SANBI
Biodiversity for Life
South African National Biodiversity Institute

Free State National Botanical Garden - Biodiversity Education and Public Engagement: Kids in Gardens Programme		
Theme	**Learning Programme**	**Grades**
1. Introduction to Free State National Botanical Garden	**R.** Sensory exploration of Free State National Botanical Garden with a focus on seasons. **CAPS**	R
	A. Parts of a plant and sensory exploration of Free State National Botanical Garden. **CAPS**	1
	B. A study of a wetland ecosystem and an introduction to Free State National Botanical Garden. **CAPS**	6, 8
2. Ecology	**A.** Finding out about a Grassland ecosystem. **CAPS**	4
	B. Investigating rocks, soil and life cycles. **CAPS**	5
	C. Investigating inter-relationships in the Grassland ecosystem. **CAPS**	8
	D. The Grassland ecosystem. Learners investigate biotic and abiotic factors, photosynthesis, the energy pyramid and examples of symbiosis, as well as doing a line transect. They consider the value and threats to the ecosystem, as well as possible solutions to the pressures. **CAPS**	10
3. Plant adaptation	**A.** Investigating plant adaptations with respect to climate and defence mechanisms.	7
	B. Investigating transpiration and the different mechanisms plants use to limit transpiration. **CAPS**	10
4. Plants and people	**A.** Exploring the sustainable use of resources, including useful plants, recycling and worm farming. **CAPS**	3
	B. Exploring indigenous knowledge, including uses of plants, stories and myths, in Free State National Botanical Garden. **CAPS**	6
5. Water	**A**. Investigating the importance of water, the organisms that inhabit it, and what threatens them. Sensory activities are included (2½ hr). **CAPS**	2
	B. Understanding ecological processes associated with fresh water and the conservation and responsible use thereof (only available seasonally). **CAPS**	4

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6. **Tourism**	Free State National Botanical Garden as a tourist destination. **CAPS**	10 Tourism
7. **Biomes**	**B**. Comparison of Grassland, Nama-Karoo and Succulent Karoo biomes, using climate and biome maps. We focus on the biotic and abiotic factors, as well as the transfer of energy within the Grassland ecosystem. A Grassland key is used. Threats and pressures for each biome are discussed. **CAPS**	10 Life Science
8. **Biodiversity** **and** **Global Warming**	**A**. Global warming: understanding climate change and its effects on biodiversity.	5, 6, 7
	B. Classification, biodiversity and plant reproduction. **CAPS**	7
	C. Global warming: using maps & investigating impacts on local ecosystems & responses. **CAPS**	9
	D. Comparison of Bryophytes, Pteridophytes, Gymnosperms and Angiosperms, sexual and asexual reproduction, seeds, and the role of plants in ecosystems. **CAPS**	11 Life Science
	E. Global warming, loss of Biodiversity in Bloemfontein, interdependence, sustainable use of resources. Personal responses to the above. **CAPS**	11 LO

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