they show us? How would you use them in your outdoor education experiences?
* Datums are a reference system which define a unique location based on height, longitude and latitude. In Australia, it is known as the Australian height datum. Explain this with reference to relevant and specific facts and examples.
* There are two main coordinates on maps, latitude and longitude and area reference and grid reference. Explain the difference between these map coordinates.

**Variation** – Students gain a deeper understanding by investigating 3D model maps, digital sand pits, or Google Earth.

By students comparing three-dimensional models to topographic maps, it can deepen their learning of the key elements and features of a topographic map. This, in turn, can support their mapping and navigation skills and understanding.

Using a topographic map of your local geographical area, label a print or digital map with as many elements of a map as possible from above.

* What do you see or notice about your local area map?
* What do you wonder about the map? For example, there may be a particular feature that you are unsure of, what could this be? Investigate these features or characteristics that are not familiar to you.
* What is important to know about reading the map of your local area?
* Students use the map to understand contour lines, scales on maps, grids, measuring distance and watch accompanying videos in resource section to support understanding.

In pairs, students assume the role of a cartographer (someone who creates maps) to create a print or digital sketch map of their school grounds or a zone within their local geographical area.

Creative thinking is encouraged. It could be a new symbol in their legend, or to highlight a particular unique feature in their local area such as a skywalk or a significant Aboriginal cultural site/area which is not sacred knowledge.

In designing their map, students consider the following:

* perspective of the map designers, geographic representation of that part of their land and area and how will that space be projected on a flat space via a map.
* target audience
* purpose of the map
* size of map and scale to use
* the production standards, or what you will include. For example, projection (what are you transferring from your surrounds to a flat piece of paper), symbols, colours.

Steps for design:

1. Gather the information for your map.
2. Consider the layout design to align to the size of the paper used.
3. Check scale, key areas and other elements important for map design.
4. Share maps with a partner to seek feedback.
5. What would you change after sharing and why?

Students use a [Take Note thinking routine](http://www.pz.harvard.edu/resources/take-note) to complete a self-reflection digitally or on paper. This strategy is used to organise an individual’s understanding of a topic which enhances students’ memory and engagement with the core themes.

Students reflect on maps and chart reading skills as they work through the [Take Note thinking routine](http://www.pz.harvard.edu/resources/take-note). Questions to consider in this thinking routine are:

* What is the most important point?
* What are you finding challenging, puzzling or difficult to understand?
* What is something you found interesting?
* In what ways and to what extent can I become a critical map reader?

Answers to these may differ between students. Allow for deeper discussion at the end of this reflection with an open-end discussion where students share their ideas.

## Mapping and planning tools for navigation

Understanding your mapping tools to support navigation promotes safety during any outdoor experience.

Students create a map of their neighbourhood. The map should not contain key elements such as border, orientation, legend, title, scale, source.

* Where possible, ask a family member or class member to use the map to get to a particular destination.
* Outline the following points:
	+ How and why the map was difficult to use?
	+ What tools and additions to the map would be needed to improve the navigation experience?

#### Mapping and planning activity – Scavenger hunt

In pairs, students create two scavenger hunts. One will be for their class peers and the other will be for their local community using the geocache method.

**Class peer scavenger hunt:**

* Using a map, designate a starting point.
* Offer suggestions and directions to allow peers to navigate to different locations. At each location use clues to solve a puzzle.
* Use a scoring system. For example, points can be awarded for correctly solving a puzzle or finding certain item locations with the correct grid markings from the map.

**Community scavenger hunt:**

* Use a **geocache method.**
* **Access the** [Geocaching Australia website](https://geocaching.com.au/) **to experience a geocache that may currently exist in local area.**
* **Students could use this site to create their own geocache treasure hunt for the local community.**

**Geocaching is a worldwide scavenger hunt based on Global Positioning System (GPS) devices that receive signals from satellites to determine their exact location. Students are encouraged to access** [Geocaching Australia](https://geocaching.com.au/) **to find out more.**

Researching an area prior to accessing it promotes safety and supports the skills of map reading, planning and navigation. There are two distances:

* As the crow flies – the direct distance between points.
* Distance by land transport (when possible) – distance estimate when you travel by road and sea.

Evaluate each scavenger hunt as a class:

* Discuss the positives and negatives of each scavenger hunt.
* Identify ways to improve maps for users.
* Outline what was important when using navigation tools for both experiences.

Access the [distance between Australian postcodes](https://www.freemaptools.com/distance-between-australia-postcodes.htm) on the [FreeMapTools](https://www.freemaptools.com/) website:

* Check the distance from your local area to five other areas of interest.
* For each destination, record the distance and take notice of the route.
* What do you notice about ‘distance as the crow flies’ versus the distance via roads?
* For each route or destination, work out the differences in time and distance for driving and walking.
* Why does knowing about ‘as the crow flies' matter when navigating and using maps?

Access the [find Australian postcodes inside a radius](https://www.freemaptools.com/find-australian-postcodes-inside-radius.htm) on the [FreeMapTools](https://www.freemaptools.com/) website. Using the radius tool, list ten natural environments or opportunities to access an outdoor education experience within a:

* 10 kilometre radius from your home
* 50 kilometre radius from your home
* 100 kilometre radius from your home.

Choose one destination and activity from one of the radius points above. Design a presentation pitch for your class around going to this destination.

Students must:

* Outline the outdoor education experience. For example, hiking to the summit of Bald Rock.
* Include what mapping and navigation tools are required to complete this day trip or overnight experience successfully.
* Explain how class peers would be expected to use navigation and mapping tools as part of a class scavenger hunt or clue challenge in that area.
* Show a copy of the map of the destination chosen, highlighting some of the area’s features that would make this experience enjoyable.
* Justify why this outdoor education location would be the best choice for the class to experience.
* Explain how this outdoor education experience could form part of a successful class challenge. Potential examples below for teachers to create and consider
	+ A-Z Alphabet nature walk sheet.
	+ Sounds orchestra nature sheet. Describe the sound, name what animal made the noise.
	+ What mathematical concepts did you see evidence of on your walk? For example, angles, length, distance or patterns.
	+ Create their own map based on their hike or trail bike ride including features and symbols. Students tell their own story via their map and their experiences on the route they took. For example, students may choose to represent different plants by using different symbols, such as a triangle for shrubs and a rectangle with a cloud on top for trees.
	+ Work collaboratively to identify similarities and differences about their map design and their outdoor experience with a partner.

### Compass features

A compass can be an invaluable tool when you are planning or navigating a particular outdoor hiking trail or route. It has many features which can support you beyond knowing where true north is and gives accurate orientation towards your destination. In this next section, the focus is on features of a baseplate or orienteering compass.

A base plate or orienteering compass is the most practical for student purposes in outdoor experiences.

It is important that the terms **cardinal directions** and **compass rose** are explained to ensure that students are aware of these terms. Cardinal directions are one of the four main points of a compass, these being **north, south, east and west** which support navigation. A compass rose is the symbol that indicates cardinal direction/s that are being accessed. A compass rose is often published on a map. The directions or symbols for a compass rose are north, south, east and west. Compass rose symbols can be represented in isolation or combine to form cardinal directions. For example, a combined cardinal direction can be north-west or south-east to indicate a direction on a map.

This is also an opportunity for students to learn about traditional **Aboriginal navigation tools and methods**.

Students create and label a **base plate or orienteering compass** which can be access on [A beginners guide to the compass](https://getoutside.ordnancesurvey.co.uk/guides/beginners-guide-to-the-compass/), digitally or on paper. Label a drawing and provide a brief description of each feature.

**Compass features** – baseplate, compass housing, compass needle, orienting lines, orienting arrow, magnetic variation, index line, direction of travel arrow, compass scale.

### Using a compass to support navigation and orienteering

In pairs, students work collaboratively to identify how a compass supports:

* navigation when using a map
* orienteering experiences
	+ Is there anything else required other than a compass when orienteering?

Students engage with the ‘using your compass’ section of [Features of a compass with Steve Backshall and Ordnance Survey (1:56 min)](https://www.youtube.com/watch?app=desktop&v=5w4qKnfJwwo&feature=youtu.be). Create an instruction sheet, digital or paper, from this information clip. Students are to:

* add any key points that will support the use of their compass
* include a labelled picture of a compass to support their teaching.

Using their instruction sheet, students work collaboratively to demonstrate understanding of how to use a compass to support them navigating in the outdoors. This could include peer teaching where possible. Choose an accessible and central location within the school grounds. For example, the basketball court for these lessons.

From this central location, students will identify different locations to create an activity for other students. The aim is to help peers to become familiar with and learn how to utilise a compass and understand what the features are that support navigation. Remind students of the compass rose and cardinal directions and to be aware of these from the central location.

* At the central location, identify which direction each cardinal point is.
* Students work in pairs to identify ten locations from the starting point and work out coordinates, using the compass. Record results.
* Use these coordinates to create a course for peers to work through. As they move through each location they could access a clue to progressively solve a riddle or puzzle.
* Each pair will swap their coordinate course with another and complete the new course.
* Peers review and make any corrections where necessary. Share ideas about the process, strengths, challenges or solutions.
* Identify as a class what worked well, what challenges were faced, how pairs overcome these and what they will remember for next time.

**Students could participate in the following activities to improve their skills with using a compass to navigate towards a destination.**

#### Compass activity 1 – Getting your bearings

Students will use appropriate equipment, for example compass, map, pencil or alternative device to:

* use appropriate equipment to create a circle in a book or on a device.
* mark 8 points on the circle, evenly spaced, with points diagonally opposite (see suggested diagram below).
* label each with paired letters opposite each other. A and B are north to south, C and D are east to west, E and F are north-west diagonal, G and H are north-east diagonal.
* assume A is zero degrees and it is at the number 12 on an analogue clock or watch and north as per cardinal direction.
* record for each letter, the bearing, the degree reading and the direction it is facing.

Figure 1 – Compass tool diagram, 'Bearing, degree reading and direction’



#### Compass activity 2 – Orienteering in the field

Students will need equipment to document their markings and a compass.

* Students create their own bearing map. Compass rose should be included.
* The starting point will be ‘X’ inside designated area.
* The designated area could be the perimeter of a soccer field or court.
* Six other markings, A-F will need to be added to their drawing for another student to work out the compass bearing from ‘X’.
* Students will use another person’s map and record their answers.
* Students will check answers with another person, correct where necessary.

#### Compass activity 2 – Blindfold compass

Blindfold compass activity, nearest to pin. In pairs, students will complete the instructions in the feature box below.

* Students will keep time, read out directions, keep a record of directions being followed.
* Points will be awarded for time and nearest marker to each pin.
* Discuss why could there be differences in place markers for each team.

Take a bearing of 180 degrees, then take 20 steps in that direction. Place your team marker down.

Take a bearing of 45 degrees, then take 28 steps in that direction. Place your team marker down.

Take a bearing of 315 degrees, then take 28 steps in that direction. Place your team marker down.

Take a bearing of 90 degrees, then take 28 steps in that direction. Place your team marker down.

Adjustments required here for wheelchair users, for example metres rather than steps and utilise a trundle or measuring wheel.

#### Compass activity 3 – Compassball

**Basketball, netball or soccer can be the sport of choice for this activity. Teachers can adapt to other sports that may suit their student context.**

* **Divide class into 2 or 4 teams, depending on space available.**
* **Teams will alternate with attempting to score a goal or alternate activity.**
* **Teacher or leader calls out a coordinate using specific bearings, steps in distance and directions.**
* **Students measure this using a compass, move designated distance, for example metres, towards the goal/ endpoint to take a shot.**
* **If team member goes to incorrect point, they cannot take a shot.**
* **If team member goes to correct spot, they are awarded 2 points. A further 3 points will be added if they score or shoot the goal.**
* **Winning team can be decided based on time limit and most points scored or first to a certain number.**

#### Compass activity 4 – Alphabet map

In pairs, students are to design their own North facing map within the school grounds. Once designed, other students will take part in completing their course, recording their findings for each letter of the alphabet.

**Map design:**

* For each letter of the alphabet, students who design the map will mark the letter on the map.
* Record bearing on a separate sheet or device. Use bearings for marking peer answers.
* Each letter destination will have a particular feature that participants will record. For example, at the letter C, with a bearing of ‘X’ we reached the outdoor barbeque area. Use for marking.

**Participant:**

* Students will begin at starting point as per map.
* Start stopwatch and record how long it takes.
* Record the destination for each letter and bearing and any other features.
* Once finished, check answers with designers.
* One point is awarded for each correct letter of the alphabet. Highest score wins.

#### Other compass activities

* Create opportunities for students to use the compass by getting them to move towards set destinations within the school. Record their readings.
* Navigate a course to give students opportunity to use the compass and understand its features and how it works. Give bearings towards that destination from their starting point. For each co-ordinate marker, students record bearings.
* In pairs, students create a short course for others to follow. Students will need to create a map, with key features on their map, including the order of stations for class peers to complete the course using their compass.

(**Variation** – consider a wild outdoor challenge. Create own map of outdoor space around school grounds [The Wild Network](https://thewildnetwork.com/inspiration/))

* Students gain a local area map and record coordinates of key landmarks in their local community.
	+ They can create a solve and seek challenge based on local buildings or areas within their local area.
	+ They can bring the compass rose to life by considering where key features in their local area are in relation to their school. They use the compass rose as their guide to indicate the direction of that place, building or area.
* Create a local geographical area treasure hunt. Students can use bearing or letters to guide their participants.

(Alternatively, bearings can be used. Students identify what they find at each bearing using a map and compass or GPS coordinates if participating in a geocaching activity).

## Navigating Country in the outdoors using natural methods

Students will investigate using natural methods to navigate their way during an outdoor education experience when other tools are unavailable. Students should also learn about traditional Aboriginal tools, preferably through engagement of a local Aboriginal knowledge holder.

Brainstorm and discuss ‘natural navigation methods’.

Students watch [Natural Navigation (12:37)](https://www.youtube.com/watch?v=C27e8GkSZUY) by Bushcraft Survival Australia. As a class:

* create an ideas map about the natural ways to navigate
* expand on each of these ideas and develop instructions for the natural methods discussed. For example, one group could be delegated responsibility for instructions on how to use the sun, another group can explain the short shadow stick method.

This is a great opportunity to access learning resources incorporating Aboriginal perspectives and content, and/or engage local Aboriginal cultural knowledge holders, such as rangers.

Read [10 Navigation Tips](https://www.thehikinglife.com/hiking-and-backpacking-skills/navigation/?subscribe=pending#blog_subscription-7). Discuss these with a partner.

* Represent your knowledge in an appropriate format, for example infographic. This is to be presented to your class to explain how these navigation tips could support you if other tools and resources are lost or have stopped working.
* Students use the [read aloud strategy](https://www.facinghistory.org/resource-library/teaching-strategies/read-aloud), text-to-speech or assistive reading tools for [How to navigate – Part four: navigator’s mindset and staying found](https://andrewskurka.com/navigators-mindset-attitude-story/).
	+ What is the theory behind the navigational story?
	+ Describe the 3 parts. How are these parts helpful when navigating in outdoor experiences?
	+ When there are inconsistencies with the outdoor ‘story’ and the map, what should individuals do?
	+ How can a map tell a story? Look at a map and explain a selected or particular route. See Yosemite High route example in the article.

When do we know a navigational story is working? How do you know?

## Reflection

Students use a quick write technique or alternative method to demonstrate their understanding.

Why is it significant to understand how to:

* read and use maps
* use a compass to support navigation
* use natural navigation methods?

Discuss as a class, supporting a range of communication methods.

Students are to complete the activities within [How to navigate – Part 5: skills + knowledge checklist](https://andrewskurka.com/backcountry-navigation-skills-knowledge-checklist/) to test their knowledge. Adjustments should be made in consideration of individual student need.

## Additional information

**Resource evaluation and support**: Please complete the following [feedback form](https://forms.office.com/Pages/ResponsePage.aspx?id=muagBYpBwUecJZOHJhv5kbKo2q_ZUXlHndJMnh2Wd8NUOUk0VTIzUDVVSlVFQVM5MkdOMkJGTjVKNCQlQCN0PWcu) to help us improve our resources and support.

The information below can be used to support teachers when using this teaching resource for Outdoor education.

### Assessment for learning

Possible formative assessment strategies that could be included:

* Learning intentions and success criteria assist educators to articulate the purpose of a learning task to make judgements about the quality of student learning. These help students focus on the task or activity taking place and what they are learning and provide a framework for reflection and feedback. [Online tools](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/622) can assist implementation of this formative assessment strategy.
* Eliciting evidence strategies allow teachers to determine the next steps in learning and assist teachers in evaluating the impact of teaching and learning activities. Strategies that may be added to a learning sequence to elicit evidence include all student response systems, [exit tickets](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/543), mini whiteboards (actual or [digital](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/575)), [hinge questions](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/557), [Kahoot](https://app.education.nsw.gov.au/digital-learning-selector/LearningTool/Card/621), [Socrative](https://app.education.nsw.gov.au/digital-learning-selector/LearningTool/Card/587), or quick quizzes to ensure that individual student progress can be monitored and the lesson sequence adjusted based on formative data collected.
* Feedback is designed to close the gap between current and desired performance by informing teacher and student behaviour (AITSL 2017). AITSL provides a [factsheet to support evidence-based feedback](https://www.aitsl.edu.au/teach/improve-practice/feedback#:~:text=FEEDBACK-,Factsheet,-A%20quick%20guide).
* [Peer feedback](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/549) is a structured process where students evaluate the work of their peers by providing valuable feedback in relation to learning intentions and success criteria. It can be supported by [online tools](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Browser?cache_id=1d29b).
* Self-regulated learning opportunities assist students in taking ownership of their own learning. A variety of strategies can be employed and some examples include reflection tasks, [Think-Pair-Share](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/645), [KWLH charts](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/562), [learning portfolios](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/583) and [learning logs](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/564).

The primary role of assessment is to establish where individuals are in their learning so that teaching can be differentiated and further learning progress can be monitored over time.

Feedback that focuses on improving tasks, processes and student self-regulation is the most effective. Students engaging with feedback can take many forms including formal, informal, formative, summative, interactive, demonstrable, visual, written, verbal and non-verbal.

[What works best update 2020](https://education.nsw.gov.au/about-us/educational-data/cese/publications/research-reports/what-works-best-2020-update) (CESE 2020a)

### Differentiation

Differentiated learning can be enabled by differentiating the teaching approach to content, process, product and the learning environment. For more information on differentiation go to [Differentiating learning](https://education.nsw.gov.au/teaching-and-learning/professional-learning/teacher-quality-and-accreditation/strong-start-great-teachers/refining-practice/differentiating-learning) and [Differentiation](https://education.nsw.gov.au/campaigns/inclusive-practice-hub/primary-school/teaching-strategies/differentiation).

When using these resources in the classroom, it is important for teachers to consider the needs of all students in their class, including:

* **Aboriginal and Torres Strait Islander students**. Targeted [strategies](https://education.nsw.gov.au/teaching-and-learning/aec/aboriginal-education-in-nsw-public-schools) can be used to achieve outcomes for Aboriginal students in K-12 and increase knowledge and understanding of Aboriginal histories and cultures. Teachers should utilise students’ Personalised Learning Pathways to support individual student needs and goals.
* **EAL/D learners**. EAL/D learners will require explicit English language support and scaffolding, informed by the [EAL/D enhanced teaching and learning cycle](https://education.nsw.gov.au/teaching-and-learning/curriculum/literacy-and-numeracy/resources-for-schools/eald/enhanced-teaching-and-learning-cycle) and the student’s phase on the [EAL/D Learning Progression](https://education.nsw.gov.au/teaching-and-learning/curriculum/multicultural-education/english-as-an-additional-language-or-dialect/planning-eald-support/english-language-proficiency). In addition, teachers can access information about [supporting EAL/D learners](https://education.nsw.gov.au/teaching-and-learning/curriculum/multicultural-education/english-as-an-additional-language-or-dialect/planning-eald-support/english-language-proficiency) and [literacy and numeracy support specific to EAL/D learners](https://education.nsw.gov.au/teaching-and-learning/curriculum/literacy-and-numeracy/resources-for-schools/eald).
* **Students with additional learning needs**. Learning adjustments enable students with disability and additional learning and support needs to access syllabus outcomes and content on the same basis as their peers. Teachers can use a range of [adjustments](https://education.nsw.gov.au/teaching-and-learning/disability-learning-and-support/personalised-support-for-learning/adjustments-to-teaching-and-learning) to ensure a personalised approach to student learning. In addition, the [Universal Design for Learning planning tool](https://education.nsw.gov.au/teaching-and-learning/learning-from-home/teaching-at-home/teaching-and-learning-resources/universal-design-for-learning) can be used to support the diverse learning needs of students using inclusive teaching and learning strategies. Subject specific curriculum considerations can be found on the [Inclusive Practice hub](https://education.nsw.gov.au/campaigns/inclusive-practice-hub/primary-school/teaching-strategies/differentiation).
* **High potential and gifted learners**. [Assessing and identifying high potential and gifted learners](https://education.nsw.gov.au/teaching-and-learning/high-potential-and-gifted-education/supporting-educators/assess-and-identify#Assessment1) will help teachers decide which students may benefit from extension and additional challenge. [Effective strategies and contributors to achievement](https://education.nsw.gov.au/teaching-and-learning/high-potential-and-gifted-education/supporting-educators/evaluate) for high potential and gifted learners help teachers to identify and target areas for growth and improvement. In addition, the [Differentiation Adjustment Tool](https://education.nsw.gov.au/teaching-and-learning/high-potential-and-gifted-education/supporting-educators/implement/differentiation-adjustment-strategies) can be used to support the specific learning needs of high potential and gifted students. The [High Potential and Gifted Education Professional Learning and Resource Hub](https://schoolsnsw.sharepoint.com/sites/HPGEHub/SitePages/Home.aspx) supports school leaders and teachers to effectively implement the High Potential and Gifted Education Policy in their unique contexts.

All students need to be challenged and engaged to develop their potential fully. A culture of high expectations needs to be supported by strategies that both challenge and support student learning needs, such as through appropriate curriculum differentiation. (CESE 2020a:6).

### About this resource

**Resource evaluation and support**: Please complete the following [feedback form](https://forms.office.com/Pages/ResponsePage.aspx?id=muagBYpBwUecJZOHJhv5kbKo2q_ZUXlHndJMnh2Wd8NUOUk0VTIzUDVVSlVFQVM5MkdOMkJGTjVKNCQlQCN0PWcu) to help us improve our resources and support.

All curriculum resources are prepared through a rigorous process. Resources are periodically reviewed as part of our ongoing evaluation plan to ensure currency, relevance and effectiveness. For additional support or advice contact the Teaching and Learning Curriculum team by emailing secondaryteachingandlearning@det.nsw.edu.au.

**Alignment to system priorities and/or needs**:

This resource aligns to the School Excellence Framework elements of curriculum (curriculum provision) and effective classroom practice (lesson planning, explicit teaching).

This resource supports teachers to address Australian Professional Teaching Standards 2.1.2, 2.3.2, 3.2.2, 7.2.2

This resource has been designed to support schools with successful implementation of new curriculum, specifically the NSW Department of Education approved elective course, Outdoor education © 2021 NSW Department of Education for and on behalf of the Crown in right of the State of New South Wales.

The resource is produced to assist schools with promoting and implementing the course for the first time. As the course may be taught by teachers from a range of key learning areas, the resource is designed to support teachers from a variety of KLA expertise.

**Department approved elective course**: Outdoor education

**Course outcomes**: OE5-1, OE5-2, OE5-3, OE5-4, OE5-5, OE5-6, OE5-7, OE5-8, OE5-9, OE5-10, OE5-11, OE5-12, OE5-13

**Author**: Curriculum Secondary Learners

**Publisher**: State of NSW, Department of Education

**Resource**: Teaching resource

**Related resources**: Further resources to support Outdoor education can be found on the Department approved elective courses webpage including course document, sample scope and sequences, assessment materials and other learning sequences.

**Professional Learning**: Join the [Teaching and Learning 7-12 statewide staffroom](https://education.nsw.gov.au/teaching-and-learning/curriculum/statewide-staffrooms) for information regarding professional learning opportunities.

**Universal Design for Learning Tool**: [Universal Design for Learning planning tool](https://education.nsw.gov.au/teaching-and-learning/learning-from-home/teaching-at-home/teaching-and-learning-resources/universal-design-for-learning). Support the diverse learning needs of students using inclusive teaching and learning strategies.

**Consulted with**: Aboriginal Outcomes and Partnerships, Inclusion and Wellbeing, EAL/D, School Sports Unit.

**Reviewed by**: This resource was reviewed by Curriculum Secondary Learners and by subject matter experts in schools to ensure accuracy of content.

**Creation date**: 1st December 2021

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**Evidence Base**:

‘The long-term vision is for a curriculum that supports teachers to nurture wonder, ignite passion and provide every young person with knowledge, skills and attributes that will help prepare them for a lifetime of learning, meaningful adult employment and effective future citizenship’ (NESA 2020:xi).

The development of the course and the course document as part of department approved electives aims to respond to the goals articulated in NESA’s curriculum review. Consistent messages from the review include:

* ‘flexibility’ was the word most used by teachers to describe the systemic change they want
* teachers need more time to teach important knowledge and skills
* students want authentic learning with real-world application.

This teaching resource provides teachers with some examples of explicit and authentic learning experiences. The option to adjust these learning sequences leads to ‘increased local decision making in relation to the curriculum’ as this ‘is associated with higher levels of student performance’ (NESA 2020:52).

The suggested strategies for teaching and learning align with the principles of explicit teaching. ‘The evidence shows that students who experience explicit teaching practices perform better than students who do not. Explicit teaching reduces the cognitive burden of learning new and complex concepts and skills, and helps students develop deep understanding’ (CESE 2020a)

## Resources

**Links to third-party material and websites**

Please note that the provided (reading/viewing material/list/links/texts) are a suggestion only and implies no endorsement, by the New South Wales Department of Education, of any author, publisher, or book title. School principals and teachers are best placed to assess the suitability of resources that would complement the curriculum and reflect the needs and interests of their students.

If you use the links provided in this document to access a third party's website, you acknowledge that the terms of use, including licence terms set out on the third party's website apply to the use which may be made of the materials on that third-party website or where permitted by the Copyright Act 1968 (Cth). The department accepts no responsibility for content on third-party websites.

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