Ecosystems and cycles: field study sheet.

Name: _____ Class: _____ Date: _____

Use this sheet on a real transect, or with the modelled transect on screen 3. Record every reading in the tables, draw the graphs, then plan your report on page 3.

SCREENS 2 AND 3 Plan the survey

a **Site:** _____ **Date and time:** _____ **Weather:** _____

b **Which way will the transect run, and why? How far apart are the stations, and how big is the quadrat?**

c **How will you keep the readings fair and comparable, and protect the site?**

SCREEN 3 Percentage cover in each quadrat

a **Transect:** _____ **Estimate the cover of each plant to the nearest 5%.**

DISTANCE	SPINIFEX	GREY SALTBUSH	DAISY-BUSH	BEARD-HEATH	SHEOAK	OTHER / BARE
0 m						
20 m						
40 m						
60 m						
80 m						
100 m						
120 m						
140 m						
160 m						
180 m						

SCREEN 3 Abiotic readings

a **Record each factor at each station, at the same time of day if you can.**

DISTANCE	WIND (M/S)	SOIL PH	ORGANIC MATTER (%)	LIGHT (% OF OPEN)	NOTES
0 m					
20 m					
40 m					
60 m					
80 m					
100 m					
120 m					
140 m					
160 m					
180 m					

SCREEN 4 Graph the patterns

a **Draw a kite diagram of the cover data, with distance along the bottom and one band for each plant.**

b **Graph one abiotic factor against distance. Which plant's pattern does it best match?**

SCREENS 5 AND 6 Energy and populations

a Where does the energy in this ecosystem come from? What is net primary production?

b Two biotic and two abiotic factors that could set the carrying capacity for an animal here:

SCREENS 7 AND 8 The cycles

a Follow a carbon atom from the air, through a dune plant, and back. Name each process.

b How did nutrients from the land harm the seagrass? Why does phosphorus return more slowly than nitrogen?

SCREEN 9 Report planner

One key point for each section of your report.

SECTION	KEY POINT AND EVIDENCE
Introduction	
Method	
Results	
Discussion	
Limitations	
Conclusion and advice	