

Unit:4

Lesson Name: 4.1 Units of Life

Presentation on: Cell Respiration

Notes from Presentation:

-Metabolism is the combination of many physical and chemical processes in living cells by means of which energy is made.

Cellular Respiration

One metabolic process commonly associated with cells is respiration.

Living things use energy produced through respiration to drive vital processes, such as growth and reproduction.

Cellular respiration Defined

- A chemical process that takes place in living cells
- Food is “burned” to release energy and waste products
  - Food= fats, carbohydrates, and proteins
  - Waste products= carbon dioxide and water

Types of Cellular Respiration

- Aerobic- Occurs in the presence of oxygen

Ex: Living plants and animals

- Anaerobic- Occurs in the absence of oxygen

Ex: Fermentation of plant tissue and components

Respiration is Similar to Combustion.....

When a log is burned in the fireplace carbon dioxide, heat and water are produced.

With Respiration.....

Carbohydrates, such as sugars are “burned in the animal cells.

The result is the release of carbon dioxide ,water and energy.

Factors Affecting the Rate of Respiration

Temperature

The rate of respiration increases as the temperature increases.

Oxygen and Energy

Animals use energy by walking, running, digesting food and so forth.

The more exercises or metabolic functions animals experience, the more cells respire to provide energy for body functions.

Animal Hibernation

- Slows metabolism and body functions down
- This is essentially slowing cell respiration to the minimum level for sustaining life.



List 5 key points that are important to remember from this presentation.

1. Cellular Respiration
2. Types of Cellular Respiration
3. Respiration is Similar to Combustion
4. A chemical process that takes place in living cells is Cellular respiration defined

5. Temperature ,The rate of respiration increases as the temperature increases.

6.

7.

List 3 ideas or concepts that this new information has in common with previous things learned.

1. Animal Hibernation Slows metabolism and body functions down

2. Anaerobic- Occurs in the absence of oxygen

3. Aerobic- Occurs in the presence of oxygen

4.

List questions or ideas that remain unclear about the information presented that should be asked for clarity at the appropriate time.

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