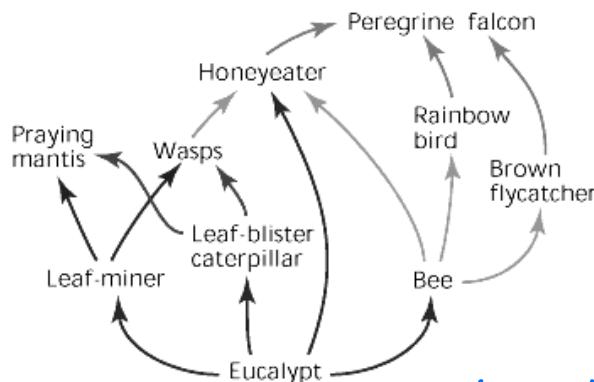


YEAR 9 SCIENCE
LIFE AND LIVING
REVISION - ECOLOGY

1. You need to know what the following things are and how they fit into the ecosystem.
Write their meaning next to them.

- Habitat - place where an organism lives.
- Biotic factors (List 3 examples.) - something living e.g. fish, grass
- Abiotic factors (List them.) - non-living (O_2 , H_2O , temp., light, soil)
- Producer - makes food.
- Consumer - eats food
- Decomposers - breakdown dead things.
- Carnivore - eats meat.
- Herbivore - eats plants.
- Omnivore - eats both plants + animals.
- Food chains - what do the arrows mean? Which way do the arrows go?
- flow of energy.
- First order consumer - eats producer.
- Second order consumer - eats 1st order consumer.
- Food web - shows feeding relationships in an ecosystem.
- Energy flow in an ecosystem. - moves along food chains from producers to consumers.
- The sun's role in food chains and food webs. - source of energy for producers.
- Introduced species - organism brought into an ecosystem from another area or country.
- Endangered species - numbers are very low + organism may die out.
- Ecosystem - made up of biotic + abiotic factors that interact with each other.
- Competitor in an ecosystem - organisms that eat the same food.
- Biosphere - all ecosystems on Earth.
- Environment - living + non-living things that affect organisms in a particular place.
- Community - different populations of plants + animals living together.

2. Use the following food web to answer the associated questions.



- (a) Name a herbivore. leaf miner, caterpillar, bee.
- (b) Name two first-order consumers. leaf miner, caterpillar, bee.
- (c) Name a carnivore. praying mantis, wasp, rainbow bird, flycatcher.
- (d) Name two third-order consumers. honeyeater, peregrine falcon.
- (e) Write down three different food chains containing the peregrine falcon.
- eucalypt → honeyeater → peregrine falcon.
 - eucalypt → bee → rainbow bird → peregrine falcon.
 - eucalypt → leaf miner → wasp → honeyeater → peregrine falcon.
- (f) What do the arrows represent? Flow of energy.
- (g) If the leaf miner is wiped out by a virus, give two effects this would have on the food web.
- Less leaf-blister caterpillars – eaten by praying mantis + wasp.
 - Less praying mantis – less food available.

3. Complete the table below by classifying the named component as **biotic** or **abiotic**.

Component	Biotic or abiotic?	Component	Biotic or abiotic?
Water salinity	A	Competitors for mating	B
Wind speed and direction	A	Producers	B
Competitors for food	B	Humidity	A
Predators	B	Decomposers	B
Light penetration	A	Air temperature	A

4. Look at the following diagram and answer the following questions.



- (a) Why are the trees and grass so important to this ecosystem?

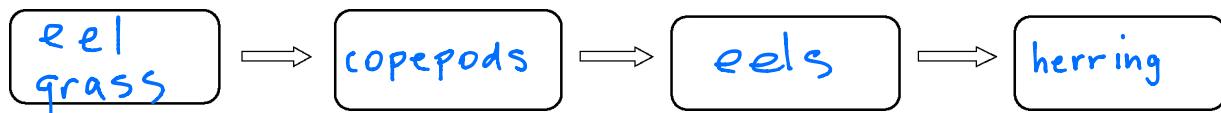
Provide food + shelter.

- (b) Why are earthworms so important in the soil under the tree?

Improve the soil so plants grow better.

5. An estuary is where a river meets the sea. Estuaries often contain shallow salty water in which a water grass called eel grass grows. The larva of small animals called copepods use the grass as a food source. Eels are predators of copepods and the eels are the prey of adult herring fish.

- (a) Use this information to complete the food chain.

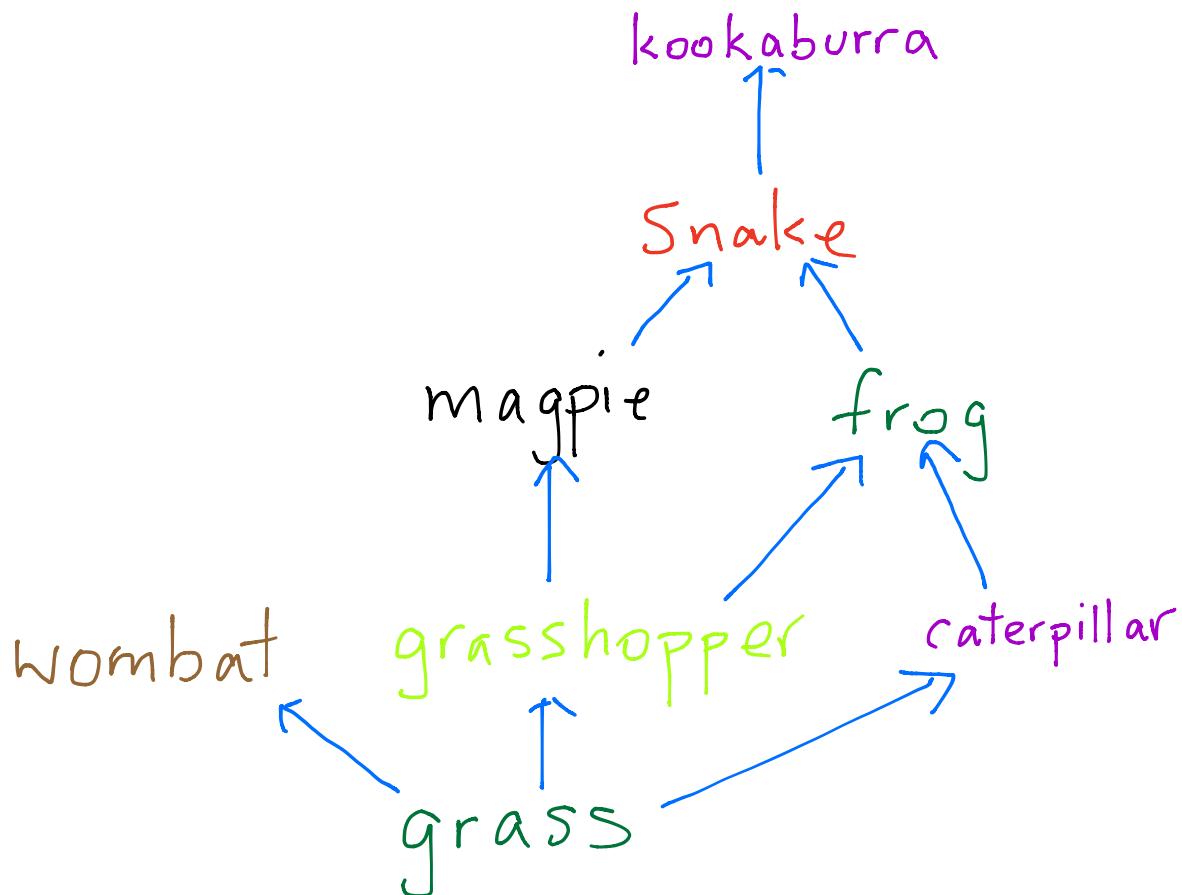


In this food chain, identify the:

- (b) herbivore *copepods*
 (c) second order consumer *eel*
 (d) producer. *eel grass*

6. (a) Use the following information to construct a food web on the following page.

- Frogs are eaten by snakes.
- Wombats eat grass.
- Magpies eat grasshoppers.
- Grass is eaten by caterpillars.
- Kookaburras prey on snakes.
- Frogs prey on grasshoppers.
- Grasshoppers eat grass.
- Snakes prey on magpies.
- Frogs eat caterpillars.



(b) Identify the third-order consumer(s). **Snake**

(c) Calculate the number of carnivores in this food web. **4**

(d) Explain how decomposers fit into this food web.

Everything will die and decomposers break them down.