

# Lesson Plan: Broccoli

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## Summary

In this episode of Sketch and Coffee Live at 5:30am Texas time, Blade sketches a toy broccoli from the Random Object Randomogrifier and dives into its cultivated history, tracing it back to the mustard family alongside bitter relatives like cabbage and kale. He shares how ancient Romans were making mustard long before broccoli existed, explains the “supertaster” discovery of the 1930s, and jokes about Neanderthal DNA influencing his dislike of the vegetable. President George H.W. Bush’s famous broccoli snub makes an appearance, along with global consumption stats showing China at 10.5 million metric tons, India at 9.5, and the U.S. at only 1.3. Blade wraps it all with humor, family anecdotes, and a firm no-broccoli-in-the-house rule.

Watch the episode here: [https://www.youtube.com/live/8TJ7-yDWX5k?si=fPO\\_iF02iOqKvgrz](https://www.youtube.com/live/8TJ7-yDWX5k?si=fPO_iF02iOqKvgrz)

## Lesson Plan

### Objective:

Students will explore the history, science, and cultural impact of broccoli, understanding its origins, related plants, taste perception differences, and global consumption patterns.

### Standards:

- NGSS: MS-LS1-5
- CCSS.ELA-LITERACY.RST.6-8.2

### Materials:

- Printed “9 Fun Facts About Broccoli” handout (see below)
- Whiteboard or projector for class discussion
- Optional: images of wild mustard and cultivated broccoli

### Procedure:

1. Begin with a quick class poll — “Who likes broccoli?”
2. Introduce broccoli as a cultivated plant, not a natural one.
3. Read aloud the “9 Fun Facts About Broccoli” handout.
4. Discuss selective breeding from mustard plants.
5. Explain “supertasters” and genetics in taste perception.
6. Review George H.W. Bush’s broccoli quote.

7. Compare global consumption numbers.
8. Class discussion: "Does learning the history change your opinion?"

**Assessment:**

- Three written questions:
  1. Where did broccoli come from?
  2. What is a supertaster?
  3. Which country consumes the most broccoli?

**Extension:**

- Research another Brassica family vegetable and create a fun-fact sheet.

**Rubric**

Criteria	4 - Excellent	3 - Good	2 - Needs Improvement / 1 - Incomplete
Participation	Actively contributes to discussion	Participates regularly	Minimal participation / No participation
Comprehension	All answers correct	Most answers correct	Some/Few correct answers
Engagement	Fully focused	Mostly focused	Occasionally/Frequently distracted

## 9 Fun Facts About Broccoli

### 1. From Mustard to Broccoli – On Purpose

Broccoli didn't just sprout naturally. Farmers started with wild mustard plants and selectively bred them for different traits—big flower heads became broccoli, leafy heads became cabbage, and so on. Source:

<https://www.bestfoodfacts.org/food-facts-broccolis-wild-roots/>

### 2. Romans Loved Mustard Before Broccoli Existed

Ancient Romans crushed mustard seeds and mixed them with grape juice to make a spicy paste. Broccoli came along centuries later thanks to Mediterranean farmers. Source: <https://www.alimentarium.org/en/fact-sheet/mustard-condiment>

### 3. Broccoli's "Bitter" Cousins

Cabbage, cauliflower, kale, Brussels sprouts, and collard greens are broccoli's close relatives. They all belong to the Brassica family and share some of the same bitter compounds. Source:

<https://www.vox.com/xpress/2014/8/6/5974989/kale-cauliflower-cabbage-broccoli-same-plant>

### 4. Lettuce Is Just a Shelf Neighbor

Broccoli and lettuce often sit side-by-side in grocery stores, but lettuce is actually part of the daisy family—closer to sunflowers than to broccoli. Source: <https://www.thespruceeats.com/broccoli-history-1807573>

### 5. Supertasters Discovered in the 1930s

In 1931, chemist Arthur Fox spilled a chemical called PTC and noticed some people found it horribly bitter while others tasted nothing. This accident kicked off research into inherited taste sensitivity, leading to the idea of "supertasters."

Source: <https://www.orlandoent.com/blog/super-tasters-and-phenylthiocarbamide-ptc/>

## 6. Famous Supertaster

In March 1990, President George H.W. Bush told reporters: “I do not like broccoli... And I’m President of the United States, and I’m not going to eat any more broccoli.”

Source: <https://smartpolitics.lib.umn.edu/2013/07/09/george-hw-bush-hater-of-brocco/>

## 7. Blame It on Neanderthal DNA (Maybe)

Some bitter taste genes date back to Neanderthals, meaning your dislike for broccoli could be an ancient family hand-me-down.

Source: <https://pmc.ncbi.nlm.nih.gov/articles/PMC8423626/>

## 8. Broccoli’s Slow U.S. Start

Thomas Jefferson grew broccoli in the late 1700s, but most Americans ignored it until Italian immigrants popularized it in the 1920s. It finally caught on after World War II.

Source: <https://www.bestfoodfacts.org/food-facts-broccolis-wild-roots/>

## 9. Broccoli by the Numbers – Who Eats the Most

In 2022, broccoli and cauliflower production leaders were:

- China: ~10.5 million metric tons
- India: ~9.5 million metric tons
- United States: ~1.3 million metric tons
- Mexico: ~0.76 million metric tons
- Spain: ~0.54 million metric tons

Together, China and India produce over 70% of the world’s supply.

Source: <https://www.globaltrademag.com/mexican-cauliflower-and-broccoli-growers-enjoy-rising-demand-in-the-u-s-the-fastest-growing-importer/>

## Worksheet

Name: \_\_\_\_\_ Date: \_\_\_\_\_

### Review Questions

1. Where did broccoli originally come from?
2. What is a supertaster?
3. Name two vegetables related to broccoli.

### Discussion Prompt

Why do you think some people enjoy bitter vegetables while others dislike them?

### Data Analysis

If China consumes 10.5 million metric tons of broccoli each year and the U.S. consumes 1.3 million, how many times more broccoli does China consume than the U.S.? Show your math.

### Reflection

Do you like broccoli? Has learning its history changed your opinion? Why or why not?