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| Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

Plant Process

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|  |  |  | 1  P |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | H |  |  |  |  |  |  | 2  P |  |  |  |  |  |  |  |  |  |
| 3  O | S | M | O | S | I | S |  |  | 4  R | E | S | P | I | R | A | T | I | O | N |
|  |  |  | T |  |  |  | 5  C |  |  | R |  |  |  |  |  |  |  |  |  |
|  |  |  | O |  |  |  | H |  |  | M |  |  | 6  A |  |  | 7  C |  |  |  |
|  |  |  | S |  |  |  | L |  |  | E |  |  | B |  |  | H |  |  |  |
|  | 8  S |  | Y |  | 9  R | O | O | T | H | A | I | R | S |  |  | L |  |  |  |
|  | T |  | N |  |  |  | R |  |  | B |  |  | O |  |  | O |  |  |  |
| 10  C | O | R | T | E | X |  | O |  |  | L |  |  | R |  |  | R |  |  |  |
|  | M |  | H |  |  |  | P |  |  | E |  |  | P |  |  | O |  |  |  |
|  | A |  | E |  | 11  P | H | L | O | E | M |  |  | T |  |  | P |  | 12  X |  |
|  |  |  | S |  |  |  | A |  |  | E |  |  | I |  |  | H |  | Y |  |
|  |  |  | I |  |  |  | S |  |  | 13  M | E | S | O | P | H | Y | L | L |  |
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|  |  | 14  T | R | A | N | S | P | I | R | A | T | I | O | N |  |  |  |  |  |
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|  |  |  |  |  |  | 15  E | P | I | D | E | R | M | I | S |  |  |  |  |  |
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| **Across**  **3.**  movement of a solvent through a semipermeable membrane into a solution of higher solute concentration that tends to equalize the concentrations of solute on the two sides of the membrane  **4.** a process in living organisms involving the production of energy  **9.** : each of a large number of elongated microscopic outgrowths from the outer layer of cells in a root, absorbing moisture and nutrients from the soil.  **10.** an outer layer of tissue immediately below the epidermis of a stem or root  **11.** the vascular tissue in plants that conducts sugars and other metabolic products downward from the leaves  **13.** the inner tissue (parenchyma) of a leaf, containing many chloroplasts  **14.** the exhalation of water vapor through the stomata  **15.** the outer layer of tissue in a plant, except where it is replaced by periderm. | **Down**  **1.** the process by which green plants and some other organisms use sunlight to synthesize foods from carbon dioxide and water  **2.** A membrane that permits passage of water and certain substances in solution  **5.** a plastid that contains chlorophyll and in which photosynthesis takes place.  **6.** The process of absorbing or assimilating substances into cells or across the tissues and organs through diffusion or osmosis  **7.** a green pigment, present in all green plants and in cyanobacteria, responsible for the absorption of light to provide energy for photosynthesis  **8.** A tiny pore in a plant leaf surrounded by a pair of guard cells that regulate its opening and closure, and serves as the site for gas exchange.  **12.** the vascular tissue in plants that conducts water and dissolved nutrients upward from the root and also helps to form the woody element in the stem. |

   photosynthesis       respiration       transpiration       absorption       stoma       mesophyll       chlorophyll       chloroplast       phloem       root hairs       permeable membrane       epidermis       cortex       xylem       osmosis