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Ag in the Classroom
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SC Ag in the Classroom
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How to Grow a Monster

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Grade Levels: K-3

Gabe and Kara are excited to help their mom plant their garden until they remember how much zucchini they grew and had to eat last year. The siblings hatch a plan to control their garden. It wasn't until they researched zucchini plants that they realized cool new ways they could eat it and use it to get involved in the local fair! This book demonstrates how families can start with a small seed and grow it into a huge success!

Scan the QR code or Click Here for ready to use slides!

This lesson includes the use of writing in a sequence with transition words, cardinal directions, and graphing skills.

Did you know? [1]

- Zucchinis are related to watermelons, pumpkins, cucumbers, and gourds.
- Eating one medium sized zucchini will give you more potassium than eating a banana.
- The largest zucchini grown was 8 feet and 3 inches tall. That's taller than Lebron James!

Discussion Questions

- Why are Gabe and his sister trying to sabotage the zucchinis?
- What do you need to grow a garden?
- Why is it important to eat vegetables?

Purpose

Students will be able to understand the concept of a food desert and how communities need access to affordable and nutritious food.

Vocabulary

- **fruit:** the part of a plant that develops from the flower and contains the seeds of the plant
- **vegetable:** any edible part of a plant that does not contain seeds
- **dormant:** not active but able to become active
- **embryo:** a human, animal, or plant in the early stages of development before it is born, hatched, sprouted, etc.
- **germinate:** to begin to grow; sprout
- **photosynthesis:** the process by which plants convert carbon dioxide, water, and light energy into sugars and oxygen in order to store energy; the opposite of cell respiration
- **respiration:** the process through which a plant exchanges oxygen and carbon dioxide with its environment
- **seedling:** a young plant that is grown from a seed
- **agriculture:** the science, art, or practice of cultivating the soil, producing crops, and raising livestock and in varying degrees the preparation and marketing of the resulting products
- **commodity:** a primary agricultural product that can be bought and sold
- **farmer:** person who owns or manages a farm, cultivates land or crops, or raises animals
- **nutrient:** a substance that provides nourishment essential for growth and the maintenance of life
- **good:** something you can use and hold in your hand

- **service:** the action of helping or doing work for someone
- **Cardinal directions:**the four main compass directions; north, south, east, and west

Materials

- Google Slides
- *How to Grow a Monster* by Kiki Thorpe
- Anchor Chart Paper
- Crayons/Markers
- Discussion Sheet

Procedures

Note: This lesson covers the topic of food deserts, which are areas that have limited access to affordable and nutritious food, or easy access to a grocery store or supermarket. Many factors impact this, including setting, transportation, income, etc. This lesson may highlight challenges that are central to the communities it is taught in. **Although an important subject, care should be taken in the discussion surrounding the lesson.** The United States Department of Agriculture (USDA) has done substantial research around the topic, and teachers or adults presenting the lesson may want to have more background on the subject. If the teacher or adults are interested, Virginia State University, in conjunction with USDA, produced a 45-minute documentary: http://youtu.be/jicYbi-8ZNU.

1. Discuss what a food desert is. Food Desert- areas that have limited access to affordable and nutritious food, or easy access to a grocery store or supermarket.
2. Read the book “How to Grow a Monster.” Ask students to raise their hand if they have a garden, or grow food, in their backyard. Share that not everyone has the space or interest to grow their own fruits and vegetables. Review pages 4-5 or 10-11 to show students how growing plants for fruits and vegetables takes a lot of space!
3. Ask students, “Where else do you get food?”
    a. Ex: grocery store, fast food restaurants, food trucks, etc.
4. Explain that everyone doesn’t have the same chance to get affordable and nutritious, or healthy food. If your house is far away from the grocery store and you don’t have a car, you may not be able to walk or ride the bus to go to the store. If your parents had to pay a bill and don’t have a lot of money left over for food, you may not be able to get healthy food. If you don’t have a yard at your house, you may not be able to grow fruits and vegetables in a garden like the characters in the book. Allow discussion with students as time and interest allows.
5. Project or share the community map with the students. Point out the grocery store on the map. Discuss with your class how the location of the grocery store in comparison with the houses may make it difficult for people to buy food.
6. Explain to students that they are going to be divided into groups (3-5 students per group) and will create their own community map.
    a. Map Criteria:

i. Must have at least one grocery store.
ii. Must have a minimum of two houses.
iii. Must have one farm.
iv. Places that offer goods and services
v. School

7. After students create their maps, have them use their maps to answer the discussion questions. (individually or whole group)
    1. Using your cardinal directions, explain how you could get from one place on your map to another place.
    2. Which places on your map offer goods and which offer services?
    3. What are the cons of living far from the farm?
    4. What are the pros of living in a city?
8. Bring the class back together into a whole group and discuss what students experienced during the activity.
    a. How did you choose where to live?
    b. Where will you and your family get food?
9. Close the lesson by reminding students that everyone should have access to affordable and healthy food. Encourage children to talk with adults at school or home about how and where they get their food.

Writing Option

Write a paragraph explaining how food makes its way from the farm to your grocery store, table, or restaurant. Be sure to sequence your writing and use transition words.

Activity 2

This activity can be used for an individual assessment or as a whole group activity.

1. Display the community map.
2. Have students use the map to analyze and complete each bar graph.

Optional Extensions

- If the school or community has a garden, become involved in the planting, harvesting, and distribution! What opportunities are there to share the food with community members in need?
- Research the local community and the options for affordable and nutritious food. Create community awareness about food deserts through educational media and/or school-supported events.

Companion Lessons and Activities

- Go Noodle- Never Eat Soggy Waffles
- My Life as a Fruit of Vegetable
- How Does Your Garden Grow
- Eat Em Up

Lesson Plans Available Online at
scfb.org/book-of-the-month

Sources/Credits

1. Buryk, D. (2020, July 21). 10 Facts You Might Not Know About Zucchini. September 14, 2022. https://www.freshcityfarms.com/blogs/10-facts-you-might-not-know-about-zucchini
2. Thorpe, Kiki. *How to Grow a Monster,* 2020.
3. American Farm Bureau Foundation Educator's Guide

Suggested SC Standards Met:

English Language Arts:

- K.I.2 Transact with texts to formulate questions, propose explanations, and consider alternative views and multiple perspectives.
- K.I.3 Construct knowledge, applying disciplinary concepts and tools to build deeper understanding of the world through exploration, collaboration, and analysis.
- K.I.4 Synthesize information to share learning and/or take action.
- K.RL.5 Determine meaning and develop logical interpretations by making predictions, inferring, drawing conclusions, analyzing, synthesizing, providing evidence, and investigating multiple interpretations.
- K. RL.8 Analyze characters, setting, events, and ideas as they develop and interact within a particular context.
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- 1. RL.8 Analyze characters, setting, events, and ideas as they develop and interact within a particular context.
- 2.I.2 Transact with texts to formulate questions, propose explanations, and consider alternative views and multiple perspectives.
- 2.I.3 Construct knowledge, applying disciplinary concepts and tools to build deeper understanding of the world through exploration, collaboration, and analysis.
- 2.I.4 Synthesize information to share learning and/or take action.
- 2.RL.5 Determine meaning and develop logical interpretations by making predictions, inferring, drawing conclusions, analyzing, synthesizing, providing evidence, and investigating multiple interpretations.
- 2. RL.8 Analyze characters, setting, events, and ideas as they develop and interact within a particular context.
- 3.I.2 Transact with texts to formulate questions, propose explanations, and consider alternative views and multiple perspectives.
- 3.I.3 Construct knowledge, applying disciplinary concepts and tools to build deeper understanding of the world through exploration, collaboration, and analysis.
- 3.I.4 Synthesize information to share learning and/or take action.
- 3.RL.5 Determine meaning and develop logical interpretations by making predictions, inferring, drawing conclusions, analyzing, synthesizing, providing evidence, and investigating multiple interpretations.
- 3. RL.8 Analyze characters, setting, events, and ideas as they develop and interact within a particular context.

Social Studies:

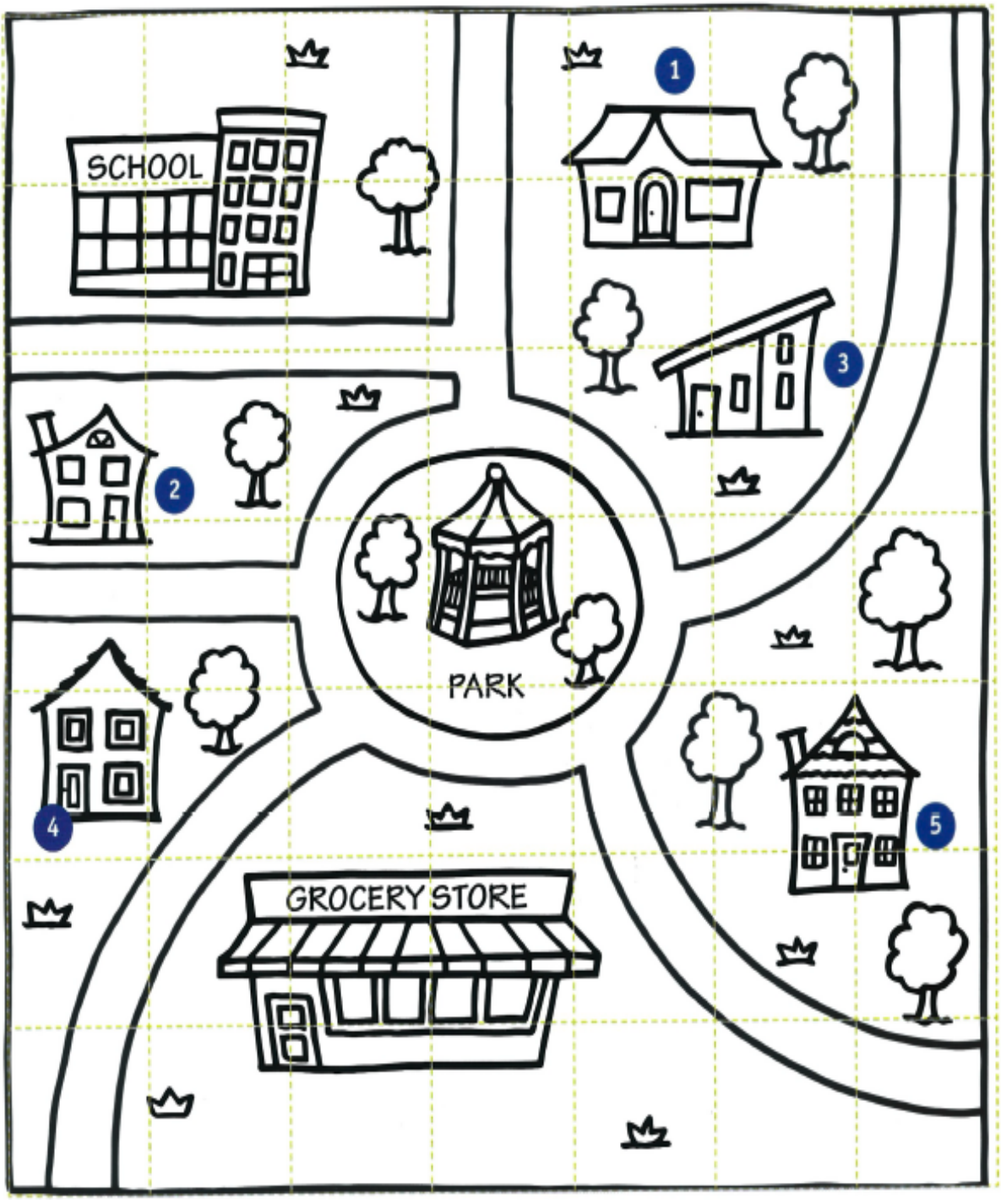
- K.E.1 Identify and compare wants and needs.
- K.E.4 Identify an economic want or need at one's school or community level and create a solution.
- K.G.1 Identify a map, various map features, and explain the purpose of maps.
- 1.G.1 Identify various types of maps, map features, and the purpose of maps.
- 1.G.3 Identify and differentiate between rural, suburban, and urban areas within South Carolina.
- 1.E.1 Compare goods and services in the school, community, and state.
- 1.E.3 Research and describe how goods and services differ in rural, suburban, and urban areas in South Carolina.
- 1.CG.4 Collaborate with others to identify, resolve, and communicate resolutions on a local or state issue.
- 2.G.3 Explain how the distribution of human features, physical features, and natural resources within the U.S. changes over time and impacts economic activity.
- 2.E.4 Interpret data to show how geographic location and available resources impact economic decision-making.
- 3.3.3.ER Identify and analyze the ways people interact with the physical environment in different regions of the state, the country, and the world.

- 3.4.2.HS Investigate the economic and land use characteristics of places and regions around the world.

Math

- K.MDA.4 Represent data using object and picture graphs and draw conclusions from the graphs.
- 1.MDA.4 Collect, organize, and represent data with up to 3 categories using object graphs, picture graphs, t-charts, and tallies.
- 1.MDA.5 Draw conclusions from given object graphs, picture graphs, t-charts, tallies, and bar graphs.
- 2.MDA.9 Collec, organize, and represent data with up to four categories using picture graphs and bar graphs with a single-unit scale.
- 2.MDA.10 Draw conclusions from t-charts, object graphs, picture graphs, and bar graphs.
- 3.MDA.3 Collect, organize, classify, and interpret data with multiple categories and draw a scaled picture graph and a scaled bar graph to represent the data.

WORKSHEET 1-PART 1



WORKSHEET 1-PART 2

To the school: How many squares from each house to the school?

House 1	**House 2**	**House 3**	**House 4**	**House 5**

Color in each square to make a chart.

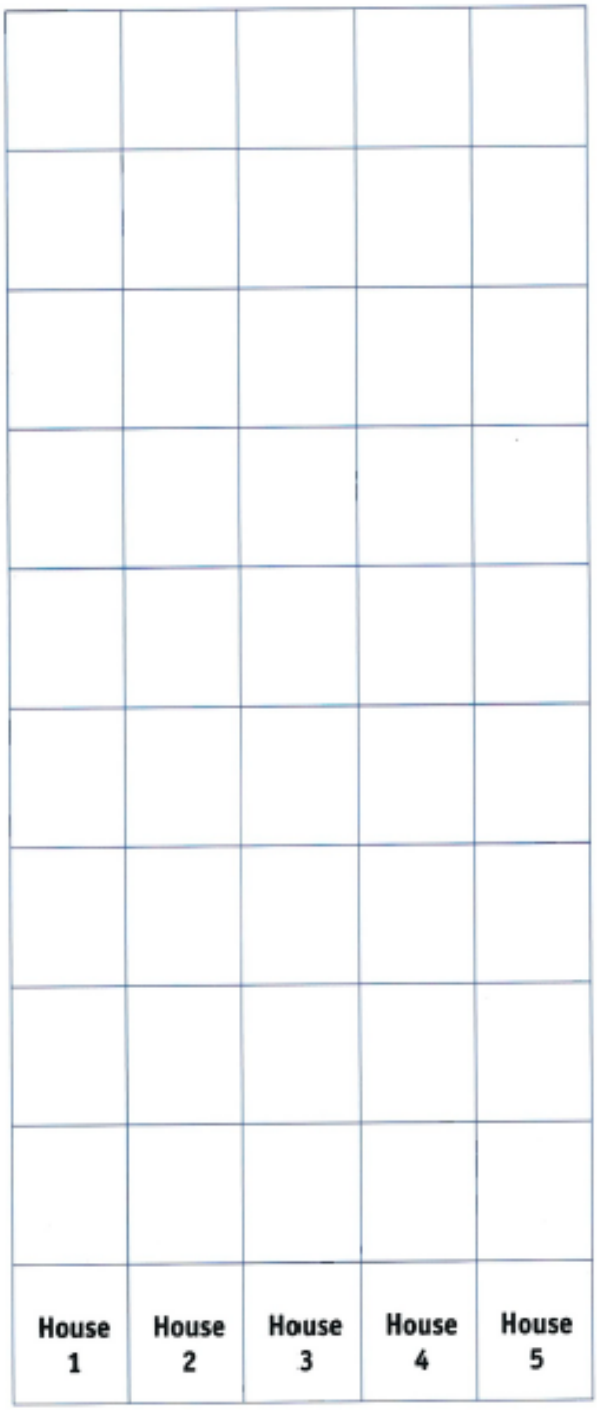
To the grocery store: How many squares from each house to the grocery store?

House 1	**House 2**	**House 3**	**House 4**	**House 5**

Color in each square to make a chart.

WORKSHEET 1-PART 3

To the park: How many squares from each house to the park?



Color in each square to make a chart.

Discussion Time

1. Using your cardinal directions, explain how you could get from one place on your map to another place.
2. Which places on your map offer goods and which offer services?
3. What are the cons of living farm from the farm?
4. What are the pros of living in a city?