



"Growing" Our Education

Grades 6-8

Teacher: Ashley Roberts

Date: 08/19/2019

Overview & Purpose

Provide the lesson title and a short (3-4 line) purpose statement expressing your vision for this lesson.

The purpose of this lesson is to walk students through the process of growing, harvesting, and preparing vegetables with the continuation of selling produce and meals using their produce if time allows.

Objectives

List your 3-5 objectives. Specify the new skills that the students will gain as a result of the lesson. What will students have learned or experienced by the end of the lesson?

1. Students will learn the process of growing edible plants from seed to fruit using indoor grow lights in the classroom to watch the process closely. This will allow them to identify the stages of growth.
2. Students will be able to identify ripe edibles and learn how to properly harvest them.

-
3. Students will learn proper food handling techniques to prepare their harvest in a variety of ways.

Materials Needed

What items do you need to complete this lesson? Please include items you requested in your project as well as anything else you used to bring this lesson to life.

1. Seeds
2. Soil
3. Growing medium
4. Grow lights
5. Business building books
6. Kitchen items- utensils, cutting boards, refrigeration, stove/oven, various pots and pans

Verification

What 3+ steps did you go through to make sure that your students understood the concepts you taught in your lesson?

1. Verbal checks will be one of the most used steps to ensure understanding.
2. Students will have short quizzes over several steps, including kitchen safety, before being able to participate in the various activities.
3. The final check will be a cumulative project at the end of the project to present their knowledge, prepare a recipe, and present their business plan to the class.

Activity

What activity did you take students through to reinforce the concepts you taught during your lesson?

Begin by introducing your students to the room and materials. Explain any necessary safety procedures. Gauge their prior knowledge of the plant life cycle by asking various questions such as "How many stages are in the life cycle of a plant?" And "Can anyone

list the five stages of the plant life cycle." This will gauge where to begin with your information. For our purposes, all students have completed more than one year of an agriculture class and have a good understanding of the concepts. Briefly review the stages using an online graphic or by making your own on chart paper.

*Possible assessment area. If your students are unfamiliar with the growing process, this would be a good place for a short assessment. These questions would depend on the prior knowledge of the students but could include things like listing the growing stages, what the purpose of parts of the plants, and how germination occurs.

Due to the length of the process of growing plants, the following steps will not take place on consecutive days.

Stage One - Prepare the area for growing.

Begin by setting up your area with your equipment. Ensure your plants have enough light either by window or the grow lights and space. Although seedlings can be put in small areas, if you do not have an outdoor area to move to, your grown plants will also be taking up this space, so keep this in mind as you plant.

Allow the students to fill your preferred containers with soil about half way and place a seed inside. Cover the seed with soil and water. Place the container in the growing area.

Over the next few weeks, have students take turns watering and keeping track of the plants. Some will sprout rather quickly, others will take a little more time. One enrichment activity that could be added would be to map out the plants and the dates of sprouts, flowering, and production for each type of plant. As the plants begin to produce, allow students to taste the various fruits of their labor.

Stage Two - (Optional)

In this phase of the lesson, you will use the fruits from stage one to make various recipes using the produce. These recipes should be chosen by the students of your class to ensure their buy-in in the project. If you are requesting they produce and eat something they do not like or are not interested in, you will lose participation. For this

example, my students have chosen to make spaghetti sauce with original recipe from Food.com <https://www.food.com/recipe/fresh-tomato-spaghetti-sauce-10837>

Since we have shorter class periods, we will make this in two sessions. Day one we will prep all the ingredients. If your students have not been taught kitchen safety, a unit on it could easily be inserted here. Be sure to talk about sanitary procedures and proper techniques if necessary. Have one student chopping and peeling tomatoes, one on onions, one on garlic and one on basil. If this is the first time in the kitchen, this process will take most of the hour. If this is not the first time, students may be able to complete the prep and begin the cooking process before the hour is over. Don't forget to allow time for proper clean up. Day two-we will begin cooking the ingredients. Have them follow the steps of the recipe closely. Because this recipe calls for a longer cook time than what we have in class, I will continue to monitor the sauce after the students have moved on to their next class. Package the sauce appropriately for the next day. When the kids return to class, allow them to warm up their sauce for tasting. This can be done on its own, or over noodles.

Stage Three- Turning the fruits into a product

I have chosen to use "Start-Up Essentials" By Rachael Thompson as a guide, but you could use any start up book or the internet as your guide.

After the students have seen the growing and production process, pose the question- "Now, how do we turn the produce into a business?" You will receive many possibilities that you may want to pursue, but for the purpose of this lesson, we will be doing meals. Day one will be spent reading and discussing the first two chapters of "Start-Up Essentials" aloud. This will allow the students to continue the brainstorming process as well as de-bunking a few common myths associated with starting a business. Day three, tackle chapter three- "Who, what, when, where and how." Take a day or two to explore business ideas and narrow down the idea the class decides on. From this point they will use this idea to fuel the rest of your project. Chapters 4 and 5 should be discussed in detail- pointing out that there is not one right way to begin. Have the kids brainstorm various ideas on these topics and fill a whiteboard with them of for a visual representation of the vast possibilities. Due to the age of my students, we will just briefly scan over chapters 6-8 dealing with taxes, funding, and professional help. You could easily turn these three chapters into a full unit if you so desired. Chapter 9- Profits and pricing- is a big discussion point. After reading the chapter aloud, discuss the start

up cost for the garden you grew in the classroom (using rounded numbers for ease of calculation). Have them calculate how much they would need to sell to make a profit in total, how much each plant would need to sell to make a profit, and pricing per unit.

