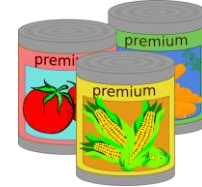


Kitchen Plant Diversity

Searching for Biodiversity in the Foods We Eat



Materials Needed

- A variety of plant-based foods
- Grocery store flyers
- Trip to a grocery store (optional)

Grade Range

K-2
3-5
6-8

Topics/Skills

Science: Structure of Matter
Engineering: Biodiversity, plant structures/foods, sustainability

Learning Standards

NGSS: [Life Science](#)

Duration

15-45 minutes

Prep Time

5-10 minutes

Variety is not only the “Spice of Life” but is vitally important to sustaining life. The natural world depends on having a variety, a **diversity**, of different plants and animals to maintain an ongoing balance, to be **sustainable**. Humans have also come to depend on and to enjoy a rich diversity of plant-based foods.

Activity Challenge

How many different types of plant-based food sources can be found in a kitchen’s cabinets, refrigerator, grocery stores and/or advertisements from grocers and supermarkets?

Preparation

- This activity can be done at home, on a trip to the store and/or in communication with friends, family and/or neighbors.
- Grocery store flyers, printed or online, can also be used as a reference for identifying different plant-based foods.

To Do

- To list the variety of plant-based foods found during the search draw a table like the one following **The Science Behind the Activity** section. The entries in the table will be used to record the **data** collected.
- Record the plant-based foods found under the correct heading in the table.

Observations

- How many plant-based food sources did you find that came from seeds, leaves, stems, roots or other parts of a plant?
- What processes were used to transform a part of the plant into the “food” item (picked, collected, dried, ground, extracted, mixed, etc.)?

Extensions

- Record how many different types and parts of plants you eat in a week or in a month.
- What types of plants-based foods have seen or heard about, but have not eaten?

The Science behind the Activity

Our Earth has many different (**diverse**) combinations (**habitats**) of temperature ranges, weather patterns, hours of sunlight and types of terrain (sandy, loamy, rocky, etc.). In each diverse habitat the different plants and animals have adapted to living there, leading to many healthy and sustainable populations. Certain interdependences can develop such that the loss or reduction in one population of plant or animal can greatly affect the ability of other plants or animals to survive and remain healthy. Introducing a foreign **invasive** plant or animal can also have harmful effects on the existing balance of plants and animals living in an area.

Humans have found that the various parts of many different plants can be used as food sources. The different ways of collecting, processing and preparing plant-based foods can become embedded in the local culture. Humans have changed the land, methods of cultivation, introduced new plants or bred new plant varieties in order to increase the amount of food that can be grown. Some plant-based foods that grow only in specific regions of the world are now consumed throughout the world because of commerce and trading between regions.

Berries/Fruits	Seeds			Leaves/Stems	Roots/Tubers	Other
	Beans	Grains	Other seeds			
<i>Raspberry/orange</i>	<i>Lima beans</i>	<i>Rice/wheat/oats</i>	<i>Peppercorn</i>	<i>Lettuce/rhubarb</i>	<i>Carrots/potatoes</i>	<i>bark – cinnamon</i>