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Teaching 4th Grade Students about Nutrition

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Teaching 4th Grade Students About Nutrition

Raquel Gaytan

A Capstone project for the Bachelor of Arts in Human Development and Family Studies

Introduction

Most children do not know how to make healthy food choices and understand why they have to have a good nutrition. It is important for children to know why having a good nutrition is important for their bodies and health. Without good understanding of nutrition, children are not able to care for their health. To address the children's' lack of knowledge, I created a 3-day lesson on nutrition and delivered it to a 4th grade classroom in Del Rey Elementary in King City, California.

Needs Statement

Nowadays, most children do not understand the importance of nutrition because of the lack of nutrition education in elementary schools. With the lack of knowledge, children do not know how to distinguish healthy food options with less healthy options. Children who are not being exposed to nutrition education at home may not be aware of how bad nutrition can impact their health. At home, some children might not be given the best healthy options, which leads to poor nutrition in which the children are not in control. According to Roberts-Gray (2016), unhealthy eating habits can be happening in families who lack the knowledge, time, and resources that are needed to provide healthy choices. For the children in these families, it can cause those children to grow up without learning about proper nutrition and not being aware of the benefits good nutrition does to their bodies. An found that "Compared with children consuming a healthy diet and physically active, the risks of being overweight and obesity among those consuming an unhealthy diet and physically inactive were substantially higher" (An, 2017). Children's health can be affected by the lack of nutrition education the children are not receiving, increasing their chances of becoming overweight and possibly obese. Kiener (2015) found that over the past 30 years, the normal weight of an American child has increased by 11 pounds. This

finding indicates that the obesity and overweight rates are only rising and individuals are getting affected as children. Not having a good nutrition is bad for the individual's body and health in general.

According to Zellner and Cobuzzi (2016), children of low income who qualify for free meals at school, are eating most of their food for that day in school. The food that children eat in school is not always the most nutritious. Yes, schools provide healthy options like fruits and vegetables. However, some children do not like those options and will not eat the fruits and vegetables. Low income families who have a lack of resources and knowledge of proper nutrition may not be able to teach their children how to eat healthy. Since children spend a lot of their day in school, teachers are also adults that can introduce good nutrition to the students. Teachers may be able to influence their students healthy eating habits, but many teachers are not educated on nutrition (Metos, Sarnoff, & Jordan, 2018).

Children tend to enjoy eating sweet treats like candy, chocolate, and sweet drinks rather than fruits, vegetables and grains. However, food preferences also are influenced by their parents' food choices and enjoyments (Roberts-Gray et al., 2016).The child's home environment plays a big role on the child's eating habits because the child's behavior can relate to "family meals, family conversations, and parent/child cooking skills" (Arcan, Friend, Flattum, Story, & Fulkerson, 2019). This is because children are learning by what the child is seeing at home. By having parents and teachers communicate with children about nutrition and children's health, it will be more likely that children will comprehend how eating healthy gives their bodies the necessary vitamins, proteins, energy and nutrients to help their bodies grow and develop.

Parents and adults need to talk to children about the importance of healthy eating, otherwise the children will not learn this information if at school the children are not receiving

Running Head: TEACHING 4TH GRADE STUDENTS

nutrition education either. Healthy habits formed at an early age are essential to stay healthy and avoid health risks. For my capstone project, I will be teaching a 4th grade classroom about nutrition and the importance it has on bodies and overall health. What I intend to do is teach children about nutrition values and how poor nutrition affects the body and health. Most children do not know that the nutrition label on the back of food packages is important in order to know what the individual is putting in their body and what each food product contains. It is also important for children to understand the five food groups in the food pyramid and how each group is necessary for their body to grow strong and remain healthy. Given that nutrition education, obesity, and low income students are a concern about this topic, I have created a 3-day lesson on nutrition for the 4th graders at Del Rey Elementary in King City.

Theory Application

In Albert Bandura's Social Learning Theory, certain behaviors are learned from the environment and by observation. Then, those behaviors are learned by the modeling that was observed. When it comes to nutrition and eating habits, it is likely that children tend to learn their habits from their environment and through observations. This theory applies to the 4th grade participants because the children are observing their environment including teachers, family, friends, and peers and their nutrition and eating habits. Since children eat what is available to them at home, school, and wherever they may be, the limited availability of food or a lack of nutritional foods may cause the children to eat the foods they are given, which may not be the healthiest. Bandura's theory proposed that learning can simply occur by observing the actions of other individuals. By observing what others prepare for meals and what is eaten, children will only learn about those food items, whether the food is healthy for the children or not

If a child does not see parents eating vegetables and fruits or is not offered vegetables and fruits at home, the child will not learn to incorporate those foods into his or her diet and is likely to not know the benefits these types of food have for his or her body. Another example is, when the parents only buy unhealthy snacks like chips, high sugar drinks, cookies, and other unhealthy snacks, the child is then consuming those snacks only. Although the child will like those snacks that are high in sugar, he or she will not learn to like other snacks that are healthier. Children learn from the nutritional behavior modeled at home.

Teaching children about proper nutrition and healthy eating can provide further opportunities to model new behavior that will help the children better understand why healthy foods are important. In accordance with Bandura's theory, I will be using two techniques to support the children's education around nutrition and healthy eating. Retention, which is how well the children remember the behavior, and reproduction, which is having the ability to perform the behavior that was just explained and demonstrated. (McLeod, 2016). Since fourth graders are at the age where the children want to choose their own food and quantity, it is important for the children to remember how to select good nutritional food.. By being able to remember the behavior of having good nutrition and then knowing how to choose healthy food options, the students will be better able to perform the behavior in the future, reflective of Bandura's notion of reproduction. Specifically, after teaching them about the five food groups, why nutrition labels are important, and how to distinguish healthy and unhealthy food options, I will have them practice these skills by doing worksheets and interactive activities.

Consideration of Diversity

My project will be conducted at Del Rey Elementary school in a 4th grade classroom. According to ed-data.org, in Del Rey Elementary 1.6% of the students are Asian, 4.3% are

White, two or more races are 0.6%, 0.3% are not reported, and 92.7% are Hispanic or Latino. The participants are likely to reflect the ethnic diversity of the entire school. One issue of diversity of the participants are that the children are low income students. I know this information because the teacher said the whole class qualifies for free or reduced lunch. Another issue of diversity is that the content is given to only one fourth grade classroom at Del Rey Elementary in King City. This is an issue since I will only be giving my content to one 4th grade classroom. Because the content is only given in English, the children will need to be English proficient enough to understand the content. The content is based on food availability. When I talk to the children about fruits and vegetables, low income students may not have access or afford a variety of foods. The low income students who may not have access or afford certain types of fruits and vegetables are not getting the chance to eat those food items. Given that low income families may look for lower cost food items, children may realize that the foods they currently eat are not that nutritional.

As a result of these issues, it is possible that the participants may not have regular access to nutrition education, healthy food options, and sufficient resources. This project is designed for 4th grade students and most likely does not apply to younger children or older students like high schoolers.

Learning Outcomes

I intend to provide a 3-session lesson on nutrition to a fourth grade classroom at Del Rey Elementary in King City.

By the end of the project, :

1.Students can identify the five food groups.

Measured by creating and example of a healthy food plate and children responses.

 Students use the basic information on food labels to determine nutritional value of foods.

Measured by filling out worksheet and activity.

3. Students are able to identify healthy and unhealthy food choices

Measured by worksheet activity.

Method

Day 1

First, I will introduce myself to the class and explain what it is I will be doing. I will be visiting the classroom after the classes lunch, so I will begin by asking the children what they had for lunch that day. After about 3 minutes, I will ask the students to explain what it means to have good nutrition, and I will write their responses on a whiteboard. Then, I will give the students the survey (see Appendix A) on nutrition. After talking about the meaning of nutrition, I will introduce the children to the MyPlate (see Appendix B) worksheet and begin the 15 minute lesson on the food pyramid and why each food group is important. The children will use the My Plate (see Appendix B) worksheet to read about the five food groups. I will also show the students a video from Nourish Interactive.com, which explains what each food group is important for. I will show the students the information on this worksheet, which points out the five food groups and gives examples of food items that belong to each group. I will share a gallery of plates to share to the students and tell them how they will get the chance to make one on a different day. After the 15 minute lesson, the children will have the opportunity to create their own healthy meal using the five food groups. I will provide the children with food magazines and the children will choose food items from each food group and add it to their healthy meal. The children will use paper plates and glue the food items from the magazine that

each child chose.Once the children are done with their healthy meal plate, I will hand out the Fruit and Veggie Goal paper (see Appendix C) to the students and have them fill it out. I will be taking a variety of fruits and vegetables to the class and showing the students types of fruits and vegetables that they may not have tried or seeing. I will be including some "Mexican" fruits and vegetables like Nopales, Jicama, Chayote and Guanabana. The children will do this for 15 minutes, then we will get back together and talk about their answers as a group for 10 minutes. I will ask the students to make a goal of trying a new fruit/veggie and we will talk about it the next day that I will see the students.

Day 2

On the second day, I will begin by asking the students what was the most nutritional thing they ate and the least nutritional for that day. Next, I will remind the children about the topic that was covered on the first day to refresh their memories (about 5 minutes). Then, I will move on to introducing food labels. I will be taking a variety of different food items so we can look at the food labels on each one. Some items will be healthy options and others will be unhealthy food items. I will do a 15 minute lesson on food labels and what each category means and does to our bodies. The lesson will include a discussion on the food labels. I will then hand out the Label Lingo (see Appendix D) worksheet and give each child two different food items. For the next 15 minutes the children will then fill in the worksheet depending on the two food item the child had. At the end we will discuss for 10 minutes about the different types of food items and compare the healthy and unhealthy items. I will also have the children bring up the most nutritional items.

Day 3

On day 3, I will take 5 minutes to discuss what we talked about on day 1 and day 2 to refresh their minds on what was learned. We will then discuss for 5to10 minutes about what the children can do with this information and write their answers on the whiteboard. Then, I will explain to the students that they will be doing a fun activity which is making a poster with healthy and unhealthy food items. I will provide the children with food magazines and the children will then choose the food items they want to add to their poster. The poster will have one side that says "healthy" and the other side will say "unhealthy". The children will then be the healthy side or unhealthy side.

Results

Learning outcome 1 was that students will demonstrate understanding of all five food groups. I believe this outcome was fully met. After our discussion about the five food groups and having the students create their own meal, the students, as group, were able to identify all five food groups. The students were able to name different food items that belonged to each food group. I have provided the answers of a group of students with whom I worked in figure 1. I have also provided example of some of the meals that the children came up with, that include all five food groups. See figure 2 for children healthy meal plates.

Learning outcome 2 was that students use the basic information on the food label to determine nutritional value of foods. On day 2, I introduced the students to the food label and why it is important to read the label on food items. I handed the students a worksheet in which the students had to use two different food labels and fill in the nutritional value of each item. This topic was sort of confusing to the students, so on day 3, I went over the nutrition labels again. I believe this outcome was partially met because although, the students were able to read

the nutrition label, the students did not understand what the nutritional values mean. I have provided an example of a students work on food labels. See figure 3 for students' work.

Learning outcome 3 was that students are able to identify healthy and unhealthy choices. I believe this outcome was met. The students, in general, were able to identify healthy and unhealthy food choices. The children seperated a paper in two sections, a healthy section and the unhealthy section. What the children did was cut out food items with the food magazine I provided and add different food items to each category. All of the children were able to identify healthy and unhealthy food choices and place them in the right category. This shows the students understanding of how to distinguish healthy and unhealthy options. I analyzed their responses by looking at each of their art works and seeing how each student added the correct food items to both categories. See figure 4 for an example of students work.

Discussion

Overall, I believe my project was successful. The children were engaged on the three day lesson and were able to learn new concepts about nutrition. According to Albert Bandura social learning theory, individuals learn through observation and modeling, and I was able to see how my participants learned from the experience. The discussions we had as a group and the activities I had the children do allowed the children to gain knowledge on different nutrition facts.

In terms of diversity, my project included only Hispanic children because the classroom I worked with was 100% Hispanic. My lesson was in English and all the participants knew English. Something I could have done different was to take ethnic foods so the children can see food items they normally see at home. Although we talked about different vegetables like nopales and chayote, taking those food items could have made a bigger impact because they would be able to physically see them and make connections.

If I had to do this project again, I would like to spend more time on my lesson and extend it to a 5 day lesson rather than a 3-day lesson. Also, I would want more time to do the nutrition label lesson because there are alot of concepts to a nutrition label and one lesson was not enough. I would also like to include a pre and post survey to allow me to analyze if the participants learned anything. A fun idea would be to make a snack together with the class as a fun learning activity. This would allow the children to learn how they could make a healthy snack at home rather than going for a snack that is unhealthy. The participants would be learning but at the same time having fun by having the opportunity to create a healthy snack on their own.

Overall, the participants learned about the five food groups, how to make a healthy meal, and how to distinguish healthy and unhealthy food choices. I believe the children benefited from my project because the children now know three important concepts to having a good nutrition. I am glad I had the opportunity to teach children about the importance of nutrition. It is great to know that my participants are now able to take this information and add it to their everyday life in order to have a healthy lifestyle.

References

- An, R. (2017). Diet quality and physical activity in relation to childhood obesity. *International Journal of Adolescent Medicine and Health*, 29(2), 1J+.
- Arcan, C., Friend, S., Flattum, C. F., Story, M., & Fulkerson, J. (2019). Fill "half your child's plate with fruits and vegetables": Correlations with food-related practices and the home food environment. *Appetite*, 133, 77-82.
- Briggs, M., Safari, S., Beall, D., American Dietetic Association, Society for Nutrition Education,
 & American School Food Service Association. (2003). Position of the American Dietetic
 Association, Society for Nutrition Education, and American School Food Service
 Association -- Nutrition services: An essential component of comprehensive school
 health programs. *Journal of the American Dietetic Association*, 103, 505-514.

Ed-Data.org. (n.d.). Retrieved February 20, 2019, from http://www.ed-data.org

Elsbernd, S. L., Reicks, M. M., Mann, T. L., Redden, J. P., Mykerezi, E., & Vickers, Z. M. (2016). Serving vegetables first: A strategy to increase vegetable consumption in elementary school cafeterias. *Appetite*, 96, 111–115.

https://doi-org.library2.csumb.edu:2248/10.1016/j.appet.2015.09.001

- Kiener, R. (2015, June 11). Obesity. *CQ researcher*. Retrieved from <u>http://library.cqpress.com/</u> McLeod, S. (2016). Bandura Social Learning Theory. Retrieved February 20, 2019, from www.simplypsychology.org
 - Metos, J., Sarnoff, K. =., & Jordan, K. (2018). Teachers' Perceived and Desired Roles in
 Nutrition Education. *Journal of School Health*, 89(1). Retrieved February 11, 2019.
 Roberts-Gray, C., Briley, M. E., Ranjit, N., Byrd-Williams, C. E., Sweitzer, S. J., Sharma, S. V.,

...Hoelscher, D. M. (2016). Efficacy of the Lunch is in the Bag intervention to increase parents' packing of healthy bag lunches for young children: a cluster-randomized trial in early care and education centers. *The International Journal of Behavioral Nutrition and Physical Activity*, *13*(3). Retrieved from <u>http://link.galegroup.com.library2.csumb.edu</u>

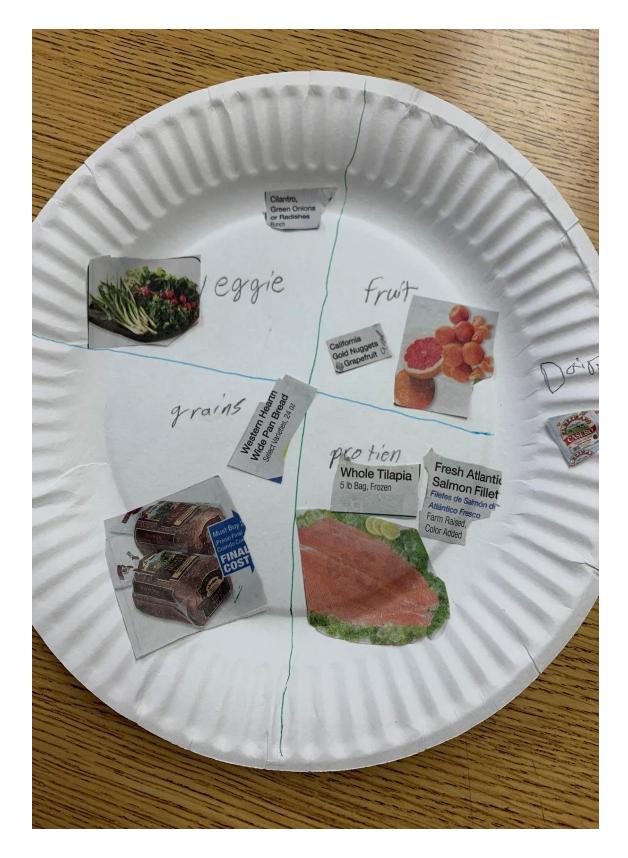
Zellner, D. A., & Cobuzzi, J. L. (2016). Just dessert: Serving fruit as a separate "dessert" course increases vegetable consumption in a school lunch. *Food Quality and Preference*, 48(Pt A), 195–198. <u>https://doi-org.library2.csumb.edu:2248/10.1016/j.foodqual.2015.09.01</u>

Results of discussion on five food groups.

EMERG Five Food groups Fruit: Grapes, apple, mangos legetables: lettuce, onion, cabbage ein: Turkey, beans, chicken Dairy: Milk, Cheese, Yogurt, ice Grains: Oat meal, wheat bread

Some of the student's healthy meal plates.

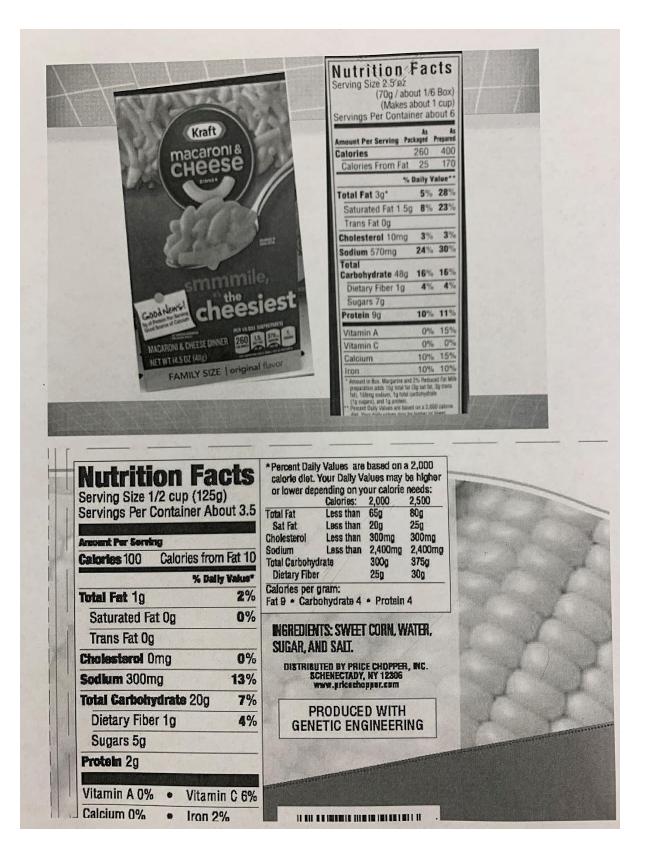




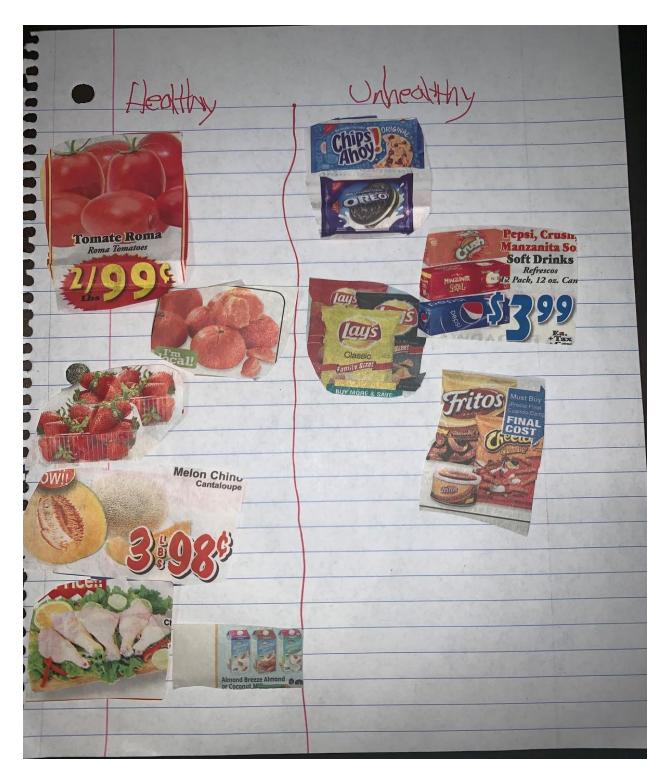
Food label worksheet

DIRECTIONS: Use the Nutrition Facts Label provided to answer the questions below.			
Nutrition Facts	Label #1 Product Name: Mac area; & Chesse	Label #2 Product Name:	
Serving Size	1 2.5 0Z	1/2 cup	
Total Fat	3	Var cup	
Which food is lowest in fat?	- 9	Corn	
Dietary Fiber	1 a	1 :g	
Which food is highest in fiber?		equal	
Sugar	7~	5.	
Which food is lowest in sugar?	, y	corn	
Sodium	570 mg	Boomg	
Which is lowest in sodium?		corn	
Why? Provide evidence to ba	e healthier choice? <u>Corn</u> ack up your choice: <u>Corn</u> hos [ess of ev	16 more healt	

Running Head: TEACHING 4TH GRADE STUDENTS



Example of healthy and unhealthy items activity



Appendix A

Pre survey on nutrition

Name:

Nutrition Survey

Direction: Circle the answer that best applies to you..

Question	1=Never	2=Some days	3=Most Days	4=Everyday
I eat Vegetables	1	2	3	4
I eat fruit	1	2	3	4
I choose healthy snacks	1	2	3	4
I eat breakfast	1	2	3	4

Question	1=Completely disagree	2=Somewhat disagree	3=Somewhat agree	4= Completely agree
I know how to plan a healthy meal	1	2	3	4
I know how to read a nutrition label	1	2	3	4
I know the five food groups of the food pyramid	1	2	3	4

Appendix B

Worksheet on Five Food Groups

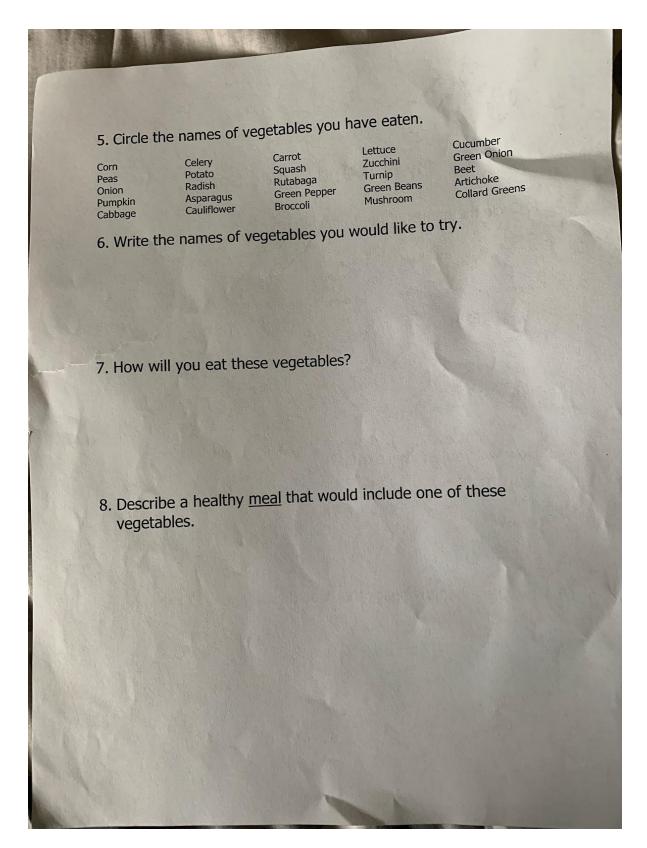


Appendix C

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Worksheet on Fruit and Veggies

	A Prose				The second is
-					
	A A	3	Name		
-			12/20	aie Goals	
	and a state of the			gie Goals	
	1. Circle the	names of the	e fruits you ha	ave eaten.	astra and
	Apple Kiwifruit Pineapple Blackberry Watermelon	Banana Cantaloupe Blueberry Pear Mango	Grape Plum Raspberry Cranberry Cherry	Orange Peach Strawberry Grapefruit Nectarine	Lime Lemon Guava Papaya Honeydew Melon
	2. Write the	names of fru	iits you would	like to try.	
	3. How will y	you eat these	fruits?		
King	4. Describe a	a healthy <u>sna</u>	ck that would	d include one	e of these fruits.
1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1					



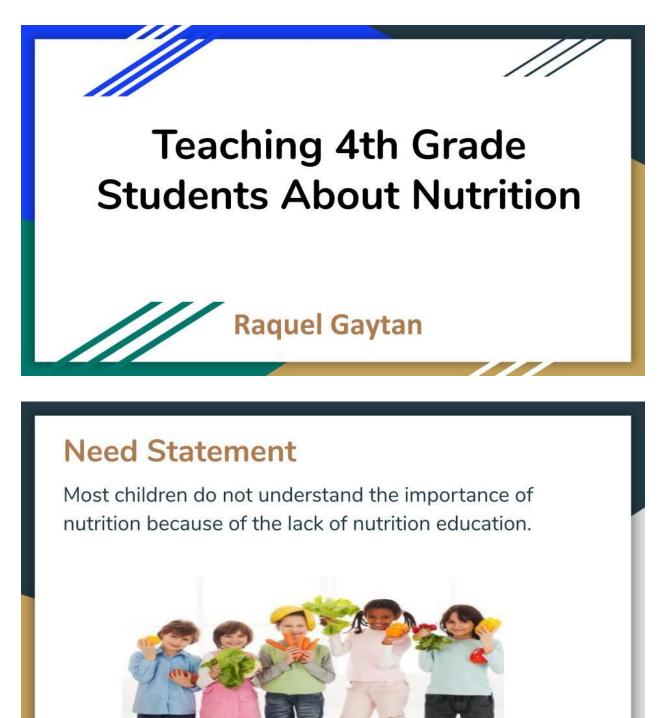
Appendix D

Worksheet on Nutrition Labels

Nutrition	Label #1 Product Name:	wer the questions below. Label #2 Product Name:	
Facts Serving Size			
Total Fat			
Which food is lowest in fat?			
Dietary Fiber			
Which food is highest in fiber?			
Sugar			
Which food is lowest in sugar?			
Sodium			
Which is lowest in sodium?	N. M. M. M.	A Carlo Carlo	
Which food do you think is the h Why? Provide evidence to back			

Appendix F

Final Capstone Presentation



Albert Bandura Social Learning Theory

Two Elements of Theory:

<u>Retention:</u> How well individuals remember the behavior.

Reproduction:

Being able to perform the behavior that was observed.

3 day lesson in a 4th grade classroom at Del Rey Elementary in King City, CA.

First day: Five food groups, healthy meal

Second day: Nutrition labels.

Third day: Healthy/unhealthy food items.



Learning Outcomes

By the end of the project,

- 1. Students can identify five food groups.
- 2. Students can use the basic information on food labels to determine nutritional value of foods.
- 3. Students can identify healthy and unhealthy food choices.

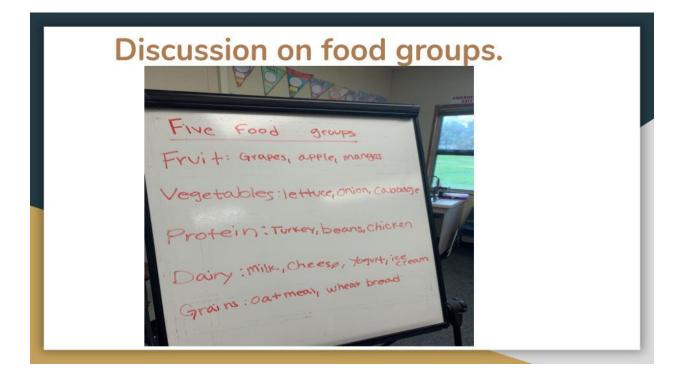
Results

L.O 1: Students can identify five food groups.

-All children gave examples of a food group.

-Children came up with healthy meal that included all of the food groups.

-Learning outcome was met.



Healthy Meal

Veggies: Green onion and Radishes Fruit: Grapefruit Grains: Whole grain bread Protein: Tilapia Dairy: Cheese

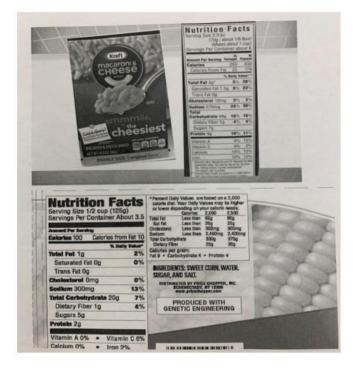


Results

L.O 2: Students can use the basic information on food labels to determine nutritional value of foods.

-Students used the nutrition label to compare two items, but did not understand what the nutrition facts meant.

-Learning outcome was partially met.



Label Lingo DIRECTIONS: Use the Nutrition Facts Label provided to answer the questions below.			
Nutrition Facts	Label #1 Product Name: Mac area & Chee	Label #2 Product Name:	
Serving Size	1 2.5 02	1/2 сир	
Total Fat	3 ai	la cu	
Which food is lowest in fat?		corn	
Dietary Fiber	2 a	24	
Which food is highest in fiber?		equal	
Sugar	7.	54	
Which food is lowest in sugar?		corn	
Sodium	570 mg	30000	
Which is lowest in sodium?		corn	
Why? Provide evidence to be	e healthier choice? <u>Loc.11</u> ack up your choice: <u>Sern</u> has fast of e	is more healt	

Results

L.O 3: Students can identify healthy and unhealthy food choices.

-All students were able to identify healthy and unhealthy food items.

-Learning outcome was met.





Discussion

-Spend more time on nutrition label lesson.

- Make a healthy snack together.

-Overall, children enjoyed the lesson and had the opportunity to learn about proper nutrition.

Teaching 4th Grade Students About Nutrition

Thank you. Questions?

Raquel Gaytan