

OSU EXTENSION SERVICE

Klamath Basin Research & Extension

Grow It, Cook It, Like It

Farm to School and Nutrition Education Program

What do plants need to grow?



Oregon State
University

Getting to Know You

Q: What is your favorite food to grow?

Janah Moorer, 541-238-5353
moorerj@oregonstate.edu

My favorite plant to grow is strawberries because I love watching them turn from green to red- and they taste so good!

Here's a picture of me at a WIC event. I'm introducing how to grow peas in a bag!



Growing Plants

Today we're going to learn about what plants need to grow!

Q: What do you need to grow?

You need lots of different things like food and water to grow! Plants are just like humans; they need certain things to grow too.



Oregon State University
Extension Service

Q: What would happen to a plant if it didn't get what it needed to grow?

Here are a few words we're going to use in our lesson:

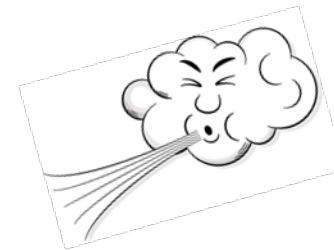
Air



Water



Sun



Soil

Q: What are we going to do?

We are going to make a “growing bracelet!”

Q: What tools will we need?

- Pipe Cleaner
- One red, blue, green, brown, clear, and yellow bead



Each different colored bead represents what a plant needs to live, and pipe-cleaner is the plant!



Oregon State University
Extension Service

Making Our Bracelets

Let's start with our yellow bead, this bead represents the sun!

The sun is 1,364,000,000 football field lengths away? That's a lot of football fields!

Next is our brown bead, this bead represents the soil!

Did you know that soil is a living system? There are more than 70,000 types of soil in the United States.

Our next bead is the blue bead, this bead represents water!

Did you know that water covers about 71% of Earth's surface?

The green bead represents the plant or your choice. It can be a tree, crop, or anything!

Did you know there are over 1.5 million species of plants in the world?

The red bead represents the care and nurturing plants need to live and grow.

Without proper care plants may die or grow wild.

The next bead is the clear bead. The clear bead represents air.

Did you know air takes up space? Air also sends pressure in every direction, at the same time!

Sun, Soil, Water, Air!

So now that we know what a plant needs to grow, let's practice!

Here are fun lyrics to sing with your family:

Sun soil water and air x2

Everything you eat! x2

Everything you wear! x2

Everything comes from x4

Sun soil water and air! x4



Listen to the wonderful
Banana Slug Band on
YouTube!

https://www.youtube.com/watch?v=vEYhs8m_qo4

What did you learn?

Vocabulary From This Lesson:

1. Sun- Plants use energy from the sun to grow. Without the sun, there would be no plants, animals, or humans!
2. Soil- The soil delivers very important nutrients to the plant. Nutrients are like food for plants!
3. Water- Water keeps the plants from drying up and carries nutrients through the plant.
4. Air- Plants need air to breathe!



Evaluation

What things do you need to be healthy that a plant also needs?

Continue making your plant journals!

As your plants begin to sprout, measure them every day, and write down how much they grow.

You can draw and name your plants too!

Keeping a journal is a fun and easy way to watch your plants grow.





Thank you! What's Next?



Karen Hottman & Janah Moorer
Family & Community Health
Karen.Hottman@oregonstate.edu



Oregon State University
Klamath Basin Research
and Extension Center

References, Learning Objectives & Science Standards

Photos: use royalty free: <https://unsplash.com/> and <https://pixabay.com/> and OSU photo archives <https://employee.extension.oregonstate.edu/eesc/eesc-photo-archives> and google images "labeled for noncommercial use"

Overall Program Learning Objectives:

1. Label the life cycle of plants/animals and describe the role humans have
2. Safely prepare a recipe with ingredients from food grown in Oregon
3. Describe what a plant needs to grow and how humans can assist
4. Identify where and how food is grown in Klamath/Oregon
5. Identify an Oregon grown food and taste it.

NGSS Standards Used in Garden Education 3rd Grade:

[3-LS1-1 From molecules to Organisms: Structures and Processes](#)

Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.

[3-LS3-1 Heredity: Inheritance and Variation of Traits](#)

Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms.

[3-LS4-3 Biological Evolution: Unity and Diversity](#)

Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.

[3-LS4-4 Biological Evolution: Unity and Diversity](#)

Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.

[3-ESS2-1 Earth's Systems](#)

Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.

Engineering Design 3-5

[3-5-ETS1-1 Engineering Design](#)

Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.

[3-5-ETS1-2 Engineering Design](#)

Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.

[3-5-ETS1-3 Engineering Design](#)

Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.