

## Semester (3) Exam Review Worksheet

### Science, Grade 5

#### Topics Covered in the Exam:

- Chapter 1, lessons: 1, 2, 3, 4 and 5. Pages: 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 17, 18, 20, 21, 22, 24, 25, 26, 30, 33
- Study all semester 3 worksheets.
- Study semester (3) exam review worksheet.

#### Practice Questions:

*Students must practice these questions at home and the solution keys would be reviewed in class afterwards.*

Question 1:

Indicate the true statement(s), and correct the false one(s).

- a- Respiration in green plants takes place only during the night.

**False: respiration in green plants takes place all time.**

- b- Photosynthesis masks respiration all time.

**False: during the day, photosynthesis masks respiration.**

- c- In the carbon cycle, carbon dioxide is absorbed by the green plants.

**True**

- d- Compost and fertilizers are rich in water.

**False: compost and fertilizers are rich in mineral salts.**

- e- In symbiosis relationship, different organisms help each other.

**True**

Question 2:

A symbiotic relationship occurs between different organisms and helps each of them meet its basic needs. Lichens are organisms consisting of a partnership between a fungus and a green alga. The lichen body consists of fungal filaments surrounding the green algae. The algae possess the green pigment chlorophyll, enabling it to use sunlight's energy to make its own food. It also provides vitamins to the fungus. The filaments of the fungus provide the alga with some of the water and mineral salts they absorb from the soil. In addition, the fungus protects the algae from drying out and shades it from strong sunlight.

In reference to the text, answer the following questions:

- a- Define "symbiosis".

**A symbiotic relationship occurs between different organisms and helps each of them meet its basic needs.**

- b- What are lichens?

**Lichens are organisms consisting of a partnership between a fungus and a green alga**

- b- Give the name of the green pigment in algae, and indicate its function.

**Chlorophyll is the green pigment. It enables the alga to use sunlight's energy to make its own food.**

- c- What does the fungus provide the algae with?

### Water and mineral salts

d- What does the algae provide the fungus with?

With vitamins and nutrients.

e- By using your acquired knowledge, give the name of another pattern of nutrition in plants.

Parasitic.

Question 3:

The table below summarizes the conditions and the results on experiments done on green plants, to study the importance of mineral salts.

Experiment	conditions	Results after 5 days
1	Green plant + open air + sunlight + water + mineral salts	Normal growth
2	Green plant + open air + sunlight + distilled water	Abnormal growth

a- Indicate the variable condition studied in the above experiments.

Mineral salts.

b- What can you conclude from the above experiment?

We conclude that mineral salts are indispensable for the normal growth of green plants.

c- Using your acquired knowledge, give the four indispensable conditions for the normal growth of green plants.

Sunlight – carbon dioxide- water – mineral salts.

Question 4:

In order to study the importance of carbon dioxide in photosynthesis, we conduct the following experiments. The results are obtained after we treat one green leaf from each plant in boiling water, hot alcohol and then iodine water:

Experiments	Conditions	Results
1	Open air + sunlight + water + mineral salts	Dark blue color
2	Closed jar with lime water + sunlight + water + mineral salts	Brown orange color

a- What is the use of lime water in the second experiment?

To absorb carbon dioxide from the jar.

b- What is the role of each step in the above experiments?

- Boiling water: to kill the plant cells
- Hot alcohol: to dissolve chlorophyll
- Iodine water: to detect the presence of starch

c- What can you conclude from the above experiments?

We conclude that carbon dioxide is indispensable for photosynthesis.

Question 5:

Consider the two reactions below that take place in the green plant:

Reaction "1":  $\text{CO}_2 + \text{H}_2\text{O} \longrightarrow \text{C}_6\text{H}_{12}\text{O}_6 + \text{O}_2$

Reaction "2":  $\text{C}_6\text{H}_{12}\text{O}_6 + \text{O}_2 \longrightarrow \text{CO}_2 + \text{H}_2\text{O} + \text{energy}$

- a- Indicate which reaction corresponds to the respiration process and which reaction correspond to photosynthesis.

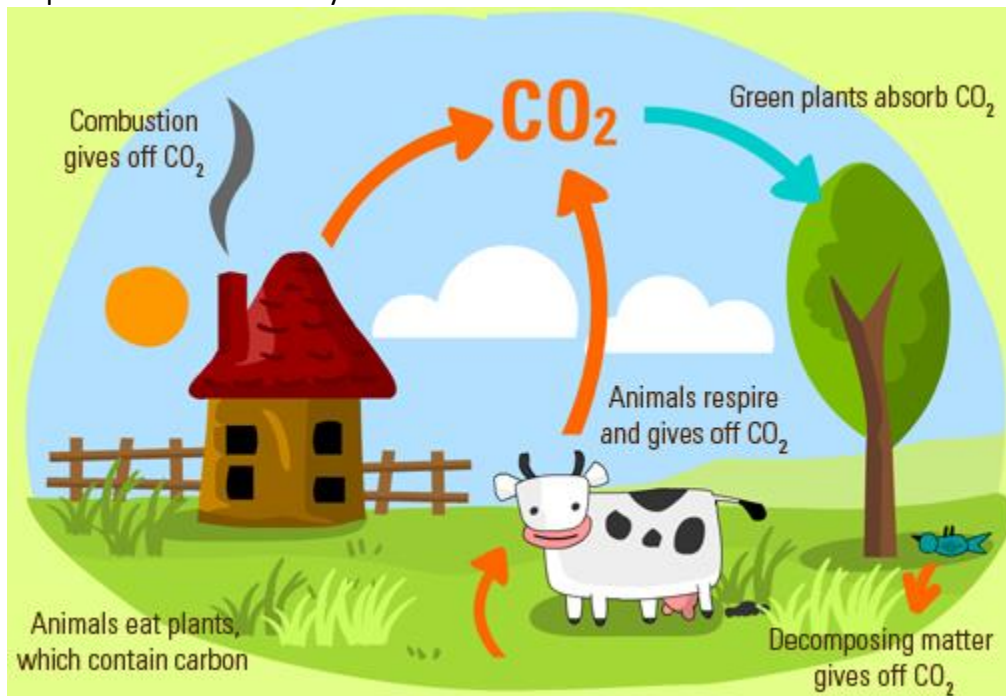
Reaction "1" corresponds to photosynthesis, while reaction "2" corresponds to respiration.

- b- Where do both reactions occur?

In the green leaf

Question 6:

The figure below represents the carbon cycle.



- a- Give three sources of carbon dioxide release to the atmosphere.

Decay of living things after they die – respiration – combustion

- b- How the carbon in the air move to the animals?

The green plant take the carbon dioxide in the air to make sugar. The animals eat the plant which contain this sugar.

- c- Give the name of the process by which the green plant absorbs carbon dioxide.

Photosynthesis.