







# Cooking Vegetables 4,000 Years Ago

## Overview:


Students will read and analyze an LA Times article to learn what prehistoric man/woman first ate and how s/he hunted, gathered, and cooked her/his meals.

## Objectives:

At the end of the lesson, students will be able to:

-  **Describe** what kinds of food prehistoric man/woman ate and why that changed over time.
-  **Explain** why prehistoric man/woman had to look for new food sources.
-  **Explain** why some of these foods had to be cooked before they could be eaten.
-  **Identify** and/or plant edible root plants in the garden (potatoes, onions, etc.).

## Preparation:

-  Before class, read the LA Times article “A Meal of Roasted Vegetables? That’s so 4 Millenniums Ago.”
- Article overview: Prehistoric man/woman gathered seafood, eggs, nuts, fruits and scavenged the carcasses of dead animals. Later they developed tools like fishing nets, hooks, and bone harpoons to hunt and kill animals to eat. When the animals became harder to find, they started eating nutritious plants that required roasting for several days in order to soften the fibers. Now archeologists are finding that they heated large rocks that held the heat for many hours, which was perfect for roasting plants.

## Materials:

- γ Handout 1: “A Meal of Roasted Vegetables? That’s so 4 Millenniums Ago”
- γ Handout 2: “Cooking Vegetables 4,000 Years Ago”

## On the Board:




- γ Vocabulary
- γ Discussion questions:
  - What kinds of food did prehistoric man/woman eat that did not require cooking?
  - Why did prehistoric man/woman have to look for new kinds of food?
  - Why did the bulbs of these new plants have to be roasted for a long time?
  - Are all plant bulbs okay to eat?
  - Why was cooking food over heated large rocks energy-efficient?
- γ Student Reflection Questions

## Suggested Snack:

- γ Sliced raw sweet potatoes
- γ Roasted sweet potato “fries:” <http://www.eatingbirdfood.com/coconut-oil-roasted-sweet-potatoes/>

-  Prepare samples of raw and roasted sweet potatoes or other root vegetables.

### Vocabulary:

 prehistoric  
 scavenge  
 carcass

 extinct  
 archeologist  
 staple

 plant bulbs  
 digestible

(See attached Handout 2 for English Language Learners.)

### Learning Activities:

#### I. Discussion (10 min.)

- A. To introduce the lesson, ask students to define *prehistoric*.
- Tell them that prehistoric literally means “pre-history,” or before history was recorded. Human pre-history is the period from the time that anatomically modern humans first appeared until they invented writing systems.
- B. Ask students to brainstorm answers to the following questions prior to reading Handout 1. Write their answers on the board.
- What do you think prehistoric man/woman might have eaten?
  - Do you think they cooked their food before eating it?
  - Prehistoric man/woman ran out of some of their food sources over time. Why do you think this happened?
  - How did they find new food sources? What do you think the new food sources were?

#### 2. Activity: Reading and analyzing an LA Times article (20 min.)

- A. Define *archeology*: the study of the ancient human past by examining material remains. It is a subfield of anthropology, the study of all human cultures.
- B. Tell students that they are going to read about current archeological discoveries.
- Refer students to the discussion questions on the board.
  - Ask a student to read the questions aloud.
  - Tell students to think about these questions as they read the article.
- C. Distribute a copy of Handout 1: “A Meal of Roasted Vegetables? That’s so 4 Millenniums Ago” to each student.
- Tell students they have 10 minutes to read and annotate the text with information that will help them to answer the questions on the board.
  - Come back together as a class and have students define the vocabulary words together.

- Discuss the questions as a class.

3. Garden Activity (10 min.)

- A. Have students tour the garden and identify edible root plants that are growing in the garden OR have students plant edible root plants.

4. Snack (5 min.)

- A. First, pass out slices of raw sweet potatoes. Ask students to describe their taste, texture, and whether or not they find them enjoyable to eat. If not, how could they be improved/enhanced to make them enjoyable?
- B. Then pass out the roasted sweet potatoes. Ask students to compare the experience of eating the roasted potatoes vs. the raw ones.
- C. Ask students how they think food changes once it has been cooked?
- D. Ask students to think of other foods that taste better, or not as good, after they have been cooked.

5. Have students answer the Reflection Questions in their garden journals (5 min.)

### Student Reflection Questions:

1. What do you think it would be like to have to hunt or gather your own food?
2. Do you think there are any problems with modern humans being able to buy whatever food they see at the grocery store?
3. Compare and contrast your experience of eating raw and roasted potatoes.

### Assessment Questions:

1. What is one way to make plants easier to digest? (**Cook them because that softens the fibers.**)
2. How did prehistoric man make his cooking techniques more energy-efficient? (**Instead of cooking over a hot fire fueled by wood and other dead plants that involved constantly tending to a fire pit, they started adding large rocks, some weighing more than 2,000 pounds, that were heated until they were red-hot. The rocks would hold heat for approximately two days and therefore conserved fuel and human energy.**)

### Standards:

#### Common Core State Standards

- CCSS.ELA-LITERACY.RI.6.1

Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

- CCSS.ELA-LITERACY.RI.6.8

Trace and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not.

**Acknowledgements:**

“A Meal of Roasted Vegetables? That’s so 4 Millenniums Ago.” The LA Times.  
<http://articles.latimes.com/print/2008/dec/27/science/sci-earlyfoods27>

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Science File

## A meal of roasted vegetables? That's so 4 millenniums ago

*After woolly mammoths ran out, primitive humans turned to slow-cooking bulbs and other plants to make them digestible.*

December 27, 2008 | Thomas H. Maugh II

Long before early humans in North America grew corn and beans, they were harvesting and cooking the bulbs of lilies, wild onions and other plants, roasting them for days over hot rocks, according to a Texas archaeologist.

The evidence for this practice has long been known of in fire-cracked rock piles found throughout the continent, but archaeologists have tended to ignore it "because a new pyramid or a Clovis arrow point is much sexier," said archaeologist Alston V. Thoms of Texas A&M University.

In two reports published online this week in the *Journal of Anthropological Archaeology* and the *Journal of Archaeological Science*, Thoms reported that cooking on hot rocks first became a substitute for cooking on hot coals about 9,000 to 10,500 years ago, then had a sudden jump in popularity about 4,000 years ago.

The reason for the changes: population growth that required the exploitation of new food resources.

"Whatever they were eating before did not require prolonged cooking," Thoms said. But beginning about 10,000 years ago, "people couldn't live off the cream of the land anymore." The megafauna that had been a prime food source -- such as the woolly mammoth -- were becoming extinct, and other mammals were becoming harder to find. People had to turn to plants.

Meadowlands and forest edges were filled with lilies, wild onions and perhaps two dozen other wild plants ready for the harvesting. The bulbs of these plants are about as nutritious as sweet potatoes, but their energy is locked up in a dense, indigestible carbohydrate called inulin. The only way to make the bulbs digestible is to roast them for two days or longer.

Cooking over a hot fire, as people had done in the past, meant tending a fire pit. But adding large rocks, some weighing more than 2,000 pounds, changed the situation. If the rocks were heated red-hot, they would hold heat for 48 hours or longer, conserving both fuel and human energy.

The remains of these earth ovens have been excavated by archaeologists since 1900, "but people haven't recognized at a broad level that the earliest ones in Canada are about the same age as those in the Pacific Northwest and in Texas," Thoms said.

In other words, "this was a punctuated change, all at once, over a big part of the country."

Evidence suggests that a similar change occurred in Russia, Japan and perhaps Britain, he said. "There are lilies in northern environments around the world, and they were used as staples in the same way people today use wheat, grains or rice."

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# Cooking Vegetables 4,000 Years Ago

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

Teacher: \_\_\_\_\_

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

## Vocabulary:

**prehistoric:**  
relating to the  
period prior to  
recorded history



**scavenge:**  
to take or gather  
(something usable)  
from discarded  
material



**carcass:**  
the dead body of  
an animal





**extinct:**  
no longer in  
existence;  
something that has  
ended or died out



**archaeologist:** a  
specialist in  
archaeology, the  
scientific study of  
prehistoric peoples  
and their cultures  
through analysis of  
their artifacts,  
inscriptions, and  
monuments

