

Photosynthesis Study Guide

Answer the following questions. (from GVL)

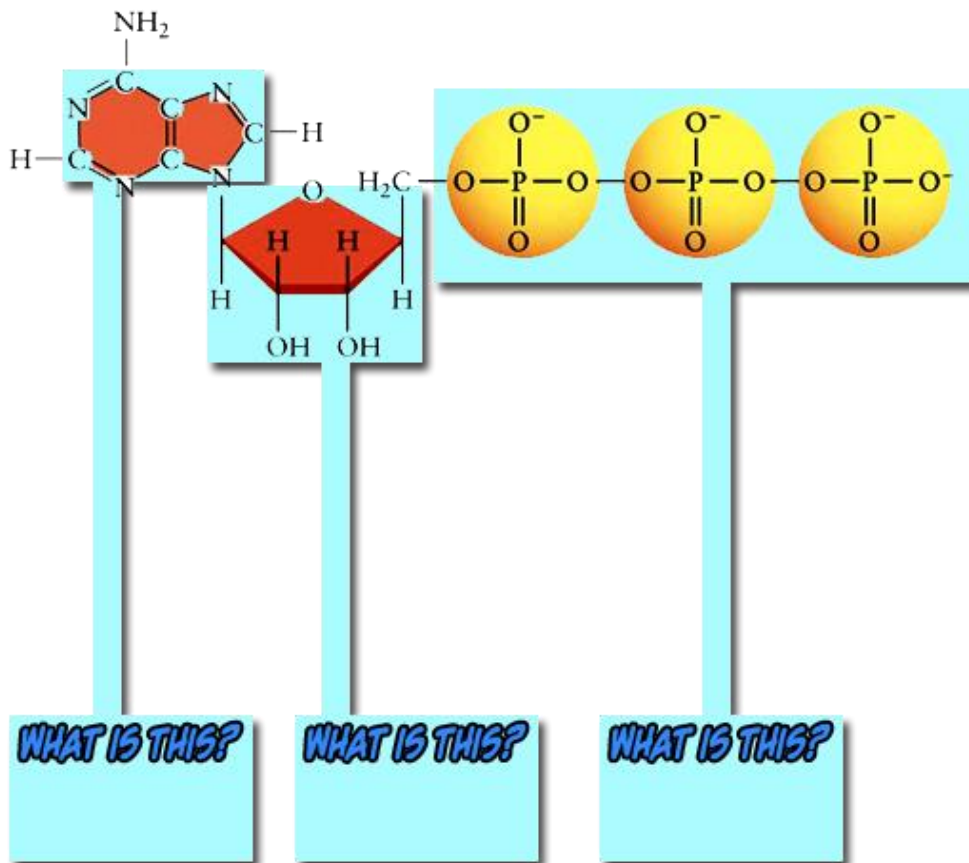
Autotrophs and Heterotrophs

- Where does the energy of food originally come from?
- Complete the table of types of organisms.

Type	Description	Examples
	Organisms that make their own food	
	Organisms that obtain energy from the food they eat	

Chemical Energy and ATP

- What is one of the principal chemical compounds that living things use to store energy?
- How is ATP different from ADP?
- Label each part of the ATP molecule illustrated below.



6. When a cell has energy available, how can it store small amounts of that energy?

7. When is the energy stored in ATP released?

ATP and Glucose

8. Circle the letter of molecules used to regenerate the energy in ATP.

a. ADP b. phosphates c. carbohydrates d. organelles

The Photosynthesis Equation

9. Write the overall equation for photosynthesis using words.

10. Write the overall equation for photosynthesis using chemical formulas.

11. Photosynthesis uses the energy of sunlight to convert water and carbon dioxide into oxygen and high-energy ____.

Light and Pigments

12 What does photosynthesis require in addition to water and carbon dioxide?

13. What is the principal pigment of plants?

Inside a Chloroplast

14. Chloroplasts contain saclike photosynthetic membranes called ____.

15. What is a granum?

16. The region outside the thylakoid membranes in the chloroplasts is called the ____.

17 What are the two stages of photosynthesis called?

a.

b.

Factors Affecting Photosynthesis

18. What are three factors that affect the rate at which photosynthesis occurs?

a.

b.

c.

19. Is the following sentence true or false? Increasing the intensity of light decreases the rate of photosynthesis.