Class 10

I. Контроль освоения времен Simple (утвердительные, вопросительные, отрицательные предложения).

II. Vocabulary training

Task 1.

Translate into English: поддерживать (сохранять) питание организма, вредная среда, выживание человека, синтезировать белки, кодировать гены, мутация клетки, свойства молекулы, окружать жидкостью, отделять цитозоль, воспроизводить клетку.

Task 2. Answer the questions:

1. What science studies cells?
2. How small are the cells?
3. What are main functions of cells?
4. What medium surrounds the cell?
5. What is the function of the cell membrane?
6. What structures form the cytoplasm?
7. What properties does a typical cell have?
8. Why does a cell synthesize protein molecules?
9. Which proteins do genes encode?
10. Are mutations harmful?

Task 3. Use your dictionaries to complete the chart with the missing forms. Make a sentence with each word (in any of its morphological forms)

Noun	**Adjective/ participle**	**verb**
	cellular	-----
	-------	to maintain
		to reproduce
separation		
	divisive	
	nutritious	------
replication		
	synthetic	
	survivable	
		to mutate

II. Informative reading.

Task 4. Look through the text and find the English equivalents to the words and word combinations: отличить (различить), признак, чувствительность (восприимчивость, способность реагировать), питание, воспроизводство, реагировать на что-то, раздражение, потреблять, получать, вещество (материя), сырьё, встраивать (вмещать), черта, способность, млекопитающее, поддерживать, вымирание, хрупкий.

Signs of life

Biology is the group of sciences that deal with life in all its forms and functions. It is necessary to distinguish between living and non-living organisms. The dividing line between the living and non-living is not a very sharp one.

From the view-point of function we can speak of several signs of life. They are responsiveness, nutrition and reproduction.

Responsiveness. All typical organisms are responsive, that is they react to stimulation by chemical agents, such as food, or by physical agents such as light.

Nutrition. All living things consume food from which they obtain matter for growth and energy for movement. In other words, in the living body food can serve not only as fuel, but also as a raw material for chemical synthesis. All the constructive phases of nutrition by which new substances are synthesized and incorporated into the structure of the living body, are absent in all non-living systems.

Production. The most unique characteristic of living bodies is capacity for reproduction. From the smallest bacterium to the mightiest mammal, each living species maintains a level of reproduction in order to avoid extinction. The processes of reproduction are extremely complex and delicate even in the simple forms of life.

Thus these activities - responsiveness, nutrition and reproduction - are combined in living bodies and can be taken as the main criteria of the living state.

Viruses don't need food but they also contain nucleic acids such as DNA or RNA and must therefore be considered as being on the border between living and non-living.

Task 5. Say whether the following sentences are true or false. Correct the false ones.

1) Biology studies both living organisms and non-living matters.
2) Not all the living organisms can react to chemical or physical stimuli.
3) Food is used by living organisms for synthesis of new substances.
4) The smallest living organisms lack the mechanisms of reproduction.
5) Viruses belong to living organisms.