Biodiversity of the Western Volcanic Plains

Managing Grassland Ecosystems: Student Worksheet

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Activity 1

Managing grassland ecosystems – Aboriginal use of fire

(Level 5)

Victoria
The Place To Be

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Managing grassland ecosystems

Prior to European settlement grasslands extended over the Western Volcanic Plains in Victoria. Grasslands across the Western Volcanic Plains are now listed as Critically Endangered.

1. On the left is a list of threats to grasslands. Find and match the threat with the negative impact on the environment.

Introduction of feral animals	Soil is compacted and native grasses are eaten by cattle
Introduction of exotic plants	Habitat is removed when rocks are disturbed and removed
Over-grazing of native plants by cattle	The development of buildings, houses and roads has resulted in the loss of native plants and animals
Fertiliser is applied to the grasses	Exotic plants compete with native plants
Rocks are removed	Dams and weirs have been constructed along some rivers and streams, which have altered the natural flow
Urbanisation and development	Introduced animals compete with native animals and damage the landscape
Changed water use	A reduced amount of fire reduces diversity of plants in grasslands
Lack of fire	Fertilisers may kill native plants

2. List two ways grasslands can be managed.

i. _____

ii. _____

Follow the instructions and complete the BWVP Managing Grasslands online learning activity. This activity simulates how to manage a degraded grassland site.

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3. Once you have completed the activity list your suggestions for managing the site.

i. Weed Management: _____

ii. Site Access: _____

iii. Feral Animal Management: _____

iv. Vegetation Restoration: _____

v. Fauna Reintroductions: _____

4. What was your overall assessment?

_____

5. Why are weeds a problem in grasslands?

_____

6. Why is a predator-proof fence so effective?

_____

7. Circle the feral animals from the following list:

Foxes	Rabbits	Bandicoots	Hares
Kangaroos	Feral cats	Feral dogs	Cockatoos

8. What impact do feral animals have on grasslands?

_____

9. Why is it important to manage weeds, grazing and vehicles when reintroducing native plants?

_____

10. What is the best order to implement the following management strategies?

Weed management – weed removal _____

Site access – install predator-proof fence _____

Feral animal management – feral animal removal _____

Vegetation restoration – replanting _____

Fauna reintroductions – reintroduce native animals _____

11. Why is it important to reintroduce native animals last?

_____

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Aboriginal people and fire

12. Aboriginal people used fire for many reasons. List one.

_____

_____

13. Many native plants benefit from fire. Use the Ecolinc Biodiversity of the Western Volcanic Plains Flora and Fauna Field Guide to investigate how the following plants benefit from fire.

Common name	Scientific name	How does fire benefit the plant?
Silver Banksia	*Banksia marginata*	
Common Onion Orchid	*Microtis unifolia*	
Blackwood	*Acacia melanoxylon*	

14. After a fire there is a great opportunity for plant seeds to germinate and grow as there is a greater amount of sunlight and reduced competition. Why?

_____

_____

15. How do the following animals survive a fire (look the animals up on the Ecolinc Biodiversity of the Western Volcanic Plains Flora and Fauna Field Guide)? Do they fly away, flee, burrow?

i. Sulphur-crested Cockatoo: _____

ii. Echidna: _____

iii. Eastern Grey Kangaroo: _____

iv. Grassland Earless Dragon: _____

v. Magpie: _____

16. Aboriginal people used fire to assist their hunting. How did they do this?

_____

_____

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Conclusion

17. When managing a grassland ecosystem, what needs to occur to ensure the successful reintroduction of native animals to the site?

18. What is one thing we can learn from Aboriginal people about managing grasslands?

19. Explain how Aboriginal people were able to live off the land for thousands of years without damaging the environment.

20. How did Aboriginal people use fire?

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