Name Key

The Simple Story of Photosynthesis and Food

1. What percent of your food is probably carbohydrates?
   60%.
2. What atoms/elements are carbohydrates composed of?
   carbon, hydrogen, and oxygen
3. What plant feature allows plants to breath in carbon dioxide molecules?
   stomata
4. What atoms do plants get from water?
   oxygen & hydrogen
5. Why are chloroplasts green?
   Because of a light absorbing pigment called chlorophyll
6. How many chloroplasts does 1 cell contain?
   20-100
7. Where do the high energy rays come from that help the plant split water molecules? the sun
8. What do we call cellulose?
   Fiber
9. What do plants use cellulose for?
   to keep themselves strong
10. What are some vegetables that contain cellulose?
    lettuce, broccoli, celery
11. Which carbohydrate stores energy?
    starch
12. Which foods contains starch?
    potatoes, corn, rice
13. What do we break the carbohydrates back in to?
    glucose
14. What do we turn glucose in to?
    pure energy molecules called ATP (adenosine triphosphate)
15. What powers ALL work in ALL of our cells?
    ATP
16. Diagram the process in the video from the beginning (carbon dioxide we breathe out) to the end (ATP is used). Use the back of your paper. You may work with a partner on this. *This will vary*

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Content Practice A

LESSON 1

Energy Processing in Plants p. 347

Directions: *Complete the flowchart by writing the correct term from the word bank on each line.*

carbon dioxide	**energy**	**hydrogen**	**molecules**
oxygen	**plant chlorophyll**	**sugar molecules**	

Photosynthesis

Light energy is absorbed by **(1)** plant chlorophyll

Chlorophyll transfers **(2)** energy to other plant molecules.

Water **(3)** Molecules split.

(4) Oxygen is released into the atmosphere.

(5) Carbon dioxide splits into carbon and oxygen atoms.

These atoms combine with **(6)** hydrogen atoms to form sugar molecules.

(7) Sugar Molecules act as an energy source.

Directions: *Answer each question on the lines provided.* * Use what you know!

8. What would happen if a plant never received any light energy?

Photosynthesis could not happen...

9. How do animals depend on photosynthesis?

Animals breathe oxygen released by plants & get energy through eating the plants (sugar → glucose)

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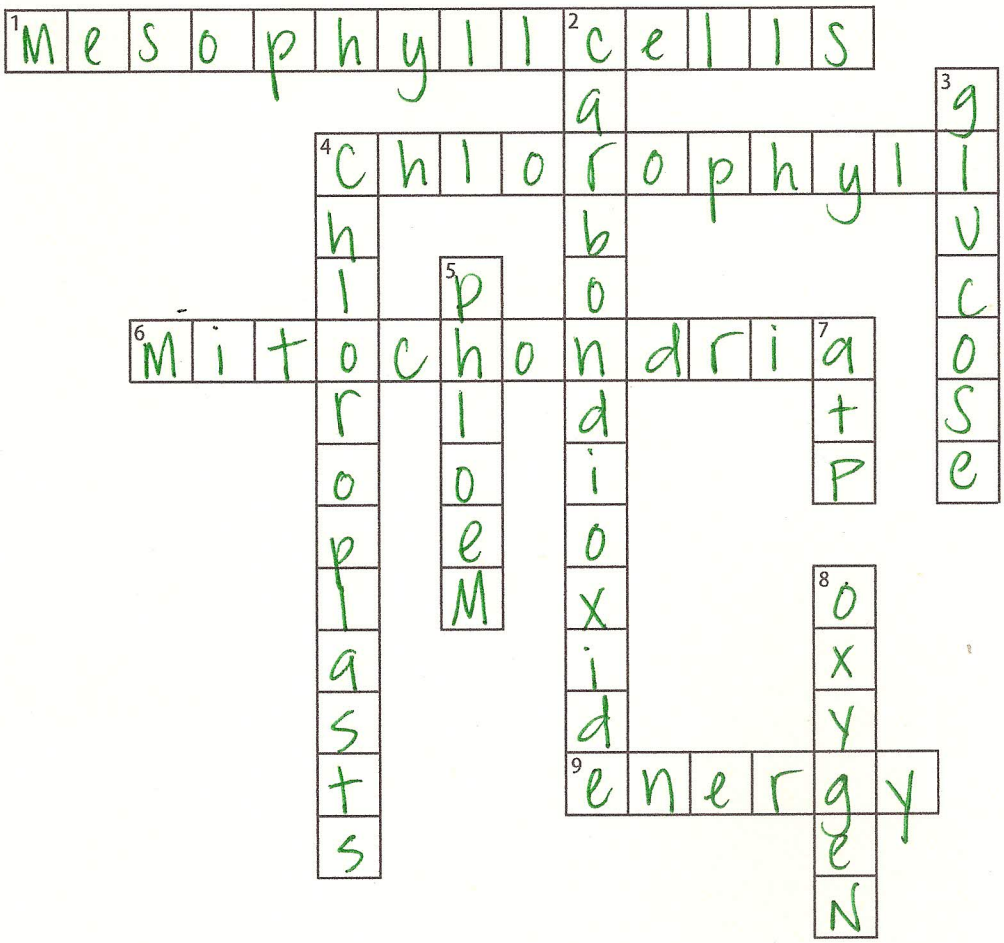
Content Practice B LESSON 1

Energy Processing in Plants p. 345-349 *read the section, including diagrams to solve*

ATP	carbon dioxide	chlorophyll	chloroplasts	energy
glucose	mesophyll cells	mitochondria	oxygen	phloem



Clues

Across

1. type of cell that contains chloroplasts
4. plant pigment necessary for photosynthesis
6. site of cellular respiration
9. usable power

Down

2. gas needed for photosynthesis
3. sugar molecule created by photosynthesis
4. where light energy is captured
5. vascular tissue that carries food to the plant
7. usable form of energy
8. gas released during photosynthesis