Study Guide for the Australian Collaboration Fact and Issue Sheet

# BIODIVERSITY

## FOR REVIEW

### 1. Introduction

**1a.** What is biodiversity?

**1b.** What are the three levels of biodiversity?

**1c.** Why do rainforests provide ideal conditions for nesting and feeding?

**1d.** What is genetic diversity and why is it important?

**1e.** What is ecosystem diversity?

**1f.** What are the essential components of a healthy ecosystem?

**1g.** Describe three ways in which natural processes interact to sustain life.

### 2. Biodiversity in Australia

**2a.** Do you know what 'endemic' means? Can you work it out from the context? If not, look it up in a dictionary.

**2b.** Why does Australia have so much biodiversity?

**2c.** What is 'land modification'?

**2d.** Why do some forms of land modification threaten biodiversity?

**2e.** Which regions of Australia have particularly high percentages of threatened ecosystems?

### 3. Australia's Regions and Habitats

**3a.** Do you know what 'amphibians' and 'invertebrates' are? If not, look these words up in a dictionary.

**3b.** What are the threats to Northern Australia's wetlands?

**3c.** What percentage of Australia's old growth forests have been logged?

**3d.** What percentage of remaining forests are protected?

**3e.** Read the list of policies needed to create sustainable rural landscapes. Put three of these policies into your own words.

**3f.** What is the extent of Australia's marine environment?

**3g.** Name five factors that contribute to the destruction of Australia's marine environment.

### 4. Protection

**4a.** How many species of fauna and how many species of flora are threatened in Australia currently?

**4b.** What is 'bioregional planning'?

## FOR DISCUSSION

**1.** For younger students:

Why is biodiversity important? If we can grow food, do we really need other inedible types of plants and animals? Why?

**2.** For intermediate students:

When the consumption of certain plants and animals threatens Australia's biodiversity, should consumption be a matter of consumer choice or government legislation? For example, should we be able to buy fish like Orange Ruffy or other species that are known to be unsustainable, or should the fishing of such species be banned altogether?

**3.** Question for an advanced class debate:

How do we balance the importance of jobs and communities against securing our biodiversity? Who should make these decisions? How? What factors should they consider?

For example, how can we best reconcile the interests of farmers and the need to protect biodiversity for all Australians? Consider these facts as a starting point: large flocks of native parrots can decimate corn and wheat crops and the cane toad was introduced to 'solve' an agricultural problem, but now threatens biodiversity.

## FOR RESEARCH

**1.** For younger students:

Find out about Australia's region of greatest biodiversity.

Research what plants and animals are unique to the area. See if you can find out more about them online.

You might to do a research project on some of the unique amphibians in this area.

**2.** For intermediate students:

Visit the Federal Government's site for biodiversity.

What national strategies exist for the protection of Australia's biodiversity? When were they last reviewed?

What strategies exist in your own state or territory for protecting biodiversity?

**3.** For advanced students:

Look at the megadiverse countries listed in the fact and issue sheet.

Do they have anything in common geographically? Do they have anything in common historically?

How do factors like location, history and economics affect a country's capacity to maintain biodiversity today?