مدرسة مريم بنت عمران للشراكات التعليمية
MARYAM BINT OMRAN CHARTER SCHOOL

Science Department

Practical Exam Revision Sheet

Subject: Science **Grade : 6**

Lesson	Standards	Objectives
Lesson 1: Models Help Scientists Study Natural Systems	MS-LS1-3	Describe the levels of organization in living things
Lesson 2 Cells Are Living Systems	MS-LS1-1 MS-LS1-2	Explain the function of cell parts and compare plant and animal cells. Compare prokaryotic and Eukaryotic cell
Lesson 3 Water in the Atmosphere	MS-ESS2-4	Describe how water moves through Earth's systems in the water cycle, powered by the Sun and gravity.
Lesson 4 Water on Earth's Surface		
Lesson 5 :Solar Energy on Earth	MS-ESS2-6	Explain how the Sun's energy and wind cause ocean currents.
Lesson 6: Atmospheric and Oceanic Circulation		

LIVEWORKSHEETS

What is a cell?

BIG IDEA

All living things are made of cells. A cell is the smallest living part of a living thing.

The Cell Theory (3 ideas)

1	All living things are made of cells.
2	The cell is the basic unit of life.
3	New cells come only from old cells.

Key words

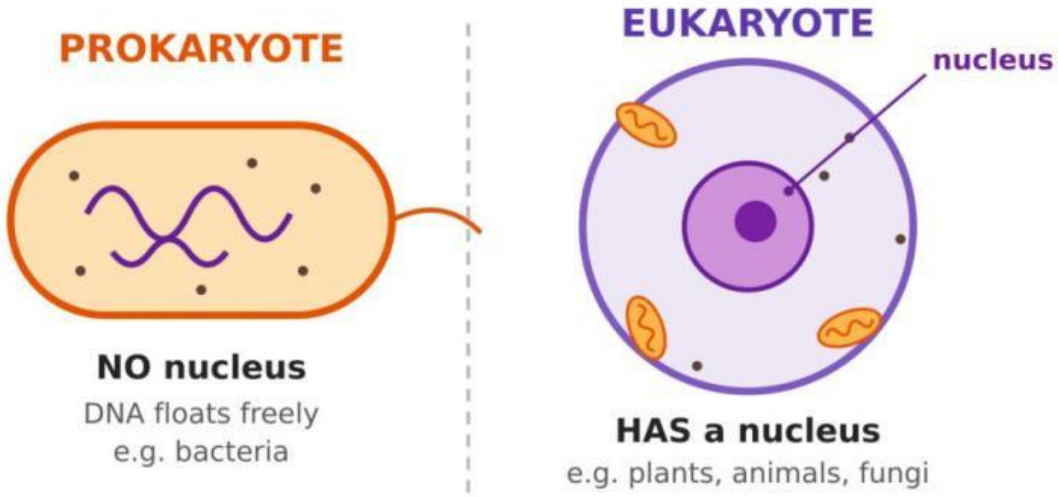
Unicellular	A living thing with ONE cell. Example: bacteria.
Multicellular	A living thing with MANY cells. Example: a cat, a tree, you!
Microscope	A tool that makes tiny things look big. We need it to see cells.

LIVEWORKSHEETS

◯ Prokaryote or ● Eukaryote?

BIG IDEA

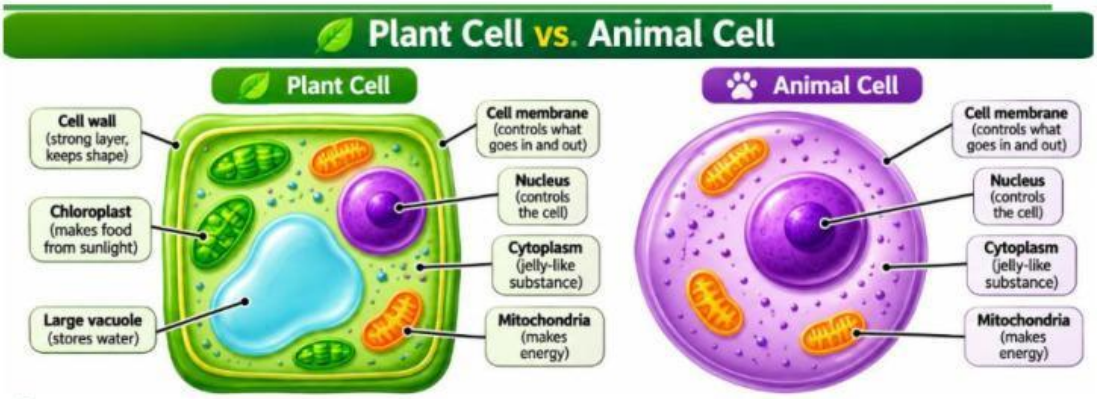
Look for the NUCLEUS! No nucleus = prokaryote. Has a nucleus = eukaryote.



◯ Prokaryote	● Eukaryote	BOTH have
• No nucleus • No organelles with a membrane • Very small • Bacteria	• Has a nucleus • Has organelles with a membrane • Bigger • Plants, animals, fungi	• Cell membrane • Cytoplasm • Ribosomes • DNA

LIVEWORKSHEETS

Plant Cell and Animal Cell



What does each part do?

Part	Job (what it does)		
Cell membrane	Lets things IN and OUT	✅	✅
Nucleus	The BOSS. Controls the cell. Keeps the DNA	✅	✅
Cytoplasm	Jelly that fills the cell	✅	✅
Mitochondria	Makes ENERGY for the cell	✅	✅
Cell wall	Strong outside layer. Keeps the shape	✅	❌
Chloroplast	Green. Makes FOOD from sunlight	✅	❌
Vacuole	Stores water	BIG	small

REMEMBER

- Only PLANT cells have: cell WALL, CHLOROPLASTS and a BIG VACUOLE.
- What goes AROUND a cell? The cell membrane (all cells) and the cell wall (plants).

LIVEWORKSHEETS

Levels of Organization

BIG IDEA

Small parts join to make bigger parts: Cell → Tissue → Organ → Organ system → Organism.



Cell	The smallest living part. Example: a muscle cell.
Tissue	Many cells of the same kind working together. Example: muscle tissue.
Organ	Different tissues working together. Example: the heart.
Organ system	Organs working together. Example: the circulatory system (heart + blood vessels move blood).
Organism	The whole living thing. Example: a human.

REMEMBER

- Muscle cell → muscle tissue → heart → circulatory system → human.
- Plants have levels too: all the parts of a plant (roots, stem, leaves, flowers) together = ONE ORGANISM.

LIVEWORKSHEETS

Earth's Four Systems

BIG IDEA

Earth has 4 systems: GEOSPHERE, HYDROSPHERE, ATMOSPHERE and BIOSPHERE.



Geosphere	Hydrosphere	Atmosphere	Biosphere
Rocks, soil, sand, mountains	ALL water: sea, rivers, ice, clouds of water	The air: gases, oxygen, wind	ALL living things: plants, animals, people

MEMORY TRICK

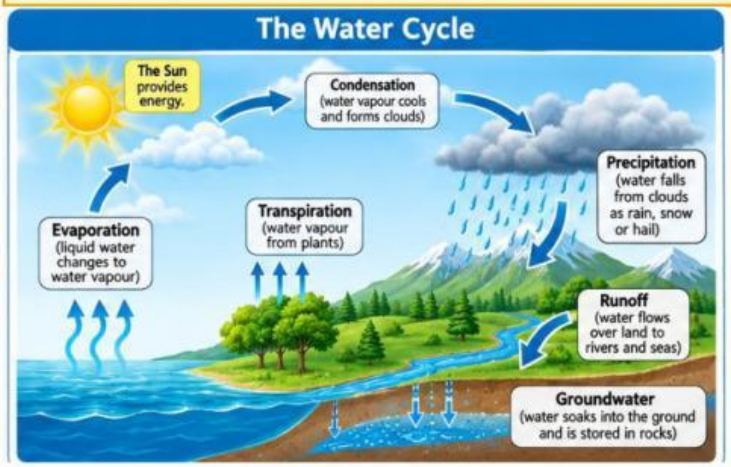
- GEO = Earth/rock. HYDRO = water. ATMO = air. BIO = life.

LIVEWORKSHEETS

The Water Cycle

BIG IDEA

Water moves around and around. The SUN gives the energy. The water cycle has NO beginning and NO end.



Evaporation	The Sun heats water. Liquid water turns into gas (water vapour) and goes up.
Transpiration	Water vapor comes out of plant leaves.
Condensation	Water vapor cools and turns into tiny drops. They make clouds.
Precipitation	Water falls from clouds: rain, snow, sleet or hail.
Runoff	Water flows over the land into rivers and the sea.
Groundwater	Water soaks into the ground and is stored in cracks and tiny holes in rocks and soil.

REMEMBER

- Water evaporates from seas, lakes, rivers, plants and even people and animals.
- Gravity pulls rain down and makes water flow downhill.

Rain, snow, sleet and hail

When drops in a cloud get big and heavy, they fall. This is **precipitation**.

Rain	Snow	Sleet	Hail
LIQUID drops	SOLID ice crystals	SOLID small ice pellets	SOLID balls of ice

EXAM TRAP

- Rain, snow, sleet and hail all come from CLOUDS and are all made of WATER.
- They are NOT the same state: rain is liquid; snow, sleet and hail are solid.
- Runoff, fog and dew are NOT precipitation.

LIVEWORKSHEETS

Sun's Energy & Ocean Currents

BIG IDEA

The Sun heats the Earth. The Sun's energy and the wind make ocean water move.

Where does sunlight go?



When sunlight reaches Earth:

- Some is **reflected** back to space (by clouds, ice and snow).
- Some is **absorbed** by the air.
- Some is **absorbed** by land and water. This warms the Earth.

How does ocean water move?



Surface current	Moved by the WIND. The water goes sideways (horizontal).
Deep current	Cold, salty water is heavy (dense). It sinks and moves deep down.
Upwelling	Wind pushes surface water away. Cold water from deep down comes UP.

REMEMBER

- WIND → surface currents. DENSE (cold, salty) water → deep currents.
- Ocean currents move heat around the Earth.

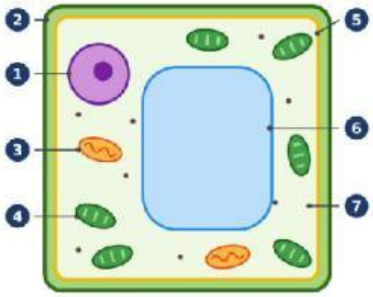
LIVEWORKSHEETS

PRACTICE TIME!

Try every question. You can do it!

A. Label the plant cell

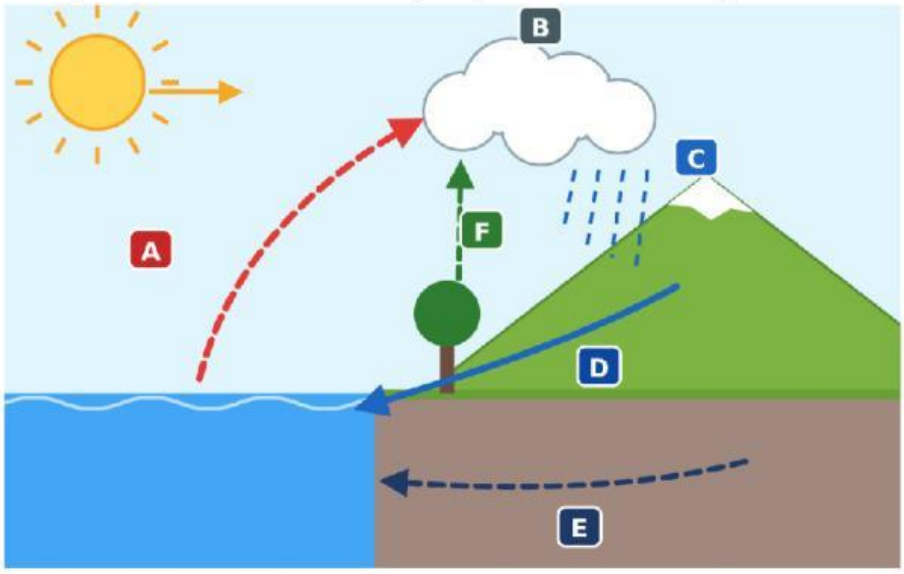
Word bank: nucleus • cell wall • mitochondria • chloroplast • cell membrane • vacuole • cytoplasm



1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

B. Label the water cycle

Word bank: evaporation • condensation • precipitation • runoff • groundwater • transpiration



A	B	C	D	E	F

LIVEWORKSHEETS

C. Choose the correct answer. Circle the letter.

1. Which part is around EVERY cell and lets things in and out?
A. cell wall B. cell membrane C. nucleus D. vacuole

2. A cell has NO nucleus. What is it?
A. a plant cell B. an animal cell C. a prokaryote D. a eukaryote

3. What do prokaryotes AND eukaryotes BOTH have?
A. a nucleus B. chloroplasts C. a cell membrane D. a big vacuole

4. Look at the cell in Part A. Which TWO numbers show it is a PLANT cell?
A. 1 and 3 B. 2 and 4 C. 3 and 7 D. 1 and 5

5. The roots, stem, leaves and flowers of a plant work together. Together they are a(n) …
A. tissue B. organ C. organism D. cell

6. Which one is NOT made of cells?
A. a tree B. a mushroom C. a rock D. bacteria

7. After a hot shower, the mirror is covered with tiny drops. This is …
A. evaporation B. condensation C. melting D. freezing

8. On a very cold night, water vapour turns straight into frost (ice). This is …
A. deposition B. sublimation C. melting D. evaporation

9. Rain, snow and hail: which sentence is NOT true?
A. They all come from clouds.
B. They are all made of water.
C. They are all liquid.
D. They are all precipitation.

10. Where is groundwater stored?
A. in clouds
B. in cracks and tiny holes in rocks and soil
C. in the sky
D. in plant leaves

LIVEWORKSHEETS

11. What gives the energy for the water cycle?

A. the Moon B. the Sun C. the wind D. the rain

12. Surface currents in the ocean are caused by …

A. wind B. fish C. the Moon D. rain

13. Which one is NOT precipitation?

A. rain B. snow C. runoff D. hail

14. Which sentence about the water cycle is TRUE?

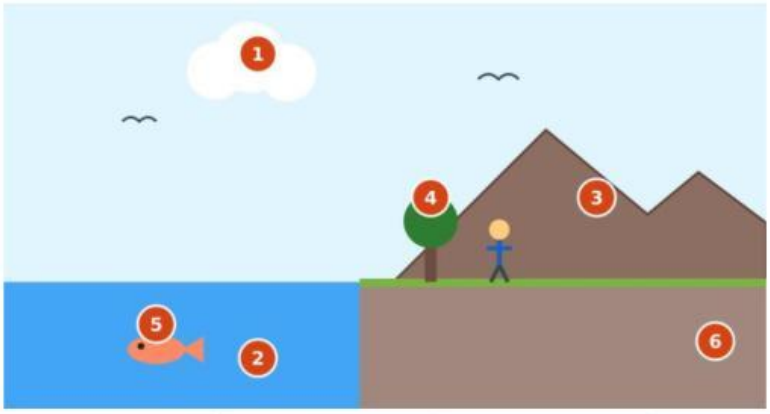
A. It starts in the sea.
B. It ends with rain.
C. It has no beginning and no end.
D. It only happens in winter.

15. When sunlight reaches Earth …

A. all of it goes into the sea
B. some is reflected and some is absorbed
C. all of it goes back to space
D. only rocks take it in

D. Which Earth system?

Look at the numbers in the picture. Write the system: geosphere, hydrosphere, atmosphere or biosphere.



1	2	3	4	5	6

LIVEWORKSHEETS

E. True or False? ☑ ✖

1	Animal cells have chloroplasts.	True	False
2	Bacteria have no nucleus.	True	False
3	A leaf is an organ.	True	False
4	Evaporation changes liquid water into gas.	True	False
5	Snow is a liquid.	True	False
6	Fish are part of the biosphere.	True	False
7	Some sunlight is reflected back into space.	True	False
8	New cells can come from nothing.	True	False

F. Name the process 🔑

Word bank: evaporation • condensation • melting • freezing • sublimation • transpiration

1	Wet clothes dry in the sun.	_____
2	Ice cream gets soft and drips.	_____
3	Water in the freezer turns to ice.	_____
4	Dew drops on the grass in the morning.	_____
5	Dry ice makes white "smoke".	_____
6	Water vapor comes out of leaves.	_____

G. Think and write

1. A cold glass of juice gets wet on the OUTSIDE. Where does the water come from?

_____

_____

2. Write ONE way plant and animal cells are the SAME, and ONE way they are DIFFERENT.

_____

_____

LIVEWORKSHEETS

3. **Why is the Sun important for the water cycle?**

_____

_____

LIVEWORKSHEETS

ANSWER KEY

A. Plant cell	1 nucleus 2 cell wall 3 mitochondria 4 chloroplast 5 cell membrane 6 vacuole 7 cytoplasm
B. Water cycle	A evaporation B condensation C precipitation D runoff E groundwater F transpiration
C. Choose	1 B 2 C 3 C 4 B 5 C 6 C 7 B 8 A 9 C 10 B 11 B 12 A 13 C 14 C 15 B
D. Earth systems	1 atmosphere (cloud/air) 2 hydrosphere (sea) 3 geosphere (mountain) 4 biosphere (tree) 5 biosphere (fish) 6 geosphere (soil)
E. True or False	1 F 2 T 3 T 4 T 5 F 6 T 7 T 8 F
F. Process	1 evaporation 2 melting 3 freezing 4 condensation 5 sublimation 6 transpiration
G. Think and write	1. From water vapour in the AIR. It touches the cold glass and condenses. 2. Same: both have a nucleus / cell membrane / cytoplasm / mitochondria. Different: only plant cells have a cell wall, chloroplasts, a big vacuole. 3. The Sun gives the energy (heat) that makes water evaporate. Without the Sun, the water cycle would stop.

LIVEWORKSHEETS