

ЗАДАНИЕ К УРОКУ

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1. 10 класс
2. Английский язык
3. Фотосинтез (Photosynthesis)
4. Ханин Вячеслав Аркадьевич

Задание 1. What important substances are there in the air we breathe? What role does oxygen play? How can oxygen be produced? Try answering these questions. If it is difficult now, let us return to them at the end of the lesson.

Задание 2. What do green plants need to make food? Read the definition to check.

Photosynthesis [N-UNCOUNT] is the way that green plants make their food using sunlight.

Задание 3. Write down two questions you have about photosynthesis, then read the text. Can you answer your questions?

A

Energy moves along the food chain from one life form to another. Some animals eat plants to get energy. Other animals then eat these animals to obtain the energy they need. Plants, on the other hand, produce their own food using energy from the sun. They do this through a process called 'photosynthesis'.

B

Photosynthesis uses energy from the sun to change carbon dioxide (CO₂) and water (H₂O) into carbohydrates. Carbohydrates are chemicals that contain hydrogen, carbon and oxygen and they are the plant's food. To start the process, the plant absorbs carbon dioxide through tiny holes in its leaves and sucks up water from the soil through its roots. A green substance in the plant's leaves called chlorophyll absorbs energy from the sun. The plant now has all it needs for photosynthesis to begin.

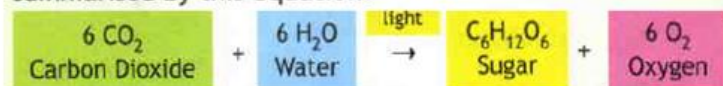
C

There are two stages to the photosynthesis process. In the first stage, called the light reaction, light energy from the

sun is converted into chemical energy. This energy is stored in a chemical called ATP (adenosine triphosphate). The second stage of the process is the dark reaction. In this reaction, the plant **converts** the carbon dioxide and water into carbohydrates. Carbohydrates provide the plant with the energy it needs in order to grow.

D

The chemical reaction involved in photosynthesis can be summarised by this equation:



E

The equation shows how important photosynthesis is for life. As well as providing food for the plant from the sun's energy, the equation shows that the reaction also produces the oxygen that animals need to breathe. Without photosynthesis, our planet could not support life as we know it.

Задание 4. Match the paragraphs to the headings below. Listen and check.

- 1 NOW FOR THE SCIENCE BIT!
- 2 WHAT IS PHOTOSYNTHESIS?
- 3 FOOD FROM THE SUN
- 4 A LIFE-GIVING PROCESS
- 5 THE LIGHT AND DARK REACTIONS

Задание 5. Explain the words in bold in the text.

Задание 6. Use the words in the box to complete the following text.

light energy / water / carbon dioxide / chlorophyll

Photosynthesis is the production of carbohydrates from 1) and 2) using 3) from the sun and 4) which exists in the cells of green plants.

Задание 7. Make notes under the headings from the first text about photosynthesis. Use them to explain how photosynthesis works.

A. FOOD FROM THE SUN:

B. WHAT IS PHOTOSYNTHESIS:

C. THE LIGHT AND DARK REACTIONS:

D. NOW FOR THE SCIENCE BIT:

E. A LIFE-GIVING PROCESS:

Задание 8. Match the words with their translations.

equation	преобразовывать
obtain	пищевая цепь
carbohydrate	углекислый газ
carbon dioxide	водород
store	углевод
root	добывать, получать
food chain	уравнение
hydrogen	корень
convert	хранить, запасать
absorb	поглощать