



PULSES: LENTILS AND GARBANZOS

What is It?

- Pulses are the dry, edible seeds of legumes. Pulses include lentils and garbanzo beans—also known as chickpeas. Dried beans and peas are also pulses.
- Pulses, like all legumes, add nitrogen to the soil, improving soil health. This makes them a good crop to grow the season before planting wheat or other grains.
- Washington is among the major producers of pulse crops in the United States, along with Montana, North Dakota, South Dakota, Idaho, and Oregon. However, it is becoming more common for growers across the United States to plant pulses in their crop rotations.
- Garbanzo beans have been enjoyed as a nutritious food source for 7,000 years.
- The name chickpea comes from the Latin word *cicer*, referring to the plant family of legumes, Fabaceae. It is also known by its popular Spanish-derived name, the garbanzo bean.
- Lentils were one of the first crops cultivated by humans.

Grow It

- Lentils and garbanzo beans are less common choices for school gardens because they require a large amount of space to grow enough for a meaningful harvest, and they need to be shelled before eating, which adds extra work. However, they can be a great learning crop and are a good option for planting otherwise empty garden beds as part of a crop rotation plan.
- As cool season plants, they can be planted in the early spring before the last frost has passed. Choose a spot that gets full sun, with loose, well-drained soil. Lentils should be planted about one inch deep, while garbanzos can be planted one and a half to two inches deep. Space plants 4–6 inches apart.
- Stop watering once seed pods begin to dry. Harvest when pods are fully dried out—about 80–100 days, depending on the variety. After harvest, seeds should be removed from pods for storage. They can be eaten or saved as seeds for the next season's crop.





Make It

Be sure to follow local Food Safety rules and regulations. Learn more here: [Food Safety Rules and Regulations | Washington State Department of Health](#).

Recipe: Lentil Squash Hummus
Yield: 16 sample size servings

Ingredients	Directions
<ul style="list-style-type: none"> • 2 tablespoon lemon juice • 2 tablespoon tahini • 1–3 garlic cloves garlic (to taste) • 3/4 teaspoon salt • 1 15-oz. can garbanzo beans, drained • 1 cup cooked lentils • 1 tablespoon extra-virgin olive oil • 1 1/2 cups baked pumpkin or winter squash • 1 teaspoon ground cumin • Optional spices: dash of paprika or black pepper 	<ol style="list-style-type: none"> 1. Pulse lemon juice, tahini, garlic, and salt together in a food processor or blender until smooth. 2. Add garbanzo beans, lentils, and olive oil. Pulse until smooth. Add squash, cumin, and spices. Process until well-blended. If hummus is too thick, add 2 tablespoons of water or an additional tablespoon of olive oil. 3. Transfer hummus to a container with a lid and refrigerate at least 2 hours before serving. 4. Store in airtight container in refrigerator. 5. Offer dip with a variety of chopped veggies or pita chips.

Chef's Tip

- Peas or cooked beets can be substituted for winter squash.

Recipe adapted from [Jenny and Luca Montague and Jessica Manly, Kalispell Public Schools](#).

Explore interactive taste test resources to encourage participants to try what you made!
[Taste-Testing Event Resources](#)



Super Lentils

Learn It

Objectives

- Students will be able to describe why lentils are good for their health.
- Students will know where lentils are grown and that there are many different kinds of lentils.

Materials

- Lyrics for “The Lentil Song” written on the board or butcher paper. (see page 5)
- 6 egg cartons
- 6 different varieties of lentils (approximately one cup to one pound of each depending on number of students). Find as many Washington-grown varieties as possible and adjust accordingly.
- Washington varieties include, but are not limited to Brewer, Crimsons, Pardinias, French Greens, Estons, Red Chiefs, Lairds, Emeralds, and Richleas.
- 36 Small pieces of paper with the names of the lentil varieties – six for each variety

Directions

Start out by singing “The Lentil Song.” Take a moment to discuss some of the lyrics. What does a pod look like? What is a legume? What is protein and why do we need it? Ask the students to list some of the activities they do for which they need protein (example: biking to school, playing baseball, etc.).

Lentils offer many health benefits. They are packed with fiber, protein, iron, potassium, vitamin B6, and other nutrients. Ask students if they think bananas or lentils (gram for gram) have more potassium (answer: lentils).

Ask students whether ground beef or lentils have more iron gram for gram (answer: lentils). Ask students which has more antioxidant power, lentils or blueberries (answer: lentils).

Discuss how these foods (bananas, beef, and blueberries) are all considered great sources of those nutrients (potassium, iron, antioxidants, respectively), but the lentil contains them all, making lentil a champion superfood!

Inform students that Washington is one of the nation’s major producers of lentils (and other legumes) and that there are many different types of lentils.



Super Lentils

Learn It

Directions

Split the class into six groups and give each group an egg carton with six different varieties of lentils in each. Give them the papers with the six different lentil names.

Students have 5-10 minutes to try to match the name with the lentil.

At the end, go over the correct answers. Have them guess what certain words mean like "crimson" (red) and "petite" (small).

Lesson adapted from "It's a bird, it's a plane, it's a ... lentil?" created by Andi Giddings, FoodCorps service member and "The Lentil Song," created by Nicki Jimenez, FoodCorps service member.



Chickpeas, credit: WSDA



The Lentil Song

Learn It

Developed by Nicki Jimenez, FoodCorps service member. The Lentil Song can be found at: www.youtube.com/watch?v=DUCFtd0Zu4k

Lyric	Motion
I am a lentil	Arms in circle overhead
I'm small and round	Thumb and forefinger like you're holding something small
I grow on a plant	Arms up like growing a plant
That comes out of the ground	Bend down and put hands on ground, then rise up like a growing plant
My home is a pod	Hands clapped together overhead
Open me up	Open hands above head
Take me out, set me free	Jump and wave arms like you've just been freed
You will see I'm a seed	Point to eye
If you plant me	Slowly bend down
Back in the ground	"Plant" a seed in the ground





The Lentil Song

Learn It

Lyric	Motion
I will grow big and tall	Grow a plant with your body, ending with your arms overhead
To make more lentils small	Thumb and forefinger like you're holding something small
And if you eat me	Motion like you're spooning something into your mouth
You will grow too	Hands on hips, tiptoe and crane your neck like you're growing
'Cause the protein in me	Muscle arms
Will help you succeed	Fists up in victory
Now that you've met me	Pretend (or actually) shake hands
I hope you see	Point to eye
I am small but mighty	Muscle arms
Eat me to be healthy	Fists up in victory



Eat It

Pulses are true superfoods and come packed with a variety of nutrients that work together to support nearly all parts of the body. They are excellent sources of electrolytes, iron, B vitamins, and other antioxidants. They are also packed with protein, which is essential for muscle repair and growth. Pulses are also rich in fiber, which is important for maintaining a healthy heart and digestive system and regulating blood sugar. Together, these nutrients strengthen the heart, blood, muscles, skin, immune function, and more.



Chickpeas in Walla Walla, credit: WSDA

Read It

- Lentil Soup, by Joe Lasker
- Lentil Soup, written by Carole Tremblay, illustrated by Maureen Poignonec
- Burfert and the Garbanzo Beans, written by Rosi Amazing, illustrated by Andreea Togoe
- The Sandwich Swap, by Queen Rania Al Abdullah & Kelly DiPucchio

More About It

- Activities for various age groups: [Teaching Materials | NDSU Agriculture](#)
- Lesson for elementary students by Michigan State University Extension: [Inquiring Minds Want to Know Science Activities for Young Minds](#)
- Lessons for 4th grade by Washington State University Extension: [Pulse on Earth: Garden-based Pulse Nutrition and Biology](#).
- Lesson for 6th– 8th grade: [Growing Pulses – Curriculum Matrix | Washington Agriculture in the Classroom](#)

