# Aboriginal Studies Years 7-10: Option 7

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## Option 7 - Aboriginal Peoples and technologies

The focus of this option is Aboriginal Peoples’ use of technologies. Students learn about the knowledge management systems of Aboriginal Peoples and how they underpin the continued use of technologies for cultural, social, environmental and economic practices. Students examine historical representations and perceptions, as well as contemporary viewpoints and applications. Consideration is given to the contributions and links to sustainability, tourism, trade, economy and self-determination.

## Outcomes

A student:

* **AST5-1** describes the factors that contribute to an Aboriginal person’s identity
* **AST5-3** describes the dynamic nature of Aboriginal cultures
* **AST5-6** explains the importance of self-determination and autonomy to all aspects of Aboriginal Peoples’ participation nationally and internationally
* **AST5-7** assesses the significance of the roles of Aboriginal Peoples locally, regionally, nationally and internationally
* **AST5-8** analyses the range of relationships between Aboriginal Peoples and non-Aboriginal peoples
* **AST5-9** analyse the factors that influence non-Aboriginal peoples’ range of perceptions of Aboriginal Peoples and cultures
* **AST5-10** identifies and applies appropriate community consultation protocols and ethical research practices to gather, protect and interpret data
* **AST5-11** selects and uses a range of research techniques and technologies to locate, select, organise and communicate information and findings

**Related Stage 4 outcomes:** AST4-1, AST4-3, AST4-6, AST4-7, AST4-8, AST4-9, AST4-10, AST4-11

Outcomes referred to in this document are from [Aboriginal Studies Years 7-10 Syllabus](https://educationstandards.nsw.edu.au/wps/portal/nesa/k-10/learning-areas/hsie/aboriginal-studies-7-10-2020) © NSW Education Standards Authority (NESA) for and on behalf of the Crown in right of the State of New South Wales, 2020

## Learning sequence 1: Aboriginal Peoples and technologies

Students:

* identify a range of on-Country technologies developed and used by Aboriginal Peoples, for example:
  + medical knowledge
  + materials and their scientific properties, such as resins, toxins
* explain the ways in which Aboriginal Peoples’ technologies are an integral part of Aboriginal social and cultural practices, for example:
  + social organisation and governance, for example Elders, kinship, totems, gender roles, food distribution
  + economies and trade, such as agriculture, aquaculture, manufacturing, materials
  + spiritualities, for example Dreamings, connection to Country
* describe the relationship between Aboriginal Peoples’ technologies and the environment, including management practices

### On-Country technologies

**Teacher note** – when conducting a [gallery walk](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Browser?cache_id=97f10) in a classroom, ensure there is sufficient space between and around each piece of work to allow for ease of movement and close inspection of the work. Allow time for participants to view each display and respond to the questions

* Develop a [gallery walk](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Browser?cache_id=100e5) of images or displays of [Aboriginal inve](https://www.sbs.com.au/language/english/naidoc-week-10-inventions-of-the-aboriginal-people)ntions and technology including a [variety of artefacts](https://australian.museum/learn/cultures/atsi-collection/cultural-objects/indigenous-bark-canoe-from-new-south-wales/), [medical knowledge](https://sites.google.com/education.nsw.gov.au/botany-of-kamay/significant-plants) and [uses for resin and sap](https://education.abc.net.au/home#!/media/2544766/use-for-resin-and-sap). Images or displays need to be visible around the room, showing a variety of technology and inventions. Access the gallery walk link to have a better understanding of the process. At the conclusion of the gallery walk:
  + Discuss what students found most interesting and why it is interesting.
  + Use a range of stationary resources, which may include [raffia](https://stringharvest.com.au/collections/all-raffia), cardboard, and more to have students recreate one of the pieces of technologies they have learnt about in the gallery walk.
* Access [First Footprints](https://www.youtube.com/watch?v=1n6VJ5jq7zY) (duration 56:42). Complete a brainstorm about the different technologies presented in the film.

### Technologies as part of Aboriginal practices

* Create a [Padlet](https://app.education.nsw.gov.au/digital-learning-selector/LearningTool/Browser?cache_id=6b7a8) to explain the ways in which Aboriginal Peoples’ technologies are an integral part of Aboriginal [social and cultural](https://www.britannica.com/topic/Australian-Aboriginal/Leadership-and-social-control) practices and identity. The Padlet should include tiles that address [social organisation](https://education.abc.net.au/home#!/digibook/3122184/bruce-pascoe-aboriginal-agriculture-technology-and-ingenuity), [economies and trade](https://education.abc.net.au/home#!/digibook/3122184/bruce-pascoe-aboriginal-agriculture-technology-and-ingenuity) and [spirituality.](https://sites.google.com/education.nsw.gov.au/kamay-looking-up/astronomy)

### Relationship between technologies and the environment

**Teacher note -** this could be done as a progressive concept map, as the students learn more about the connection they add to the concept map throughout the topic.

* Examine the Bureau of Meteorology’s [Indigenous Weather Knowledge](http://www.bom.gov.au/iwk/?ref=ftr) website. Using the information from this site, write a [PEEL](https://www.virtuallibrary.info/peel-paragraph-writing.html) paragraph describing how Aboriginal Peoples managed their environments.
* Complete a [concept map](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Browser?cache_id=9d000) exploring the relationship between Aboriginal Peoples’ technologies and the environment.

## Learning sequence 2: Impact of invasion and colonisation

Students:

* investigate colonial representations of Aboriginal Peoples’ technologies
* assess the impact of invasion on Aboriginal Peoples’ technologies and environmental management practices
* examine ways in which Aboriginal Peoples and Torres Strait Islander Peoples, and non-Aboriginal people have shared and adapted each other’s technologies, for example:
  + the use of Aboriginal survival techniques by non-Aboriginal people
  + the adaptation of materials, introduced by non-Aboriginal people, into Aboriginal Peoples’ and Torres Strait Islander Peoples’ technologies
* discuss post-invasion perceptions of Aboriginal Peoples’ technologies
* explore methods of challenging misconceptions about Aboriginal Peoples’ technologies

### Colonial representations of Aboriginal technologies

* Watch [A real history of Aboriginal Australians](https://www.youtube.com/watch?v=fqgrSSz7Htw) (duration 12:33) and complete a [KWLH Chart:](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Browser?cache_id=0aee6)
  + K – what you already know about the colonial representations of Aboriginal Peoples’ technologies
  + W – what you want to know
  + L – what you learn in real time while watching [A real history of Aboriginal Australians](https://www.youtube.com/watch?v=fqgrSSz7Htw)
  + H – how would you learn more?
* Discuss what the video clip tells the audience about colonial representation of Aboriginal Peoples’ technologies, particularly agriculture.

### The impact of invasion

* Access [How humans have impacted nature](https://www.natureaustralia.org.au/what-we-do/our-insights/perspectives/human-impact-nature-australia/) and complete the following questions:
  + What happened when the ‘whitefellas’ arrived? How did they change and exploit the environment?
  + Was all of Australia impacted by the arrival of Europeans? Use examples to support your answer.
  + Explain what has happened as a result of extensive agriculture and urban development?
  + What is conservation? Explore one past or present Indigenous led conservation project and complete a [PMI Chart](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Browser?cache_id=92200) about the project.

### Sharing and adaptation of technologies

* Create a collaborative [Jamboard](https://app.education.nsw.gov.au/digital-learning-selector/LearningTool/Card/593?clearCache=bbe0a005-c10e-4f3a-8da2-49bf701191) while researching about the sharing and adaptation of Aboriginal and Torres Strait Islander Peoples technologies.
* Discuss the main points on the Jamboard.

### Post-invasion perceptions

**Teacher note** – in this task, students will complete a [PMI Chart](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Browser?cache_id=37bdb). A PMI chart encourages the examination of ideas and concepts from different perspectives. This reflection tool is used to look at the positives, minuses and implications or interesting facts about a concept or idea. Ideas are critiqued individually or together to form an opinion or make a decision.

* Read the article [We've got our story wrong](https://www.news.com.au/technology/environment/indigenous-historian-bruce-pascoe-says-weve-got-our-story-all-wrong/news-story/70518cd1c35efd73c126ec0c19bb8281) and complete the following tasks:
  + What has been taught in schools about Australia’s first people? What does this say about past-invasion perceptions?
  + What does institutionalised mean? How have the misconceptions been institutionalised?
  + What happened to the complex civilisation?
  + According to Bruce Pascoe, it is important to change these misconceptions. Why?
  + The last paragraph expresses the idea that children need to make up their own mind about history. Complete a [PMI Chart](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Browser?cache_id=37bdb) about this concept. Write a paragraph answering the question ‘Should students make up their own mind about history?’ Justify your response.

### Methods of challenging misconceptions

* [Brainstorm](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Browser?cache_id=92200) and discuss methods for challenging misconceptions. This could include education, protests, campaigns on social media and museum exhibitions.
* Using [Canva](https://www.canva.com/?experience=authwall), create either an advertisement or poster that challenges the misconceptions about Aboriginal Peoples’ and their technologies.

## Learning sequence 3: Contribution of Aboriginal Peoples’ technologies

Students:

* describe the links between Aboriginal Peoples’ environmental management practices and sustainability
* assess the impacts of recognition and utilisation of Aboriginal Peoples’ technologies in the environment, for example:
  + sustainable agriculture
  + environmental management, such as bushfire mitigation
  + scientific research, for example endangered species, climate variation
* analyse the contribution of Aboriginal Peoples’ technologies to tourism, trade and economy, for example:
  + ecotourism
  + environmentally sustainable industry
  + Aboriginal Peoples’ economic independence and self-determination
* describe the application of Aboriginal Peoples’ cultural knowledges to contemporary scientific and technological development, and innovation, for example:
  + digital seasonal calendars
  + apps, such as language revival
  + virtual reality initiatives

### Links between environmental management and sustainability

**Teacher note** – the environmental management plan task can be done as a class or in groups. Have students examine their local environment, identify and discuss environmental management that may be required.

* Examine [Great Barrier Reef - TUMRAs](http://www.gbrmpa.gov.au/our-partners/traditional-owners/traditional-use-of-marine-resources-agreements) and [The Yirriganydji TUMRA](https://www.youtube.com/watch?v=Y2Y_gHuklyc) (duration 8:11). Discuss what a traditional use of marine resources agreement (TUMRA) is and how they relate to sustainable practices.
* Using Aboriginal technologies, create an Environmental Management Plan for your local area, that promotes sustainability. For instance, [Cultural Burning](http://www.kooricountryfiresticks.com.au/) in areas prone to bushfires or have high density bush areas.

### Impacts of recognition and utilisation

* [Indigenous Protected Areas (IPAs)](http://www.environment.gov.au/land/indigenous-protected-areas) are areas of land and sea managed by Indigenous groups as protected areas for biodiversity conservation through voluntary agreements with the Australian Government. Research one of these areas and create a [presentation](https://app.education.nsw.gov.au/digital-learning-selector/LearningTool/Browser?cache_id=b5b88) that explores how the area has recognised the use of Aboriginal technologies and if it has had an impact on the environment in that area.

### Contribution of technologies to tourism, trade and economy

**Teacher note** – prepare the hexagons ahead of time for the [hexagonal thinking activity](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Browser?cache_id=8e81a). Hexagonal thinking can be used to help map out the problem-solving process, share ideas and answer an overarching question. Before commencing, modelling a completed hexagon may help students understand the strategy.

* Use the [Destination NSW](https://www.destinationnsw.com.au/about-us/strategies-and-plans/aboriginal-tourism-action-plan) site to complete a [hexagonal thinking activity](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Browser?cache_id=8e81a). Fill in your blank hexagons and arrange them to demonstrate your ideas about the contribution of Aboriginal Peoples’ technologies to tourism and therefore to trade and the economy.

### Application of Aboriginal Peoples’ cultural knowledges

* Complete a [jigsaw activity](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Browser?cache_id=ad0d8) - the jigsaw technique breaks a class into small mixed groups to work on research tasks that are collated into a final outcome. For example, three groups based around [digital seasonal calendars](https://www.csiro.au/en/Research/Environment/Land-management/Indigenous/Indigenous-calendars/About-the-calendars), [apps](https://rmit.libguides.com/apps/indigenous), [virtual reality initiatives](https://www.welcometocountry.org/indigenous-reality-virtual-reality/). All students should address the same part work together to answer their section, then return to their original groups to present their work.

## Case study

Students investigate ways in which Aboriginal Peoples continue to use their technologies, using local examples where possible. In the planning, delivery and evaluation of case studies, schools should work in partnership with their local Aboriginal community, and/or appropriate knowledge holders to identify suitable resources, including additional contacts and appropriate publications.

Students:

* apply ethical research skills, including protocols for consultation to work effectively with Aboriginal Peoples and communities
* demonstrate understanding of ethical responsibilities surrounding Indigenous Cultural and Intellectual Property (ICIP)
* investigate ways in which Aboriginal Peoples continue to use their technologies, using local examples where possible
* communicate findings and conclusions of the case study effectively and appropriately

**Teacher note** – case studies require local consultation. Both the AECG and ALC have links on their websites to local organisations. The presentation does not have to be a Google Site; the teacher should determine the most appropriate method for their context.

### Activity

* After consultation with the local [Aboriginal Education Consultation Group](https://www.aecg.nsw.edu.au/) (AECG), the local [Aboriginal Land Council](https://alc.org.au/accessing-country/) (ALC) and [National Parks and Wildlife](https://www.nationalparks.nsw.gov.au/conservation-and-heritage/aboriginal-culture), complete a Google Site or website discussing the use of Aboriginal technologies in the local area
* Your website must include a page about each of the following:
  + The laws that impact the use of land and technologies both nationally and within NSW.
  + An overview of Aboriginal technologies and their uses.
  + Information about the local AECG programs, National Parks and Wildlife programs or the local ALC operations and any traditional technologies they use in the local area. Include the purpose of using these technologies. For instance, [cultural burning](https://www.firesticks.org.au/about/cultural-burning/) is burning practices developed to enhance the health of the land and its people.

## Assessment task and rubric

**Teacher note** – this assessment is based on the case study, with more depth. When using this task, ensure it is placed on the school template and follows all assessment requirements.

The outcomes have been linked to aspects of the task, so it is clear how they relate to one another making it easier for specific grades for each outcome to be allocated.

### Outcomes

* **AST5-7** assesses the significance of the roles of Aboriginal Peoples locally, regionally, nationally and internationally
* **AST5-9** analyse the factors that influence non-Aboriginal peoples’ range of perceptions of Aboriginal Peoples and cultures
* **AST5-10** identifies and applies appropriate community consultation protocols and ethical research practices to gather, protect and interpret data
* **AST5-11** selects and uses a range of research techniques and technologies to locate, select, organise and communicate information and findings

### Task

* In consultation with either the local [Aboriginal Education Consultation Group](https://www.aecg.nsw.edu.au/about/) (AECG) or the local [Aboriginal Land Council](https://alc.org.au/accessing-country/) (ALC) and [National Parks and Wildlife](https://www.nationalparks.nsw.gov.au/conservation-and-heritage/aboriginal-culture) create a website discussing the use of Aboriginal technologies in the local area.
* Your website must include a page about each of the following:
  + The laws that impact the use of land and technologies both federally and within NSW. Analyse one federal and one state law and determine its impact on non-Aboriginal peoples’ perceptions of Aboriginal Peoples and cultures.
  + An overview of Aboriginal technologies and their uses.
  + Information about the local AECG programs, National Parks and Wildlife programs or the local ALC operations and any traditional technologies they use in the local area. Include the purpose and assess the significance of using these technologies. For instance, [cultural burning](https://www.firesticks.org.au/about/cultural-burning/) is burning practices developed to enhance the health of the land and its people.

### Marking criteria

|  |  |
| --- | --- |
| Criteria | Grade |
| * Demonstrates extensive knowledge of the local AECG programs or the local ALC operations and any traditional technologies they use in the local area. Including the purpose and assess the significance of using these technologies * Demonstrates extensive knowledge of the laws that impact the use of land and technologies both federally and within NSW. Analyses one federal and one state law and is able to determine its impact on non-Aboriginal peoples’ perceptions of Aboriginal Peoples and cultures * Demonstrates highly developed skills and processes throughout the consultation process, identifying and applying appropriate community consultation protocols and ethical research practices * Effectively communicates complex ideas and information by selecting and using a range of research techniques and technologies to locate, select, organise and communicate information and findings. | A |
| * Demonstrates thorough knowledge of the local AECG programs or the local ALC operations and any traditional technologies they use in the local area. Including the purpose and assess the significance of using these technologies * Demonstrates thorough knowledge of the laws that impact the use of land and technologies both federally and within NSW. Explains one federal and one state law and attempts to determine its impact on non-Aboriginal peoples’ perceptions of Aboriginal Peoples and cultures * Demonstrates well-developed skills and processes throughout the consultation process, identifying and applying appropriate community consultation protocols and ethical research practices * Clearly communicates complex ideas and information by selecting and using a range of research techniques and technologies to locate, select, organise and communicate information and findings. | B |
| * Demonstrates sound knowledge of the local AECG programs or the local ALC operations and any traditional technologies they use in the local area. Including the purpose and assess the significance of using these technologies * Demonstrates sound knowledge of the laws that impact the use of land and technologies both federally and within NSW. Outlines one federal and one state law and attempts to explore its impact on non-Aboriginal peoples’ perceptions of Aboriginal Peoples and cultures * Applies some skills and processes throughout the consultation process, identifying and applying appropriate community consultation protocols and ethical research practices * Communicates ideas in an appropriate manner by selecting and using a range of research techniques and technologies to locate, select, organise and communicate information and findings. | C |
| * Demonstrates basic knowledge of the local AECG programs or the local ALC operations and any traditional technologies they use in the local area. Including the purpose and assess the significance of using these technologies * Demonstrates basic knowledge of the laws that impact the use of land and technologies both federally and within NSW. Describes one federal and one state law. Cannot determine its impact on non-Aboriginal peoples’ perceptions of Aboriginal Peoples and cultures * Applies limited skills and processes throughout the consultation process, identifying and applying appropriate community consultation protocols and ethical research practices * Communicates ideas in a descriptive manner by attempting to select and use a range of research techniques and technologies to locate, select, organise and communicate information and findings. | D |
| * Demonstrates elementary knowledge of the local AECG programs or the local ALC operations and any traditional technologies they use in the local area. Including the purpose and assess the significance of using these technologies * Demonstrates elementary knowledge of the laws that impact the use of land and technologies both federally and within NSW. Identifies one federal and one state law. Cannot determine its impact on non-Aboriginal peoples’ perceptions of Aboriginal Peoples and cultures * Attempts to participate in the consultation process, identifying and applying appropriate community consultation protocols and ethical research practices * Demonstrates elementary skills in communicating ideas and selecting information. | E |