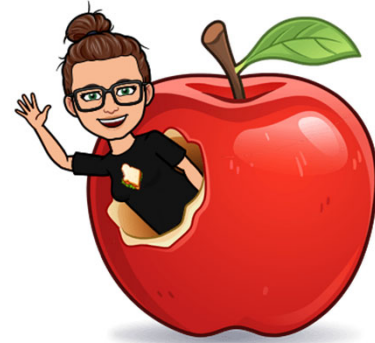


Oregon Grown

Klamath County Extension

With Mrs. Paolina!



INTRO SLIDE

Hello Students! Welcome to the Oregon Grown classroom with Mrs. Paolina where we learn all about Oregon grown foods and healthy ways we can eat them!

***TEACHER NOTE:

Key Message: Students will understand vegetative propagation and regeneration and the importance of a plants ability to regrow lost or damaged parts. This lesson will also expose students to the potato-a prominent crop in our area.

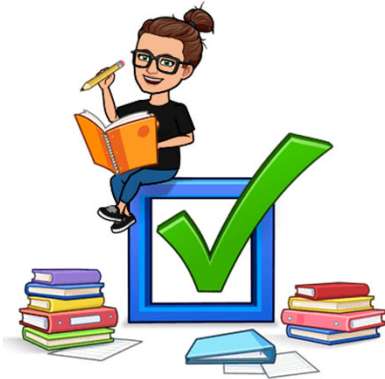
This lesson meets Oregon state Standards: NGSS:3-Ls1-1, 3-5-ETS1-1; SS 3.10; HE 1.3.3; RI 3.2; Essential Skills 2, 4, 5,9

Length: 8 minutes and 43 seconds without pauses for the activity and discussion. Total of approximately 60 minutes with activity and discussion pauses. This lesson is already extended due to the journaling of observations for the experiment. You can set your own pace to have student journal as often and as many times as you see fit.



Oregon State
University

Discover Different Ways Plants Can Grow!



Book: From Eye to Potato



Vocabulary words



Garlic Experiment



Fun facts and Try it!



OVERVIEW PAGE

Today's Lesson is all about discovering different ways plants can grow!

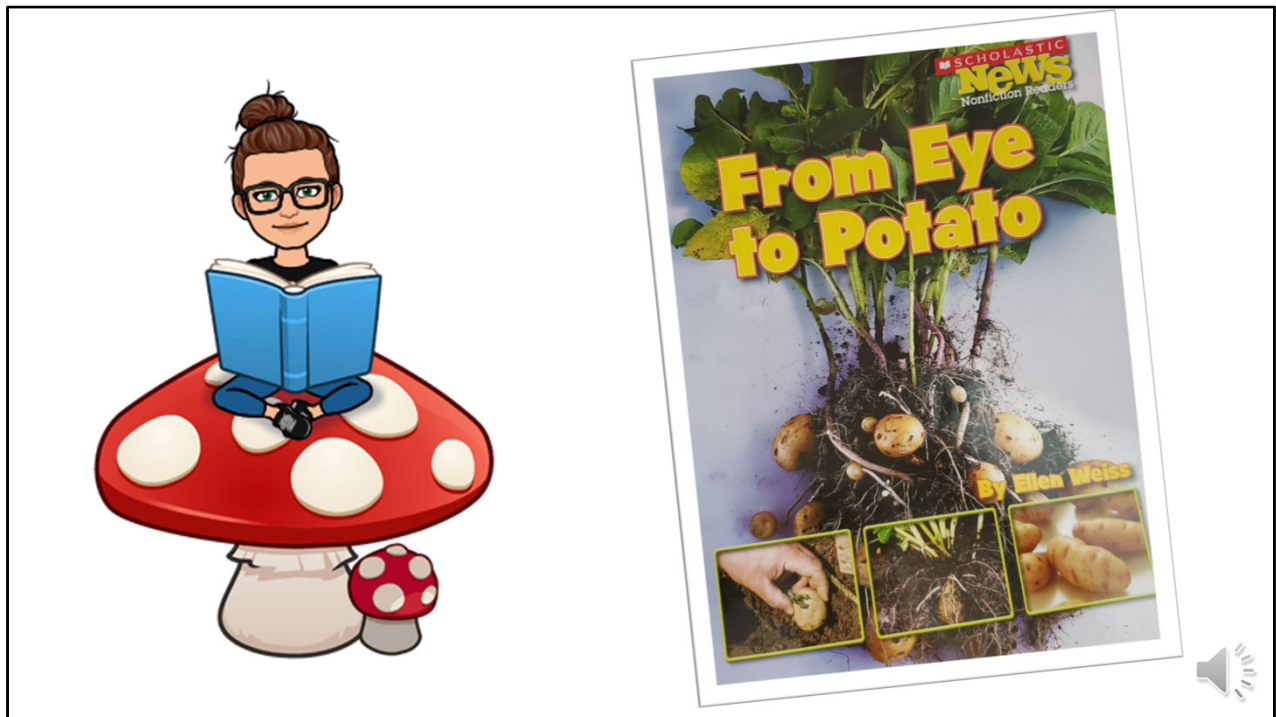
First, we get to hear about a book, "From Eye to Potato".

Next, we are going to learn some new vocabulary words.

Then, a fun Garlic experiment!

Finally, we will end our lesson with fun facts and a recipe you can try at home!

Are you ready?!



BOOK INTRO/DISCUSSION PAGE

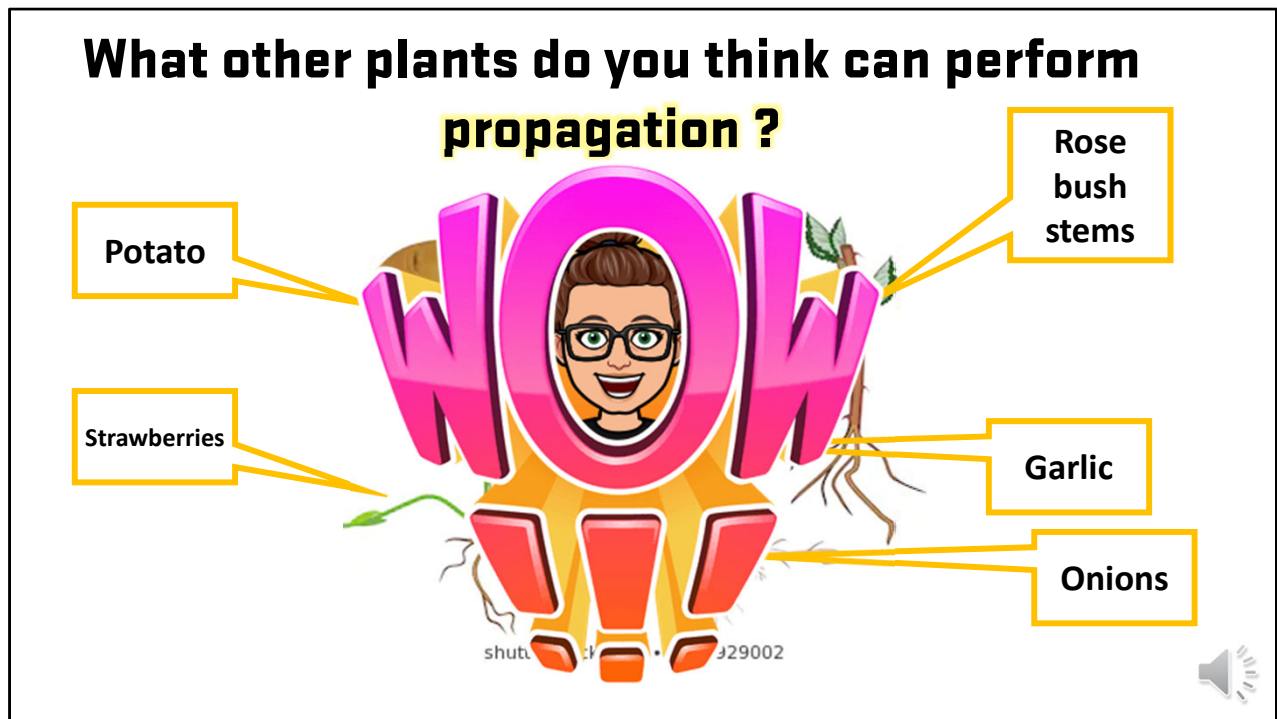
Here it is: “From Eye to Potato” by Ellen Weiss. This is a fantastic book I like to share with all of my students. Have you read this book? If not, Let’s stop here and read it! If you have already read this book, lets keep learning!

*****TEACHERS NOTE:** You can check this book and/or lesson kit out by contacting your Klamath County’s extension office’s SNAP-Ed program. The books can be delivered with or without your classroom kit prior to the lesson date. An OSU educator will set up a time to pick up the book and/or lesson kit after the lesson date. Please pause here to read the book to students. If you have already read the book, move on to the next slide for discussion.



What a great book! Who knew potatoes could be so cool? Did you see how potatoes can grow new plants from eyes that form on the potato's skin. Sometimes the eye sprouts on the whole potato like this! These potatoes are no longer good to eat but they are good for what? Yes! Planting! These are called seed potatoes! Once the potatoes grow eyes, they are cut up and stored to be planted later.

As you know, most plants grow from seeds but many can also be grown from bulbs, tubers or stem cuttings. This is called Vegetative propagation! Our first vocabulary word! Vegetative propagation means when plants grow from bulbs (like garlic and onions), tubers (like potatoes!) or stem cuttings (rose bushes). Not from seeds.

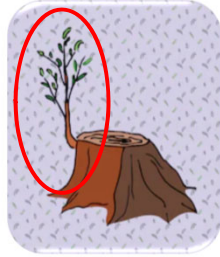


What other plants can you think of that can perform propagation? I'll give you a minute to guess.

*****Teacher note:** Stop here and allow students to guess. Up next I will show more examples of propagation.

Great job guessing! There are several plants that can perform propagation. We know about the potato. Strawberries propagate new plants when the main plant is done giving fruit. Garlic and onions! Even stems you cut from a rose bush can grow a new plant from that single stem! WOW, plants are awesome.

Regeneration: Plants have the ability to regrow lost or damaged body parts.

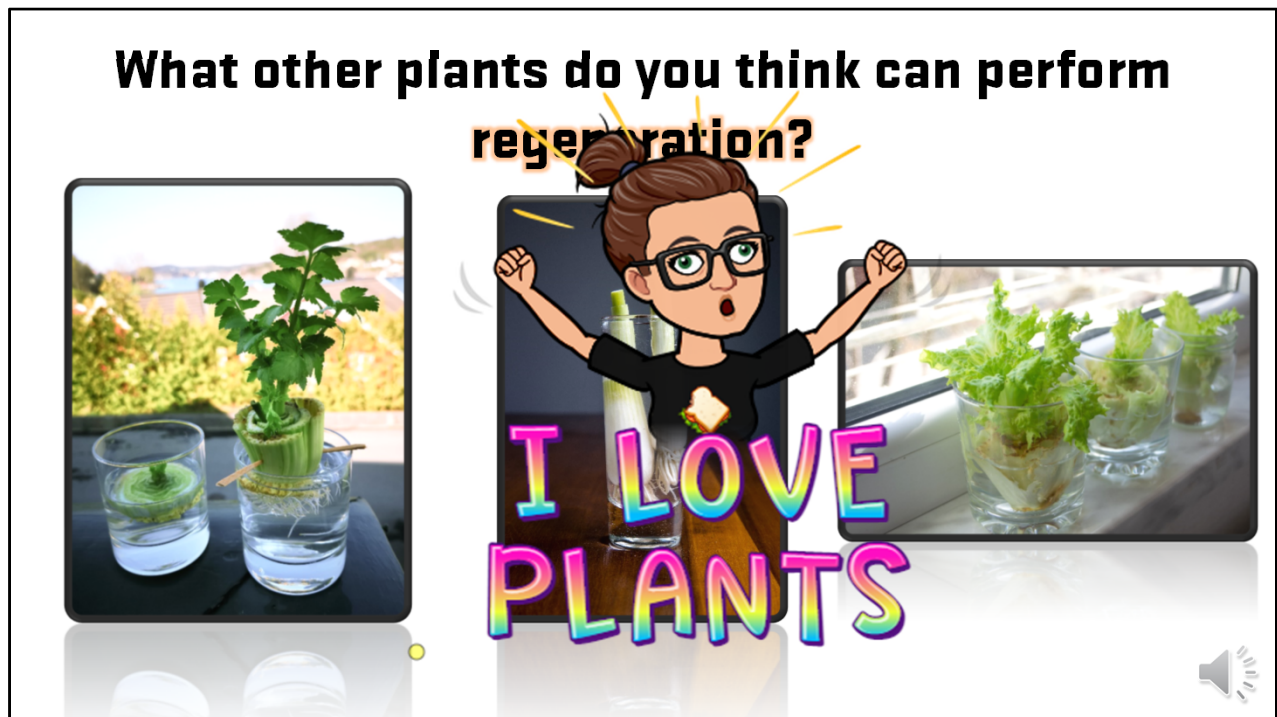


STUMP



Our next vocabulary word is regeneration! The word regeneration means: plants have the ability to regrow lost or damaged body parts. For example, after a tree is cut down, there is only a stump. Over time, shoots often grow from the stump! With water from nature and food from the soil, the tree will grow eventually grow into a new, healthy tree.

*****Teacher note: Please stop here if you would like to discuss the definition of regeneration further.**



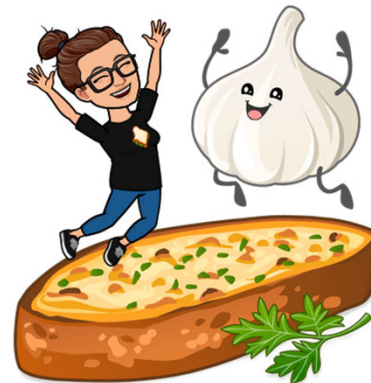
What other plants can you think of that can perform regeneration? I'll give you a minute to guess.

*****Teacher note:** Stop here and allow students to guess. Up next I will show more example of regeneration.

Great guesses! There are several plants that can regenerate from lost or damaged parts. There is celery. You can use the bottom end that is cut off when preparing it. Green onions, you use the small white ends with the little roots that are cut off. There is even lettuce. Instead of throwing the bottom of the lettuce head away after you cut them, throw them in some water and see if they grow! I love plants! Don't you?

Propagation Experiment Activity!

GARLIC!



ACTIVITY INTRO PAGE

Now, we are going to do a Propagation experiment with...Garlic!

*****TEACHER NOTE:** You can request to check out a lesson activity kit from Klamath County OSU extension office.

If you have not received a kit. Check out the Alternate activity section of Supporting Lesson Materials on this lessons webpage.

What you will need:

3 cloves of garlic

1 plastic cup

water

My Propagation Journal

Name: _____

WHAT YOU WILL NEED (SUPPLY PAGE)

What you will need:

3 gloves of garlic (skin on, do not peel the garlic)

1 plastic cup

Some water – you will only need a small amount.

1 propagation journal.

*****TEACHER NOTE:** Pause here to ensure everyone has all materials and an adult present to complete activity.

*If you have not received a kit, please see the printable propagation journal on the lesson webpage. There are also alternate activities discussed in the teacher note on the next slide.



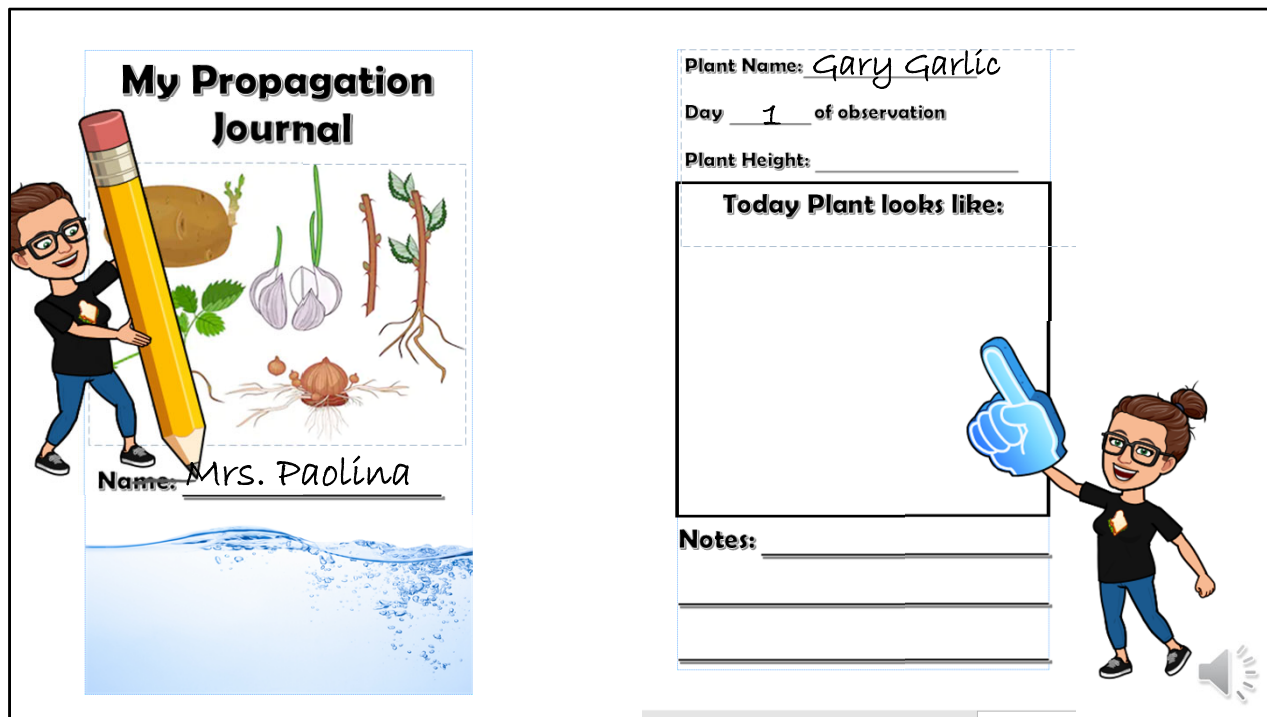
In this activity you have garlic cloves. These small pieces come from the head of garlic seen here.

1. Grab your cup and three garlic cloves.
2. To add excitement to our experiment, take one of your garlic cloves and peel all the skin off and set it to the side. This may take some time, don't worry peeling garlic can be hard when you aren't using it to cook! In order for the sprout to keep growing, it has to push through the skin. If we remove the skin the sprout has to push through, will it help the sprout out? We shall see!
3. Now grab another garlic clove and just peel back the top part of the skin where the sprout will come out, may this will help the clove sprout faster?
4. And for your last garlic clove, let's just leave it alone!
5. Next take your three cloves of garlic and place them into the small cup. Make sure the flat end seen on the picture here is facing down.

6. Then, fill the cup with water until three-fourths of the cloves are covered with water.
7. Do not cover with a lid and place in a safe spot, by a window if you can.
8. Check every day to make sure water level is the same. Fill with water as needed.

And wish them luck!

*****TEACHER NOTE:** You can complete this activity with the end of a bunch of lettuce, celery or individual green onions. The container does not matter, just check the water daily and allow the students to check progress at intervals that best fit your time schedule. You can see instructions for these under the supportive materials section on this lesson's webpage.

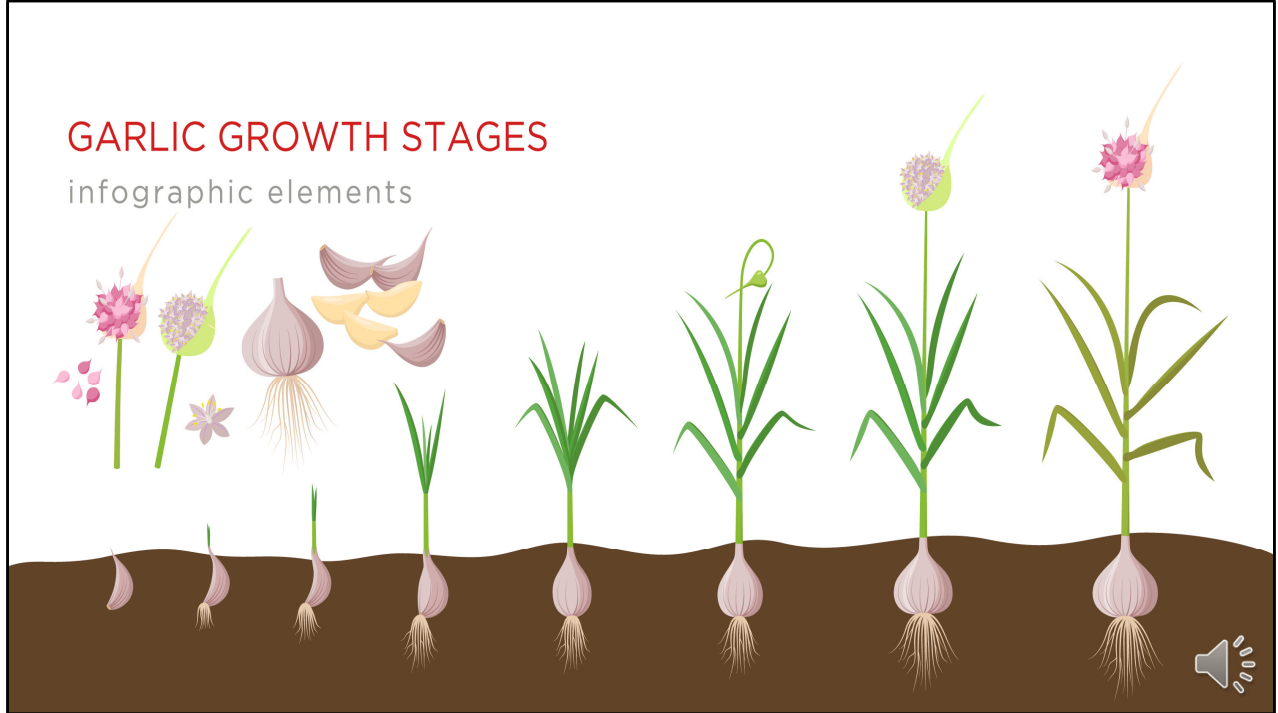


Next grab your propagation journal! Here you can write your name on the front. Now, open the journal up to the first page and write the name of your soon to be garlic plant. I named mine Gary Garlic. On the next line you will write the observation day 1, because this is our first day observing our garlic. Here you can draw a picture of how your garlic looks. Finally, you can use the notes section to write a description of your garlic. For example, three cloves, no sprouts, water is clear and covers $\frac{3}{4}$ of the cloves. Please do not forget to check your garlic's water daily and refill as needed. You will need to come back to observe and journal on your garlic's progress. Your teacher will instruct you on how often you are going to observe and journal on your garlic plants progress.

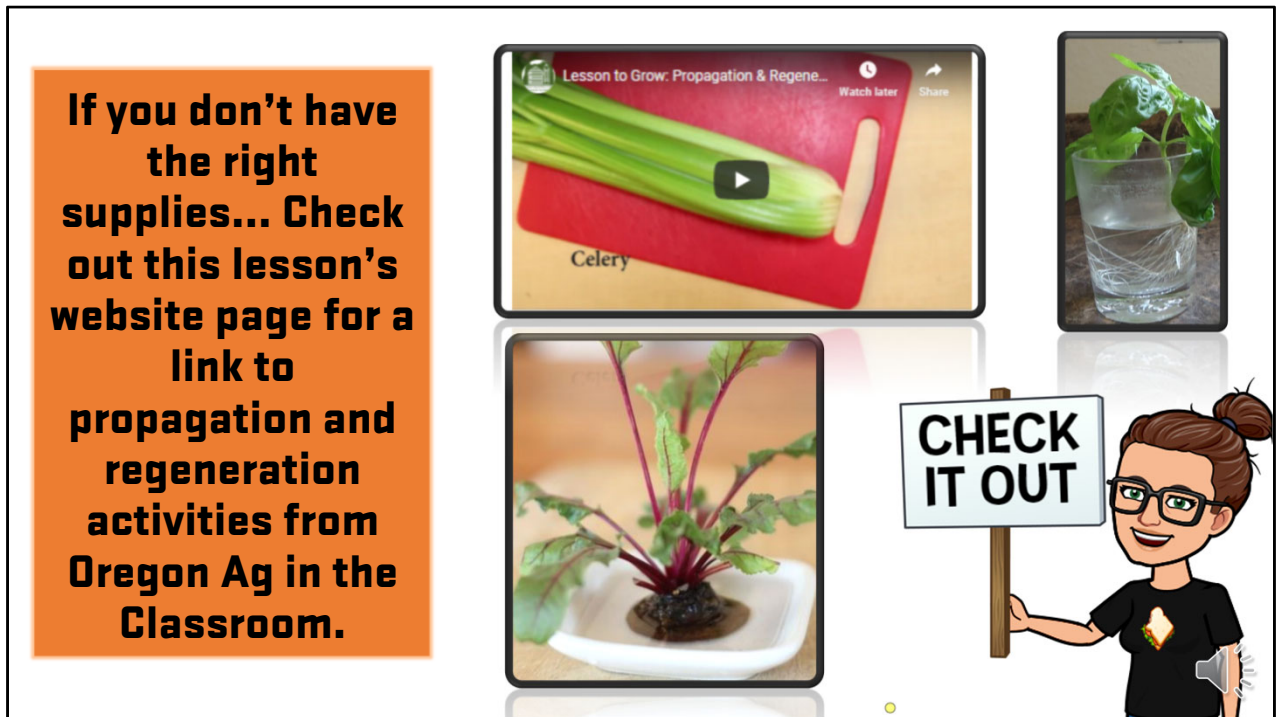
*****TEACHER NOTE:** If you would like, have the students come up with a hypothesis and write it in the notes section. Feel free to pause after each step to ensure students are following along. You can also pause for discussion at anytime throughout this video.

GARLIC GROWTH STAGES

infographic elements



If you choose, once your garlic plant sprouts you can plant your garlic in the ground at school or at your home! It is best to plant your garlic in the fall (September – November). Make a hole in well drained soil that is 2 inches deep and 4 inches apart. Place the clove root side down and cover. Make sure to water when the soil appears dry or is sandy. The garlic should be ready to harvest by June! The only way to know is to pull it out of the soil and check!

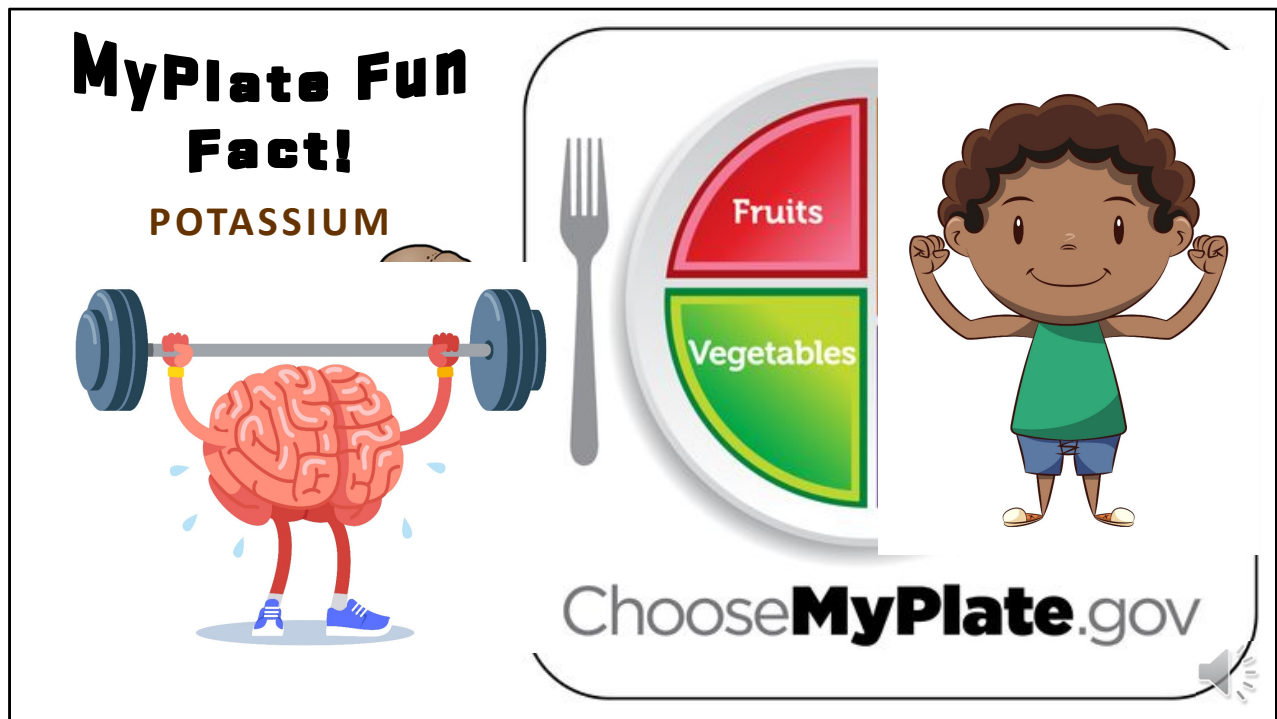


ALTERNATE ACTIVITY PAGE

If you don't have the right supplies...Check out this lesson's webpage for a link to

*****TEACHER NOTE:** If you have not received a kit, please see Oregon Ag in the Classroom for other propagation and regeneration activities or contact our office through the webpage to request a kit!

<https://oregonaitc.org/lessonplan/propagation-regeneration-in-plants/>



FUN FACT – MYPLATE

Now it is time for MYPLATE FUN FACTS! Did you know potatoes belong to the vegetable group? They are the root part of a plant! Potatoes are full of an important nutrient call potassium. Potassium is important for our healthy brain and muscles!



MY FARMER FUN FACT – Oregon grown
Up next FARMER FUN FACTS!

This is our Oregon map. Oregon is known for its potato farms. Oregon has one of the highest yield per acre of potatoes in the world at 53,000 pounds of potatoes per acre! That means 1 acre in Oregon can produce 53,00 pounds of potatoes! Did you know, In Klamath County potatoes are one of the main crops grown?

Try It! Cheesy Potato Soup

Ingredients

- 1 medium onion, Chopped (About 1 cup)
- ¼ cup celery, chopped
- 1 teaspoon oil
- 2 cups potatoes, peeled and diced bit size
- 2 cups chicken broth
- ¼ teaspoon pepper
- 3 tablespoons cornstarch
- 1 ½ cups nonfat or 1% milk, divided
- ¾ cup (3 ounces) cheddar cheese, shredded
- 1 tablespoon bacon bits or 1 slice bacon, cooked and crumbled



Directions

- Wash your hands
- In a large saucepan over medium-high heat, sauté onions and celery in oil until onions are clear.
- Add the potatoes, broth, and pepper. Bring to a boil. Reduce heat; cover and simmer until the potatoes are tender, 15 to 25 minutes.
- In a small bowl, stir together cornstarch and ¼ cup of milk until smooth. Add remaining milk. Stir into the potato mixture.
- Cook and stir until thickened and heated through, about 5 minutes. Do not boil.
- Remove from heat. Stir in cheese until melted. Top with bacon bits. Serve warm.
- Refrigerate leftovers within 2 hours.



Now for our recipe: Let's see if you want to try it!

Today's recipe is cheesy potato soup you can try with your people at home! Remember, your tongue is growing and changing all the time just like you. You never know when you might like something new. So give this recipe a try.

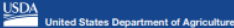

*****TEACHER NOTE:** If you have not already received the recipe handout. You can find a printable version on our website located on this lesson webpage under supporting materials.

See you next time!



Well students, that was our lesson for the day. Thank you for learning with me in our online Oregon Grown classroom. See you next time!

*****TEACHER NOTE:** After this lesson, please ensure students complete post assessment exit ticket. You can find the link on our website located on this lesson webpage under main lesson materials. This is how we are collecting data on how many students we are reaching and their understanding of our lessons. It is two questions, multiple choice/true or false.

AND JUSTICE FOR ALL

In accordance with Federal law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, this institution is prohibited from discriminating on the basis of race, color, national origin, sex, religious creed, disability, age, political beliefs, or reprisal or retaliation for prior civil rights activity.

To file a program discrimination complaint, a complainant should complete a Form AD-3027, USDA Program Discrimination Complaint Form, which can be obtained online at www.usda.gov/sites/default/files/documents/usda-program-discrimination-complaint-form.pdf, from any USDA office, by calling (866) 632-9992, or by writing a letter addressed to USDA.

The letter must contain the complainant's name, address, telephone number and a written description of the alleged discriminatory action in sufficient detail to inform the Assistant Secretary for Civil Rights (ASCR) about the nature and date of an alleged civil rights violation. The completed AD-3027 form or letter must be submitted to USDA by:

mail:
U.S. Department of Agriculture
Office of the Assistant Secretary for Civil Rights
1400 Independence Avenue, SW
Washington, D.C. 20250-9410; or

fax:
(833) 256-1665 or (202) 690-7442;

email:
program.intake@usda.gov.

This institution is an equal opportunity provider.

Conforme a la ley federal y las políticas y regulaciones de derechos civiles del Departamento de Agricultura de los Estados Unidos (USDA), esta institución tiene prohibido discriminar por motivos de raza, color, origen nacional, sexo, credo religioso, discapacidad, edad, creencias políticas, venganza o represalia por actividades realizadas en el pasado relacionadas con los derechos civiles.

Para presentar una queja por discriminación en el programa, el reclamante debe completar un formulario AD-3027, Formulario de queja por discriminación del programa del USDA, que se puede obtener en línea, en www.usda.gov/sites/default/files/documents/usda-program-discrimination-complaint-form.pdf, en cualquier oficina del USDA, llamando al (866) 632-9992, o escribiendo una carta dirigida al USDA. La carta debe contener el nombre, la dirección y el número de teléfono del reclamante, y una descripción escrita de la supuesta acción discriminatoria con suficiente detalle para informar al Subsecretario de Derechos Civiles (ASCR, por sus siglas en inglés) sobre la naturaleza y la fecha de la presunta violación de los derechos civiles. La carta o el formulario AD-3027 completado debe enviarse al USDA por medio de:

correo postal:
U.S. Department of Agriculture
Office of the Assistant Secretary for Civil Rights
1400 Independence Avenue, SW
Washington, D.C. 20250-9410; o'

fax:
(833) 256-1665 o' (202) 690-7442;

correo electrónico:
program.intake@usda.gov.

Esta institución ofrece igualdad de oportunidades.

Form AD-475-S SNAP and FOPIR Poster Revised September 2019 Afiche del Formulario AD-475-S SNAP y FOPIR / Revisado Septiembre 2019

*****TEACHER NOTE:** If program delivered in a non-school setting, you must read the script below

Oregon State University's Klamath County Extension Service would like to take a moment to share with you the And Justice For All poster, something we display when we are teaching. It provides non-discrimination information stating that our institution is prohibited from discriminating in accordance with civil rights regulations and policies. For more information see this link -> <https://www.fns.usda.gov/cr/and-justice-all-posters-guidance-and-translations>
This program is partially funded USDA's Supplemental Nutrition Assistance Program.

Credits Slide (1 of 1)



Oregon State University
Extension Service



Project funded, in part, by Oregon Department of Ed Farm to School & School Garden Grant

This material was funded by USDA's Supplemental Nutrition Assistance Program - SNAP. For information on nutrition assistance through Oregon SNAP, contact Oregon SafeNet at 211. USDA is an equal opportunity provider and employer. Oregon State University, Oregon State University Extension Service is an Equal Opportunity Provider and Employer.

Photos Source: Photos Source: FoodHero.org & purchased from Shutterstock, Inc. Empire State Building 350 fifth avenue, 21st Floor New York, NY 10118 (invoice available per request)

Farmer fun facts by: <https://oregonfb.org/2018agweek/> & <https://www.oregon.gov/ode/students-and-family/childnutrition/F2S/Pages/OregonHarvestforSchools.aspx>

Activity Source: Oregon Agriculture in the Classroom Foundation



Oregon Agriculture in the
Classroom Foundation

