B2

Chapter 2 Checkpoint

Revision (Route A)

Activate

Aims

This is a revision activity for B2 Chapter 2. Work through each task to help you revise key concepts.

Task 1: Photosynthesis

Use the key words in bold to complete the word equation for photosynthesis.

oxygen **water** **carbon dioxide** **glucose** **light**

Reactants				Products		
	+		→		+	

Clue:
A gas that enters the leaf through the stomata

Clue:
A liquid that is absorbed through the root

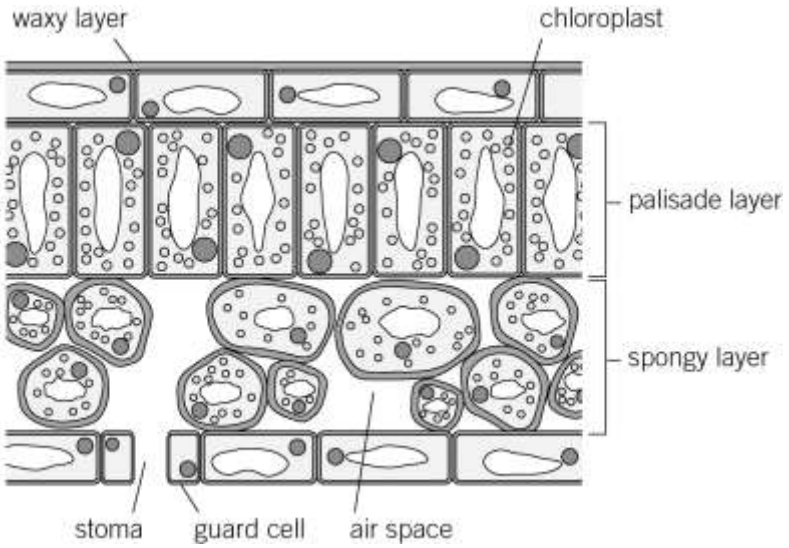
Clue:
The molecule the plant needs for energy

Clue:
A gas that is released into the atmosphere

Use the information in the word equation, together with the clues, to write a description of what happens in photosynthesis.

Task 2: The leaf

Look at the diagram of the plant leaf. The structure of each part can give you a clue about its function. Complete the sentences below by adding in the correct names.



Name: _____

Description: Contains cells packed with chloroplasts. This is where most of a plant's photosynthesis occurs.

Name: _____

Description: Contains air spaces, allowing carbon dioxide to diffuse throughout the leaf. Oxygen diffuses out of the leaf.

Name: _____

Description: Carbon dioxide diffuses in. Oxygen and water vapour diffuse out.

Name: _____

Description: Open the stomata through the day and close the stomata at night.

Task 3: Plant minerals

Read the descriptions of the plant, and match the possible deficiencies based on the symptoms.

Deficiencies: **magnesium** **potassium** **nitrate** **phosphate**

Plant	Possible deficiencies
dead patches on leaves, yellow leaves	
poor growth, some older leaves are yellow	
poor root growth, some young leaves are purple	
yellow leaves	

Task 4: Respiration

Aerobic respiration

Use the key words in bold to complete the word equation for aerobic respiration.

carbon dioxide **water** **oxygen** **glucose** **(energy)**

Reactants				Products				
	+		→		+		+	

Clue:
You get this from food

Clue:
You inhale this gas

Clue:
You exhale this gas as it is waste

Use the information in the word equation, together with the clues, to write a description of what happens in aerobic respiration.

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Anaerobic respiration

Write a word equation for anaerobic respiration.

Hints:

- Anaerobic respiration happens when there is no oxygen available.
- Lactic acid is a waste product of anaerobic respiration.

Task 5: Food chains

Create a food chain for these organisms, and then describe what a food chain shows.

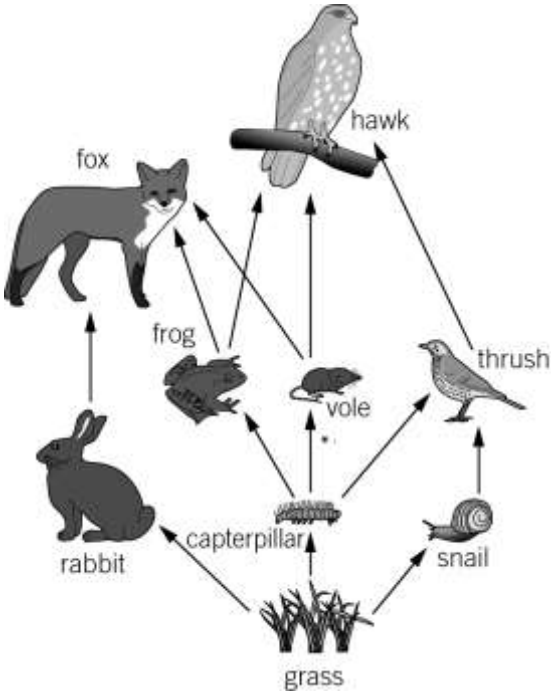
Organisms:

- nettles (a producer)
- barn own (eats voles)
- caterpillar (eats nettles)
- field vole (eats caterpillars).

Task 6: Interdependence

Fill in the gaps in the paragraphs below. Some of the key words are shown in bold. Not all of the words you need are given.

interdependent **population** **food web**



Interdependence means the way in which living organisms depend on each other to survive, grow, and reproduce. Organisms in a _____ depend on each other for survival. They are _____ .

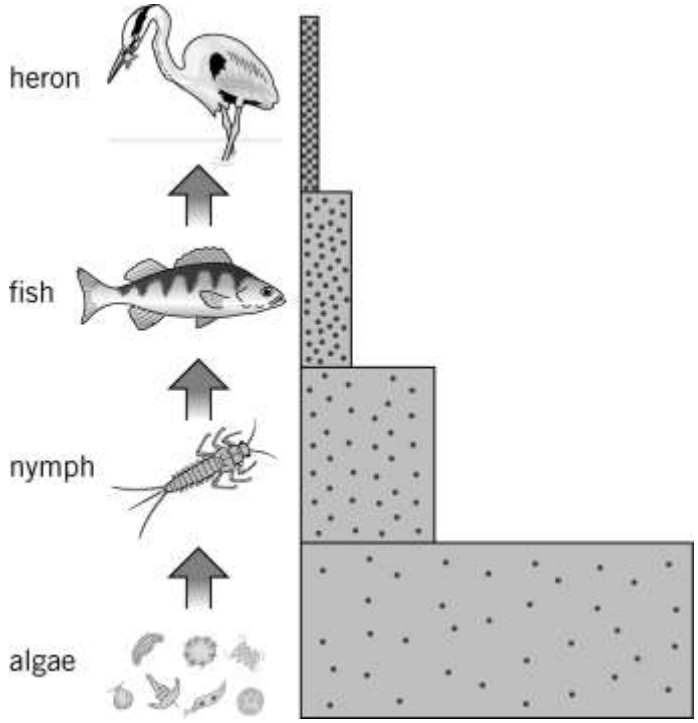
The number of animals or plants of the same type that live in the same area is called _____ . The population size of one type of organism has a direct effect on the size of another type of population.

In this food web, the rabbit has one predator. Its predator is a _____ .

If the number of rabbits _____ due to a disease, the number of foxes would also _____ as they would have less to eat.

Task 7: Ecosystems

Bioaccumulation



The diagram represents a food chain in an area containing toxic waste. Complete the paragraphs below to explain why the heron will have high levels of toxins.

polluted **bioaccumulation** **low** **fish**
herons **high** **algae**

In this food chain, the _____ is the producer. The area is _____ with toxic waste. The algae each contain _____ levels of toxins. The nymphs eat lots of algae. The _____ eat lots of nymphs. The _____ eat a lot of fish. The levels of toxins build up through the food chain. This is because the bigger organisms eat lots of the smaller organisms. The herons consume _____ levels of toxins. This is called _____ .

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Ecosystem key words

co-exist **community** **ecosystem** **habitat**
oak tree **woodlice**

An _____ is the name given to the plants and animals that are found in a particular location, and the area in which they live. These plants and animals depend on each other to survive. The organisms in an ecosystem are known as a _____ . The area they live in is called a _____ . For example, in an oak-tree ecosystem, the _____ - is the habitat. The community is made of different organisms that live in the oak tree, for example _____ , birds, and squirrels. The organisms in a community and a habitat _____ . This means they live in the same place at the same time.