

WINDOW WHEATGRASS

LESSON SNAPSHOT

RELATED “MY AMERICAN FARM” GAME

“Load the Lunchbox” available at www.myamericanfarm.org

GRADE LEVELS

- Pre-K - Kindergarten

CONTENT AREAS

- Science
- Math

STANDARDS

K-ESS3-1. Use a model to represent the relationship between the needs of different plants and animals and the places they live. *Next Generation Science Standards*

K.MD.1 Describe and compare measurable data. *Common Core State Standards for Mathematics*

OBJECTIVES

By the end of this activity, the students will be able to:

- Define agriculture
- Identify plant growth needs (water, nutrients, sun)
- Make the connection between agriculture and food

MATERIALS

- Whiteboard and markers
- “Teaching Winter Wheat” My American Farm eComic (Projector or print copy)
- 2 Seed trays or shallow containers
- Potting soil
- Watering can or spray bottle
- Wheat seed
- Paper plate or plastic bag
- Poster paper
- Ruler
- (Optional) “How Did That Get in my Lunchbox” by

Chris Butterworth

- (Optional) Computers and internet access – 1 per student or pair *This is only necessary if you wish to do the My American Farm game in class.
- (Optional) Headphones - 1 per student *This is only necessary if you wish to do the game individually in class.

PREPARATION

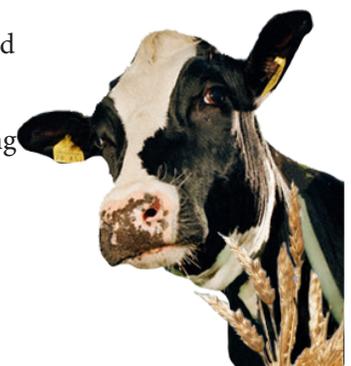
- Visit My American Farm online (www.myamericanfarm.org) to preview the “Load the Lunchbox” game.
- Review the lesson. There are a couple of places where you will see an asterisk (*). These are areas where you can choose to modify the lesson. To determine if you need to make these modifications, ask:
 - » How much time would you like to allocate for the activity?
 - » How would you like students to demonstrate what they’ve learned?

INTRODUCTION

SET CONTEXT FOR THE ACTIVITY

Step I: Introduce the term “Agriculture”

- Ask students who brought lunch to pull out their lunch bags/boxes and look inside.
- For students who will eat a school-provided lunch, share what is on today’s menu.
- Ask students to quickly share items they have in their lunch. Write the lunchbox items on the board in their food groups, but do not label or identify the food groups yet.
- After students have shared, ask students what each group has in common. Label groups as they identify. Help students identify groups which may be unfamiliar.
- Share with students that there is an industry called “agriculture” that gives us all of the things we need to survive, including food! Write the word “agriculture” on the whiteboard. Read the word out loud and ask students to repeat.
- Agriculture is a term





that encompasses all of the industries and processes involved in the production and delivery of food, fiber and fuel that humans need to survive and thrive.

BODY

MAIN CONTENT

Step 2: Wheat Comic Book

- Set context: *We depend on farmers and ranchers for the food we eat everyday. The things in our lunchbox all started, at one point, on a farm! Let's find out how wheat becomes bread by exploring a comic book!*
- Visit www.myamericanfarm.org/games and select "Load the Lunchbox". Click on the eComic that appears once the game is selected. You may choose to display this comic using a projector, or print and share with students.
- Read the comic aloud. Read the first page. On subsequent pages, ask students to predict what is going on by looking at the illustrations.

Step 3: Plant Seed Trays

- Set context: *Today we will create our very own miniature wheat farm for our class, as we explore what it takes to grow healthy plants that become nutritious food for me and you.*
- Let students observe wheat seeds by placing them on a paper plate or in a plastic bag.

*You may find wheat seeds at your local nursery, or you can order them online. Wheatgrass is a common health food product, so seeds are often readily available. Wheatgrass is the same plant that produces grains of wheat, it is just cut before grain heads form.

- Share with students that every slice of sandwich bread starts as a small seed!
- Ask students what plants need to grow. Listen for: sun, water and nutrients. Extension Note: Students often identify soil as a growth requirement. Soil is actually a way that plants get nutrients. If plants are provided nutrients in some other way (i.e. liquid fertilizer), many can grow in water. This is called hydroponics.



- Add potting soil to seed trays. Fill to approximately half way to the top of the tray.
- Have students sprinkle wheat seeds across the soil generously.

- Cover with soil and water with a watering can.
- Place one tray in a well-lit area. Place a second tray in an area that gets little light.
- Ask students to predict how these locations will affect seed growth.
- On a sheet of poster paper, recreate the following chart:

				
Date	Height	Notes	Height	Notes

- Water seeds regularly to keep soil moist, but not soggy.
- Record height weekly for the seed tray in the sun, and the seed tray that is not in the sun.
- As wheat begins to grow, you may wish to record data more often on your poster chart.

*You may wish to give students the responsibility to water and record observations.

Step 4: Play Game

- At this point you may elect to have students play "Load the Lunchbox", available at myamericanfarm.org. Students can work individually or in pairs.
- Inform students that they will be jumping into a fun game, in which they will learn more about agriculture by harvesting products from each important food group.

*You may choose to have students play this game before you arrive, after you have left, or at home with adult permission.

*The game is supported by audio. You may wish to secure headphones for students, or play the game as a class while displaying on a large screen.



WRAP UP

REVIEW, ASSESS, CHALLENGE

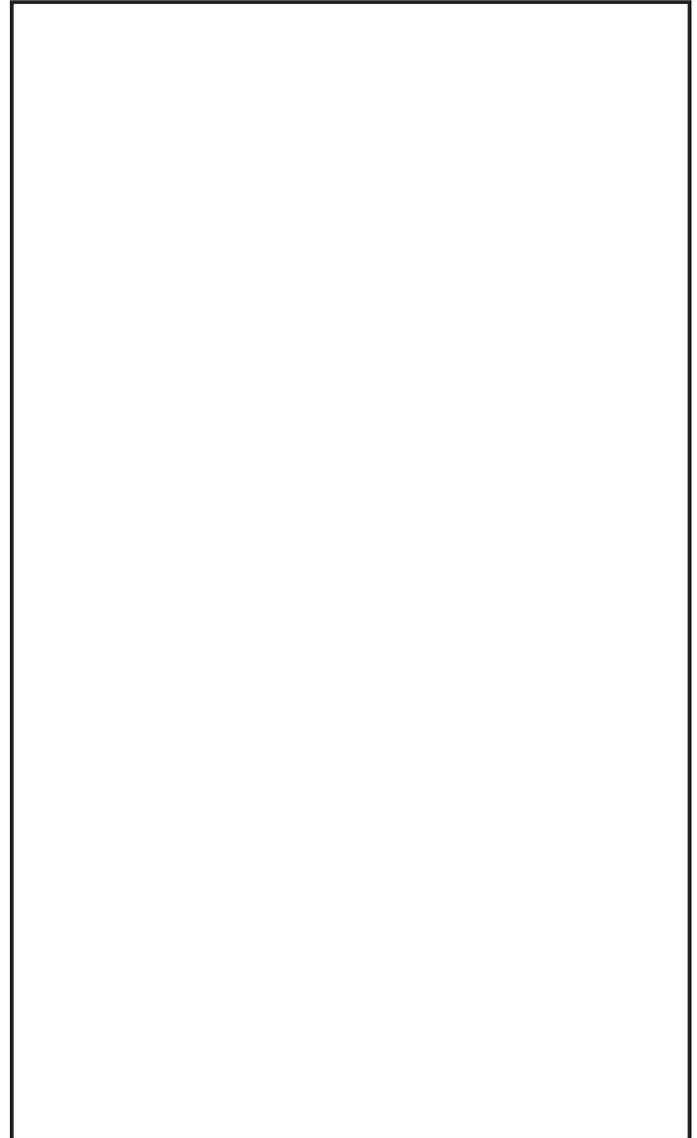
Step 5: What have you learned?

- Remind students that we are able to enjoy an abundance of healthy food because of the hard work of farmers and ranchers.
- Ask students to recall the three things plants need in order to survive (water, sun, nutrients/food).
- Teach students a hand gesture to go with each item: act out pouring water (water), hands above head in circle (sun), mimick eating (food)
- Challenge students to go home and teach their parents or other family members the hand gestures to remember the key components plants need to survive and thrive!

*To extend learning, visit www.choosemyplate.gov for more information on nutritious food choices.

*To add a literature component, read “How Did That Get in My Lunchbox” by Chris Butterworth.

TEACHING NOTES



FOUNDATION CONTACT INFORMATION

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