Students understand their own biology and that of other living things, and recognise the interdependence of life.

**Student Focus for Learning**

- roles, relationships, cycling of matter, flow of energy and the interdependence of living things
- changes to natural systems and the effects on organisms, habitats and sustainable environments
- the cellular basis of life processes and organisation and processes at the system level, including the interrelationship between structure and function
- genetics, reproduction and inheritance
- evolution, variation and adaptation of organisms

**Background**

Traditional Aboriginal people successfully managed the issues relating to their daily life. The environment was made use of but with strict adherence to cultural conventions it was never exploited. There were always enough materials to build shelters. Animals were in abundance providing skins for clothing, food to eat and bones for tools. Aboriginal people were at ease with their environment and generally lived healthy lives. Much can be learnt from these practices in an environment which today can be seen to be crumbling.
Ideas for teaching units in culture from an Aboriginal perspective

Outcome A  Interdependence of Living Things

• Many times when we are walking between the school and home we ignore what is around us. For many, the bush is something to be cleared of all vegetation in order to build a house and perhaps install plants to add beauty or sometimes to supplement what we eat. With the help of local Aboriginal Elders, survey the local flora. All flora was known to Aboriginal people and many had a specific use. Through research and assistance from knowledgeable Aboriginal people identify flora that may fit one or more of the following qualities:
  ○ Edible
  ○ Have healing properties
  ○ Poisonous
  ○ Useful for shelter
  ○ Useful for making tools
  ○ Useful for making weapons
  ○ Other uses

• It is a sad reflection that with colonisation the destruction of many ecosystems followed. Animals whose value and uniqueness could not be seen while others had their habitat so disturbed that it led to their extinction or were slaughtered to make way for new species, most of which were very unsuited to the environment. With the help of local Aboriginal Elders or through research survey the local fauna for animals that are:
  ○ Edible
  ○ Have healing properties
  ○ Useful for making clothing
  ○ Other uses
How many of us could survive if we were lost in the bush? Would we know what to eat and would it be enough to keep us alive? Complete a survey on bush tucker with students looking at the nutritional value of different types of flora and fauna under the following headings:

- Protein
- Carbohydrate
- Fats and oils
- Vitamins
- Minerals
- Water

• Staying alive in adverse environments is difficult for most people. Bushwalkers who become lost can die in a very short time just from not having adequate protection from the environment. Students investigate how Aboriginal people were able to survive for thousands of years in an environment that for many would be hostile. Do an investigation using the following headings:
  - During times of drought
  - In extreme heat
  - In extreme cold
  - During floods
  - During earthquakes

• The use of natural oils from plants and animals has been important for all civilizations. For Australian Aboriginal people investigate what was the source of these oils and to what purpose was it used. Students to study available sources of natural Australian oils such as that from plants and animals and the uses it was put to. Discuss how we can protect these resources.
Traditional Aboriginal people have always seen themselves as part of the environment. For survival it was essential that the critical balance in the relationship between all living things in the environment were maintained. Students to investigate how Aboriginal people were able to maintain this critical balance using some of the following headings:

- Use of fire to encourage regrowth
- Sustainable hunting and fishing
- Limited foraging to allow growth of young flora and fauna
- Conservation of species
- No debris produced or left within the environment

**Outcome B  Structure and Function**

Ways of classifying plants and animals are constructions that provide a model from which science is based. Look at ways Aboriginal people could have classified animals using headings such as ‘uses’ and ‘harmful’.

Health issues such as diabetes, early mortality and high infant death rate, plague Aboriginal communities today. A great number of these problems relate the poor nutritional value of food consumed by Aboriginal people today. This was not always the case and utilising traditional food sources in the past maintained an excellent balanced diet. Students are to investigate traditional Aboriginal dietary habits including some of the following:

- Traditional low fat diet
- How traditional cooking methods maintained nutritional value
- Life expectancy in traditional society
- Causes of death or illness in traditional society
Outcome C  Reproduction and Change

• Since colonisation many species of flora and fauna have become extinct. This has resulted from hunting and destruction of habitat. Is it possible to stop the destruction of species? How were species numbers maintained in traditional Aboriginal society? Look at measures that were used to limit over-hunting and over-fishing and those used to encourage regeneration of plants and animals.

• Genetics and heredity are important scientific topics today. Their study maintains species health and longevity. Aboriginal people were also aware of its importance which is demonstrated in the strict cultural conventions covering marriage rites. How did traditional people record and manage marriage relationships to ensure continuing healthy bloodlines?

• The education of the young in traditional Aboriginal society was primarily about passing down cultural knowledge for the continuing survival of the whole group. Students to research how children traditionally prepared for adult responsibilities. Consider this using these and other headings:
  ○ Rites of passage
  ○ Rituals
  ○ Corroborees and ceremonies

Resources