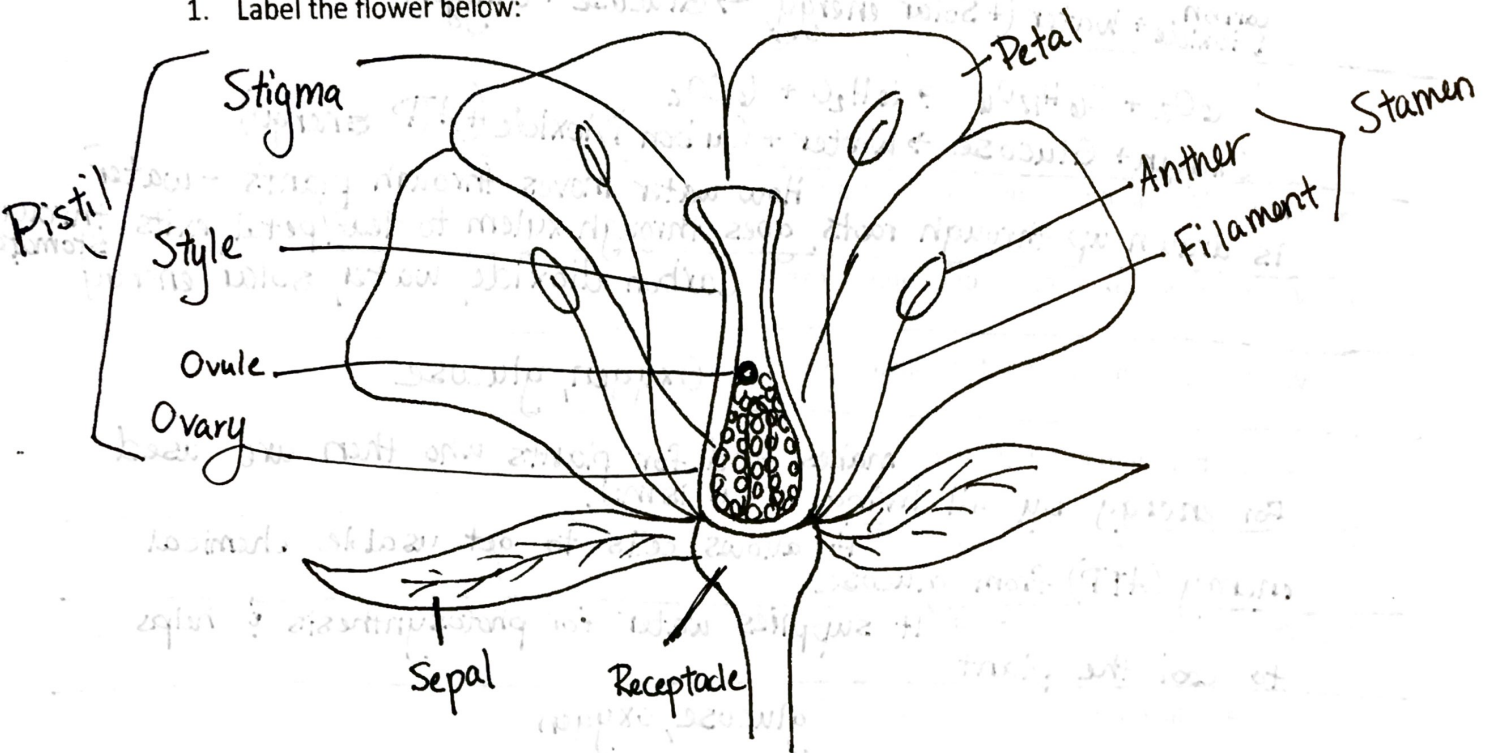


Plant Parts & Processes Study Guide

Name: KEY Core: _____ Date: _____

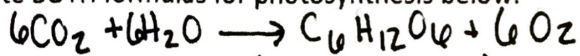
1. Label the flower below:



2. Fill in the chart below:

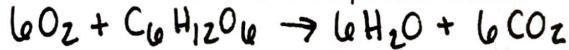
Plant Part	Plant Function
Pistil	Female reproductive part of the plant
Stigma	Sticky part of the pistil; catches pollen - female
Style	Transfers pollen from Stigma to Ovary - female
Ovary	Female part, holds ovules (Fertilization here)
Ovule	The female sex cell
Anther	produces pollen, male part
Filament	supports anther, male part
Stamen	The male reproductive part of a flower
Petal	brightly colored part - attracts pollinators
Sepal	leaves that protect flower bud
Receptacle	This part holds everything together
Xylem	This part transfers water in the stem
Phloem	This part transfers glucose/nutrients in stem
Chloroplast	Cell organelle where photosynthesis occurs
Stomata	Pore in leaves, allows CO ₂ , O ₂ , H ₂ O to enter & exit leaf
Mitochondria	Cellular Respiration occurs in this organelle
Guard Cells	Cells surrounding stomata responsible for opening & closing it

3. Write BOTH formulas for photosynthesis below:



Carbon Dioxide + Water (+ Solar energy) → Glucose + Oxygen

4. Write BOTH formulas for cellular respiration below:



Oxygen + Glucose → Water + Carbon Dioxide (+ ATP Energy)

5. What is transpiration? How does it occur? How water moves through plants - water is drawn up through roots, goes through xylem to leaf/petal, exits through stomata

6. What are the "ingredients" for photosynthesis? Carbon dioxide, water, solar energy

7. What are the "ingredients" for cellular respiration? Oxygen, glucose

8. Why is photosynthesis important? makes food for plants who then are used for energy by all living organisms!

9. Why is cellular respiration important? It allows cells to get usable chemical energy (ATP) from glucose

10. Why is transpiration important? It supplies water for photosynthesis & helps to cool the plant

11. What are the products of photosynthesis? glucose, oxygen

12. What are the products of cellular respiration? water, carbon dioxide, energy (ATP)

13. What are the three things plants can use to slow down the rate of transpiration?

wax cuticle, stomata, boundary

14. What are the four environmental conditions that change the rate of transpiration?

humidity, light, temperature, and wind

15. What is pollination? Who are the pollinators? (Give at least 3 examples.)

the process of transferring pollen from anther to stigma bees, butterflies, wind

16. What is fertilization? Where does it occur? when the male sex cell (pollen) meets the female sex cell (ovule) to create a seed - in the ovary

17. What would happen if plants could not access sunlight? Explain how this would impact a food chain.

1. They could not complete photosynthesis

2. Without food, they would "starve" and die

3. Animals who eat plants (herbivores) would quickly run out of food & also die

4. All living organisms that rely on herbivores as a food source (omnivores & carnivores) would also go extinct.

Moral of the story...

PLANTS ARE IMPORTANT! ☺