



Stage 5 Geography

Environmental Change and Management



The where, what and why of the Cumberland Plain Woodland

Name: _____

www.longneck-e.schools.nsw.edu.au



Education
Public Schools

Land use and management investigation

Use the resources supplied to answer the following questions.

What are the characteristics of the Cumberland Plain Woodland?

Where is the Cumberland Plain Woodland?

Why does the Cumberland Plain Woodland have a conservation plan?

What does the future hold for the Cumberland Plain Woodland?

Plant community assessment – Site 1

Parameter	Results	Relevance
Soil temperature		The temperature of soil can affect how seeds in the ground germinate and grow.
Soil moisture		Moisture in the soil is important for the functioning of the ecosystem. The amount of organic material in soil can help determine soil moisture.
Soil pH		Different plants require different pH levels. Some plants are more tolerant of extreme results.
Soil colour		

Vegetation identification

Use the vegetation id booklet to identify the dominant tree and shrub species.

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Field sketch

Complete a field sketch of this location; think about how you will indicate slope and orientation (direction).

Plant community assessment – Site 2

Parameter	Results	Relevance
Soil temperature		The temperature of soil can affect how seeds in the ground germinate and grow.
Soil moisture		Moisture in the soil is important for the functioning of the ecosystem. The amount of organic material in soil can help determine soil moisture.
Soil pH		Different plants require different pH levels. Some plants are more tolerant of extreme results.
Soil colour		

Vegetation identification

Use the vegetation id booklet to identify the dominant tree and shrub species.

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Field sketch

Complete a field sketch of this location; think about how you will indicate slope and orientation (direction).

Plant community assessment – Site 3

Parameter	Results	Relevance
Soil temperature		The temperature of soil can affect how seeds in the ground germinate and grow.
Soil moisture		Moisture in the soil is important for the functioning of the ecosystem. The amount of organic material in soil can help determine soil moisture.
Soil pH		Different plants require different pH levels. Some plants are more tolerant of extreme results.
Soil colour		

Vegetation identification

Use the vegetation id booklet to identify the dominant tree and shrub species.

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Field sketch

Complete a field sketch of this location; think about how you will indicate slope and orientation (direction).

Water quality assessment

Parameter	Result	Relevance
Salinity		Average freshwater readings are 146ppm. Salinity above 1900ppm inhibits plant growth and may exclude many aquatic organisms.
pH		A pH of 7 is ideal. Results below 5 and above 9 could be regarded as polluted. Values between 6.7 and 8.6 can support healthy fish populations.
Temperature		High temperature in association with high nutrient levels may cause excessive plant growth. High temperature may also reduce dissolved oxygen levels.
Turbidity		Turbidity readings above 20ppm may inhibit plant growth and reduce dissolved oxygen levels.
Biological indicators		

Biological indicators

Identify the animals found, circle the number and add together to get a pollution index.

Common Name & Sensitivity	Tolerance Measure
Very Sensitive	
Tadpole	10
Stonefly Nymph	10
Mayfly Nymph	9
Dobsonfly Larva	8
Caddisfly Larva	8
Sensitive	
Water Mite	6
Beetle	5
Freshwater Shrimp	4
Tolerant	
Dragonfly Nymph	3
Damselfly Nymph	3
Freshwater Mussel	3
Mosquito Larva	3
Bloodworm	3
Nematode	3
Very Tolerant	
Backswimmer	2
Water Boatman	2
Water Scorpion	2
Water Strider	2
Worm	2
Leech	1
Freshwater Snail	1
Total	

Pollution Index	
Poor	0-20
Fair	21-34
Good	35-44
Excellent	45+

Record any additional comments on the aquatic environment below:

Human activity and impact

Record evidence of human activity when observed.

Human activity	Environmental impact

Conclusions

Make some notes identifying the differences and similarities between the three plant communities; identify some correlations or interactions between the terrestrial and aquatic environments. Comment on the state of the ecosystem.
