



STORIES OF THE LAND

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The natural environment has always been very important to Australia's Aboriginal people. It gave them food and shelter, and its features inspired their culture. Through storytelling and art, they explained the Dreaming, their history and their culture, and told about ceremonies and the world around them. The environment also provided Aboriginal Australians with materials to paint on, such as rock and bark, and materials to paint with, such as **ochre** and charcoal, and sticks, bark and hair. Today, the traditions of art and storytelling are still strong in Indigenous culture.

FACT!

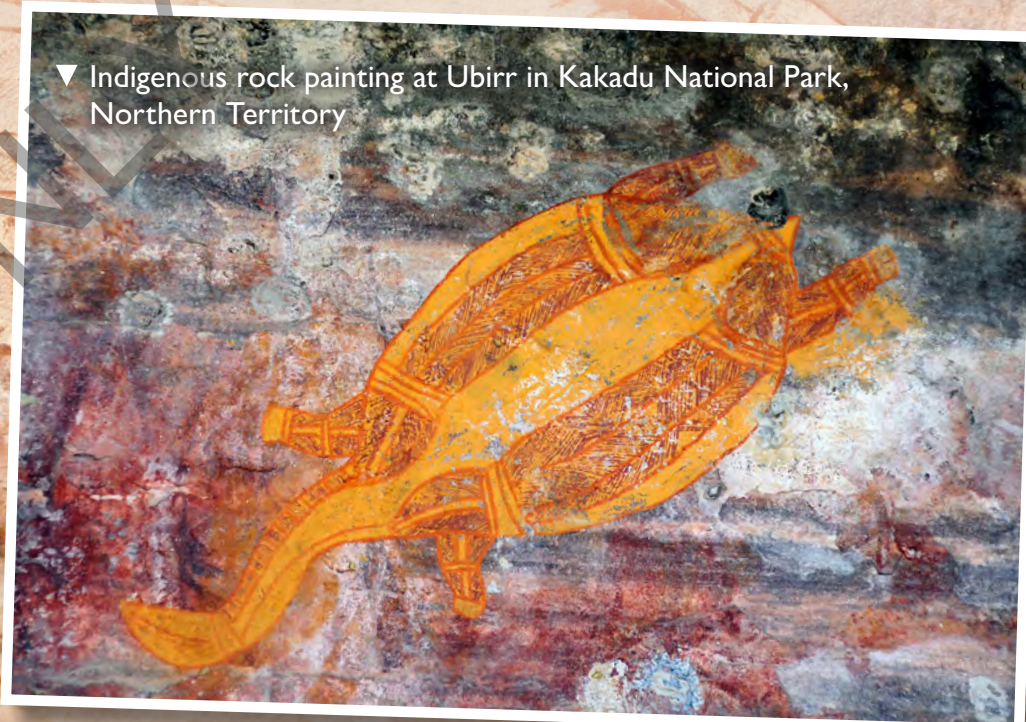
Australian Indigenous art is the oldest traditional art in the world, dating back more than 40 000 years.



Rock art

Rock art can be found in places all over Australia. It **portrays** people and animals, and often tells **Dreaming** stories of the creation of the world and everything in it. This includes mountains and rivers, as well as people, animals and plants. Rock paintings also show that the site belongs to a certain group, and that it is a special and **sacred** place for them. The site helps connect them to country – their land.

▼ Indigenous rock painting at Ubirr in Kakadu National Park, Northern Territory



Scan the code to link to a video about Indigenous art and the Dreaming.



Bark painting

Indigenous peoples have traditionally used bark and leaves as their 'canvas'. Bark paintings are used to help tell stories, as well as at funerals, or to mark special sites. There are many different styles of bark painting all around the country. The paintings from central **Arnhem Land** show figures of animals and people, and use strong lines and cross-hatching. The

lines and colours all have meaning within the paintings and help to tell the story. The **cross-hatching** is done with a fine brush made of human hair attached to a short stick.

◀ This painting from central Arnhem Land is an example of the cross-hatching technique.



Pigments from the environment

Ochre was first mined, ground to powder and mixed with liquid. It was then painted on rock, wood or bark using a stick or grass tied to the end of a stick. Aboriginal artists also used their hands to paint ochre on the skin of people taking part in ceremonies. By blowing ground powder onto rock, Aboriginal Australians used ochre to create stencil art. There are many stencil images around Australia, and they were used to show people's connection to a particular place.

Painting ochre onto skin ▶



QUESTIONS



1. Which style of artwork do you prefer: rock art or bark painting? Explain your choice.
2. If we did not have a written language and could only communicate through visual art, what would some of the challenges be?
3. Time connectives are words such as 'before', 'next' and 'after' that tell us when things occurred. Identify two time connectives on the topic card.
4. Use the QR code (or <http://qrs.ly/aj4zb28>) to watch a video about Aboriginal art and the Dreaming. Write a summary of what the Dreaming is.
5. Complete an Internet search on 'Aboriginal art' and choose a picture that appeals to you. Then, find a partner and discuss what your chosen pictures may represent.
6. Use the ideas you generated in Question 5 to write a narrative about your picture.



FARMING WITH FIRE

In Australia, fire is not always **destructive**. **Indigenous** Australians have found ways to use fire to maintain their food supplies and to care for the land.

Regular burning helps many native plants to release their seeds and continue their **life cycles**. By lighting controlled fires, Indigenous Australians have also been able to force animals into **particular** areas, making them easier to hunt.

Tasmania and Arnhem Land are two areas of Australia in which Indigenous Australians have used fire to benefit the land and their food supplies.

Tasmania

The Indigenous people of Tasmania used a method known as fire-stick farming. They knew which areas of bush to burn to encourage new plant growth. The new growth provided good food for animals and lured them into particular areas. They could then be hunted more easily.

This method also encouraged the growth of fungi, and **edible** plants such as **tubers**.



▲ Joseph Lycett, *Aborigines Using Fire to Hunt Kangaroos*, 1817

Arnhem Land

In Arnhem Land, in the Northern Territory, Indigenous Australians also use fire to encourage new plant life, and to flush out animals they can hunt, such as **goannas**, snakes and rats. They wait until the cooler months of the year, around June or July. The men move ahead, lighting fires. The women follow behind, gathering the foods that the fires have provided.

Indigenous men also use fire to hunt larger animals, such as kangaroos and emus. They split into small groups and spread out across a chosen area. They light a semicircle of fire that drives the animals towards a group of waiting hunters.



▲ Indigenous fire plough and hearth



▲ Modern-day controlled burning in Arnhem Land

FACT!

Because of their in-depth traditional knowledge, the Anbara people of Arnhem Land know which areas to avoid burning. They do not burn plants that do not recover well from fire.

QUESTIONS

1. Why would Indigenous Australians wait until the cooler months to light fires?
2. Draw a diagram that shows how lighting a fire in a semicircle would allow animals to be hunted more easily.
3. What is the definition of 'native plants'? Provide three examples of plants that are native to Australia.
4. Use the QR code (or <http://qrs.ly/5c4zb2d>) to watch a video about Indigenous Australians' controlled burning practices. Why do the people in the video suggest that the fires are critical to the health of the desert environment?
5. Read the information at <http://qrs.ly/mf4zb37> to understand a little more about how fire helps banksias.
6. Draw and label the life cycle of a banksia, showing how fire assists with the process.

Scan the code to link to a video about how people around the world are learning from Indigenous Australians' controlled burning practices.





RENEWING WATER

Water is an incredible substance. Even after we have used it and **polluted** it, water can be **purified** and **reused** in all sorts of ways. Scientists have developed clever ways of doing this. Nature does an excellent job of renewing water, too.

Technologies for renewing water

In recent decades, scientists have developed a range of **technologies** that allow us to reuse water.

One method is to **filter** the water through materials called **membranes**. The water passes through tiny holes in the membranes. The membranes catch **particles** of dirt, bacteria, sand and algae as the water passes through them.

Another method of renewing water is **ultraviolet disinfection**. Ultraviolet light is invisible to our eyes, but it is deadly to tiny **organisms** such as bacteria and viruses. The light damages their ability to **reproduce**, and they soon die off.



◀ This plant uses reverse osmosis – a water-purification technology.

▼ A filter membrane

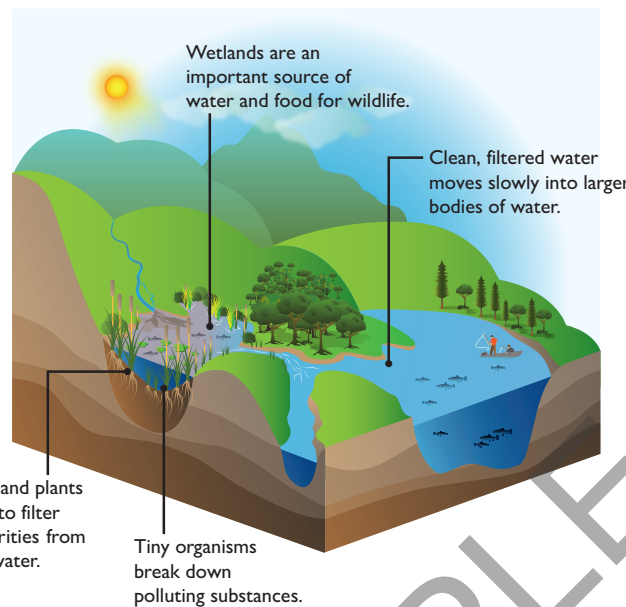
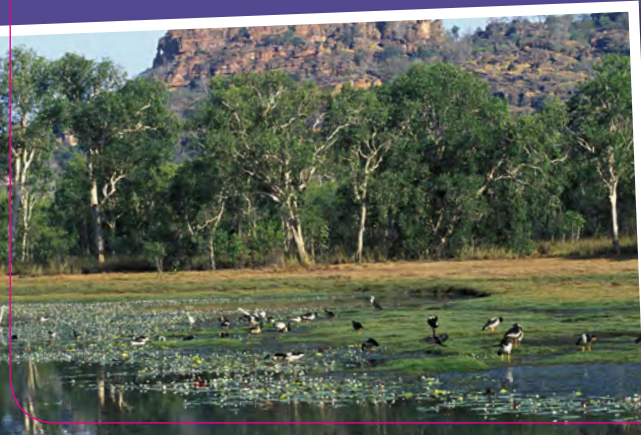


The wonders of wetlands

Nature provides many excellent water filters, too, particularly soil. Soil works extremely well with plants and other vegetation to renew and purify water. This happens a lot in **wetlands**.

The tiny organisms that live in wetlands also break down substances that have polluted the water. These can include **chemical** or **biological** substances, such as dead plants and animals.

▼ Wetlands help sustain water supply by naturally filtering impurities. They also provide an important habitat for plants and animals, so it is important to protect them.



▲ How a wetland works

One of the main reasons why wetlands are such good filters is that water moves very slowly in them. This allows dirt and other polluting substances to settle to the floor of the wetland. Some of these are trapped in the soil and used as food by the plants in the wetland. The water cleaned in wetlands often ends up in rivers, lakes and oceans.

Scan the code to link to a video about the importance of wetlands.



FACT!

New technologies allow us to turn water from our showers and toilets into perfectly drinkable fresh water!



QUESTIONS



1. What are the environmental benefits of renewing water?
2. Make a list of the things being removed from water through the process described on the topic card.
3. The prefix *re-* is often used on the topic card. List the words that use this prefix, and write a definition for the prefix.
4. Use the QR code (or <http://qrs.ly/if4zb2m>) to watch a video about wetlands. There are three different types of wetlands: inland, coastal and human-made. Provide two examples of each type.
5. Draw a flow chart that shows the steps involved in filtering water.
6. Imagine that you are going to complete an experiment to see what materials make good water filters. Use a paper towel, a piece of fabric and a piece of netting. Write a prediction of how you think each material will act as a filter.