

Biology

4. Bioenergetics

Revisiting Booklet

Name:

Photosynthesis

The word equation:

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The balanced symbol equation:

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Photosynthesis is described as an endothermic reaction. Why?

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.....

Give three factors that affect the rate of photosynthesis:

1.

2.

3.

4.

Draw a graph to show how rate of photosynthesis changes as temperature increases.

Draw a graph to show how rate of photosynthesis changes as light intensity increases.

Why is glucose stored as starch?

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Describe four ways that plants use glucose.

1.

2.

3.

4.

5.

In order for plants to make proteins, they have to absorb something additional from the soil. What is it?

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Respiration

Respiration is described as an exothermic reaction. Why?

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The word equation:

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The balanced symbol equation:

.....

What does respiration take place inside a cell?

What is the energy released by respiration used for?

1.
2.
3.
4.

Name the two types of respiration. How are they different?

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For aerobic respiration, give the:

Word equation

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Symbol equation

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For anaerobic respiration in muscles, give the:

Word equation

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Why is the amount of energy produced in anaerobic respiration much less?

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For anaerobic respiration in plant and yeast cells, give the:

Word equation

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What is the alternative name given to this type of respiration?

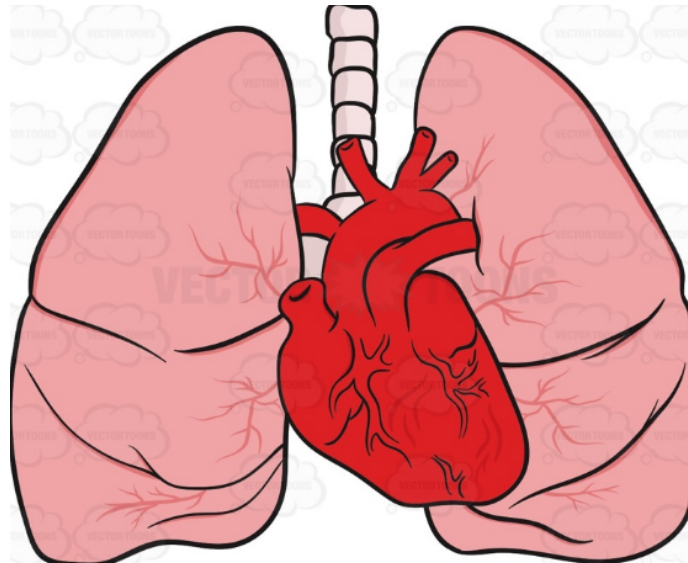
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Why does this type of respiration have economic importance?

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Outline the changes that happen during exercise to the human body.



Why do these changes occur?

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Why is anaerobic respiration important during some intense exercises?

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What is the cause of oxygen debt?

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What is metabolism?

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The energy transferred by respiration in cells used by organisms for the continual enzyme controlled process of metabolism that synthesise or break down carbohydrates, proteins and lipids. Complete the table to summaries metabolism.

Small molecules	Larger, synthesised or broken down molecules
Glucose	
Lipid molecules	
Glucose and nitrate ions	
Urea	