Name: _____ Date: _____

Respiration in Organisms

Q1. How do the cockroaches breathe?

Ans. _____

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Q2. Why does an athlete breathe faster and deeper than usual after finishing the race?

Ans. _____

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Q3. Why do we respire?

Ans. _____

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Education with Fun

Respiration in Organisms

Q1. How do the cockroaches breathe?

Ans. A cockroach has small openings on the sides of its body. These openings are called spiracles. They have a network of air tubes called tracheae for gas exchange. Oxygen rich air rushes through spiracles into the tracheal tubes, diffuses into the body tissue, and reaches every cell of the body. Similarly, carbon dioxide from the cells goes into the tracheal tubes and moves out through spiracles.

Q2. Why does an athlete breathe faster and deeper than usual after finishing the race?

Ans. During fast running the demand for energy is high. But the supply of oxygen to produce the energy is limited. Our muscle cells can also respire anaerobically, but only for a short time, when there is a temporary deficiency of oxygen. Thus, an athlete breathes faster and deeper than usual after finishing the race so that more oxygen is supplied to the cells. This speed up the breakdown of food and more energy is released.

Q3. Why do we respire?

Ans. All organisms are made of small microscopic units called cells. A cell is the smallest structural and functional unit of an organism. Each cell of an organism performs certain functions such as nutrition, transport, excretion and reproduction. To perform these functions, the cell needs energy. Even when we are eating, sleeping or reading we require energy. The food has stored energy, which is released during respiration. Therefore, we respire to get energy from food.