

Greenhouses

0:05

Hello and welcome to the Kentucky 4-H Virtual Experience. My name is Joey Barnard and I am the Extension Specialist for 4-H Camping. Today, we'll be visiting West Kentucky 4-H Camp where Nicole Blanzly, the Camp Director, will be sharing with us a lesson about greenhouses.

0:22

Welcome to our greenhouse. I'm Nicole Blanzly, Camp Director of the University of Kentucky's West Kentucky 4-H Camp. I'm standing inside this awesome structure that we use to grow plants in the early spring or late in the fall when it's way too cold for those plants to live outside.

0:42

Our greenhouse stays warm in the wintertime because sunlight passes through the transparent ceiling and walls and the dark colored soil of our leaves and plants converts that light energy into energy in the form of heat.

0:57

The sun produces white light. When light waves strike an object, some of that energy is absorbed and some of that energy is reflected away. White light is made up of all the colors of the rainbow: red, orange, yellow, green, blue, indigo, and violet. The colors we see are the parts of the rainbow or the color spectrum that are not absorbed by an object.

1:23

My jacket is green because it absorbs all the colors except for green. You might have noticed that on a warm and sunny day, dark surfaces like the gaga ball mats are hotter than lighter colored surfaces like the pool deck and lighter colored clothing is cooler than darker colored clothing. This is because lighter colors, like white, reflect more of the light spectrum while darker colors, like black, absorb more colors of the light spectrum.

1:53

Energy in the form of light passes through the plastic panels on our greenhouse very easily. Energy in the form of heat does not pass through the panels as easily and as a result get trapped in the greenhouse. As the sun sets, the air's temperature around the greenhouse starts to drop and the plastic on our greenhouse traps the heat and keeps the interior of our greenhouse warm; protecting the plants from the cold and the frost.

2:21

Thanks to our greenhouse, we will be able to have fresh veggies and greens by the time our campers arrive in June. Our greenhouse will give us 3 to 4 weeks of a head start.

2:35

Today we are going to make min greenhouses with items you can find in your house. Here, I have a couple different containers. You can get creative with the items that you choose, but remember the walls and the top should be semi-transparent so that the sunlight can get in to warm up your plants.

2:53

You will also need some scissors or box cutter. You're going to need some seeds, some potting soil, a cup or spray bottle filled with water, some duct tape, and a permanent marker.

3:12

The first thing we're going to do is tap holes in the bottom of the container. These holes will provide drainage for extra water and prevent a buildup of minerals like salt and other solutes that could be harmful to your plants.

3:45

If your container of choice does not have a lid, we're going to make one. So, you might ask an adult to help you with this step. Go here just below the handle and cut all the way around. And I'm going to a little hinge. Alright so now we have holes in the bottom of our containers. The next step is to add our potting mix. And we're to add, but no less than, two inches per container.

4:52

Alright we're going to add some moisture to our soil. Now we're ready to plant our seeds. I'm going to be planting some lettuce and some peas. Our packet is going to tell us how deep to plant our seeds, but generally, the size of the seed will help determine the depth that we need to plant it. A bigger seed, like these peas, will be planted deeper than the smaller seeds, like the lettuce seeds.

5:55

Now we're going to close the lids on our mini greenhouses and use the tape to keep them closed. We'll use the permanent marker to label our greenhouses and this will help us remember what we planted and on what day we planted it.

6:26

We want our greenhouses in a sunny place so that the sunlight will be absorbed by the dark soil. Warmth and moisture are important in the process of germination. It won't be long and we'll be enjoying pea shoots and young lettuce grown from our very own min greenhouses.

6:45

Thank you so much for joining me in the West Kentucky 4-H Camp Grows Garden. If you give this project a try, we would love to see your creativity. What containers will you transform into a greenhouse? And what are some of your favorite fruits and vegetables to grow and eat?