

How *Veld & Flora* can assist you with teaching the National Curriculum.



CURRICULUM CORNER

This page provides teachers with curriculum links to two articles on grasses and grasslands in this issue and also refers to the article on pine plantations. The compass-rose diagram organizes learning outcomes and suggested activities from a range of learning areas. We hope this will assist teachers to inspire their learners in Grades 10 - 12, the Further Education and Training (FET) Curriculum.

Compiled by Olwen Gibson with input from Roleen Ellman.

Grassland in Namibia. Photo: Eugene Moll.

Use these articles in your lessons: **Grass, restio or sedge (page 153)**, **Silverglen Nature Reserve (page 156)** and refer to **How no-man's-land is becoming everyone's problem (page 147)**.

NATURE of grasses, grasslands, their biodiversity, their soils and effects of fire

LIFE SCIENCES

In the **Diversity, Change and Continuity strand** for Grade 10: Investigate species of grasses in a specific area. Identify them and draw them. List other species of

plants and animals found in the same area. LO 1
In the **Environmental Studies strand** for Grades 10-12: Refer to the Silverglen article and comment on the biodiversity of this grassland reserve. LO2
In the **Tissues, cells and Molecular Studies strand** for Grade 10:

Find out about cell division in meristematic tissue and where in plants this tissue is found. LO 2
AGRICULTURAL SCIENCES
In the **Soil Science strand** for Grade 10: Find out about soil-forming factors in grasslands and the nature of grassland soils. LO 1

For Grade 11: Research the properties (colloidal and organic matter components) of grassland soils. LO 1
GEOGRAPHY
In the **Fluvial Processes and Landforms strand** for Grade 11: Find out about the importance of grass in soil structure LO 2

WHO makes decisions on environmental issues? WHAT action needs to be taken?

LIFE ORIENTATION

In the **Citizenship Education strand** for Grade 10: Explain the environmental issue of threats to a grassland in an urban area. Take part in a group project to solve some of the problems. LO 2
For Grade 11: Participate in a community service that addresses grassland conservation. Determine the actions that need to be taken. LO 2

For Grade 12: Critically evaluate an existing community project that addresses the issue of either loss of a grassland resource or the impact of pine plantations on natural resources. LO 2
LANGUAGE
Debate an issue such as **sustainable harvesting of medicinal products or commercial pine plantations versus indigenous fynbos vegetation**. LO 2,3 and 4

ECONOMIC use of grasses as food crops: distribution and management of grasslands

LIFE SCIENCES

In the **Structure, Control and Processes in basic life systems of plants and humans strand** for Grade 10: List some of the food products in South Africa that are derived from grasses. LO 2
In the **Environmental Studies strand** for Grades 10-12: Investigate the value of grasslands both economic and ecological. Do the same for a

commercial pine plantation. LO3
In the **Environmental Studies strand** for Grade 10 and the **AGRICULTURAL SCIENCE strand Agro-ecology** for Grade 10: Map the veld-types/grasslands of South Africa. Shade and provide a key. Use an atlas to fill in the grasslands of the world on a world map. Outline and list, on the map, the grain products of each. LO 2
GEOGRAPHY
In the **Geographical skills and techniques strand** for Grades 10-12 the above mapping activity applies. LO 1

SOCIAL / human impacts on grasslands

LIFE SCIENCES

In the **Structure, Control and Processes in basic life forms of plants and humans strand** for Grades 10-12, under **Indigenous Knowledge systems**: List the uses of grasses and 'look-alike' grasses. LO 1

In the **Environmental Studies strand** for Grades 10-12: Explain the threats to the Silverglen Reserve and the value of sustainable harvesting. LO 2
In the **Diversity, Change and Continuity strand** for Grade 10: Find out what threats there are to grassland biodiversity in South Africa. LO 2

GEOGRAPHY

In the **Fluvial Processes and Landforms strand** for Grade 11: Assess human impact on the world's and South Africa's grasslands. Under **Environmental Relationships** assess the influence of climate, soil, topography and, especially, veld fires on grasslands. LO 2

In the **People and their needs strand** for Grade 11, under **Resource Use and Management**: Explain the terms: 'resource exploitation' and 'resource conservation' with reference to the three articles. LO 2

Do you find *Veld & Flora* useful to you as a teacher? Please write to us at info@botanicalsociety.org.za or Learning about Biodiversity, *Veld & Flora*, Private Bag X10, Claremont, 7735.