

GROW YOUR PALS PROGRAM GUIDE



THE NATIONAL FFA MENTORING PROGRAM

Sponsored by



LESSON 1.15

Seed Detective

Unit:
PLANTS AND GARDENING

PRECEPTS

- F. Continuous Improvement
- F5. Acquire new knowledge

NATIONAL STANDARDS

- PS.01.02.06.a. Explain the functions and components of seeds and fruits.
- NL-ENG.K-12.3 – Evaluation Strategies
- NL-ENG.K-12.5 – Communication Strategies
- NS.K-4.3 Life Science



Lesson Type:
One-on-One

STUDENT LEARNING OBJECTIVES

As a result of this lesson, the student will ...

- Identify two *seeds* found outdoors.
- Identify two *seeds* commonly found in a kitchen.





TIME

Instruction time for this lesson: **10-15 minutes.**



RESOURCES

National FFA Organization. (2003). LifeKnowledge Precepts and Signs of Success.



TOOLS, EQUIPMENT AND SUPPLIES

- ✓ Plastic bag for collecting *seeds*
- ✓ Two common foods with *seeds* (example: apple, orange, green beans, squash, pumpkin)
- ✓ One seed from each of two common foods
- ✓ One seed from each of two common outdoor plants (example: walnut, acorn, flower *seeds*, grass seed)
- ✓ Nearby (two to three minute maximum walk) outdoor area where *seeds* can be found, such as a flower or vegetable garden, or an area with trees.



KEY TERMS

The following term is presented in this lesson and appears in ***bold italics***:

Seeds



CONTENT OUTLINE

Objective 1. |

- I. Identify seed characteristics
 - A. Look for matching *seeds* outdoors
- II. Identify common foods with *seeds*
 - A. Find foods with matching *seeds*

INTEREST APPROACH

Prepare two plastic bags, such as a sealable sandwich bag, by labeling one “**Seeds Found in Kitchen**” and the other “**Seeds Found Outdoors**.” Place one seed from two different foods (example: apple seed and orange seed) in the bag labeled for kitchen. In the outdoor bag, place one seed from two different plants (example: marigold seed, zinnia seed, walnut, acorn, etc.). Have the two bags of **seeds** on the table when you meet with your mentee.



Guess what? I have a mystery to solve, and I need your help. These two bags of **seeds** were left on my table. The only thing I know about them is that two **seeds** can be found in most kitchens and the other two **seeds** are found outside. We will need to do some detective work to find out where these **seeds** come from. Let’s examine them first and see if you can guess what they are.

Allow your mentee to guess what the **seeds** are. If they can’t guess the **seeds**, go on a seed hunt to find the plant or food that produced them. If they do correctly identify the seed, have examples of the food (such as an apple) available to cut open to verify they are correct. If the mentee identifies the outside **seeds** (such as a walnut), go outside with them to find the type of plant that produced the seed.

SUMMARY OF CONTENT AND TEACHING STRATEGIES

OBJECTIVE 1. | Identify two **seeds** found outdoors.



- I. Identify **seeds** characteristics
 - A. Look for matching **seeds** outdoors

If the mentee did not identify the **seeds**, go on a seed hunt outside. Once outside, use the Descartes e-Moment® and ask mentee, “What do we know about this seed? What do we think we know about this seed? What don’t we know about this seed?”



We weren’t able to identify the **seeds** by just looking at them. Let’s go outside and see if we can find similar **seeds**.

Proceed outside with mentee. Once outside ask the following questions:



What do we know about the outside **seeds**?

*Wait for response. If the mentee doesn't have an answer, help them out by describing the seed. For example. "We know the **seeds** are tan and flat with a point. So let's look for flat, tan **seeds**.)"*



What do we think we know about these **seeds**?

*It is very possible the mentee may have trouble with this. Give them hints. For example: "This seed reminds me of some I saw in a garden once. Hmm, do you see a garden anywhere?" The hint you give will depend on the type of **seeds** you have.*



What don't we know about these **seeds**?

The answer may be as simple as "We don't know where they come from."



Let's begin looking. We know the **seeds** came from outdoors and we think it might have come from a garden.

*(The hint where they might have come from depends on the **seeds** you have)
Provide small hints as needed to guide your mentee to the location where they can find the **seeds**. Instruct them to collect a matching seed for each seed already in the bag. Make sure, also, to identify where the seed is coming from (tree, flower, garden vegetable, etc.). Return to area where you can find two **seeds** commonly found in kitchens.*



Wow! You did a great job finding the source of those **seeds**. Now we know what the **seeds** are and what plants produce them. Let's go back inside and find the source of the other two **seeds**.

OBJECTIVE 2. | Identify two *seeds* commonly found in a kitchen.



- I. Identify common foods with *seeds*
 - A. Find foods with matching *seeds*

*Elicit ideas from mentee related to common foods that have **seeds** in them.*



Now that we have identified the outdoor *seeds*, let's see if we can identify the indoor *seeds*.

What are foods that we eat which have *seeds* in them?

*Allow mentee a few moments to list things they have eaten that have **seeds**. If the mentee guesses one of a food that contains the seed you are looking for, cut that food apart in a manner that will expose the seed. If mentee does not say the food source related to the seed, provide hints for them.*



You listed an orange as one of the foods that has seed, and that is correct. They do have *seeds*. I have an orange. We will cut it open and see if it has a seed like we are looking for. *(Cut orange open and expose **seeds**)*. You were right! It is an orange seed!

or, if mentee has not said the correct food:



You have done a good job listing foods with *seeds*. However, I know what all those *seeds* look like and the seed we are trying to find is not one of those foods. There is another food I know of that has *seeds*. It is a grapefruit. Do you think it might have a seed like this? Let's find out.



*Cut the food open and expose the **seeds**.* Oh look! We guessed right. It is a grapefruit seed. Good job. We make great seed detectives!



REVIEW / SUMMARY

*Review the four **seeds** by holding each seed up and asking the mentee to identify the plant it comes from.*



APPLICATION

Large Group Idea

*Have each student plant a seed that is easy to grow in a small cup. Suggested **seeds** are marigolds, corn or beans.*



Continued Discussion

*Instruct student to collect two or three new **seeds** from their home or yard to bring for discussion next time.*