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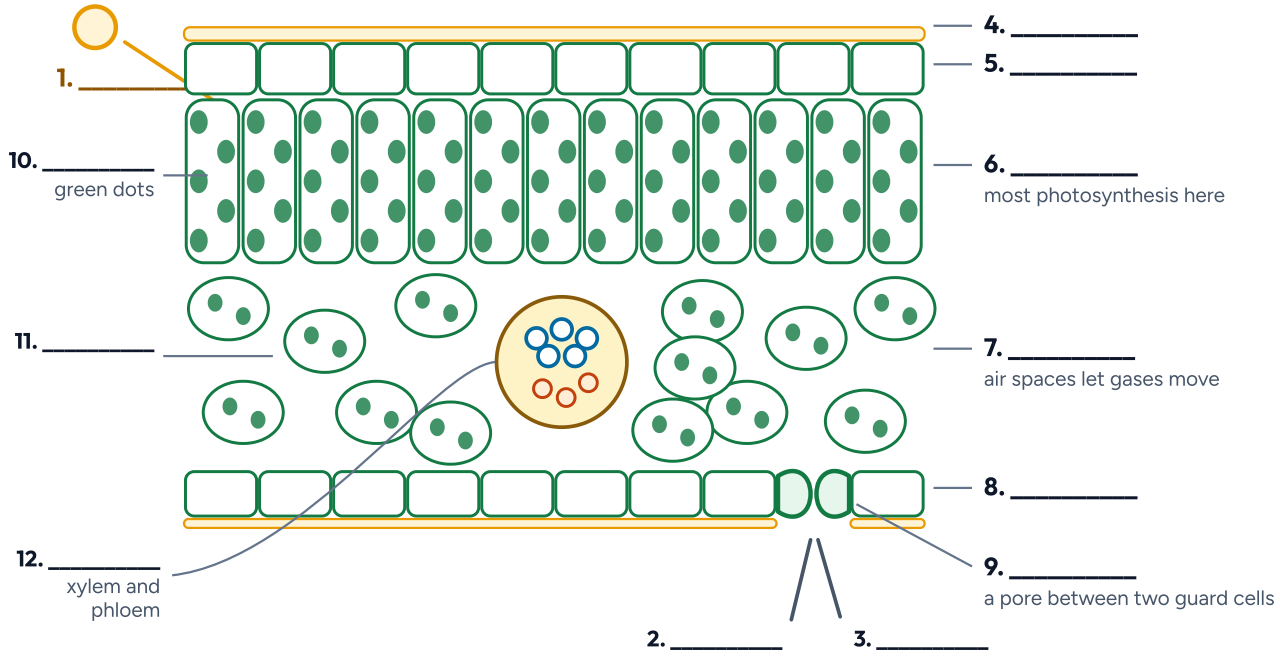
Photosynthesis worksheet

Name _____ Class _____ Date _____

Part A: Label the diagram

This is a cross-section of a leaf. Write the name of each numbered part on the diagram. Use the word bank.

Air space · **Chloroplasts** · **CO_2 in** · **Light** · **Lower epidermis** · **O_2 and water vapour out** · **Palisade mesophyll** · **Spongy mesophyll** · **Stoma** · **Upper epidermis** · **Vein** · **Waxy cuticle**



Part B: Fill in the blanks

carbon dioxide · **chlorophyll** · **chloroplasts** · **glucose** · **light** · **oxygen** · **stomata** · **stroma** · **thylakoid** · **water**

1. Photosynthesis takes place in organelles called _____.

2. The green pigment _____ absorbs light energy.

3. Plants take in _____ from the air for photosynthesis.

4. The gas given off as a waste product of photosynthesis is _____.

5. The sugar made in photosynthesis is called _____.

6. Gases move in and out of a leaf through tiny pores called _____.

7. The light-dependent reactions happen on the _____ membranes.

8. The Calvin cycle happens in the _____, the fluid inside the chloroplast.

Part C: Complete the equations

1. Complete the word equation: carbon dioxide + _____ → _____ + oxygen

2. Balance the symbol equation: _____ CO_2 + _____ H_2O → $C_6H_{12}O_6$ + _____ O_2

Part D: Answer the questions

1. Why are most chloroplasts found in the palisade mesophyll?

2. Explain why stomata often close on hot, dry days.

3. Name the two stages of photosynthesis and say where in the chloroplast each one happens.

4. Where does the oxygen released by photosynthesis come from?

5. Give two ways a plant uses the glucose it makes.

6. A plant is moved from bright light into dim light. What happens to its rate of photosynthesis, and why?

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