

Materials

- 1 seed catalog
- 2—3 seeds from each featured crop
- Heavy paper stock
- Scissors and glue
- Flip chart, markers, and tape
- Colored pencils
- Popsicle sticks
- Access to a laminating machine

Preparation

Seed cards: Cut paper stock into 4X4-inch pieces. Glue 2—3 seeds to a piece of paper stock and label on back. Feature crops from 3—4 different plant families, with 2 examples per family (ex. tomatoes and peppers, broccoli and cabbage). Ideally, feature crops that you will later be planting in the garden.

Plant Markers: Consult the seed catalog and cut out pictures of garden crops that correspond to the seed cards. Cut paper stock into 5X7-inch pieces.

PROCEDURE

Part 1: Match Seed Cards

- Have students gather in a large circle. Pass around seed cards, one at a time, announcing the name of each seed before you begin passing. Have students quietly think of one adjective that describes the seed's appearance, but encourage them to keep their ideas to themselves until everyone has examined the seed.
- As each seed completes its rotation, write its name on a piece of flip chart paper. Select student volunteers to share their adjectives with the group, recording them underneath the seed name. Repeat the process for each seed, recording its name and corresponding adjectives after the previous seed.
- Once all seeds have been examined, discuss the adjectives recorded on the flip chart paper. "Are there any seeds that are similar in size and appearance? Which ones?" Introduce the concept of plant families.
- Next, place all the cards face up in the middle of the circle. Call on a student volunteer to select one seed card from the center of the circle. "We are going to find each seed's plant family sibling." Instruct the student to match their seed card with another that is similar in appearance.
- Take out a new piece of paper. After every correct match, tape the seed cards next to each other on a separate section of the paper. Above each seed pair, record the plant family name. (Ex. Broccoli and Cabbage – Brassica). Repeat until complete. Review plant families and corresponding seeds.

Part 2: Make Plant Markers

- Divide students into groups based on the number of plant families featured in the previous activity. Assign each group a plant family and an area of the classroom to work in.
- Give each group collection of seed catalog pictures that correspond to their assigned plant family. Split individual garden crops up amongst the group and give each a student a picture of their featured plant.
- Pass out pieces of paper stock (1 per student) and colored pencils. Instruct students to draw a picture of their featured plant on the paper stock, labeling each with the name of the plant and its plant family.
- Collect plant markers and transition to journal activity.
- **Afterwards:** Laminate plant markers. During a future lesson, have students tape 2 popsicle sticks to either side of the plant markers. Make sure the sticks are solidly attached and extend far enough out from the bottom so that they can be firmly inserted into garden soil. Save for planting time.

ENGAGE

Introduce the seed catalog. “Winter is the ideal time to hunker down with a trusty seed catalog and plan for the upcoming growing season. Seed catalogs feature many different *cultivars*, or varieties of plants. Gardeners consult seed catalogs to select plant cultivars that are best suited for their region’s climate and their garden’s unique growing conditions. Gardeners also pay attention to other characteristics that make a plant desirable, such as appearance, abundance of harvest, or resistance to pests and disease.”

Objectives

- Students will be able recognize patterns in seed size and appearance based on plant families
- Students will understand that plants from the same family share similar characteristics and growing preferences
- Students will be able to visualize seeds as mature garden crops

EXPLAIN

What are plant families?

All plants belong to a greater plant family. These plant families are often quite large and can encompass a broad range of plants. For example, *Fabaceae*, or the Pea family, includes everything from herbs to trees! Similar to a family tree, plant families are divided into more specialized sub-groupings. Popular garden plants such as broccoli, brussels sprouts, kale, and cabbage all belong to the Mustard Family, but are commonly referred to as *Brassicas*. This term that corresponds to a particular *genus*, or sub-grouping, of plants within the greater Mustard Family.

Just like human families, members of plant families tend to share many similar characteristics. For example, Brassicas tend to do well under cooler growing conditions and are relatively frost resistant, making it possible to grow them year round in some places. Given their hardy nature, Brassicas are often grown in colder climates, where they serve as an important food source throughout the winter months. On the down side, Brassicas are also prone to many of the same pests and diseases.

Having a working knowledge of common plant families and their respective characteristics can be a tremendous asset in the garden. As illustrated above, members of the same plant family tend to share many similar characteristics, such as a preference for particular growing conditions. Since plant families often succumb to the same diseases, it’s important to practice smart crop rotation from year to year. Become familiar with the plants and plant families you plan on featuring in your garden and plan accordingly. Your reward – healthy, happy plants!

ADDITIONAL CONTENT INTEGRATION *(see previous page)*

If the seed catalog contains additional information on each seed, include it with the picture cut-outs. After students have drawn their featured plant onto the paper stock, have them turn their card over. Have students record additional information on their featured plant (such as temperature, sun exposure, and watering preferences) on the other side. Other information such as history or lore is also encouraged.

Additional Materials

- Supplemental seed catalog information on each plant’s growing preferences

EVALUATE

Journal prompt: You have been given the very special assignment to develop an entirely new edible garden plant. What does the seed look like? What does the mature plant look like? What part(s) can you eat? Give your personal plant a name and describe its ideal growing conditions.