# Science
# Unit 1
## *Food*

- What is food and why is it important?
- How do we study food in Science?

# *Culminating Performance Task[1]*

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[1] The performance task is designed to showcase student mastery on a set of key unit targets that are integrated into a multi-part task. Although this is a culminating task, students are working toward the targets throughout the unit and then finalizing and presenting the task in the last week. Students need to see a model early in the unit, and lessons equip students with the knowledge and skills required to complete the performance task. The task is evaluated using a rubric that describes performance indicators for each target.

## TASK DESCRIPTION

| TITLE | GROUPING FOR FINAL PRODUCT (Individual, Partner, Group) | Approx. # Lessons to Finalize | Approx. # Lessons to Present |
|---|---|---|---|
| **What Does Our Class Eat for Breakfast?** | **Individual** | **4** | **1** |

**OVERVIEW:** *For the Unit 1 project, individual students will create and present their own chapter of a class book titled* What Does Our Class Eat for Breakfast? *The chapter contributions of each student will be compiled into a class text that students will use a resource throughout the rest of the year and return to in Unit 4. In Sets 1 and 2, students will draw, name, translate, and group their breakfast foods, introducing food groups and nutrition. During Sets 3, 4, and 5, students will work on observations using their five senses and practice categorizing and identifying foods based on characteristics. The scientific concept of magnification will be introduced along with the measurement of serving size and nutrition of foods. In Set 6, students will finalize their chapter, including drawings and text, and share their chapters with the class.*

| PURPOSE & ROLE[2] | This performance task builds on and expands students' own knowledge and experiences with breakfast, and builds understanding from experience to oral language to print. It intends to help students develop their skills as: **communicators**, by sharing important scientific and cultural knowledge about a traditional breakfast from their home country; **researchers**, by acquiring new information, drawing connections about the different types of foods we eat, and gathering evidence to support the significant role breakfast foods play in our lives; and **nutritionists**, by exploring the breakfast foods of different cultures and learning about their physical and nutritional properties, and learning about the food groups for each item of their breakfast. |
|---|---|
| **AUDIENCE** | Students will share their final chapter with one another at the end of Set 6 through a gallery walk. Each student's chapter entry will be hung in the classroom and half of the students will be presenting as the other half rotates. Ultimately, each unit will add a new chapter and each finished chapter entry will be compiled into one large food book that each student will receive a copy of. |
| **FORMAT** | The performance task includes two parts:<br>1. **Drawings and narratives from Set 6:** Each student creates a four-page chapter entry on their breakfast foods. These will be hand-drawn and handwritten. This chapter entry includes the following:<br>  a. Page 1: An **introduction of student** (from ELA class) with a picture.<br>  b. Page 2: A **drawing** of student's special occasion breakfast plate. This |

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[2] This comes from RAFT (role-audience-format-topic), a widely used writing framework:
http://www.readwritethink.org/professional-development/strategy-guides/using-raft-writing-strategy-30625.html

drawing will have:
- i. labels of the names of foods and drinks (completed in Lesson 26)
- ii. labels of the food groups they belong to (in home language and English) (completed in Lesson 27)
- iii. a data table of food groups (in English) (completed in Lesson 27)

c. Page 3: A **narrative** about student's special occasion breakfast. This narrative includes:
- i. sentences that identify the foods eaten in the special occasion breakfast (completed in Lesson 26)
- ii. sentences that summarize data represented in the bar graph (completed in Lesson 27)
- iii. sentences that describe the physical characteristics of the breakfast foods using using 3-5 senses (completed in Lesson 28)
- iv. sentences that describe a personal connection to this breakfast meal, how and when the student eats it, and why it is important (completed in Lesson 29)

d. Page 4: A **bar graph** that corresponds to student's data table (completed in Lesson 27) and a **nutritional label** of one breakfast item and identification of amounts of nutritional values that are low and high according to FDA health recommendations (completed in Lesson 28)

2. **Breakfast foods gallery walk:** Students' chapter entries are hung up around the classroom. Students take turns being in the presenting group or the audience group. One group presents as audience walks around and visits each student's portfolio entry. They take notes and comment about the display of breakfast food and write 1-3 questions about the student's food on Post-its, which are later attached to each chapter. The presenters have one minute to present to classmates.

| | |
|---|---|
| **TOPIC** | The topic of the food portfolio is the traditional or special occasion breakfast food the student chooses to investigate from his or her own country. During Unit 1, students will participate in activities in each set that model the steps of the required tasks of the chapter, which students will eventually need to complete on their own. In Set 6, students will work individually to complete their breakfast food chapter. |
| **DIFFERENTIATION** | The performance task has many opportunities for differentiation. Each set (Sets 1 through 5) is dedicated to one task of the breakfast food chapter. Students build up their knowledge of each task through explorations and investigations using their breakfast foods. Students begin creating their breakfast food chapter in Set 1, completing each task for the chapter in subsequent set. Differentiation strategies can include:<br>• Working in home language groups throughout the sets.<br>• Labeling breakfast foods for the chapter. Some students may need to use word banks. Observations and cultural significance piece can be made as words or as sentences.<br>• Writing 1-3 questions during the gallery walk, depending on needs and proficiency. |

| | |
|---|---|
| | • Self-assessing using a simple checklist after the performance task.<br>• Setting realistic goals that are also challenging. |
| **TECHNOLOGY** | This performance task will be completed in class, on paper with colored pencils. This is appropriate for the presentation format, a gallery walk. Students may use cameras to take pictures of their breakfast foods plate, or the explanation for how it is used in their culture. However, we stress that students hand-draw their breakfast foods, as drawing and labeling are important skills in the field of science. As with all projects, if teachers have access to technology, they can choose for students to create digital chapters of their breakfast foods. |
| **PRESENTATION** | The purpose of the gallery walk is for students to share their knowledge about an important breakfast food in their home country and gather new knowledge about other breakfast foods eaten and presented by the class. It will also serve as a review of the understandings of the unit and support students to take the final on-demand assessment. Encourage the audience to stay on task as they travel around the room and visit presenters, and for presenters to stay on time as they present, to ensure that all members have enough time to present their food portfolio entry in one class period. |
| **OTHER NOTES** | There are many possibilities for extensions to this activity, such as including additional stories about student experiences with breakfast, changes to breakfast since moving to the United States, and/or a comparison of an everyday breakfast to a special occasion breakfast. |

## KEY TARGETS AND RUBRIC: FOR TEACHERS

| Targets | Needs Support | Approaching Target | Meets Target | Exceeds Target |
|---|---|---|---|---|
| **I can label, classify, and record breakfast foods into food groups. (NGSS CC1)** | Labels some breakfast foods and food groups correctly. Labels are not clearly written and lines are not straight. Food groups are not recorded. | Labels most breakfast foods and food groups correctly. Some labels are not clearly written, and some lines are not straight. Food groups are recorded, but not in a data table. | Labels most breakfast foods and food groups correctly. Most labels are clearly written and most lines are straight. Food groups are accurately recorded in a data table. | Labels and classifies all breakfast foods and food groups correctly. Labels are clearly written and lines are straight. Food groups are accurately recorded in a data table. |
| **I can write descriptions of my breakfast foods using observations from my senses. (NGSS CC1)** | Writes 0 or 1 description of foods using observations from only one sense. | Writes 2 or more accurate descriptions of foods using observations from only one sense. | Writes 2 or more accurate descriptions of foods using observations from multiple senses. | Writes 3 or more accurate descriptions of foods using observations from multiple senses. |
| **I can explain the context in which I eat this breakfast in writing. (NGSS SP8)** | Context statement offers little to no information about how and when breakfast is eaten in the home. | Context statement provides some information about how and when breakfast is eaten in home, but lacks important information. | Context statement provides a complete picture of how and when breakfast is eaten in the home. | Context statement provides clear picture of how and when breakfast is eaten in the home using the given language frames. |
| **I can represent and interpret data visually. (NGSS CC1, P4)** | Does not include a bar graph of food groups from breakfast items.<br><br>Summary statement is missing from narrative. | Constructs a bar graph using information from food group data table. Graph has multiple errors.<br><br>Summary statement is missing from narrative or does not show level of interpretation. | Constructs a bar graph using information from food group data table. Graph has minor errors.<br><br>Summary statement is in narrative and demonstrates appropriate level of interpretation. | Constructs a bar graph using information from the food group data table. Graph is correctly drawn.<br><br>Summary statement is in narrative and demonstrates clear interpretation. |

## TARGETS AND RUBRIC: FOR STUDENTS

| Long-Term Targets | Needs Support | Approaching Target | Meets Target | Exceeds Target | Teacher Comments |
|---|---|---|---|---|---|
| I can label and classify breakfast foods into food groups. (NGSS CC1) | ☆ | ☆ | ★ | ★ | |
| I can write descriptions of my breakfast foods using observations from my senses. (NGSS CC1) | ☆ | ☆ | ☆ | ★ | |
| I can explain the context in which I eat this breakfast in writing. (NGSS SP8) | ☆ | ☆ | ★ | ★ | |
| I can use tools of science to describe one of my breakfast foods in more detail using magnification and measurement. (NGSS CC3) | ☆ | ☆ | ★ | ★ | |

# Science
# Unit 1
*Food*

## *Model Drawing*

ORANGE JUICE
**FRUIT**

STRAWBERRIES
**FRUIT**

BLUEBERRIES
**FRUIT**

BUTTER
**DAIRY**

PANCAKES
**GRAIN**

BACON
**PROTEIN**

SCRAMBLED EGGS
**PROTEIN**

| FOOD GROUPS | |
|---|---|
| GRAINS | 1 |
| VEGETABLES | 0 |
| FRUIT | 3 |
| PROTEIN | 2 |
| DAIRY | 1 |
| OTHER | 0 |
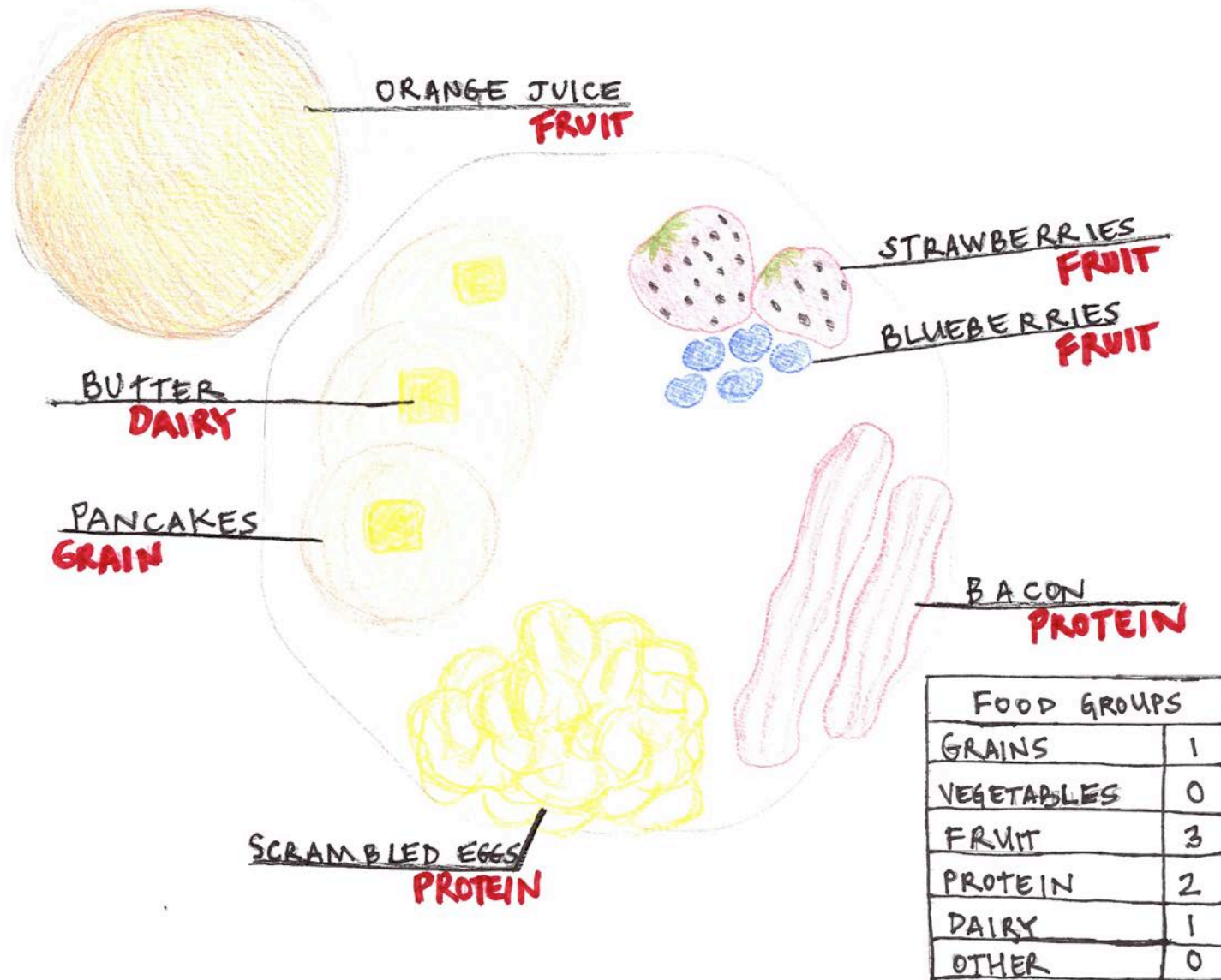
# Science
# Unit 1
## *Food*

## *Model Label and Graph*

PANCAKES

## Nutrition Facts

Serving Size 40g
Serving per Container 28

Amount Per Serving

| Calories 160 | Calories From Fat | |
|---|---|---|
| **% Daily Value *** | | |
| Total Fat | 4.5 ...g | 7 ...% |
| Saturated Fat | 1 ...g | 6 ...% |
| Cholesterol | 0 ...g | 0 ...% |
| Sodium | 410 ...mg | 17 ...% |
| Total Carbohydrate | 26 ...g | 9 ...% |
| Dietary Fiber | 1 ...g | 0 ...% |
| Sugar | 1 ...g | 8 ...% |
| Protein | 3 ...g | 0 ...% |

| Vitamin A 1 .% | • | Vitamin C 0 ...% |
|---|---|---|
| Calcium 6 ...% | • | Iron 4 ...% |

*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.
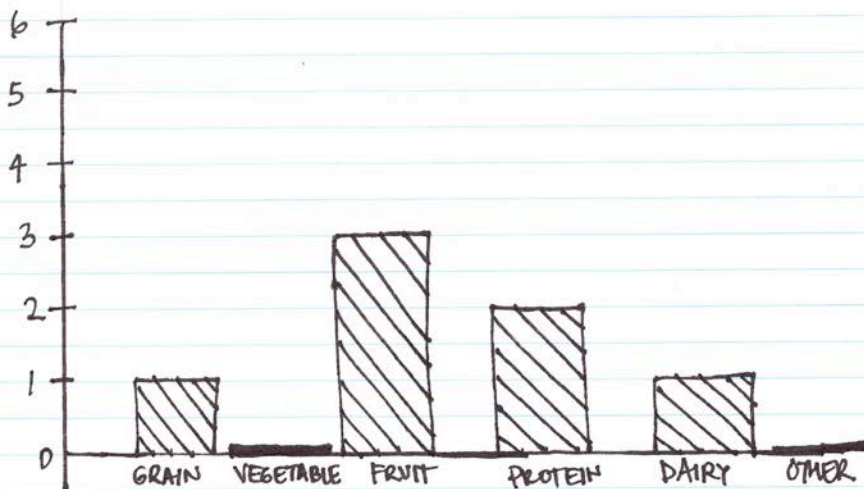
# Science
# Unit 1
## *Food*

## *Model Narrative*

I eat pancakes with butter, scrambled eggs, bacon, strawberries and blueberries for breakfast in the U.S. I drink orange juice.

Scrambled eggs are yellow, soft, and fluffy.
Pancakes are round and brown.
Bacon is long, hard, and brown.
Strawberries are red, sweet, and juicy. THey have small black seeds, tiny hairs and green leaves.
Blueberries are blue. They are small and round.

I eat more fruit than protein, dairy, vegetables and grains.
I eat fewer vegetables.

I eat this breakfast on Sunday with my family. My family eat at a table.
This reminds me of my father because he likes bacon.
This makes me happy because we eat together.

# Science
# Unit 1
*Food*

# *Student Checklist*

BRIDGES: Science, Unit 1

What does our class eat for breakfast?
What do I eat for breakfast?

**Performance Task Checklist**

My chapter includes:

❏ Page 1: An **introduction of myself** (from ELA class) with a picture

❏ Page 2: A **drawing** of my special occasion breakfast plate. My
drawing has:
  ❏ labels of the names of foods and drinks (Lesson 26)
  ❏ labels of the food groups they belong to (in home language
    and English) (Lesson 27)
  ❏ a data table of food groups and corresponding bar graph (in
    English) (Lesson 27)

❏ Page 3: A **narrative** about my special occasion breakfast. My
narrative has:
  ❏ sentences that identify the foods I eat for my special
    occasion breakfast (Lesson 26)
  ❏ sentences that summarize data represented in the bar graph
    (Lesson 27)
  ❏ sentences that describe the physical characteristics of my
    breakfast foods using 3-5 senses (Lesson 28)
  ❏ sentences that describe my personal connection to this
    breakfast meal, how and when I eat it, and why it is
    important (Lesson 29)

❏ Page 4: A **bar graph** that corresponds to my data table (Lesson 27),
and a **nutritional label** of one breakfast item and identification of
amounts of nutrition values that are low and high according to FDA
health recommendations (Lesson 28)