



## Literacy Year 9 – Week 7

### STUDENT ACTIVITIES

#### Reading

1. Without reading any of the text, look at the three maps for the text *Endemism*. What do you think the maps represent?


2. Read the key for the maps and the explanation above them that is in italics. How has this new information changed your interpretation of the maps?


3. Read the key for the maps and the explanation above them that is in italics. How has this new information changed your interpretation of the maps?


4. Read the text *Endemism* stopping after the third paragraph and the fourth paragraph to check your understandings of endemism against the diagrams (i.e. maps).


STUDENT ACTIVITIES

# Endemism

Endemism describes how species that are native to a particular geographical area or continent evolve. Examples of endemism in Australia are the koala and the red kangaroo — both of which are not naturally found anywhere else in the world.

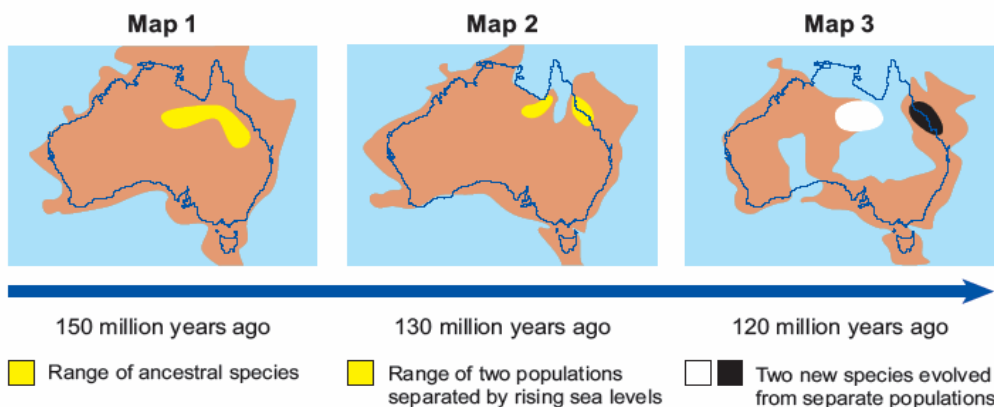
Endemism usually occurs in areas that are isolated in some way. Australia has been isolated from other continents for tens of millions of years, resulting in a high level of endemism. More than 80% of our plant and animal species are not found on any other continent.

Endemism occurs when populations of one species are separated so they cannot interbreed. Both populations continue to breed and evolve separately. In time, it is possible they will become two separate species.

The factor that causes populations to separate is called an isolating mechanism. Isolating mechanisms can be geographical (for example, changes in sea level or the formation of mountain ranges) or behavioural (for example, a population developing two different mating seasons or behaviours).

Endemism doesn't just occur between continents; it also occurs within them. For example, species can be restricted to large regions such as south-west Australia or tropical Queensland. Endemism can also occur over very small areas, such as on mountain tops or around springs. The isolating mechanism in both these cases would be the unsuitable nature of surrounding areas.

*The diagrams below illustrate the evolution of one species of plant or animal into two isolated and distinct species. Brown areas show the changing land mass and blue areas show the changing sea levels. An outline of Australia's current coastline is also shown.*





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5. After reading the text, complete questions 27, 28 and 29 provided.

**27** Map 2 shows

- one species being invaded by another.
- two species living in two different areas.
- one species living in two different areas.
- two new species that have evolved from one species.

**28** Map 3 shows that 120 million years ago

- the climate in Australia had begun to cool.
- large areas of Australia were covered by ocean.
- there were four major species evolving in Australia.
- the land mass of Australia had changed very little over 30 million years.

### STUDENT ACTIVITIES

**29** Which isolating mechanism is illustrated in the three maps?

- changes in the coastline
- general behavioural change
- difference in mating seasons
- formation of a mountain range

Shade one  
bubble.



6. Share your responses with a partner.
7. What is something that you should do when reading a text with diagrams or illustrations to help you understand the text better?