

Brigham Young University

# Grant Proposal

As a group we worked with a local elementary school to set up a theoretical grant to create a perpetual afterschool program. Our group decided to take the project a step further and actually create a perpetual program using our limited resources.

# Rock Canyon Afterschool Nutrition Class

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Grant Proposal

**Sarah Conway, Chelsey Evans, Dustin Moore, Lisa Lindow**

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October 22, 2011

Dear Mary O'Neil,

We are currently dietetic students at Brigham Young University and have become aware that the Rock Canyon Elementary School District is in need of a nutrition class for their afterschool program. We hope that after you have reviewed our grant proposal, you will see that need too and will agree to support and fund our efforts.

Nutrition education often gets overlooked in elementary schools and most of the teachers are not informed enough to teach the children about nutrition. Several studies have been conducted (we will mention these specifically in our proposal) about afterschool programs that provide nutrition education and they have seen positive results in the health habits of the children. We hope that by implementing a nutrition program at Rock Canyon Elementary, we can also get positive results.

There have been some previous efforts to teach the afterschool children about nutrition before at Rock Canyon Elementary, but it was short-lived and when the volunteers left, the nutrition class was no longer a part of the afterschool program. We will provide the lessons, materials, and a steady flow of volunteers to have a nutrition class that can be taught year after year. We plan to make an impact on the children and influence them to make healthy food choices.

Teaching the children about nutrition now will impact their health and their food choices later in life. We hope that as you look through our grant proposal you will realize how important this project is and you will lend us the help and support we need. Thank you for taking the time to review our proposal.

Sincerely,

Sarah Conway

**Project Title:** Rock Canyon Elementary School Afterschool Nutrition Class  
**Amount Requested:** \$2,912.25  
**Group Members:** Chelsey Evans, Dustin Moore, Sarah Conway, Lisa Lindow  
**Project Collaborator:** Mary O'Neil  
**Target Population:** Grades K-6 at the afterschool program

## **Increasing Nutrition Education in Children at Rock Canyon Elementary School: A Community Health Education Project**

### **NEEDS STATEMENT**

In the last thirty years, the amount of children or adolescents who are obese or overweight has more than doubled (1). Of the children that enter kindergarten, about one-third of them are overweight (2). Children who are overweight are more likely to get chronic diseases later in life and are more likely to be obese as adults. Type II diabetes was more common in older adults who were overweight or obese, but now 50% of the children who are diagnosed with diabetes are diagnosed with type II diabetes (1). These statistics are very troubling and are evidence that nutrition intervention is needed for children and adolescents.

There are many factors that influence how a child eats. Their family life style, culture, and income have a huge effect on what foods they eat. Many parents don't seem to be educated on healthy food choices and their children are heavily influenced by their parent's choices. Although increasing nutrition education in the schools isn't the only solution to combating childhood obesity, schools have to be involved in the process (1). A child spends the majority of their day at school and can eat between one to two meals there. Schools have a huge capacity to be a power for change when it comes to teaching children how to eat better and encourage healthy behaviors. It is at this period of life that most health and eating habits are formed and that is why it is so important to address and why it is included in the Healthy People 2020 National Health Objectives (3). Schools are usually provided with funding by state governments to implement physical activity and nutrition education programs and are required to follow the regulations (4). One source of intervention in schools has been in the form of afterschool programs.

There are approximately 37% of all students in grades K-8 that participate in afterschool programs, as estimated by the Department of Education (5). This is a significant portion of the student population that can be taught about nutrition and physical activity without taking away time from other school subjects during the day. Several studies have been conducted in regards to the efficacy of having a nutrition-focused afterschool program and they have seen positive results. In a study done in Hawaii called "Fun Five," the afterschool program focused on increasing student's knowledge and consumption of fruits and vegetables as well as increasing the student's amount of exercise (2). Positive results of an increase in fruit and vegetables were seen in children who were "at risk" or consumed less than 2 fruits and vegetables a day at the beginning of the study (2). Another study implemented a program that focused on educating children and parents about nutrition labels. This program significantly increased nutrition knowledge in both the parents and the children from those who did not receive the education (6). These studies, as well as many others, provide evidence that afterschool programs can be an effective way to expose children to nutrition education.

At Rock Canyon Elementary School, there is currently no afterschool class about nutrition. They have a school lunch program, but little nutrition education is given in the classrooms. A nutrition afterschool class was previously held for a short amount of time, but it was not sustainable. One of the afterschool directors told us that this class had a great impact on the children and that they still talk about things they learned in it. In the student population there is a lot of culture diversity as well as students who receive free and reduced lunches who could benefit from learning about healthy food choices available to them.

We suggest that by creating a curriculum for an afterschool nutrition program for Rock Canyon Elementary about each different food group and healthy food choices in each group, the children will have an increased understanding of food and which foods are healthier for them. We predict that this will make children more aware of their food choices which will lead to a decrease in obese and overweight children in this population. This community project will introduce a nutrition education plan that was not at the school before and help the children learn about correct food principles.

## **GOALS AND OBEJECTIVES**

Develop a one-day a week nutrition class for the afterschool program at Rock Canyon Elementary School, catered to grades K-6, to teach about basic nutrition and healthy lifestyles through food choices.

Process Objectives:

1. Create 8 lesson plans that can be used to teach the afterschool nutrition class once a week. These will include an overview of MyPlate, each of the five food groups, water, and DARE or saying no to drugs.
2. Create a self-sustaining system for providing volunteer teachers form the BYU dietetics program. Develop an orientation packet and provide the volunteers with the preparation and materials they need.

Outcome Objectives:

1. By the end of each class, 80% of the students will retain knowledge of the specific lesson taught and the retention will be measured informally by in-class activities and games which require use of the information taught in the class.
2. With lesson plans, materials, and a system for obtaining volunteers, the nutrition afterschool class will be self-sustainable for 5 years.

## **METHODS**

The afterschool nutrition class will be organized on the basis of eight different lesson plans, one being taught every week, followed by a class activity or game based upon that lesson. The eight lessons will be centered on fruits, meats, vegetables, dairy, grains, fats, water, and a special D.A.R.E. presentation. Considering the age range and short attention span of the children in the class, the lessons will be succinct and cover only fundamental principles. The lesson plan briefly teaches the material, and the game or activity afterward allows us to assess understanding in the children.

For example, the meat lesson is assessed by using a protein game. A child selects a card which has a picture on it. In order to win, the child needs to correctly describe what type of protein it is (poultry, beef, fish, etc.) and then tell the class what a serving size is. The child's ability to play this game will be informative of how well they retained the information they were taught.

We will be responsible for gathering all the materials needed for the lessons and activities, recruiting volunteers to teach and monitor the classes, and contacting local businesses to request charitable contributions to the class (in the form of food or materials).

Seeing as how we want this after-school class to operate until at least the year 2016, Mary O'Neil who heads the after-school programs at Rock Canyon, will be given the information needed to sustain the class with minimal effort on her part. The information given will include copies of all the lesson plans, materials used in the lessons, all the related games and activities, any further information needed to explain these, and adequate contact information of the Dietetics Department at BYU when the need for more volunteers arises.

We will teach the first class on November 17<sup>th</sup> so that if there is a need to alter our lessons for some unforeseen reason (smaller class size than expected, different age range, etc.), we can immediately do so. The volunteers will begin teaching two weeks later under our supervision to allow us to instill our expectations and expected outcomes for the class.

For more information about our methods refer to our gaant chart and nutrition education plan.

## **EVALUATION PLAN**

### *Formative Evaluation*

After meeting with the director of the afterschool programs, the director expressed a need for a sustainable afterschool nutrition class. They had a temporary class in the past that they felt was beneficial to the student and desire to have one that will become a regular part of the afterschool class options.

### *Process Evaluation*

Eight lesson plans will be completed that can be used on a regular and continued basis for teaching the nutrition class. Volunteers from the BYU dietetics program will come to teach the lessons on a regular basis.

### *Outcome Evaluation*

Due to the nature and age group of our participants we will evaluate informally using activities and games designed to test their knowledge about each lesson's objective. Overall the success will be determined by their increased ability to complete the games after being taught the lesson material.

For more details and information refer to our Logic Model.

## **SUSTAINABILITY**

The afterschool program nutrition class at Rock Canyon elementary school will be self-sustaining after the initial completion of the lesson plans and materials. The teachers of the class will be provided through Brigham Young University's Nutrition, Dietetics, and Food science department. Each fall the directors of the Rock Canyon afterschool program will contact Dr. Pauline Williams, the teacher of NDFS 290, requesting three to four student volunteer teachers in the NDFS 290 class and direct them to the training and lesson materials, which will include the contact information for the director at Rock Canyon. Students will then contact Rock Canyon and set up a schedule for nutrition classes. The student teacher responsibilities include reading over the lesson plans and teaching the afterschool nutrition class during both fall and winter semesters.

## Budget

This is the proposed budget to fund the creation of a self-sustaining afterschool program nutrition class. The administration is responsible for the creation of the program during a 14 week period and then the staff (teachers) will be volunteer nutrition students from local universities. The expense of the office, utilities, and equipment cover the cost for the 14 week creation period of the program.

<b>Category</b>	<b>Details</b>	<b>Cost</b>
<b>Administration</b>	<i>1 FTE x \$15/hr x 14 weeks</i>	\$210
<b>Staff</b>	<i>Volunteer Students</i>	\$0
Office Space	<i>\$200/month x 3 months</i>	\$600
Overhead Cost	<i>Utilities and internet</i>	\$175
	<i>Gas</i>	\$210
Equipment	<i>Binder</i>	\$3.50
	<i>Paper</i>	\$3.75
	<i>Page Protectors</i>	\$5.00
	<i>Computer</i>	\$600.00
	<i>Printer</i>	\$50.00
	<i>Materials Box</i>	\$20.00
	<i>Training Webpage</i>	\$900
	<i>Objects for Lessons</i>	\$75.00
	<i>Craft materials</i>	\$25.00
	<i>Ink</i>	\$35.00
<b>Total</b>		<b>\$2,912.25</b>



## References

1. Dietz WH, Lee SM, McKenna ML, Wechsler H. The role of schools in preventing childhood obesity. *NASBE*. 2004; 4-12.
2. Iversen CS, Nigg C, Titchenal CA. The impact of an elementary activity program on children's fruit and vegetable intake, physical activity and body mass index: Fun 5. *Hawai'i Med J*. 2011; (supp.1) 1-5.
3. Healthy People 2020. Early and middle childhood.  
<http://www.healthypeople.gov/2020/topicsobjectives2020/overview.aspx?topicid=10>. Accessed October 25, 2011.
4. Boles M, Dent C, Dilley JA, Duncan SC, Elman MR, Johnson DB. Changes in local school policies and practices in Washington state after an unfunded physical activity and nutrition mandate. *Prev Chronic Dis* 2011; 1-13.
5. Dzewaltowski DA, Rosenkranz RR, Geller KS, et al. HOP'N after-school project: an obesity prevention randomized controlled trial. *J Behav Nut*. 2010; 1-12.
6. Katz DL, Katz CS, Michael J, Njike V, Reynolds J, Smith E, Treu JA, Walker J. Teaching healthful food choices to elementary school students and their parents: the Nutrition Detectives program. *J Sch Health* 2011; 21-28.

## Logic Model: Rock Canyon Afterschool Nutrition Class

**Goal(s):** Develop a one-day a week nutrition class for the afterschool program at Rock Canyon Elementary, catered to grades K-6, to teach about basic nutrition and healthy lifestyles through food choices.

<b>Inputs</b>	<b>Outputs (Implementation/Process Obj.) Activities</b>	<b>Outcomes – Impact</b>
<p>Volunteers</p> <p>Lesson plans: displays, games, worksheets</p> <p>Materials</p> <p>Classroom</p> <p>Time</p> <p>Computer</p>	<ul style="list-style-type: none"> <li>• Create 8 lesson plans that can be used to teach the after school nutrition class. These will include an overview of MyPlate, each of the five food groups, water, and DARE or saying no to drugs.</li>   <li>• Create a self-sustaining system for providing volunteer teachers, from BYU dietetics program. Develop an orientation packet and provide the volunteers with the preparation and materials they need.</li> </ul> <p><b>Participants:</b> Grades K-6 in afterschool program</p>	<p><b>Short/Medium-Term</b> By the end of each class, students will retain knowledge of the specific lesson taught, and retention will be measured informally by in-class activities and games which require use of the information taught in the class.</p> <p><b>Long-Term</b> With lesson plans, materials, and a system for obtaining volunteers, the nutrition after school class will be self-sustainable for 5 years,</p>

**Assumptions:**

The programs will be able to continue after we graduate and that the children will have a better understanding of food after the class.

**External Factors:**

Parent’s personal beliefs about food and eating habits and what children learn in school.

**Evaluation:**

- The 8 lessons that will be reused an indefinite number of times by future teachers.
- An adequate number of volunteers participate in teaching lessons.
- Evaluate the children’s ability to complete activities and games based on the knowledge learned in classes.



**NDFS 400 COMMUNITY PROJECT LESSON PLAN**

<b>Title</b> Introduction to MyPlate		<b>Name</b> Chelsey Evans, Dustin Moore, Lisa Lindow, Sarah Conway	
<b>Target Audience</b> K-6 afterschool program		<b>Community Agency</b> Rock Canyon Elementary After School Program	
<b>Terminal Objective</b> Children will be able to sort foods into proper food group categories on MyPlate.		<b>Terminal Concept</b> Good nutrition means eating a variety of foods from all five groups. In other words, all foods fit!	
<b>References</b> USDA My Plate <a href="http://www.choosemyplate.gov">www.choosemyplate.gov</a>			
<b>Preparation</b> <ul style="list-style-type: none"> <li>• MyPlate poster and cut-out food pictures for each MyPlate food group, including (list foods).</li> <li>• Folder with lesson plan and food cut-outs and MyPlate poster.</li> </ul>			
<b>Pre-assessment</b> Does anyone know what my pyramid or my plate is? Show them a picture and ask if they have ever seen myplate before.		<b>Introduction</b> Same as pre-assessment	
<b>Supporting Objectives</b>	<b>Content Outline</b>	<b>Time</b>	<b>Learning Experiences</b>
Children will be exposed to different foods	The pre-assessment will introduce this activity. There are lots of different foods that each fit into a specific group. Today we are going to learn about a few food that go into each group on MyPlate Draw MyPlate on the white board.	5min	At start of class have 3 children volunteer to come and choose foods out of a bag: <ul style="list-style-type: none"> <li>• Grains <ul style="list-style-type: none"> <li>○ Bread</li> <li>○ Brown rice</li> <li>○ Oats</li> <li>○ Quinoa ( for older kids)</li> </ul> </li> <li>• Fruit <ul style="list-style-type: none"> <li>○ Grapes</li> <li>○ Bananas</li> <li>○ Pineapple</li> <li>○ Mango</li> <li>○ Pomegranate ( older kids)</li> </ul> </li> <li>• Vegetables <ul style="list-style-type: none"> <li>○ Sweet potato</li> <li>○ Broccoli</li> <li>○ Green beans</li> </ul> </li> </ul>

Children will learn about the different foods and be able to sort them.

Ask: What did is the name of the food you drew out of bag? What food do you think it fits into?

Teach about MyPlate by giving a brief explanation and some examples from each of the categories.

- Grains
  - Come from plants like wheat or oats. They are then ground into flour to make things like bread.
  - They have vitamins that are healthy for our bodies.
  - Whole grains are extra

- Corn
- Protein
  - Peanut butter
  - Fish
  - Tofu
  - Beans
  - Nuts
  - Seeds
  - Steak
- Dairy
  - Yogurt
  - Cottage cheese
  - Milk
  - String cheese

Children will place the food items they drew into a food group.

Show a picture of grain and have them guess what it is and then tell them what it is. Ask Children when the last time they ate grains was and what they ate. Discuss

healthy because they have more vitamins and fiber – which helps food move through our bodies

- Fruit
  - They grow on trees or bushes
  - They have lots of vitamin like vitamin C in oranges
  - They have natural sugars that make them taste sweet and are good for our body.
  - Come in lots of colors
- Vegetables
  - Grow in ground or from plants. Potatoes grow in the ground and broccoli grows from a bush.
  - Lots of vitamins and fiber – what does fiber do?
  - Come in all different colors
  - One of the biggest areas on myplate – need to eat a lot of them
- Protein
  - Comes from animals and plants
  - Seeds and nuts come from plants and trees and flowers
  - Poultry a fancy name for bird and beef, steak, hamburger comes from a

Ask Children when the last time was that they ate fruit and what kind they ate. Discuss

Ask Children when the last time was that they ate vegetable and what kind they ate. Discuss

Ask Children when the last time was that they ate protein and what kind they ate. Discuss

	<p>cow.</p> <ul style="list-style-type: none"> <li>○ Helps our muscles be strong, and make us full longer</li> </ul> <ul style="list-style-type: none"> <li>● Dairy <ul style="list-style-type: none"> <li>○ Comes from cows and goats</li> <li>○ Milk can be made into cheese, yogurt, cottage cheese, or icecream.</li> <li>○ Milk has calcium and makes our bones strong.</li> </ul> </li> </ul>		<p>Ask Children when the last time was that they ate dairy and what kind they ate. Discuss</p>
<p><b>Assessment</b> Once again have children choose foods out of bag and place them in proper food group for MyPlate demonstrating that they learned about the food groups and where each food belongs.</p>			
<p><b>Closure</b> Myplate is a great guide and we should need to use it to make our plates healthy and make our bodies feel good! 😊</p>			