

Objectives

- To explain some of the effects of fire-stick farming
- To describe modern applications of fire-stick farming
- To explain how fire-stick farming increases Australian biodiversity
- To recognise that Indigenous people have detailed knowledge of fire regimes and their effects

Prior knowledge

Students will need some knowledge of the long history of Indigenous peoples in Australia and the relatively recent arrival of European colonists. They should also understand that there are concerns about increasing carbon dioxide levels in the atmosphere.

Background

The Australian landscape has changed dramatically in the years since European contact and settlement. Early colonists describe in words and artworks that the landscape was park-like and open as a result of fire-stick farming. Today bushland areas are much more overgrown. Recent devastating bushfire events and weed infestations have highlighted the problems caused by the sudden change in fire regimes. This has also affected biodiversity as habitats and food/nutrient sources have also changed.

Starter activity

Hold a class brainstorm and ask students to share what they know about fire in Australia. Using this information, create a group mind map.

Resource and Activity sheets

The Activity sheet 'Fire-stick farming' encourages students to process the background information from the Resource sheet 'Benefits of fire-stick farming' and develop an understanding of what fire-stick farming is and what effects it has on Australian biodiversity.

The Activity sheet 'Modern fire management' helps students recognise the valuable knowledge that Indigenous Australians have about using fire to manage the land. Students are then asked to describe how that knowledge is being applied today.

In the Activity sheet 'Biodiversity and fire-stick farming' students develop an understanding of what biodiversity is and how it is affected by fire-stick farming.

The Activity sheet 'Mind map quiz' provides an opportunity for students to organise the concepts they have encountered on the Resource and Activity sheets into a useful summary.

Extension ideas

- Students could visit www.csiro.au/news/KakaduWetlands.html, which presents a case study of how Indigenous and Western science combine to use traditional fire regimes to manage the land. Have students summarise the benefits described in the article.
- Ask students to research devastating bushfires such as those in Victoria in 2009, Canberra in 2003 or Sydney in 1994. Students then tabulate the causes, locations and consequences.
- Students could create an information poster on a species that depends on regular fire, such as the Golden-Shouldered parrot, or Banksia plants.

Other relevant resource and activity sheets

- What is biodiversity? (p. 25)
- Maintaining Australian biodiversity (p. 27)

Suggested web addresses were functional at the time of publication but teachers should check them for inappropriate content and to ensure that they are still functional before use with students.