Farm to School Month – Week Three: Cabbage Day!!

CABBAGE
Let’s learn about cabbage today!! In 2009, Alaska harvested 787,200 lbs of cabbage according to the USDA. That is a lot of cole slaw!

Why take a whole day to look at cabbage? Well, cabbage, like other vegetables in the crucifer family (Brassicaceae) that grow very well here in Alaska.

Oh, and let’s not forget that in 2012 the giant cabbage weigh-off at the Alaska State Fair yielded the World Record for that year with a 138.25 lbs green cabbage!! That is a competitive weight class in high school wrestling and would be a Bantamweight MMA fighter! That is a big cabbage!!

The Roots of Cabbage History
- Nearly 3,000 years ago, wild cabbage indigenous to Asia and the Mediterranean slowly spread into Northern Europe by the Celts and later the Romans.
- Cabbage has been cultivated for longer than almost any other vegetable on record. To be precise, more than 6,000 years! It originated in Shensi Province, China, sometime around 4,000 B.C.
- Able to store for long periods, cabbage was a staple item of Europeans in the Middle Ages. Its juice was commonly used to heal wounds and as a cough remedy.
- In 1541, French explorer Jacques Cartier introduced cabbage to North America.
- Since cabbage contains lots of vitamin C, other explorers, including Captain Cook, traveled with it to prevent scurvy. Cabbage rapidly spread across the continent.
- Red cabbage makes an excellent all-natural dye in food or on fabric. You can also dye egg shells light blue with the red cabbage dye.
Let’s Move into the Science of Cabbage

Pronunciation: kæbˈiːj
Spanish name: cole
Family: Brassicaceae
Genus: Brassica
Species: B. oleracea
Group: Capitata

Cabbage is a cole crop of the Mustard family (Brassicaceae) and its varietal name, B. oleracea Capitata, distinguishes this cruciferous vegetable as being “in the form of a head.” (The Brassicaceae family was formerly called Cruciferae.) The word cabbage derives from the French word caboché meaning “head.”

The species B. oleracea, or wild cabbage, is grouped into seven major cultivars based on development. (See chart below for cultivars.) Within the Capitata Group, there are more than 400 cabbage varieties but most common are the green, red, purple, and savoy varieties. Most Asian cabbage varieties belong to another species, B. rapa. This includes Chinese cabbage, which is also known as Napa or celery cabbage.

How Does a Cabbage Grow?
Cabbage is the most easily grown vegetable of the Mustard family. It is a cool-season crop that matures prior to extreme heat. Cool-season crops are grown for vegetative parts, including the roots (carrots), leaves (cabbages), stems (celery), and immature flowers (broccoli). Due to smaller plant size and shallow roots, cabbages are often started from seeds indoors.

Temperature Grows best at 50 to 75° F
Soil Sandy loam or raised clay soil beds; requires added compost and moisture
Exposure Full sun or partial shade
Planting Seedlings spaced 1 to 2 feet apart; rows spaced 2 to 3 feet apart
Days to Maturity 50 to 90 days
Harvesting Hand-harvested

Reasons to Eat Cabbage
A ½ cup of shredded cabbage (about one cupped handful) provides:

- An excellent source of vitamin C and K (from red, green, and savoy varieties of cabbage). Vitamin C helps prevent cell damage, supports the body’s immune system and produces collagen, which makes healthy cartilage, joints, skin, and blood vessels.
- A source of vitamin A (from red and savoy varieties of cabbage).
- A good source of fiber.

What is vitamin K?
- Vitamin K is a fat-soluble vitamin.
- It is used to make proteins needed to begin blood clotting.
• Vitamin K also makes proteins to control calcium binding in bones and other tissues.
• Vegetables where green leaves are eaten generally are high in vitamin K especially dark green leafy vegetables such as kale and spinach.
• Low levels of vitamin K can include anemia, bruising, nosebleeds, and bleeding gums.

Some Great Cabbage Facts
• There are at least a hundred different types of cabbage grown throughout the world, but the most common types in the United States are the Green, Red, and Savoy varieties.
• Cabbage has virtually no fat. One cup of shredded raw cabbage contains 50 calories and 5 grams of dietary fiber.
• Cabbage can be steamed, boiled, braised, microwaved, stuffed, or stir-fried, and eaten raw.
• One cup of shredded raw cabbage contains 190% of the recommended daily amount of vitamin C.
• Many vegetables evolved from the original wild cabbage including broccoli, Brussels sprouts, cauliflower, collard greens, kale, and kohlrabi.
• Primary uses of cabbages include processed coleslaw (40-45%), fresh head (35%), sauerkraut (12%), various fresh-cut products (5-10%), and dried (less than 5%).
• Cabbage is considered Russia’s national food. Russians eat about seven times as much cabbage as the average North American.
• One acre of cabbage will yield more edible vegetables than any other plant which makes cabbage a money saver!

Let’s Eat. . .

Roasted Cabbage Coleslaw

Serves 4

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Amount</th>
</tr>
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<tbody>
<tr>
<td>Cabbage, green or red, shredded</td>
<td>1 head</td>
</tr>
<tr>
<td>oil</td>
<td>2 Tablespoons</td>
</tr>
<tr>
<td>salt</td>
<td>½ teaspoon</td>
</tr>
<tr>
<td>pepper</td>
<td>½ teaspoon</td>
</tr>
<tr>
<td>Carrots, shredded</td>
<td>1 cup</td>
</tr>
<tr>
<td>Apple cider vinegar</td>
<td>3 Tablespoons</td>
</tr>
<tr>
<td>Honey or maple syrup</td>
<td>1 Tablespoon</td>
</tr>
<tr>
<td>Dijon mustard</td>
<td>2 teaspoons</td>
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1. Preheat oven to 425°F.
2. Toss shredded cabbage, oil, salt and pepper together. Place cabbage in a single layer on a baking sheet. Place in oven and bake for 8 minutes, then stir, and bake for 5 to 10 minutes, or until browned. Remove from oven and let cool.
3. For the dressing, combine apple cider vinegar, honey, and Dijon mustard.
4. Toss together roasted cabbage, carrots, and dressing. Serve chilled.
Yummy Goodness and Tasty Tips!!

- When buying cabbage, choose firm, heavy cabbage heads with unbruised leaves.
- Store cabbage tightly wrapped in the refrigerator and use within a few weeks.
- Once cut, place the remainder in a plastic bag and use within a few days.
- When cabbage is purchased at the store; the darker outer leaves that are not tight against the head have generally been removed so just the compact head is seen. Remember, the darker leaves will have the highest concentration of vitamins C and K.
- Cabbage is best in flavor and nutrition when eaten raw or cooked for a short time in a small amount of water. Overcooking tends to destroy flavor, appearance, and vitamins, and it increases the sulfur odor.
- Cabbage can be steamed, microwaved, boiled, roasted or made into coleslaw or sauerkraut.
- Cabbage is a great addition to casseroles, stews, salads and soups.
- To prepare cabbage, remove the thick outer leaves, slice in half, wash remaining cabbage head, and remove the hard white core.
- Slice into desired thickness.
- Cabbage can also be preserved so you can enjoy it long into the wintertime. Preserving cabbage can be done through cold storage, fermenting, freezing, canning, and drying.

Digging in: Classroom or Home Learning Activities

- **Science Investigation:**
  Use cabbage juice to determine whether a substance is an acid or base.
  
  **Materials:**
  Can opener, 1 can red cabbage (not sauerkraut), colander, small bowl, measuring spoons, 3 glass jars, 1 tablespoon vinegar, 1 tablespoon baking soda, 1 tablespoon distilled water
  
  **Procedure:**
  Open can of cabbage.
  Use colander to drain cabbage juice into bowl.
  Put two tablespoons (30ml) of juice into each glass jar.
  Add vinegar to first jar. Record color of juice.
  Add baking soda to second jar. Record juice color.
  Add distilled water to third jar. Record juice color.
  Discuss results.

- Plan a meal that includes a cabbage. The meal should be low in calories, fat, and sodium and provide at least 20% of the recommended Daily Value for iron, fiber, and calcium. Which cabbage recipe would you select? What other foods (grains, fruits, vegetables, meat/beans, dairy products) would you include to make a complete, balanced meal? Which vitamins are included in your meal?

- Research the history, uses, and folklore associated with the cabbage in China and Poland.

Library Connections . . .

- **Elementary:**
  - Tiny Green Thumbs by C.Z. Guest
  - What is a Plant? by Bobby Kalman

- **Secondary:**
  - Green Power: Leaf and Flower Vegetables by Merdith Sayles Hughes
  - 100 Vegetables and Where They Came From by William Woys Weaver