CHAPTER

2 Organisation of the Organism

Exercise 2A Cell Structure

1 Find and circle the names of these eight cell parts in the puzzle.

cell membrane

cell wall

chloroplast

cytoplasm

mitochondrion

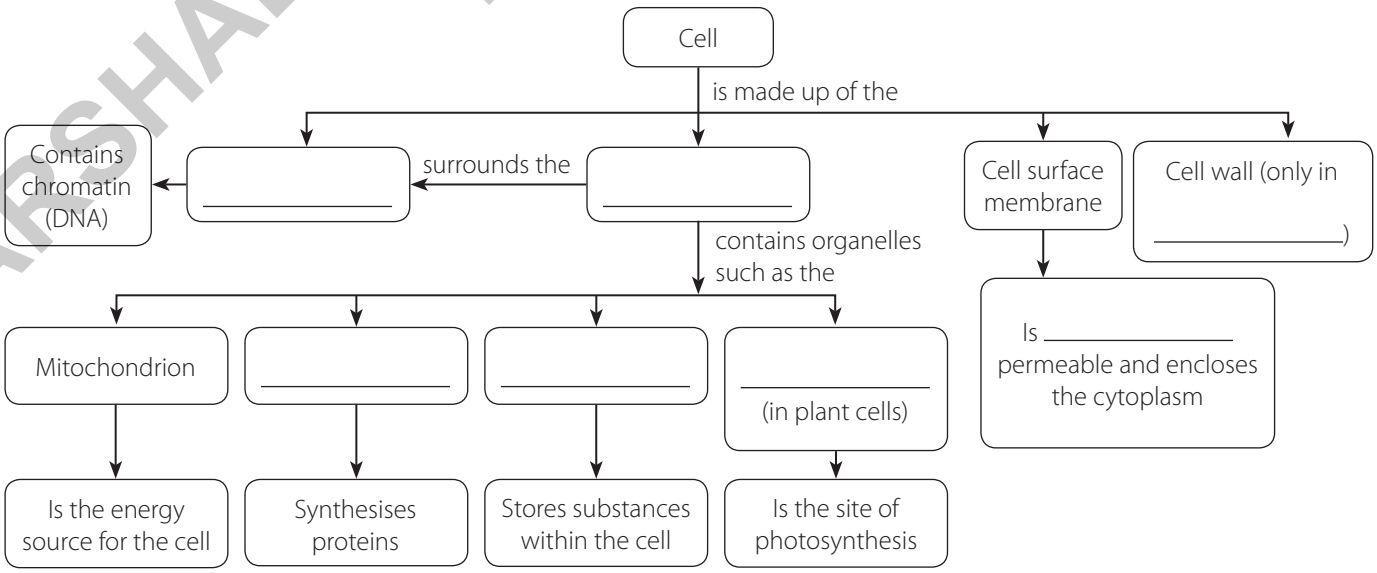
nucleus

ribosome

vacuole

N	A	N	T	H	T	R	E	P	S	O	G	V	E	M
U	X	M	O	F	W	Z	I	K	K	Y	I	A	R	S
C	P	X	I	M	A	V	G	X	S	S	Q	C	S	O
L	C	R	I	T	U	V	J	E	J	V	D	I	D	K
E	E	V	I	T	O	C	Y	T	O	P	L	A	S	M
U	L	A	N	B	U	C	G	O	N	C	F	D	I	S
S	L	C	Z	C	O	P	H	X	Q	C	N	N	Y	I
P	M	U	A	E	U	S	P	O	R	V	T	F	X	O
U	E	O	M	L	U	H	O	S	N	H	V	S	I	B
R	M	L	C	L	V	W	H	M	S	D	C	U	K	K
W	B	E	T	W	Z	T	D	D	E	J	R	B	T	N
W	R	V	M	A	B	A	I	A	U	M	I	I	X	B
M	A	A	P	L	E	T	M	O	D	K	V	C	O	B
X	N	C	H	L	O	R	O	P	L	A	S	T	C	N
Q	E	Q	T	A	U	B	R	M	W	Z	V	G	Z	W

2 Complete the concept map by writing your answers in the blanks. Discuss with your classmates how the concept map can be extended to include more information from Section 2.1 of the Student's Book.



MARSHALL CAVENDISH EDUCATION DRAFT COPY

Exercise 2B Cell Structure

For each question, choose the correct answer and write your choice in the brackets.

For questions 1, 2, and 3, refer to the diagram of a plant cell in Figure 2.1.

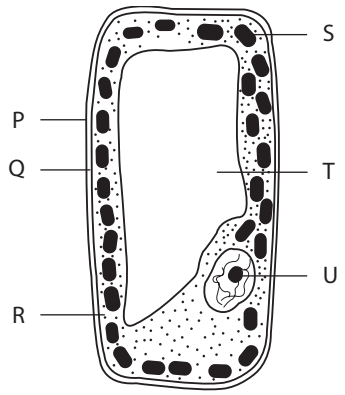


Figure 2.1

1 What are the parts labelled P, Q and R?

	P	Q	R
A	Cell surface membrane	Cell wall	Cytoplasm
B	Cell wall	Cell surface membrane	Cytoplasm
C	Cytoplasm	Cell surface membrane	Cell wall
D	Cytoplasm	Cell wall	Cell surface membrane

( )

2 Which part traps light energy for photosynthesis?

A R **B** S
C T **D** U

3 Which of these parts are found in both plant and animal cells?

A P and Q **B** P and R
C Q and R **D** Q and S

( )

4 An animal cell had its nucleus removed by means of a fine glass tube. The cell was not otherwise damaged. The cell was put in a solution that induces cell division. It survived for a day, but did not undergo cell division. An intact cell, used as a control, divided twice during that time.

What can you conclude from this experiment about the nucleus in the cell?

A The nucleus controls the normal activity of the cell.
B The nucleus is essential for cell division.
C The nucleus is essential for life.
D The nucleus is the only part of the cell that contains DNA.

( )

MARSHALL CAVENDISH EDUCATION DRAFT COPY

(c) Some people suffer from a genetic disease known as sickle-cell anaemia. The sufferers of sickle-cell anaemia have red blood cells that are sickle-shaped as shown in Figure 2.6.

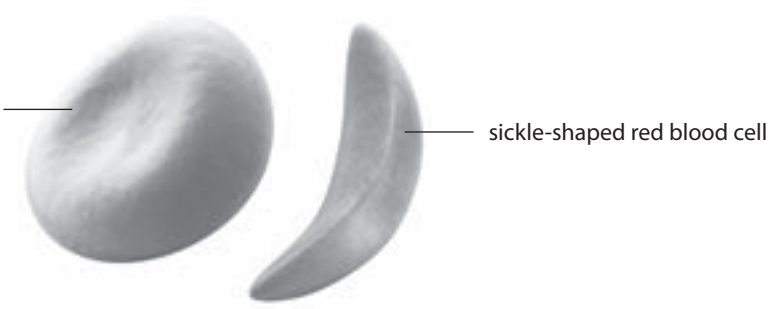
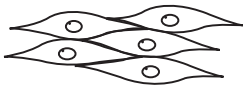


Figure 2.6

Explain why a patient suffering from sickle-cell anaemia feels tired easily.

5 **(a)** Complete Table 2.1 by writing "cells", "tissue" or "organ" in the blanks.

Table 2.1

A: _____	 endothelial layer  muscle
B: _____	 liver
C: _____	 

(b) Put A, B, and C in order of complexity, from the least complex to the most complex.

least complex ⟶ most complex

MARSHALL CAVENDISH EDUCATION
DRAFT COPY

Exercise 2H Let's Reflect

Reflect on your learning achievements for each section in Chapter 2. Look back at the concepts taught in the Student's Book. Check how you have fared in answering the questions in the Student's Book and the Theory Workbook. Then complete the Chapter Journal.

Chapter Journal

1 Rate your confidence level for your understanding of this chapter. Draw a pointer on the confidence meter to show your confidence level.

➔ If you are *not confident* or only *somewhat confident*, go back to the Student's Book and revise this chapter.

2 What questions do you still have about the concepts taught in this chapter? Write them, if any, in the space provided.

2.1 Cell Structure	
2.2 Levels of Organisation	
2.3 Size of Specimens	

➔ If you have written any questions, show them to someone such as your teacher who can help you.

3 What other thoughts do you have about learning this chapter?

➔ Reflect on your thoughts and share them with your teacher or classmates.

MARSHALL CAVENDISH EDUCATION
DRAFT COPY