

Knowing and Understanding

Copy and complete these statements using the words on the right to make a summary of this chapter.

- 1 _____ are characteristics that help an organism to survive and reproduce where it lives.
- 2 The survival of an organism in its environment depends on _____ or living factors such as predators, and _____ or non-living factors such as light, temperature and humidity.
- 3 Interactions between _____ can be described in terms of food chains and _____, and human activity can _____ these interactions.
- 4 There are three different types of adaptations: structural, functional and _____.
- 5 Organisms living on land or in water have different environments to cope with. Light, temperature, the amounts of dissolved salts and _____ affect organisms in water. Water availability, temperature and _____ are problems on land.
- 6 Eucalypts are adapted to the Australian environment because they can control the opening and closing of their _____, have leaves with a thick cuticle and can re-grow quickly after a _____.
- 7 Introduced organisms are causing the loss of _____ in Australia.

abiotic
adaptations
affect
behavioural
biodiversity
biotic
buoyancy
fire
food webs
organisms
stomata
support

Self-management

Finding information

When given some reading to do and then asked questions about it, you often have to hunt back through the text to find what you need. A good way to summarise a chapter and save time is to write down all the headings, and words in *italics* and **bold** with page numbers as you go. For example, here are the first two pages of this chapter:

Page 89 Focus for learning

Inquiry 1: What do you need?

Problem solving: Gone forever

habitat, adaptations

Page 90 Australian environments

Inquiry 2: Four different Australian environments

biotic, abiotic, environment

- 1 Continue to summarise the chapter in this way.
- 2 Beside each bold word write down its meaning.
- 3 Using your summary, state the page number and the heading where the following information could be found:

- a a picture of a rainforest
- b light levels in the ocean
- c biotic and abiotic factors
- d three different types of adaptations
- e variation and natural selection
- f the echidna and bilby
- g support structures of animals living on land
- h nocturnal animals
- i the littoral zone
- j adaptations to fire
- k the organism pictured below



Checkpoint

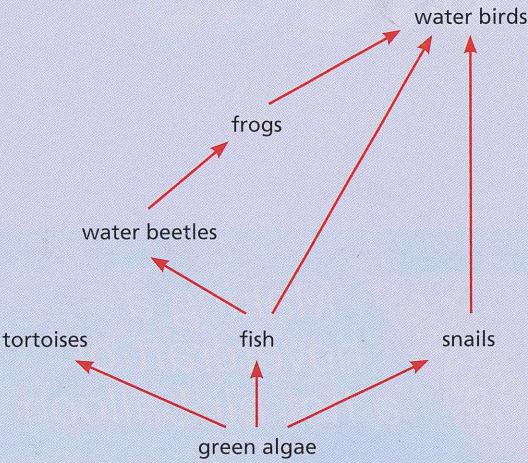
- 1 Write meanings for the following words:
adaptation, producer, nocturnal, extinct, stomata, turgid
- 2 Copy and complete the following sentences.
 - a The place where an organism lives is called its _____.
 - b The characteristics that suit an organism to the place where it lives are called _____.
 - c In the food chain *grass → rabbit → hawk*, the hawk is a _____ and the _____ is its prey.
 - d The area where water meets the land is called the _____.
 - e It is important to maintain the variety of life on Earth or _____, not only for our own survival, but for the survival of all life.
- 3 a Which of these factors could be a problem for organisms living on land?
dehydration, lack of body support, buoyancy, lack of oxygen, water movement
b Which of these factors could be a problem for organisms living in water?
dehydration, lack of body support, buoyancy, lack of oxygen, water movement
- 4 Phasmids are leaf or stick insects (see photo below). For self-defence a phasmid may
 - freeze.
 - spray a chemical on its predator.
 - hiss and kick its legs.
 - open its bright wings.
 a Explain how each of these adaptations helps the phasmid survive.
b Are these all behavioural adaptations? Explain.



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- 5 Ella and Talia were growing cabbages in their garden. They observed that birds were eating caterpillars on the cabbages, and that the caterpillars were eating the cabbages. Draw a food chain for their observations.
- 6 The drawing below shows a food web for a large pond.
 - a Which animals are herbivores?
 - b Which animals are carnivores?
 - c Which is the producer in the food web?
 - d Predict what would happen if more water birds came to the pond.
 - e What would happen to the food web if the green algae started to die?



- 7 In parts of central Tasmania eucalypts are the dominant forest plants, and beech trees grow beneath them. Over time the forest becomes so dense that the light reaching the forest floor is too low for the eucalypt seeds to grow and survive. Eucalypts are fire-tolerant, but beech trees are not.
 - a Explain what would happen over time if there were no fires in the forest.
 - b What would happen to the forest if there were regular fires?