



ساینس – خامس ابتدائي – الترم الثاني

قناة مستر مجدي

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ده لينك الحلقة مباشرة



SCIENCE – PRIMARY 5

Mr. Magdy Channel

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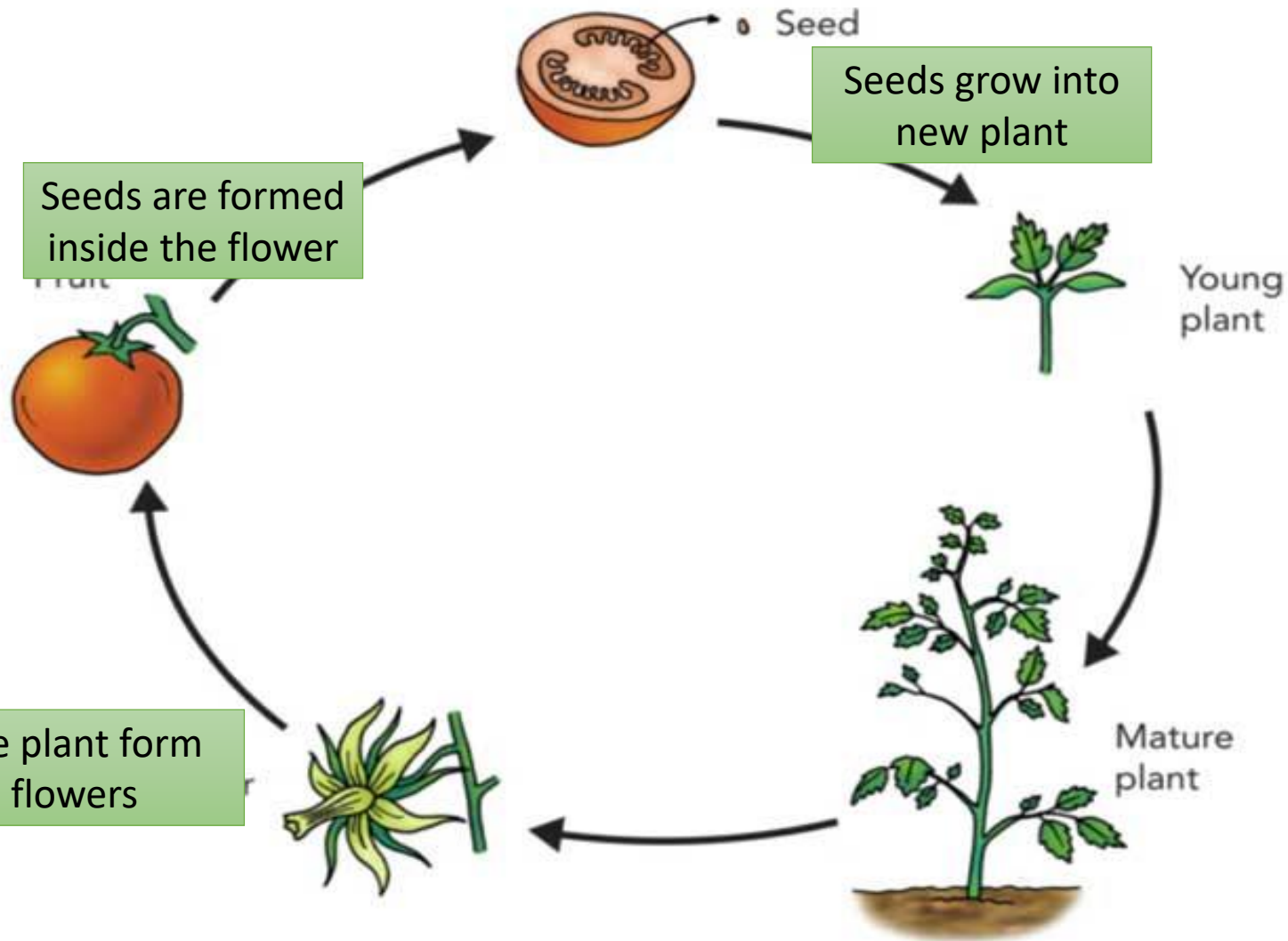


Renewable resources

Can be replaced easily

plants

Plants are renewable resources because they can grow again through their life cycle. They never run out.



Renewable resources

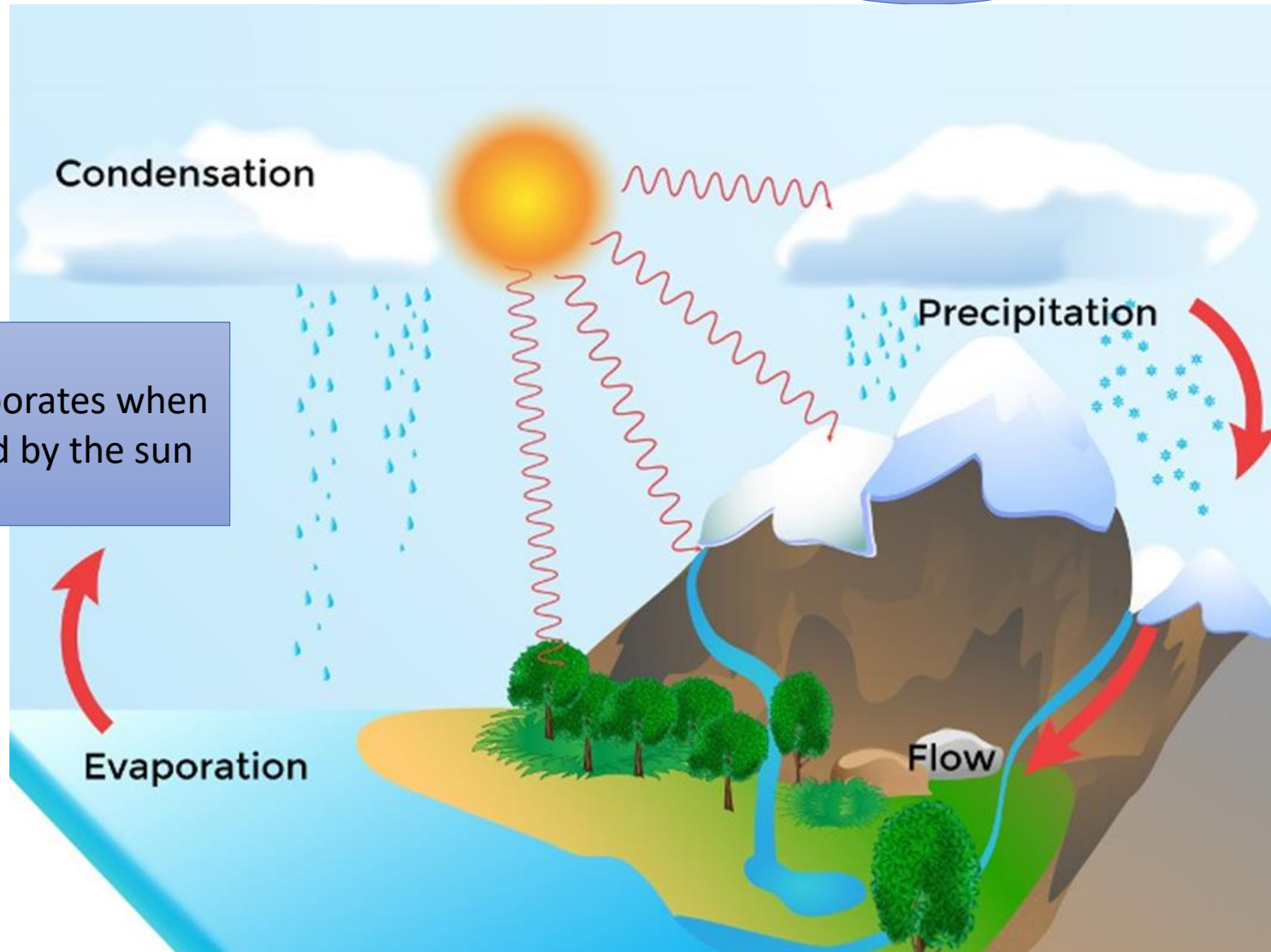
Water

Water is renewable resource because it is always replaced by water cycle so it never runs out.

Water evaporates and come back as precipitation (rain)

Water evaporates when it is heated by the sun

Water come back again in the form precipitation .



A visit to school garden

Can you find the 4 spheres in one place?
Can you tell if they interact or not? How?

Atmosphere

SCHOOL GARDENING

Environment Studying

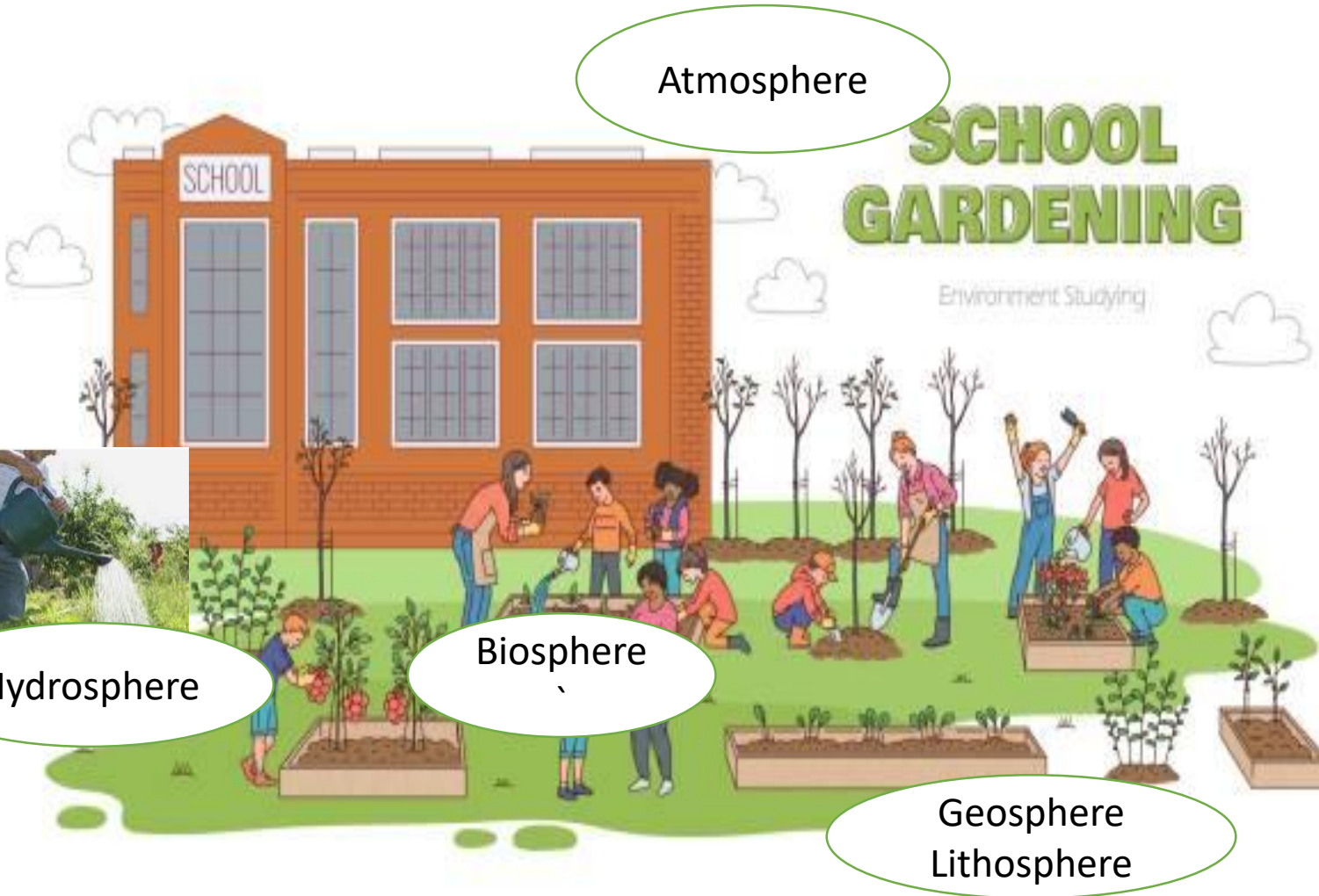
Biosphere (human, plant, and animals)
need hydrosphere(water) to grow and
survive.

Hydrosphere

Biosphere

Geosphere
Lithosphere

Biosphere (human, plant, and animals)
need atmosphere (air) to breathe and
survive.



A visit to school garden

What can you find in each sphere? How?

Atmosphere

Atmosphere has air
I can feel it around me as wind
I breathe it.
The pattern is (gas)

Biosphere has trees, grass, humans, insects.

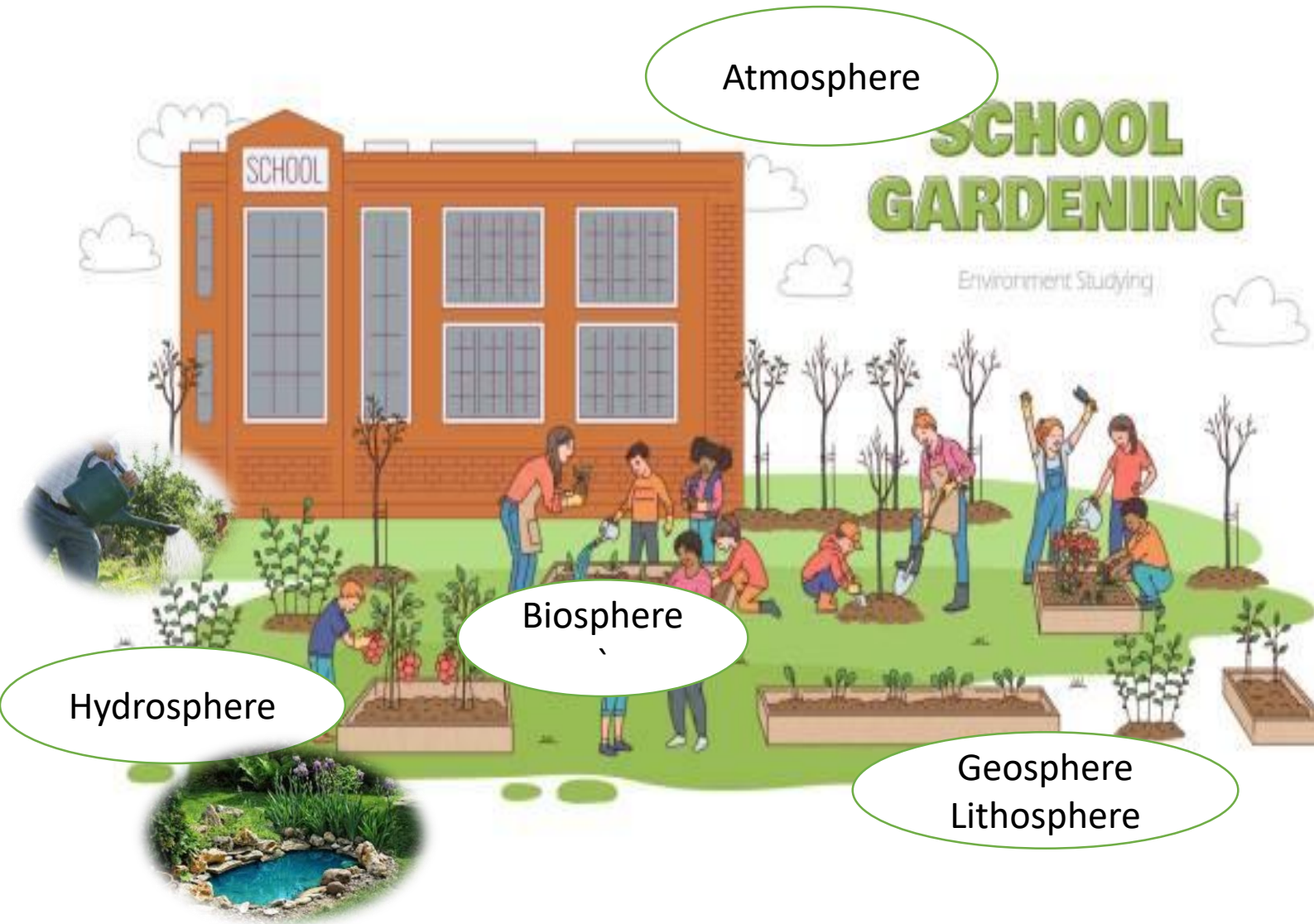
Geosphere (lithosphere) has rocks, soil, dust.
The pattern is (solid)

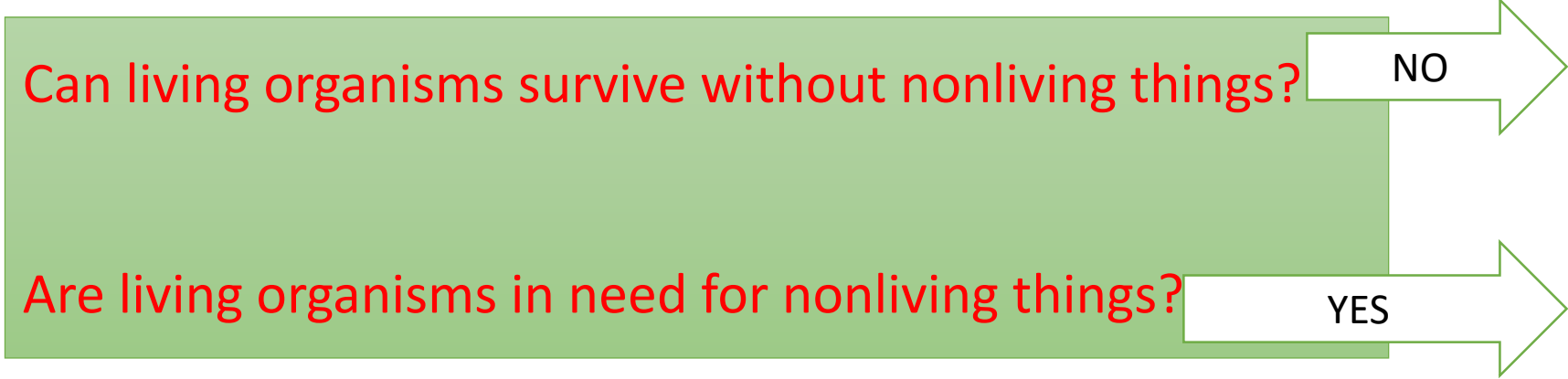
Hydrosphere has water from a pond or lake.
The pattern is (liquid)

Biosphere

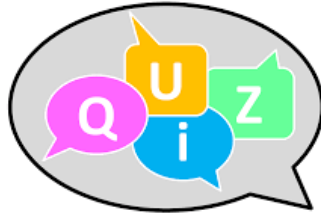
Hydrosphere

Geosphere
Lithosphere





- Living organisms need water and air to survive,
- they need soil to grow plants
Plants need minerals from the soil to grow well.
- Animals use water and soil as a habitat.



Living organisms can survive even without water.

Water and plants are renewable resources.

Animals are not affected by the absence of soil.

Plants may run out by using them.

The hydrosphere and lithosphere is used as a habitat by biosphere.

Water evaporates and rise up and then return in the form of rain.(precipitation)

Scientists sorted out or grouped the living and nonliving things into 4 main **systems**

They used “ sphere” to name each system.

Because the earth shape is spherical (very close to sphere covered with the 4 spheres.



SYSTEMS(SPHERES) OF THE EARTH

GEOSPHERE (LITHOSPHERE)

Contains

Rocks, metals, landforms, soil, and **magma** (molten rocks inside Earth)

HYDROSPHERE

Contains

All water on Earth such as oceans, seas, rivers , ground water, icebergs, ice caps, ice sheets

ATMOSPHERE

Contains

All gases that surround the Earth
Mixtures of gases (air)

BIOSPHERE

Contains

All living organisms such as plants, animals including humans.

The Earth spheres always interact together

Interacting of biosphere and lithosphere



Ants(biosphere) look for their food in the soil(lithosphere)
They take the soil as a habitat and shelter.

Plants depend on the nutrients -absorbed from soil- to grow.

Energy and matter are exchanged (transferred).
from a biosphere to lithosphere and from lithosphere to biosphere.

Interaction between hydrosphere and lithosphere(geosphere)

When water(hydrosphere) interacts with rocks (geosphere) you can observe some phenomena such as



Erosion

Moving the broken down pieces of rocks and soil to another place by moving water.

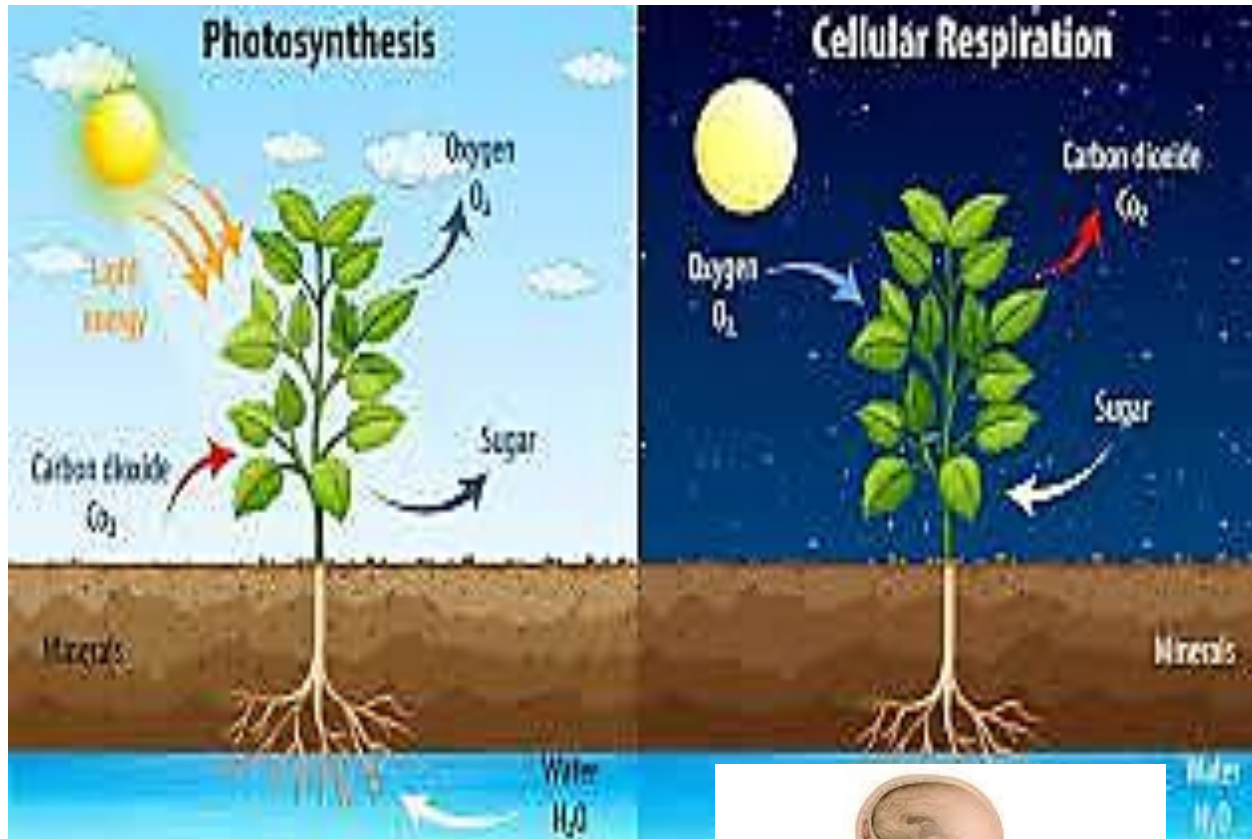


Lakes

When water seeps into (leaks) the cracks of rocks forming lakes.

Energy and matter are exchanged (transferred) from hydrosphere to lithosphere and from lithosphere to hydrosphere.

Interaction between atmosphere and biosphere



During **photosynthesis** process plants (biosphere) need carbon dioxide from the air (atmosphere).
Plants release oxygen in the air.

During **respiration** process living organisms(biosphere) take in oxygen from the air (atmosphere) and release carbon dioxide.

Energy and matter are exchanged (transferred) from biosphere to atmosphere and from atmosphere to biosphere.

Study the following pictures and determine the interacted spheres.



Characteristics (features) of biosphere

1- It contains all living organisms

2- Living organisms are everywhere on Earth.
They live from Antarctica (the coldest area) to hot deserts.

3- large ecosystems (areas) that have their own animals, plants, climate are called **biomes**.

Biome:

a large area characterized by its vegetation, soil, climate, and wildlife

Examples of biomes

Deserts

Grassland

Rainforests

Savannah

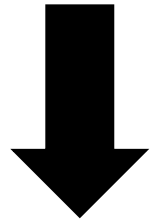
Tundra

Wetlands

Characteristics (features) of hydrosphere:

The Hydrosphere contains all water on Earth in its three states
Solid (ice) - Liquid (liquid water - Gas as water vapor

Water covers more than 70% of Earth

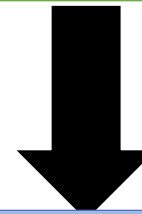


Salt water



Salt water represent about 97 %
of hydrosphere

Salt water found in oceans, seas,
and gulfs



Fresh water

Fresh water represent about 3%
of hydrosphere

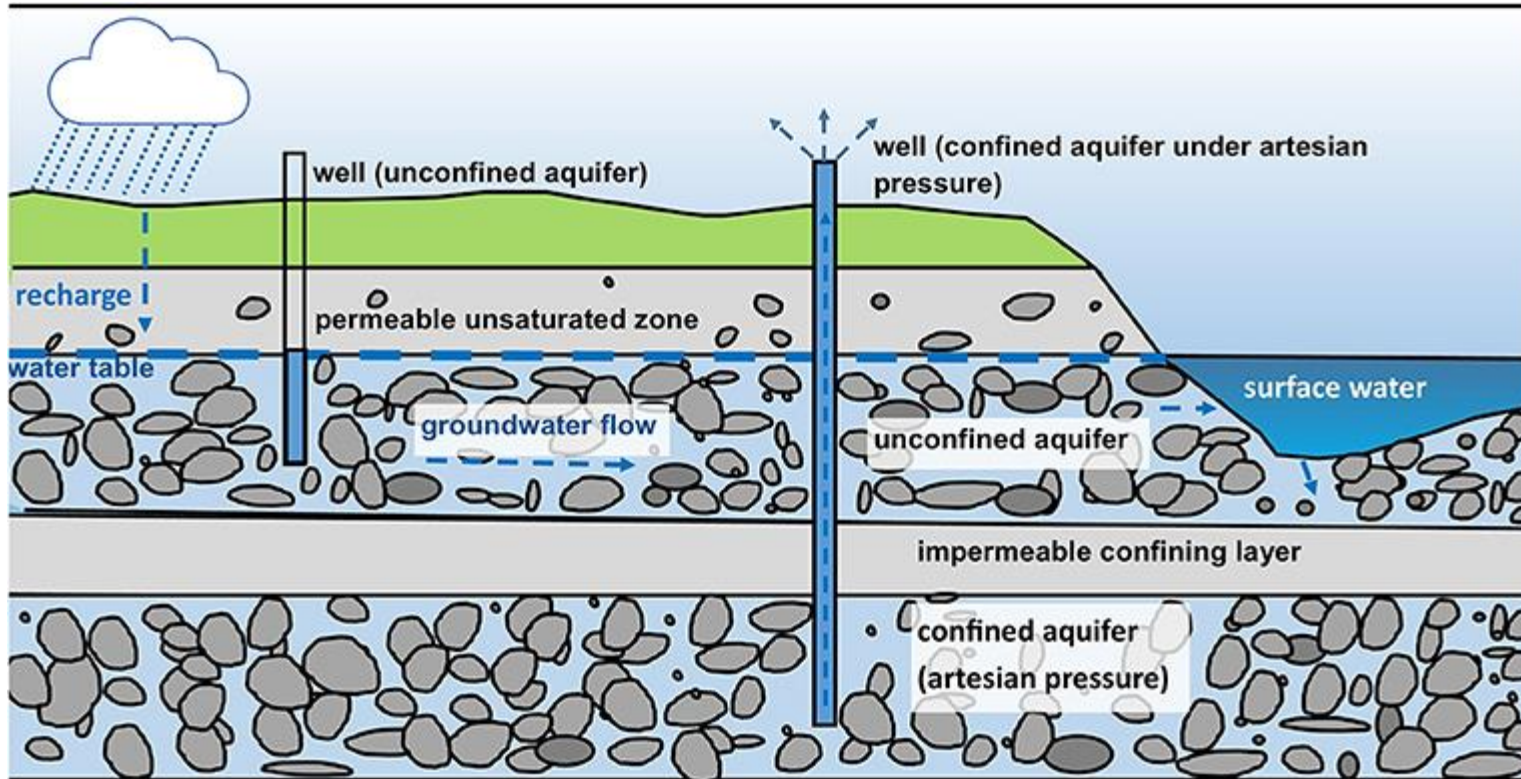
Fresh water exists in
rainwater, rivers, most of
lakes

Most Fresh water is frozen in the form
of icebergs.



Groundwater

Groundwater is the water found underground in the cracks and spaces in soil, sand and rock.



Aquifer

الخزان الجوفي

a body of permeable rock which can contain or transmit groundwater.

We get ground water by

Springs

ينابيع

Wells

آبار



Complete using the words in the box.

Biome – aquifer – groundwater – biosphere- matter – energy.



1- When Earth spheres interact , And
Exchange or transfer.

2- Insects use soil as a habitat that is show interaction between
..... and lithosphere(geosphere).

3- Water that is under the surface of the Earth is called
..... .

4- Is a body of permeable rock which can contain
or transmit groundwater.

5- Is a large ecosystem(area) that has its own
vegetation, climate, soil, and wildlife.

Water and plants are renewable resources! (G.R)

Water can be replaced through water cycle.

Plants can be replaced through plant life cycle.

Put



1- All living organisms belong to lithosphere.

2- Soil and plants belong to the same sphere.

3- Erosion of rocks on the beach is considered
interaction between biosphere and hydrosphere.

4- fresh water represents 97% of water mass on
the Earth.

5- Salt water is found in seas and oceans.

1- A body of water that contains mostly fresh water and some of them contains salt water.

A- Rivers b- Oceans c- Seas d- Lakes.



2- Salt water representsof water on the Earth.

A- 50 % b- 60 % c- 97% d- 79 %

3- We cannot drink water as it has much salt.

A- rivers b- oceans c- ponds d- streams

4- Water covers more than% of Earth.

A- 70 b- 7 c- 90 d- 3

5-..... process shows the interaction between biosphere and atmosphere.

A- fermentation b- photosynthesis c- digestion

6- A farmer waters the plants from a river. How many spheres are interacting in this situation.

A- 1 b- 2 c- 3 d- 4

This picture shows interaction between and

A- biosphere and atmosphere
B- biosphere and hydrosphere
C- hydrosphere and atmosphere
D- biosphere and lithosphere.



When you join a school trip to Luxor where you visit the temples and statues and breathe hot, clean air.

What spheres are interacting in this situation.

A- biosphere, hydrosphere, and geosphere.
B- Hydrosphere, atmosphere, and geosphere.
C- atmosphere, biosphere, and geosphere
D- hydrosphere, and atmosphere only.

Wafaa went on a boat trip in RED, SEA, HURGHADA, while she is looking at the fascinating landscape of the clean, blue water, she saw someone on another boat going scuba diving . Wafaa wondered about the kind of interaction between water, fish, coral reefs, and the diver.

A- hydrosphere and geosphere.
B- geosphere and atmosphere.
C- atmosphere and biosphere.
D- biosphere and hydrosphere.



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