

Designing a Learning Experience

The Blueprint

NAME: SKYLAR COLLATZ

PROJECT TITLE: CULTURAL RECIPE BOOK

GRADE LEVEL: 4TH GRADE

PROJECT ESSENTIAL QUESTION: WHAT IS THE RELATIONSHIP BETWEEN CULTURE AND FOOD?

SUBJECT: ENGLISH LANGUAGE ARTS & HEALTH

LESSON TITLE: MYSTERY CANS: HEALTHY OR UNHEALTHY?

DURATION: 1 CLASS PERIOD, 1 HR 15 MINUTES

PURPOSE OF THE LESSON

Connection to Global Mini Project

This lesson will be the fifth learning experience in the Global Mini Project. The learners will have begun researching their chosen country and exploring some popular cultural foods. In preparation for this learning experience, the students will have chosen and submitted a preliminary recipe for their final project. This learning experience will prepare students to think critically about their country's cultural foods. It will also help them answer the project's essential question. When conducting research after this activity, students may determine that their country's culture emphasizes foods that are higher in some types of nutrients rather than others. This discovery will help them compare and contrast their chosen culture to those of their peers. By justifying their ideas about healthy/unhealthy foods verbally and in writing, the students will gain experience supporting their opinions with details about a topic. This is a scaffolded step in preparation for the culminating event, Culture Night, in which students must be able to express and support their ideas.

Curriculum Alignment

English Language Arts (Writing), Grade 4

Cluster: Text Types and Purposes

- W1: Write opinion pieces on topics or texts, supporting a point of view with reasons and information.
- W1.b Provide reasons that are supported by facts and details.

Health, Grade 4

Standard 6.0 Nutrition and Fitness: Students will be able to demonstrate the ability to use nutrition and fitness knowledge, skills, and strategies to promote a healthy lifestyle.

- Topic F. Nutrition and Physical Activity Guidelines
 - 2. Analyze the Nutrition Facts label

Objectives

1. By writing a letter (opinion piece), the students will evaluate and formulate a point of view about whether a food is healthy supported by 3 facts and details.
2. By analyzing a nutrition label, the learners will evaluate the amount of fat, sodium, carbohydrates, and protein in a food to determine whether this food is healthy or unhealthy.

Knowledge

The students should know...

- The definition of “healthy.”
- The impact of eating fat, sodium, carbohydrates, and protein.

Skills/Processes

The students should be able to...

- Locate fat, sodium, carbohydrate, and protein levels on a nutrition label.
- Compare levels of fat, sodium, carbohydrates, and proteins to determine whether a food is healthy.
- Formulate a well-developed opinion and use supporting details.

Understanding (Big Idea)

The students should understand that...

- There are a variety of nutrients that make a food healthy or unhealthy.
- The nutrition of a food cannot necessarily be judged by its appearance.

Dispositions/Habits of Mind

The students should develop habits of...

- Thinking flexibly.
- Thinking interdependently.
- Applying past knowledge to new situations.

Assessment:

The students will demonstrate learning by writing a letter to the cafeteria staff justifying whether an ingredient should be included in the school lunch menu based on how healthy it is. In this letter, they will show their understanding of a Nutrition Facts label by using specific details about the relative amounts of nutrients in their ingredient. The teacher will know that students have achieved the objective when they effectively judge whether a food is unhealthy or healthy, explain specific nutrients (i.e. fat, sodium, carbohydrate, and protein), and use specific details to support their argument.

Note: The Exploration Sheet will only be assessed based on completion. Its purpose is to activate students’ prior thinking and show their level of understanding before the lesson.

The Letter Planning Sheet will also be assessed based on completion. Its purpose is to scaffold the process of forming an opinion and using supportive details.

Product/ Records to be Assessed	Evaluation Criteria	4.0 (Exceeds Expectations)	3.0 (Meets Expectations)	2.0 (Approaches Expectations)	1.0 (Does not meet expectations)
Letter: "Healthy or Not?" (to be completed during "Apply.")	Statement of Opinion	The student's judgment of the food's ability to support health is clearly stated at the beginning and is very logical throughout.	The student's judgment of the food's ability to support health is stated at the beginning and is somewhat logical throughout.	The student's judgment of the food's ability to support health is stated somewhere in the letter.	The student's judgment of the food's ability to support health is not stated anywhere in the letter.
Letter: "Healthy or Not?"	Description of Nutrients	The student lists and describes 3 out of the 4 nutrients accurately and compares them to one another using new insights.	The student lists and describes several nutrients accurately and compares them to one another using insights from class discussion.	The student lists several nutrients, but may describe some inaccurately.	The student does not list any nutrients, or describes them all inaccurately.
Letter: "Healthy or Not?"	Use of Supportive Details	The student supports his/her argument by including three specific details from the Nutrition Label. These supports are clearly connected to the overall argument.	The student supports his/her argument by including two specific details from the Nutrition Label. These supports are connected to the overall argument.	The student supports his/her argument by including less than two specific details from the Nutrition Label. These supports may not be connected to the overall argument.	The student does not include any supportive details from the Nutrition Facts Label.

LEARNING EXPERIENCE

Vocabulary & Terms

- **Healthy:** describes something that is in a good condition, able to work properly
- **Nutrient:** an element of food that supports the body and leads to good health
- **Nutrition Facts Label:** a label on every packaged food that tells us the amounts of nutrients in the food
- **Fat:** a substance in food that helps the body store energy
- **Sodium:** a substance in food that is used for flavoring
- **Carbohydrate:** a substance in food that provides the body with heat and energy
- **Protein:** a substance in food that helps the body grow

Instructional Materials and Supplies:

- Cans of canned food with corresponding labels detached (3 cans per student-groups with 4-5 students in each group)
 - Cans of food are selected from students' chosen recipe
 - They are organized into groups by recipe (3 cans per recipe)
 - Each student-group receives one recipe group of cans
 - Each can is labeled 3, 2, 1 to describe whether the food is *very healthy*, *somewhat healthy*, or *unhealthy* respectively
 - Examples of canned food include tuna fish, beets, corn, refried beans, canned meat, etc.
- PowerPoint slide with problem statement
- Exploration Sheet: Mystery Can Activity (1 per student, see attached sheet)
- Additional ingredients (1 ingredient per student-group)
 - Ingredients are selected from students' submitted recipes
 - Examples include pasta, rice, dressing, etc.
- Letter Planning Sheet (1 per student, see attached sheet)
- Letter Activity Sheet (1 per student, see attached sheet)
- Pencil per student

Technology:

- Computer
- Projector

Sequence

Event	Procedure/Activity; Questioning Strategies; & Management Considerations:
<p>LAUNCH</p> <p><i>10 minutes</i></p>	<p><i>"I was reading your chosen recipes that you gave me and they looked so delicious that I decided to try some of them this weekend. Because I'm trying to save money, I went to the grocery store and bought most of the ingredients as canned food. These cans right here."</i></p>

The teacher begins pulling cans of various sizes out of her bag and placing them on the front table so everyone can see.

“When I got back home from the grocery store, I sorted the cans into groups based on which recipe they were for.”

The teacher sorts the cans into four different recipe groups, with three cans in each group.

*“I also compared the canned foods in each group to see which food was very healthy, somewhat healthy, and least healthy. If the food was the most healthy out of the three, I wrote a 3 on the bottom of the can. If it was in the middle, I wrote a 2. If it was the least healthy, I wrote a 1. Talk to your partner about what you think **healthy** means. *What makes a food healthy?*”*

The students are organized into four groups, with 4 – 5 students in each group. After the students are done discussing (about three minutes), the teacher brings the class back together to briefly share ideas about the definition of **“healthy.”**

*“It sounds like you guys are on the right track! I normally read the **nutrition facts label** to see whether a food is healthy. But, my sister thought it would be funny to take all of them off! Now I don’t know which ingredient is in each can.”*

“I need you to help me match each of the cans to the right nutrition label. Remember, I ranked which of the ingredients was the healthiest out of the three and wrote the number on the bottom of the can. I also know which nutrition labels belong to each recipe.”

The teacher reveals the problem, which is written on a PowerPoint slide, by reading it aloud. She passes out 3 cans and 3 food/nutrition labels to each group (the cans and labels are in the correct recipe group so they correspond with each other).

+ Today’s Problem

Help me **match** the nutrition labels to each can.

Read the **nutrition labels** and use what you know about **“healthy”** to make a good guess as to which can has...

- The **most** healthy ingredient.
- The **somewhat** healthy ingredient.
- The **least** healthy ingredient.



“Work with your other group members and take notes using your exploration activity sheet or draw a picture on a separate paper. Be ready to share with the class in 15 minutes.”

The teacher passes out the activity sheets (see attached worksheet).

EXPLORE

15 minutes

The students work on the problem. The teacher circulates around the room and asks questions. Questions may include:

- *“How are you matching the labels to the cans?”*
- *Tell me about your matches. Why did you match them that way?*
- *What clues does the nutrition label give us about whether a food is healthy or unhealthy?*
- *How do you know your ideas are reasonable?”*

If students are struggling and additional support is needed, the teacher can ask the following questions:

- *“What does the word “healthy” mean to you?”*
- *What do you think is a healthy nutrient on the nutrition label? An unhealthy nutrient?*
- *Which nutrients should a healthy food have a lot of? Which should it only have a little of?*
- *Which nutrition label has the most healthy nutrients? Which has the least?”*

Each student group is asked to share how they matched their nutrition labels to the mystery cans. The teacher encourages the students to justify why they made the choices they did.

- The students can choose to present as a group, elect one individual, or draw their choices on the board.

Using the students’ responses, the teacher then facilitates a discussion about specific elements of a nutrition label (**fat, sodium, carbohydrate, and protein**) using the PowerPoint presentation below. The teacher draws upon students’ ideas as they were matching the nutrition labels to the mystery cans and checks for understanding throughout. He/she also asks discussion questions throughout the presentation to keep the students involved. While the teacher may have a correct answer in mind, he/she should incorporate student responses as much as possible.

PRESENT

25 minutes

+ **Nutrition Facts Labels**

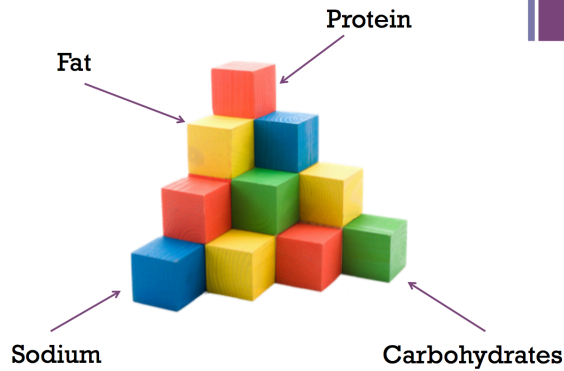


Tell us what is inside our food!

“You guys did a great job analyzing your nutrition facts labels! So, why do you think foods have nutrition facts labels? How are they helpful?”

Great ideas! Yes, just like the summary on the back of a book, a nutrition facts label gives us a summary of what is in our food. They can tell us whether our food is healthy.”

+ Nutrients



“Now that we know what a nutrition facts label tells us, what do you think nutrients are? What might this picture tell us about nutrients?”

Nutrients are the building blocks of our food. They support our body and lead to good health. Foods have lots of different kinds of nutrients, but today we are going to focus on four: **fat, sodium, protein, and carbohydrates.**”

+ Fat



Total Fat	8 g
Saturated Fat	2.5 g
Trans Fat	0 g



Total Fat	1g
Saturated Fat	0g
Trans Fat	0g

“What did the amount of fat on your nutrition labels tell you? Do you think healthier foods have a lot of fat or a little fat?”

Fat is a nutrient in foods that helps our body store energy. We eat food so we have the energy to run, talk, and play later. There are good fats that come from natural things and bad fats that people put in food to make it taste better. It is important that we only eat a little fat so our body has enough room to store it.

Based on these nutrition labels, which food do you think is healthier, the first or second? Yes, the second one, corn, is healthier because it only has 1g of fat and the first one, cookies, has 8g of fat.”

+ Sodium



Sodium	160mg
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Sodium	180 mg
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“What do you think sodium is? What did the amount of sodium on your nutrition facts label tell you? Do you think healthier foods have a lot or a little sodium?”

Sodium is salt, a nutrient in food that adds flavoring. We don't want to eat foods that have too much because it can make it hard for our heart to pump blood all over our body.

Both of these foods are pretty high in sodium. But if we had to choose between the two, which food do you think is healthier based on sodium? Yes, Tostitos are healthier than Pringles because they have 160mg of sodium rather than 180mg of sodium for the same amount of chips.”

+ Carbohydrates



Total Carbohydrate 33g
Sugars 26g

Total Carbohydrate 22g
Dietary Fiber 2g
Sugars 9g



“What do you think carbohydrates or carbs are? What did the amount of carbs on your nutrition facts label tell you? Do you think healthier foods have more or less carbs?”

Carbohydrates are nutrients that provide the body with heat and energy. Sugar is a type of carbohydrate. We need foods with carbohydrates because they give us energy, but we don’t want to eat too much or our body will store the extra energy as fat. Also, we don’t want to eat too much sugar because it is bad for our teeth.

Based on these nutrition labels, which food do you think is healthier, the first or second? Yes, the second one, Cheerios, is healthier because it only has 22g of carbs and 9g of sugar and the first one, yogurt, has 33g of carbs and 26g of sugar.”

+ Protein



Protein 2g



Protein 7 g

“What do you think protein is? What did the amount of protein on your nutrition facts label tell you? Do you think healthier foods have more or less protein?”

Protein is a nutrient that helps the body grow by building muscles and bones. We want to eat foods with lots of protein so our body can get bigger and stronger.

Based on these nutrition labels, which food do you think is healthier? Yes, the second one, string cheese, is healthier because it has 7g of protein where the Nutri-Grain bar only has 2g of protein.”

Closing questions may include:

- *“Which nutrients should we have a lot of?”*
- *“Which nutrients should we have a little of?”*
- *“Do you think one nutrient makes a food healthy or unhealthy?”*
- *“How can we have a balance of healthy and unhealthy foods?”*

APPLY
30 minutes

The teacher calls on two students to collect the mystery cans and nutrition labels from each group and tells them to place them on the front table. She passes out additional ingredients (see instructional materials and supplies) so there is one ingredient per student-group.

“Thank you so much for your help matching the nutrition labels to the mystery cans. I’m going to review your exploration sheets tonight and use them to tape the nutrition labels back on the correct can.

This week I also found out that the school cafeteria workers are thinking about adding some new foods to the lunch menu. At each of your tables, you now have another ingredient that

	<p><i>they are considering. This time the nutrition label is still attached to the ingredient. However, not all of these foods are healthy. Evaluate your food's nutrition label to see if it is very healthy, somewhat healthy, or unhealthy based on the amount of fat, sodium, carbohydrates, and protein. We want to make sure that our lunches are as healthy as possible.</i></p> <p><i>After you decide how healthy your ingredient is, write a letter to the school cafeteria workers persuading them to include or not include this food. We can make our letter as persuasive as possible by including specific facts and details about the amount of fat, sodium, carbohydrates, and protein in the food. Use the planning sheet to prepare your opinion."</i></p> <p>The teacher passes out the next planning sheet (see attached Letter Planning Sheet) and reviews the directions (see attached worksheet). He/she circulates the classroom as the students are working, answering any questions they have and making sure that they are using details from the ingredient's nutrition label.</p> <p>Once students have finished their planning sheet, they may begin writing their letter (see attached Letter Activity Worksheet).</p> <p>After 18-20 minutes, one student from each table collects the activity sheets and another collects the ingredients. Both students bring the materials to the front table.</p>
<p>CLOSURE</p> <p><i>5 minutes</i></p>	<p><i>"Now that you have helped me plan my recipes for this weekend, let's think about some healthy foods that we can all eat everyday. Talk to your partner and brainstorm two healthy foods that you can put in your lunchbox or get at the cafeteria."</i></p> <p>The teacher asks students to share their ideas and writes them on the chalkboard.</p> <p><i>"We are going to continue to work with our recipes. For tomorrow, bring in a nutrition facts label from a food at home. Make sure you ask an adult before removing any food or cutting out the label. Choose whether you think the food is very healthy, somewhat healthy, or unhealthy."</i></p>

*Additional Resources + Materials: