



SEASONALITY: EVERYTHING IN ITS OWN TIME

INTEGRATED SUBJECT(S): English Language Arts, Mathematics	
GRADE LEVELS: K-12	
LESSON TOPICS	
The environment and seasonality	
CURRICULAR CONNECTION + FOOD OBJECTIVES	
Students will practice reading and math skills while tasting produce that is in season locally and creating a unique recipe using seasonally available ingredients.	
CORE CONTENT STANDARDS/SKILLS <i>Potential Curricular Connections:</i>	PILOT LIGHT FOOD EDUCATION STANDARDS covered in lesson
<p>Common Core English Language Arts: Grades K-12 Informational Text: Key Ideas and Details (Standard 1) Grades K-12 Writing: Text Types and Purposes (Standard 2)</p> <p>Common Core Math: Grades K-5 Measurement and Data Grades 3-5 Number and Operations - Fractions</p>	<p>PLFS 2: Foods have sources and origins.</p> <p>PLFS 3: Food and the environment are interconnected.</p> <p>PLFS 5: Food impacts health.</p> <p>PLFS 6: We can make positive and informed food choices.</p>
RELEVANT VOCABULARY	
season, seasonality, interdependent, sustainable, eco-(as a root), farm-to-table, root, tuber, bean(as a category), brassica, citrus, segment, equal	
CLASSROOM/CURRICULUM ACTIVITIES THAT CONNECT TO THE FOOD EXPERIENCE <i>How the food experience connects to the curriculum:</i> <i>What activities will you do that lead up to and/or follow the food experience?</i> *grade bands are only suggestions- activities can be modified to fit multiple grade levels	
<p>Grades K-2:</p> <ul style="list-style-type: none"> ● Read <u>The Doorbell Rang</u> by Pat Hutchins. Discuss how the fractional pieces of something can be changed to fit the needs of a situation or group. ● Use the food rainbow to discuss how color matters - what you see on the plate, what you taste in your mouth and what you smell with your nose. Do certain foods have certain properties? 	



- Read The Vegetables We Eat by Gail Gibbons. Have students design a meal and describe what part of the meal contains vegetables/ fruits. Students could also create a vegetable color wheel.
- Read Oliver's Vegetables by Vivian French and make a list of the veggies students eat. Create a graph or data table from the list.

Grades 3-5:

- Read the book: Eating Fractions by Bruce McMillan. Students share different ways to share foods equally and foods that are already segmented (pizza slices, apples, oranges)
- Make fraction houses: students create a picture of a house using directions that are written with fractions.
 - There are 6 windows, $\frac{2}{6}$ of the windows have curtains. There are 15 flowers, $\frac{3}{15}$ of the flowers are red, $\frac{7}{15}$ of the flowers are blue and $\frac{5}{15}$ of the flowers are yellow.
- Use <https://www.choosemyplate.gov/> to discuss the current food recommendations. Have students decide what fraction of the plate should be fruits and vegetables
 - For example, it might be $\frac{1}{2}$ of the plate, but the fruit is smaller portion of the half on the plate. Discuss why that might be with students.
- Visit the school garden and discuss/read about what grows in Illinois in the Spring. Ask students the following questions:
 - What do these plants have in common?
 - How are they different than vegetables we eat in August (corn, tomatoes, cucumbers)?

Grades 6-8:

- Students can use fractions while adapting recipes for large groups (Math)
- Students can investigate the climatic impacts on food growth (Science)

Grades 9-12:

- Students can research and discover how to increase produce yield in a small space (Math, Science)
- Students can research the distance of how food gets to where it needs to be using <https://www.seasonalfoodguide.org//> for your area (Math)

RELATED BACKGROUND KNOWLEDGE ON FOOD

- Information about eating in season: “Why Eating Seasonally and Locally is Better for You (and Your Wallet)” *Lifehacker.com* by Alan Henry
<https://lifehacker.com/why-eating-seasonally-and-locally-is-better-for-you-an-1563025065>
- Finding what is in season (uses zip code): “Seasonal Food Guide”
<https://www.seasonalfoodguide.org/why-eat-seasonally>
- Specific guide for Illinois seasonality (check your states’ universities for similar information if not in IL): “Illinois... What’s in Season” *Illinois.edu* by University of Illinois Extension
<https://web.extension.illinois.edu/cjmm/downloads/69483.pdf>
- Some examples of recipes by season (in this case, spring!): “29 Recipes to Really Get You Excited for Spring” by *Bon Appetit.com* <https://www.bonappetit.com/recipes/slideshow/spring-recipes>



ANCHOR TEXTS

Grades K-3

- [The Vegetables We Eat](#) by Gail Gibbons
- [The Doorbell Rang](#) by Pat Hutchins
- [Oliver's Vegetables](#) by Vivian French

Grades 3-12

- [The Story of Food: An Illustrated History of Everything We Eat](#) published by DK and forward by Giles Coren
- [Stinky and Stringy : Stem & Bulb Vegetables \(Plants We Eat\)](#) by Meredith Sayles Hughes (Grades 5-8)
- [Eating Fractions](#) by Bruce McMillan (Grades 3-5)

FOOD EXPERIENCE + MATERIALS

Step by step instructions for the food experience.

Option 1:

Recommended for lower elementary:

- Bring in a few (3-4) fruits or vegetables from the current season for students to sample (use the seasonal food guide: <https://www.seasonalfoodguide.org//> to determine what is in season in your state/zip code). Be sure at least one item is something students would typically not think of as a “seasonal item” (such as orange or apple, for example)
- Choose one item that would be in season in the next six months in your state (i.e. a fall vegetable or fruit if doing lesson in spring). Have students compare this item to those in season using their 5 senses.
- Students should evaluate which item(s) they like best and compare the location where each item came from.
 - Students can read sections of this article: “How Far does Your Food Travel to get to Your Plate?” by [CUESA.org https://cuesa.org/learn/how-far-does-your-food-travel-get-your-plate](https://cuesa.org/learn/how-far-does-your-food-travel-get-your-plate)
 - Students can map where food comes from when it’s not locally in season
 - Students can list resources being used to move from country to country when not in season

Materials:

- 3-4 pre cut fruits or vegetables in season in your area (use <https://www.seasonalfoodguide.org//>)
- 1 non-seasonal fruit or vegetable in your area
- Forks, plates/bowls, and/or napkins

Option 2:

Two day food experience outlined below:

DAY ONE:

- In groups of 4, provide a sampling of the various seasonal ingredients available for use.
- Students should complete a science/written observation page with an extra section for tasting notes.
- Students will decide on a combination of ingredients to use for their recipe. They should use fractions when describing/recording the amount of ingredients in each recipe.
 - For instance, $\frac{3}{5}$ will be lettuces, $\frac{1}{8}$ will be peas, $\frac{1}{8}$ will be citrus, etc...
- Students will write a recipe on the recipe card, using fractions, and turn it in.



DAY TWO:

- Ingredients will be pre-prepared for the students to gather what they need for their recipes.
- Student groups will take ingredients to their stations and begin making their recipes.
- Students will plate and sample their creations (making notes of the flavors and discussing any changes).
- Students will have the chance to make one change which must be mutually agreed upon. Change must make the whole recipe still equal “one whole” when the fractions are added together.
- Students will try the change and record their final recipe and will check their recipe against a rubric.
- Recipes will be photographed by each group and typed for the recipe book.

Materials:

Produce will depend on season (use guides above). List below is general for all seasons followed by a list specific to spring in Chicago (but adjust for your community!)

- Observation page printouts for students
- Index cards for making recipe cards
- Measuring spoons and cups (2-3 sets)
- Plates, forks, and napkins
- Ingredients for food experience:
 - Vegetables: 5-8 varying types of vegetables (whole on day 1, pre cut for day 2)
 - Fruits: 1-2 varying types of fruits (whole on day 1, pre cut for day 2)
 - Herbs: 2-3 fresh herbs -- or use dried if in winter! (whole on day 1, pre cut for day 2)
 - Seasonings: salt and pepper
 - Oil: olive, canola, or vegetable

For example, the produce available stores in Spring in Chicago includes:

- Vegetables: radishes, kale, cabbage, peas, fava beans, asparagus, early onions, carrots, beets, and lettuce
- Fruits: citrus selections (various oranges, lemons, grapefruit, tangerines, limes)
- Extra virgin olive oil
- Fresh herbs: dill, mint, basil, oregano, parsley, thyme, chives

IDEAS FOR FOOD ADVOCACY

- Students can compile these and other recipes into a cookbook with informational sections about sustainability. The cookbook can be produced and sold with profits giving given to a local Food Bank.
- Students could create or revive a school or community garden (making sure to plant in line with the seasons and the hardiness zone they live in)

COMMUNITY CONNECTIONS

- Students could visit a local farmers’ market or community garden to see and taste local produce.
- Students could visit a local grocery store or have a representative from a grocery store come to tell the class about the seasonality of produce in store.



RECIPE OR TAKE-HOME ACTIVITY

Recipe and Take-Home Activity:

Students can take compiled recipes from their lesson home to families.

Lesson adapted from lesson by: Chandra Garcia-Kitch and Justin Behlke