

# Cabbage

**Age Group:** 6<sup>th</sup> Grade

**Time:** 45 minutes

**Materials:**

- Head of cabbage
- Mason jars
- Salt
- Pre-shredded cabbage for making sauerkraut
- Sauerkraut for tasting

**Prep in advance:**

- Pre-shred the cabbage for making sauerkraut.

**Description:**

After a discussion about what cabbage is and what common foods it is found in around the world, students will learn about preserving foods by making sauerkraut.

**Objectives:**

Students will be able to...

- Explain and define what cabbage is.
- Explain how cabbage is eaten and what foods it is in around the world.
- Understand preservation methods and their importance.
- Make sauerkraut.

**Environmental Education Guidelines:**

- Knowledge of environmental processes and systems:
  - Humans and their societies: Culture
  - Environment and Society: Technology
  - The earth as a physical system: Changes in matter
  - The living environment: Organisms, populations, and communities.

**Major Life Science Themes:**

- Structure & Function
- Diversity

**Safety:**

- General garden safety, as expressed in the rules section below:
  - stay on the paths,
  - ask before you eat,
  - stay within sight of an adult

**Instructional Sequence:**

**All about the cabbage** (20 minutes)

- With a head of cabbage in hand, ask the students:
  - Who knows what this is?
  - Guess where this cabbage grew (The Learning Gardens!)
  - How many of you have ever had cabbage?
- Explain and define what cabbage is.
  - Cabbage is rich in Vitamin C and dietary fiber, glutamine (an amino acid).
  - It can be green, red, or white.

- Cabbage has been used for food for over 3,000 years. Whether stored fresh or pickled, cabbage was an important staple winter vegetable in cold climates when nothing else was available.
- Cabbage is December's Harvest of the Month.
- "ma (or mon) petite chou" is a French term of endearment that literally translates "my little cabbage"
- These plants are related to cabbage: turnips, broccoli, Brussels sprouts, cauliflower, Chinese kale, kale, collard greens, kohlrabi, Bok choy
- Ask students:
  - Do you ever eat any of these? (allow for answers)
- Explain how cabbage can be eaten and what common foods it is found in:
  - Cabbage can be eaten raw, cooked, fermented, or pickled.
  - Cabbage is often used in relish, is pickled, or is preserved in some other way.
  - It is prepared and eaten in many different ways in different cultures.
    - Cabbage can be found in coleslaw (Southern U.S.),
    - Kimchi (Korean),
    - Pico de gallo (Mexican),
    - Borscht (Eastern European soup; usually also contains beets),
    - Cabbage rolls (Eastern Europe and Middle East),
    - Sauerkraut (German and Eastern European),
    - Corned beef and cabbage (Irish)
- Explain that today we are going to make sauerkraut; a kind of Eastern European fermented cabbage relish, and learn about how pickling and other preservation methods work.
- Ask students:
  - Why do you think learning how to preserve was so important to people or families before refrigeration methods were invented?
    - Keeping food over the winter.
    - Traveling over long distances with food.
    - Any others?
  - Why do you think people decided to preserve cabbage?
    - Cabbage offered Vitamin C to sailors on long journeys.
    - They liked the taste?
    - Other ideas?
  - What other foods do we preserve? What other preservation methods do we use?

- Cucumbers (pickles)
- Pickled radishes, carrots, okra, eggs, pig's feet, etc.
- Canned foods
- Frozen foods
- Wines and beers
- Others?

**Making Sauerkraut** (*20 minutes*)

- Present a head of cabbage, explaining that sauerkraut is made by fermenting shredded cabbage.
- Explain how:
  - You combine cabbage with salt in a jar.
  - Eventually the cabbage releases its own juices, which are then eaten up (see: “fermented”) by microorganisms, thus producing sauerkraut over time!
- Pass out sample sauerkraut portions for tasting. Have each student taste the sauerkraut and share their thoughts for the class.
- Demonstrate how sauerkraut is made (staff should demonstrate this as it is messy and sanitation is key!)
  - Pack pre-shredded cabbage into quart size mason jars, adding a teaspoon of salt to each.
  - Press down hard on sauerkraut to really pack it in there! Use pestle or sturdy spoon.
  - Cap. Return to sauerkraut daily to skim off the top layer. Wait 2-4 weeks.

**Closing** (*5 minutes*)

- Wrap up – time for questions

**Assessment/Evaluation:**

Ask students to write in their journals about cabbage and the many different foods that it is found in, giving examples from other cultures.