Grade 7 Respiration in Organisms Worksheets

A. Answer the following questions in short:

1. Why does an athlete breathe faster and deeper than usual after finishing the race?
2. List the similarities and differences between aerobic and anaerobic respiration.
3. Why do we often sneeze when we inhale a lot of dust-laden air?
4. Take three test-tubes. Fill $\frac{3}{4}$ th of each with water. Label them A, B and C. Keep a snail in test-tube A, a water plant in test-tube B and in C, keep snail and plant both. Which test-tube would have the highest concentration of CO_2?
5. Which muscular part of the body present in the chest cavity helps air to be breathed in and out?
6. Which gas present in the air is essential for aerobic respiration? What is the role of oxygen during respiration?
7. Paheli wants to know whether roots which are underground also take in oxygen? If so, how?
8. What are gills?
9. What would happen if a potted plant is over watered?
10. How is inhaled air different from exhaled air?
11. Whenever we feel drowsy or sleepy, we start yawning, us in any way?
12. Why do mountaineers climbing high mountains carry oxygen cylinders with them?

B. Tick (✓) the correct option:

1. In cockroaches, air enters the body through:
(a) lungs
(b) gills
(c) spiracles
(d) skin

2. During heavy exercise, we get cramps in the legs due to the accumulation of:
(a) carbon dioxide
(b) lactic acid
(c) alcohol
(d) water

3. Normal range of breathing rate per minute in an average adult person at rest is:
(a) 9 – 12
(b) 15 – 18
(c) 21 – 24
(d) 30 – 33

4. During exhalation, the ribs:
(a) move outwards
(b) move downwards
(c) move upwards
(d) do not move at all

5. The mountaineers carry oxygen with them because:
(a) at an altitude of more than 5 km there is no air.
(b) the amount of air available to a person is less than that available on the ground.
(c) the temperature of air is higher than that on the ground.
(d) the pressure of air is higher than that on the ground.

C. Match the following:

'A'	'B'
1. Yeast	a. Earthworm
2. Diaphragm	b. Gills
3. Skin	c. Alcohol
4. Leaves	d. Chest cavity
5. Fish	e. Stomata
6. Frog	f. Lungs and skill
	g. Tracheae

D. State 'True' or 'False':
1. During heavy exercise the breathing rate of a person slows down. …….
2. Plants carry out photosynthesis only during the day and respiration only at night. …….
3. Frogs breathe through their skins as well as their lungs. …….
4. The fishes have lungs for respiration. …….
5. The size of the chest cavity increases during inhalation. …….

E. Fill in the blanks:
1. Aerobic means …… .
2. Oxygen passes into the Amoeba through its …… .
3. Human beings take oxygen through …….. .
4. During respiration, energy is released in the form of …….. .
5. Whales have …….. for respiration.
6. Less energy is produced in ……. respiration.

F. Given below is a square of letters in which are hidden different words related to respiration in organisms. These words may be present in any direction—upwards, downwards, or along the diagonals. Find the words for your respiratory system. Clues about those words are given below the square:

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

Clues:

1. The air tubes of insects.
2. Skeletal structures surrounding chest cavity.
3. Muscular floor of chest cavity.
4. Tiny pores on the surface of leaf.
5. Small openings on the sides of the body of an insect.
6. The respiratory organs of human beings.
7. The openings through which we inhale.
8. An aerobic organism.
9. An organism with tracheal system.

G. Observe fish in an aquarium. You will find flap like structures on both sides of their heads. These are flaps which cover the gills. These flaps open and close alternately. On the basis of these observations, explain the process of respiration in the fish.

H. Visit a doctor. Find out about artificial respiration. Ask the doctor:

1. When does a person need artificial respiration?
2. Does the person need to be kept on artificial respiration temporarily or permanently?
3. From where can the person get supply of oxygen for artificial respiration?

I. Complete the table by changes in breathing rate under different conditions:

Name of the classmate	Breathing rate			
	Normal	After a brisk walk for 10 minutes	After running fast 100 m	At rest
Self				

J. Fill the table by effect of breathing on the chest size of some classmates:

Name of the classmate	Size of the chest (cm)		
	During inhalation	During exhalation	Difference in size