

APPENDIX 2: STUDENT ACTIVITIES

STUDENT ACTIVITIES 1

Compose an introductory paragraph for a generic extended response on Kakadu.
Use the 'Introduction' and 'Spatial Patterns and Dimensions' sections to complete this.

Spatial technology and mapping

Visit Kakadu National Park in Google Earth and /or Google Streetview.
Follow the rivers, identify areas of wetland and describe their continuity.
Do the images portray the wet season or the dry season? Use evidence to justify your answer.
Use Source 1 in Appendix 1 to create a precis map of the KNP drainage pattern (river network) and shade areas where wetlands would be located.

STUDENT ACTIVITIES 2

- Discuss why precipitation is so important in Kakadu?
- Describe Kakadu's distinctive weather pattern.
- Distinguish between hydrological and geomorphic processes.
- Describe what is driving the hydrological and geomorphic processes in Kakadu?
- Outline the major landforms formed as a result of these processes?
- Briefly describe the hydrological processes of Kakadu.
- Outline the difference between weathering, erosion, transport and deposition. How is Kakadu affected by each of these processes?
- Examine how changes in geomorphic and hydrologic processes impact on Kakadu?
- Define biogeography.
- Outline the important role that termites play in an ecosystem such as Kakadu.
- Define: Invasion and Succession
- Distinguish between a pioneer species and a secondary species?
- Explain why mangroves are considered a secondary species?
- List three natural stresses occurring in Kakadu and describe adjustments in response to this stress.

EXTENDED RESPONSE: With reference to at least ONE ecosystem you have studied, explain the biophysical interactions which lead to diverse ecosystems and their functioning. (2002 HSC).

STUDENT ACTIVITIES 3

- Provide an example of three different levels of change occurring in Kakadu.
- Describe the process involved in the trophic pyramid.
- Define dynamic equilibrium.

EXTENDED RESPONSE: Compare the nature and rate of change that affect the functioning of TWO different ecosystems at risk. (2008 HSC).

STUDENT ACTIVITIES 4

- Outline two positive impacts humans have had on Kakadu National Park.
- Outline two examples of feral introduced animals in Kakadu National Park that have had a negative impact.
- Outline two examples of introduced weeds in Kakadu National Park that have had a negative impact.
- Explain how tourism can be a negative impact on Kakadu?
- Describe the impact that uranium mining has on Kakadu National Park.
- Describe the impact of global warming on Kakadu National Park.

EXTENDED RESPONSE: Assess the impact of humans on the functioning of TWO ecosystems at risk. (2013 HSC)

STUDENT ACTIVITIES 5

- Outline the role of the Aboriginal community as managers of the land in Kakadu.
- Explain how the arrival of non-Aboriginal people affected the use of fire as a management tool?
- List and explain 4 examples of traditional fire management practices used today.
- In which year was Kakadu declared a national park?
- In which year was Kakadu declared a World Heritage area? What was the decision based on?
- Outline the aim of the Ramsar Convention?
- In which year was Kakadu listed as a Wetlands of International Importance by the Ramsar Convention?
- Briefly explain how mining activities were managed in Kakadu National Park.
- Explain how two different feral animals are managed in Kakadu National Park.
- Explain how two different introduced weeds are managed in Kakadu National Park.
- Describe the aim of crocodile management in Kakadu? Explain how this is carried out?
- List and outline 5 tourism management tools employed by Kakadu National Park.
- Watch the Four Corners report “*Kakadu in Crisis*” and identify issues that relate directly to the Kakadu wetlands.
- Has management in Kakadu achieved the *Vision for Tourism* stated below.
- Evaluate the success of management strategies used to protect the cultural and environmental values of the Kakadu wetlands.

EXTENDED RESPONSE: Evaluate the impact of both traditional and contemporary management strategies on TWO ecosystems at risk. (2012 HSC)



SKILLS ACTIVITIES: Weather and climate

USE Sources 5 and 6 in Appendix 1

1. Explain the difference between weather and climate.
Refer to sources 5 and 6 as examples in your answer.

Source 5 - Graph 1

2. Describe the Annual Rainfall Distribution
3. Calculate the Average Annual Rainfall.
4. Calculate the average temperature of the hottest and coldest months
5. Calculate the Annual Temperature Range

Refer to Source 5 - Graph 1 and Graph 2

6. Explain the relationship between rainfall distribution, cloudiness and sunshine.

Refer to Source 5 – Graph 3 and Graph 4

7. How many days in January received less than 2mm of rainfall?
8. What % of days in December received over 10 mm of rainfall?
9. Calculate the % of days in October that were over 35 degrees C.
10. Suggest a reason why there are more hot days in October than November and December

Refer to Source 5 – Graph 5

11. State the three directions from which most winds blow at Kakadu.
12. State the number of hours wind blows from the East South East
13. Calculate the % of South Southeasterly winds that were over 12 miles per hour.
14. Convert the answer to Q13 to kph (12 mph = 19.31 kph)

Refer to Source 6

15. Describe the weather forecast for Kakadu NP on March 28th, 2021
16. List the weather features included in a Meteogram.

Visit the Meteoblue website at

https://www.meteoblue.com/en/weather/historyclimate/climatemodelled/kakadu-national-park_australia_6941907



Use the HOME SYMBOL on the left-hand menu to select the current 7 day forecast for Kakadu. Compare the forecast now to that of the week beginning March 28th, 2021.



Identify the season for each forecast period (now and march). Choose from:

- Wet season
- Start of wet season / End of dry season
- End of wet season / Start of dry season
- Dry season

Justify your choice using statistical evidence from each forecast