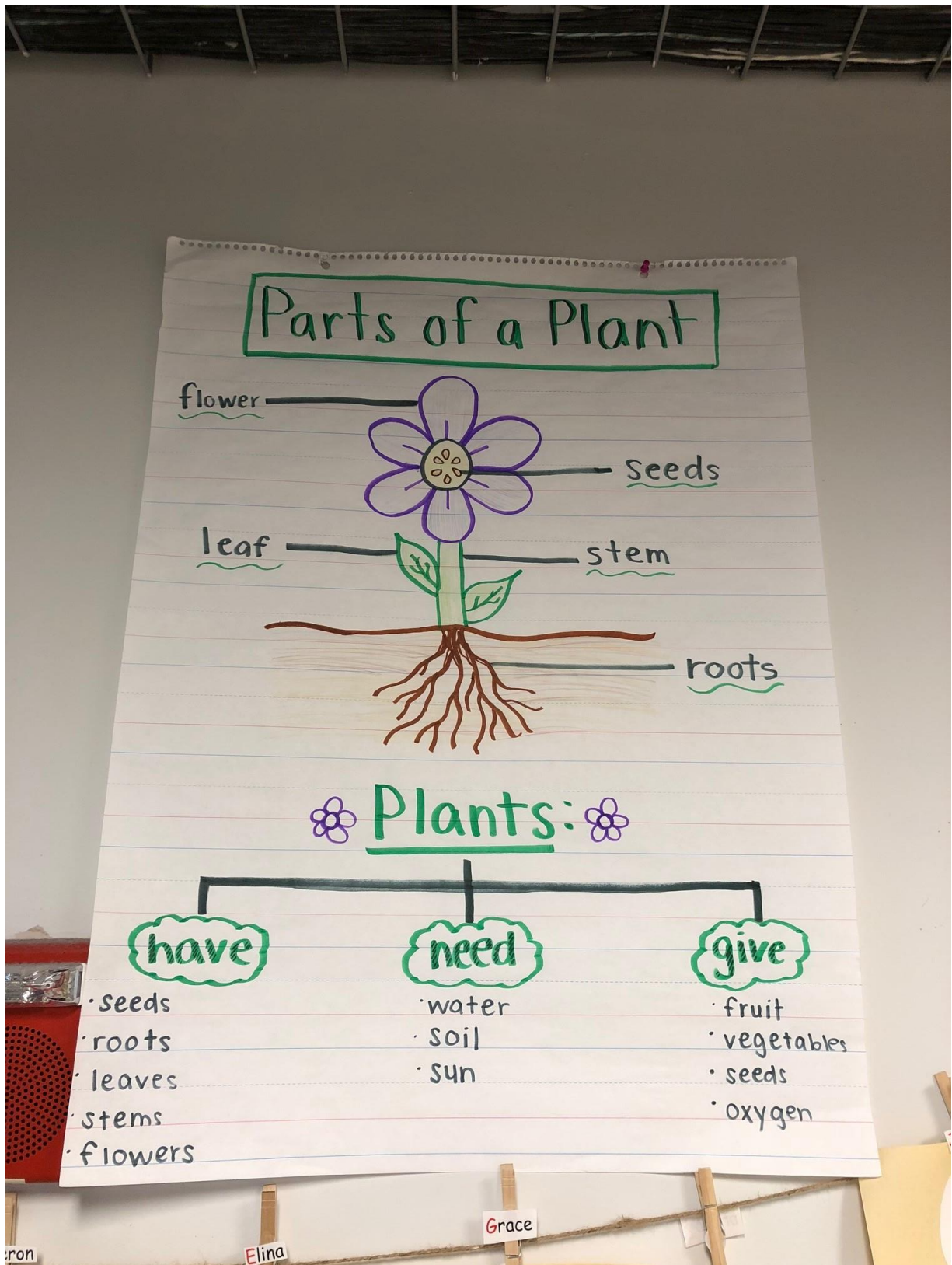
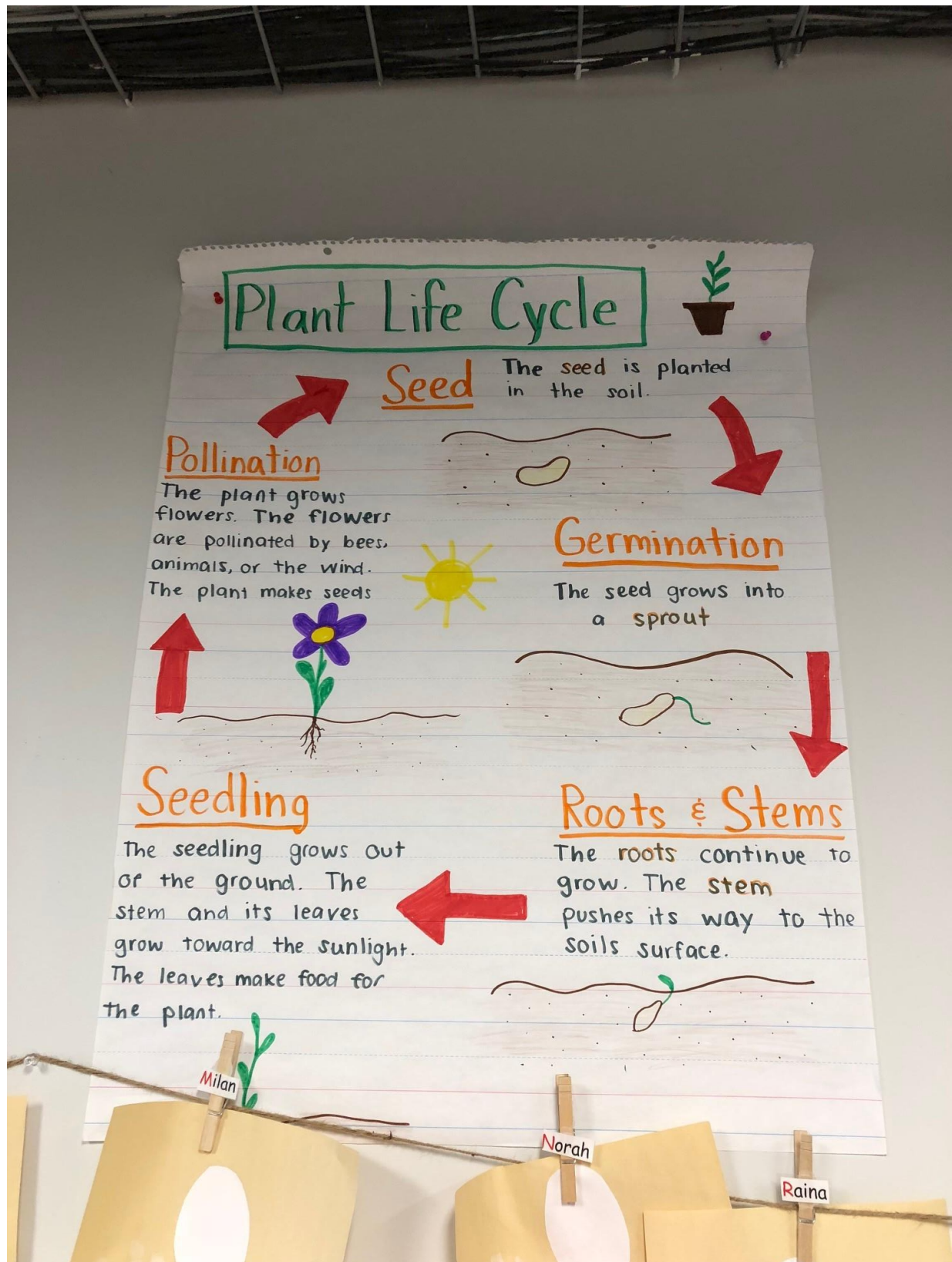


# Plant Diagram, Pre-K2 (4-year-olds)

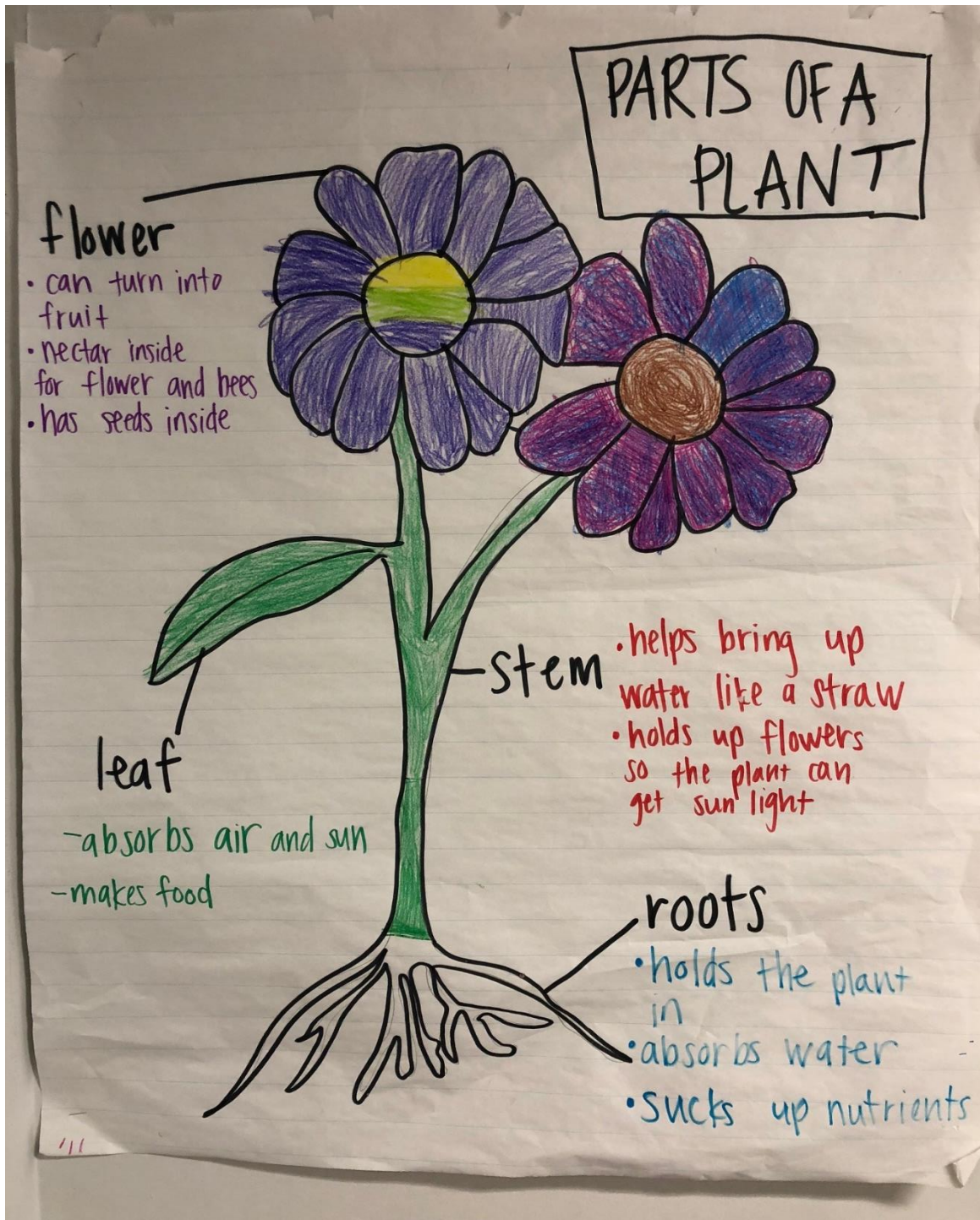


# Plant Life Cycle, PreK-2 (4-year-olds)

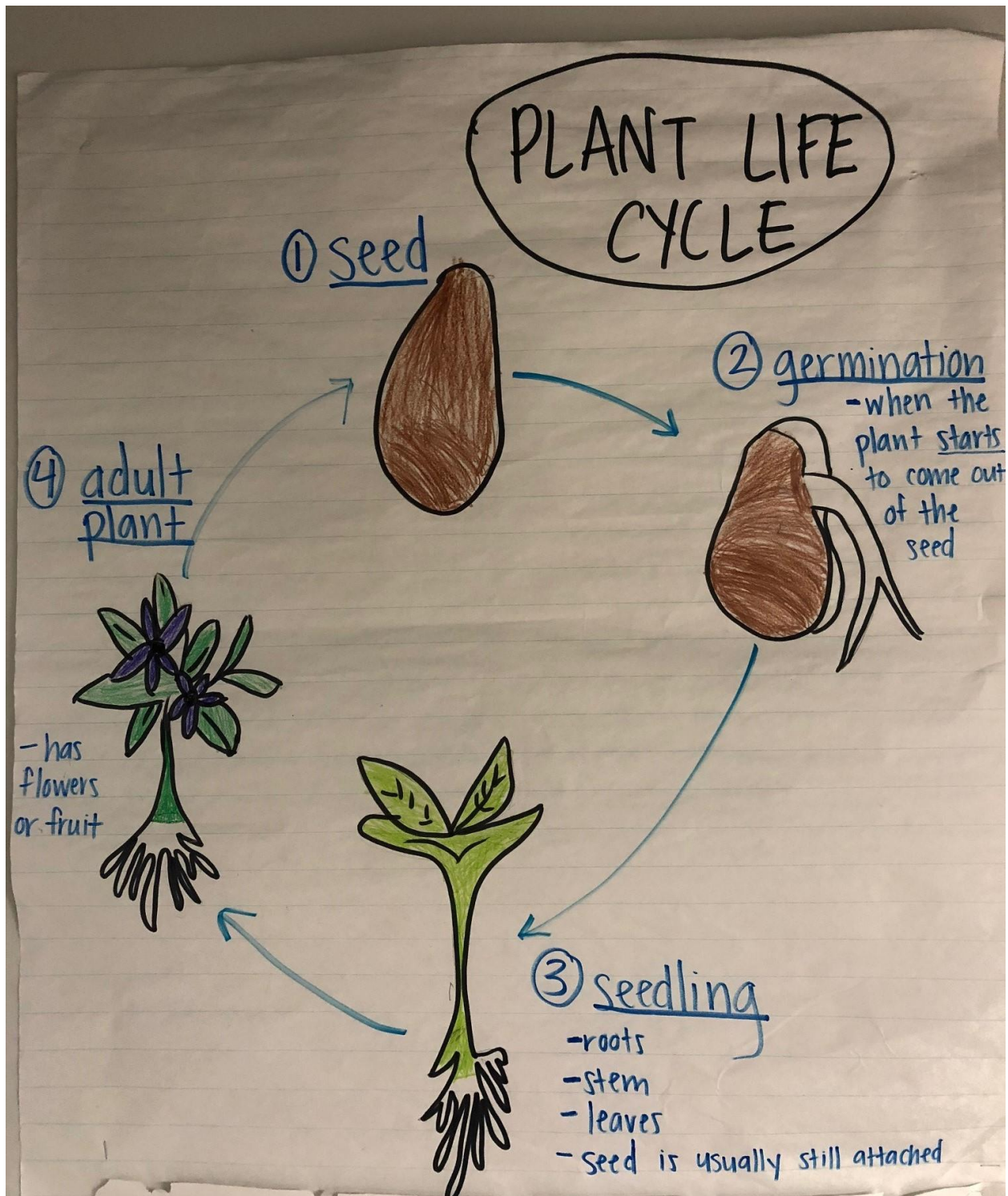




# Plant Diagram, Grade I

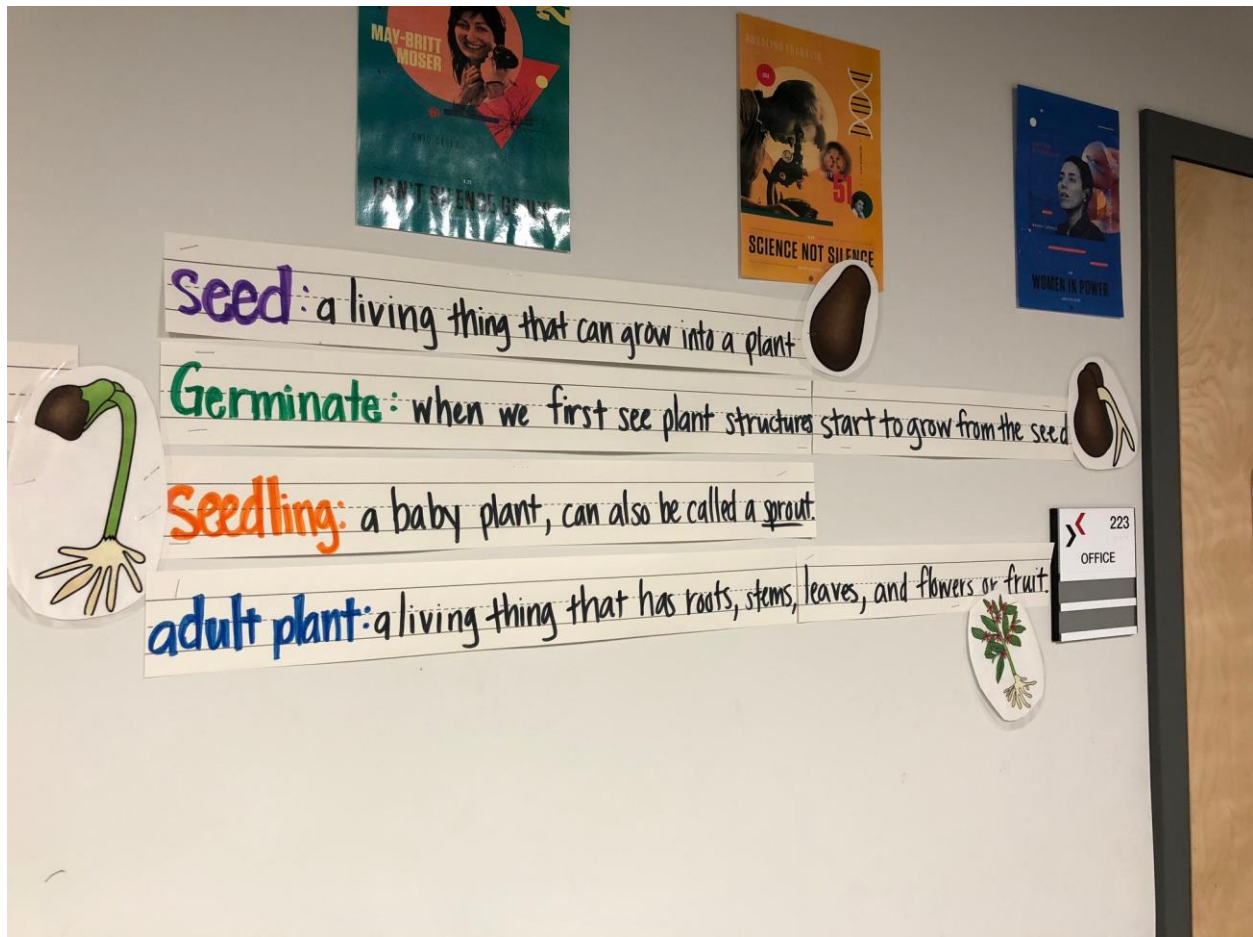


# Plant Life Cycle, Grade I

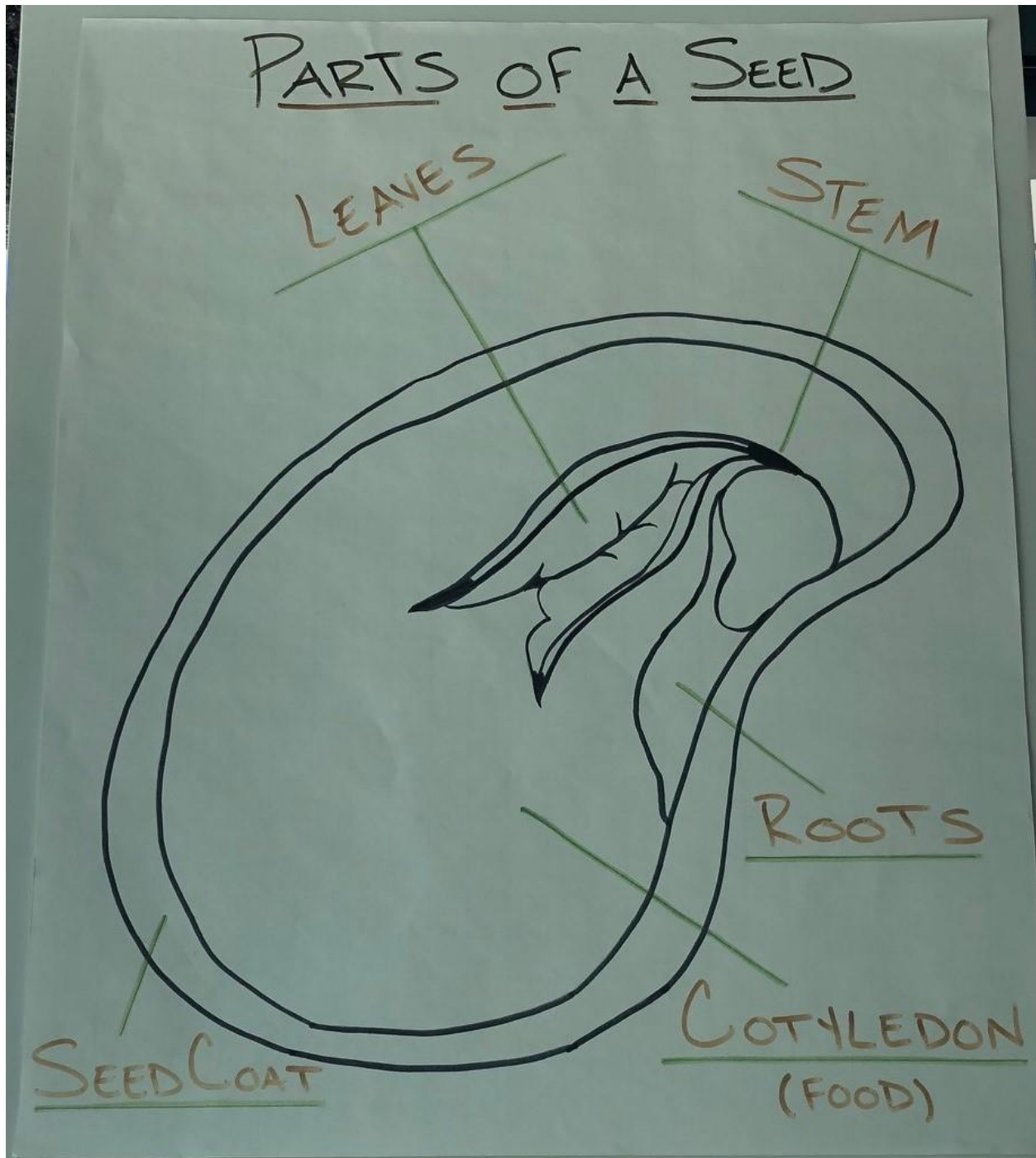




## Plant Definitions, Grade 1







## Seed Diagram, Grade 3



**Seed Coat:** the hard, protective outer covering of a seed.

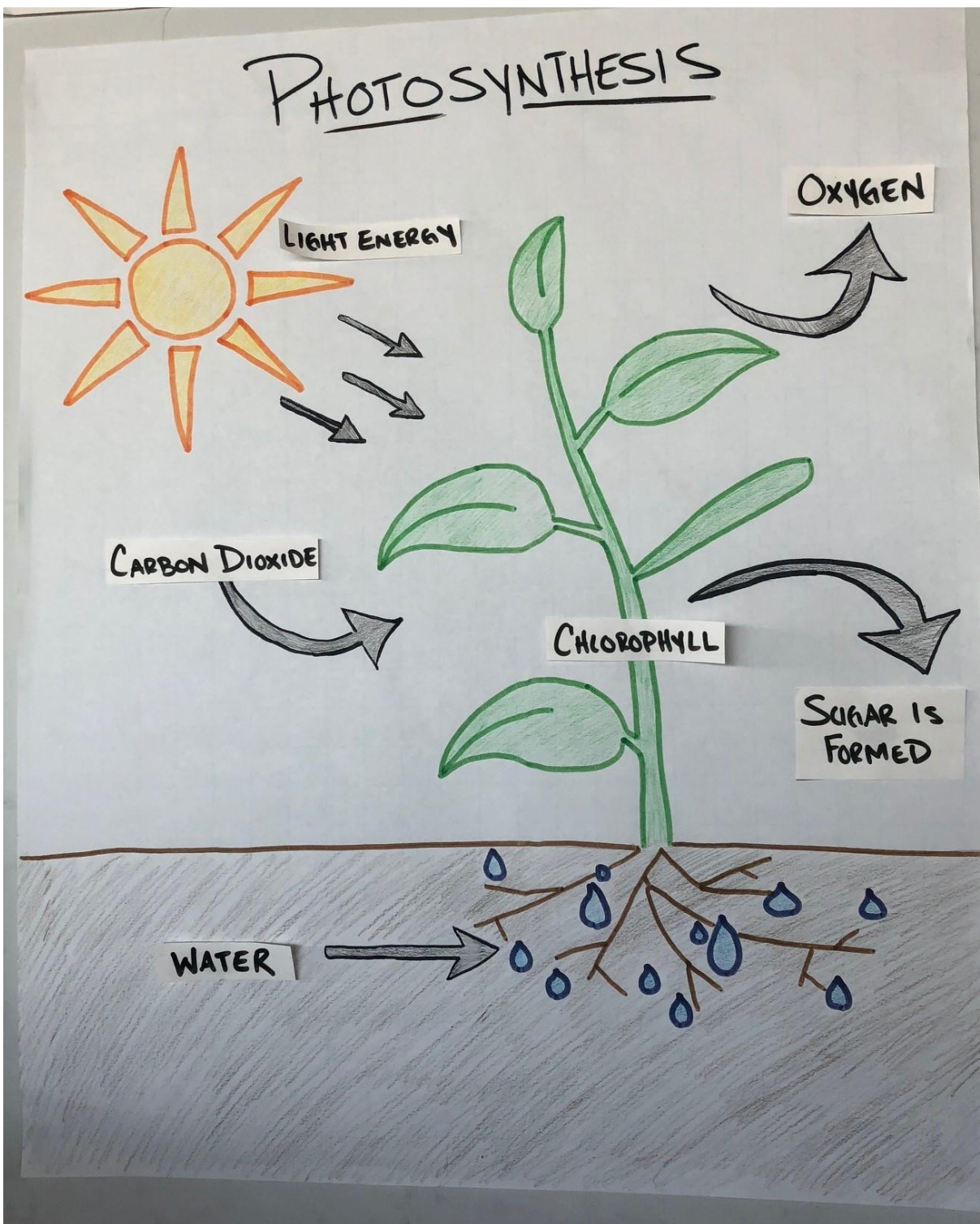
**Cotyledon:** a leaf that is stored in the seed. During **germination**, it stores food for the seed to use. When the seed sprouts, the cotyledon(s) are the first leaves that the plant has. Cotyledons often look very different from the standard leaves, so they are not called **true leaves**!

## Plant Parts & Functions, Grade 3

STRUCTURE	FUNCTION
	ABSORB WATER ANCHOR THE PLANT
	SUPPORTS THE PLANT TRANSPORTS WATER
	COLLECTS SUNLIGHT PRODUCES FOOD (PHOTOSYNTHESIS)
	ATTRACTS POLLINATORS PRODUCES SEEDS TO MAKE NEW PLANTS



## Photosynthesis, Grade 3

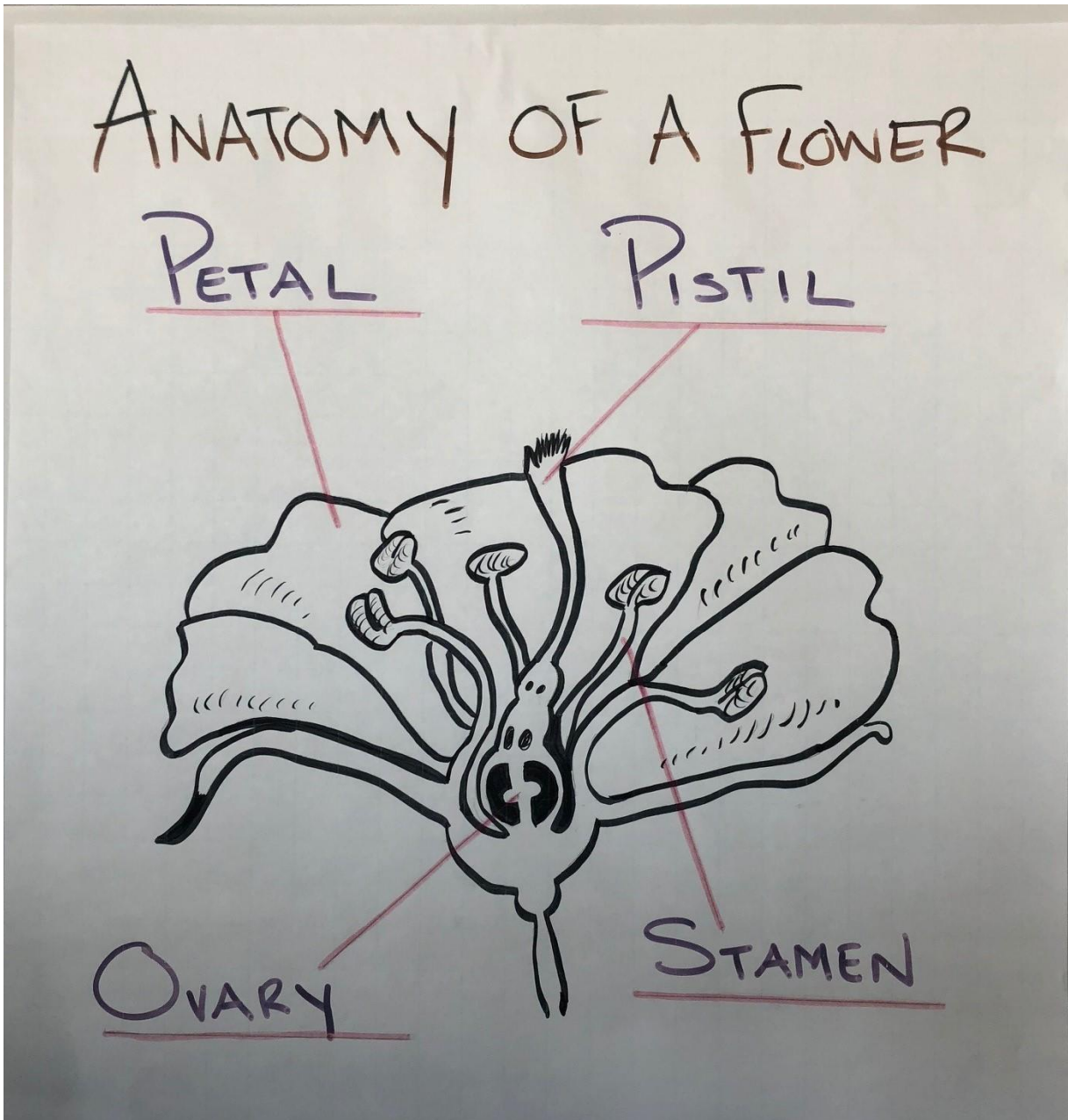


**Photosynthesis:** a process plants use to make food. 'Photo' means light. 'Synthesis' means to make. Green plants (and some other organisms) use sunlight to make nutrients (sugar, their food) from **carbon dioxide** and water. Photosynthesis in plants involves the green pigment **chlorophyll** and generates oxygen as a by-product.

**Chlorophyll:** a green pigment found in plants that is an important part of the photosynthesis reaction. Chlorophyll soaks up the energy from sunlight so that plants can use it to make food. It is also the reason why plants are green!



# Anatomy of a Flower, Grade 3



**Petal:** the parts of a flower that are often brightly colored. The petals are bright and colorful in order to attract insects that help with **pollination**!

**Pistil:** the female part of the flower, which is made up of a few structures. This is where the **seeds** are produced (also known as a mature ovule) as well as the **fruit** (the mature **ovary**).

**Ovary:** this is part of the pistil where the seeds (mature ovules) are produced.

**Stamen:** this is the male part of the flower, which is also made of a few different structures. This is the part of the flower that produces **pollen**.

## Other Definitions

**Germination:** the process by which a dormant seed begins to sprout and grow into a seedling under the right growing conditions.

**Pollen:** the fertilizing element of flowering plants, consisting of fine, powdery, yellowish grains or spores, sometimes in masses. When pollen meets the **ovules** of the flower, it causes plants to form **seeds**.

**Pollination:** the act of transferring **pollen** grains from the male **stamen** of a flower to the female **pistil** in order to produce **seeds** and **fruit**.

**Taproot:** the primary, descending root of some plants, which then has smaller roots coming off of it to collect nutrients. A **taproot system** enables the plant to anchor better to the soil and get water from deeper sources. Not all plants have a taproot system; the other type is a **fibrous root system**.

**Fibrous Root System:** this root system is made up of thin, stringy roots that all have about the same diameter. These roots branch several times to form a complex mat under the plant that binds to the upper soil layers.

**Fruit:** a true fruit (not necessarily what you consider fruit in the grocery store) is a ripened plant ovary, which contains seeds. Only flowering plants produce true fruits!

**Carbon Dioxide:** a chemical compound composed of one carbon atom and two oxygen atoms. It is a colorless gas at room temperature, and it is a major component of photosynthesis, where plants turn sunlight, carbon dioxide, and water into sugar and oxygen!

**True Leaves:** true leaves unfurl above the cotyledons on the seedling, and look like a smaller version of the plant's adult foliage. They are more decoratively shaped than seed leaves and often hairier, and all of the later leaves will match them in appearance.