Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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 **BOTANY INTRODUCTION**

**Plants are essential** to our existence! Plants **bring energy** into themselves through the process of **photosynthesis**. Also, they bring in carbon dioxide and **release oxygen** (and a little carbon dioxide). **Phototropism** is when plants bend themselves to grow towards the light because they need the light to photosynthesize.

There are **six main reasons** that plants are important. Everything we eat comes directly or indirectly from plants, so plants are important for *food*. *Oxygen* is brought to us by plants and is a byproduct of photosynthesis. Plants regulate the water cycle because they help distribute and purify the *water* on this planet, as well as help to move water through the soil to the atmosphere is a process called transpiration. Plants make up the backbone of all *habitats*. Species such as fish and wildlife also depend on plants for food and shelter. Plants store carbon and have helped to keep much of the carbon dioxide produced from the burning of fossil fuels out of our atmosphere, so they help keep our *climate* regulated. And finally, did you know that one-quarter of all prescription drugs come directly from or are derivatives of plants? Four out of five people in the world today rely on plants for primary health care because our plants provide us with *medicine*, much of which has not even been discovered yet!

We eat **six main parts** of the plant in our daily diet. Those parts are the seeds, roots, stems (also called shoots), leaves, flowers, and the fruit. The seeds, of course, are the new or ‘baby’ part of the plant. The roots anchor the plant into the ground, take up water through capillary action, and bring nutrients to the plant as well as store carbohydrates. The stems hold the plant upright and the leaves photosynthesize, bringing energy to the plant. The flower of the plant attracts the pollinators such as bees, dragonflies, and other insects. When the plant has been pollinated, the flower petals no longer need to attract bees, so the petals fall off, thus allowing all the energy of the plant to go into growing the fruit. Inside the fruit are the seeds, which will eventually drop to the ground, and the process will begin again! Study the diagram of the plant cycle of a type of mustard plant (*Brassica* species).

We use many parts of the plant in our diet! See if you can put the following plants into the correct categories!

 **SEED ROOT STEM LEAF FLOWER FRUIT**

LETTUCE ASPARAGUS CARROT RHUBARB STRAWBERRY

PEANUT

**WORD GARDEN**

CHERRY POTATO

PEAS RADISH

PARSLEY BEETS

BANANA TURNIP

SPINACH WHEAT

BASIL CORN

CABBAGE APPLE BROCCOLI CAULIFLOWER RICE

CELERY