SCIENCE YEAR 8 - UNIT 1 - LESSON 6

Why Living Things Need Transport Systems

Use this worksheet after reading the lesson to practise the key ideas and prove you can meet the success criteria.

Name _____

Date _____

Class _____

1. Key Ideas

Once organisms become larger and more complex, they cannot rely on simple exchange at the outside surface alone. This lesson explains why multicellular organisms need transport systems to move useful substances in and wastes out.

- multicellular organisms need ways to move substances around
- large organisms cannot rely only on exchange at the outside surface

2. Success Criteria

By the end, you should be able to:

- multicellular organisms need ways to move substances around
- cells need water, gases and nutrients, and wastes must be removed
- size and complexity increase transport demands

3. Key Terms

Transport system
A set of structures that move substances through an organism.

Nutrients
Useful substances needed by cells, including food molecules and minerals.

Waste
Substances that must be removed because cells no longer need them or they can cause harm.

Gas exchange
The movement of gases such as oxygen and carbon dioxide between an organism and its surroundings.

Multicellular
Made of many cells.

Distance
How far substances must move to reach cells inside an organism.

4. Activity: Build the Lesson Map

Use the lesson to complete the table. Keep answers brief but specific.

Prompt	Your answer
Main concept	
Important example	
Common mistake to avoid	
How this links to the next lesson	

5. Short Answer Questions

1. Explain this lesson goal in your own words: "multicellular organisms need ways to move substances around". Use one specific example from the lesson.

CORE

2. Apply this idea to a new example: "cells need water, gases and nutrients, and wastes must be removed". Show your reasoning clearly.

CORE

3. Analyse why this idea matters for understanding Why Living Things Need Transport Systems: "size and complexity increase transport demands".

REASONING

6. Extend: Apply the Idea

A student says, "I understand Why Living Things Need Transport Systems because I memorised the definition."

Explain why memorising a definition is not enough. Use an example from the lesson to show deeper understanding.

7. Multiple Choice

1. What is the best first step when answering a question about Why Living Things Need Transport Systems?

☐ A. Identify the key concept being tested

☐ B. Write every fact from memory

☐ C. Ignore the command word

☐ D. Skip examples and evidence

2. Which answer would show stronger understanding of Why Living Things Need Transport Systems?

☐ A. An answer with accurate terms and reasoning

☐ B. A copied definition only

☐ C. A single-word response

☐ D. An answer with no example

3. What should you do if a question asks you to explain?

☐ A. Link the idea to a reason or cause

☐ B. List unrelated facts

☐ C. Only draw a diagram

☐ D. Write the shortest possible answer

8. Success Criteria Proof

Finish with evidence that you can do each success criterion.

SUCCESS CRITERION 1

Prove that you can: multicellular organisms need ways to move substances around

SUCCESS CRITERION 2

Prove that you can: cells need water, gases and nutrients, and wastes must be removed

SUCCESS CRITERION 3

Prove that you can: size and complexity increase transport demands

One thing I still need help with: