

Text : Metabolism and energy in cells

« Metabolism » is the general term used to describe all the chemical reactions that occur in the cells of living things. The study of metabolic reactions is called « Biochemistry ».

Metabolic reactions can be divided into two groups :

- a- Anabolic reactions
- b- Catabolic reactions

Anabolism includes all chemical changes necessary for growth, defence, and repair of cells. Anabolic reactions require energy which is provided by catabolic reactions. Catabolism describes degradative reactions including digestion, as well as energy-producing reactions.

Energy is produced in cells according to the requirement of the body, by the catabolism of carbohydrates and fats. This chemical energy is required for performing mechanical work, to maintain the tissues of the body and for growth. Heat is a by-product of those reactions. As such, it stimulates the production of sweat which cools the body down.

Adapted from “MEDICINE”, by DAVID V. JAMES

GRAMMAR LESSON

Objective of the lesson : At the end of this lesson my students should be able to use the article “the” where required correctly.

WORKSHEET for the teacher only

WARM UP

DATE

Something about corona virus to get rid of anxiety and agony.

BRAINSTORMING QUESTIONS

1-What is the word used to describe all the chemical reactions that occur in our cells ?

2- what is the science that studies metabolic reactions ?

‘ Ø metabolism’

‘ Ø science ‘

‘ Ø biochemistry ‘

‘ Ø death ‘

But we say ‘ the science which studies microbes’ ‘ the metabolism of food ‘

‘The chemistry of food’

‘ the cells of human beings ‘

‘ the death of the doctor was a terrible news.’

Why ? today, in our lesson , we will see when to use the definite article “the” and also when to omit it .

Ø cigarette is bad for your health.

The Cigarette I smoked yesterday is very toxic.

Give me the uranium.

Ø Uranium is a dangerous substance.

GRAMMAR LESSON

WORKSHEET for students and teacher

ACTIVITY ONE . read the text and find nouns without the definite article “ the ” .

Example : Ø metabolism

ACTIVITY TWO . complete the blanks with the definite article “the ” or Ø (omission)

- 1- can you pass me burette, please ?
- 2-sugar is bad for your health.
- 3-president ALLASSANE .
- 4-Côte D'Ivoire
- 5-football is the most interesting sport .
- 6-dinner is ready.
- 7-tuberculosis is a dangerous disease.
- 8-life expectancy is very high in Japan.
- 9-Wine we drank last week is very good.
- 10-.....man fears death .

ACTIVITY THREE . complete the blanks with the definite article “ the” or Ø (omission)

- 1- Our teacher of chemistry brought a new thermometer in the lab yesterday ;
this morning a student broke thermometer.
- 2- She learnt to play Piano.
- 3- dinner we had yesterday was really excellent.
- 4-men fear death.
- 5- women like housework.
- 6-men fear unemployment.
- 7- The teacher wenthome.
- 8- We go tochurch to pray.
- 9- We go toschool to study.
- 10-The objective of every human being ishappiness.

ACTIVITY FOUR . production

Your penfriend who is a Nigerian has come to visit your school. Explain him the main subjects in your school (microbiology and biochemistry). Build the dialogue and present it. You can insist on the areas of study of your main subjects, tell him the subject you prefer and the reasons why you prefer it.