United Health Foundation W150 9900 Bren Road East Minnetonka, MN 55343

Dear United Health Foundation Grant Committee,

My colleagues and I are pleased to submit the enclosed proposal, *Development of a Physical Activity Program for the Utah County Mountainland Head Start Program*, in regards to the Whole Kids Foundation Innovation Grant through the United Health Foundation and Whole Kids Foundation. We are requesting a total of \$1,694 to carry out a four-month project from (September 2015-December 2015). You will find the enclosed proposal and an additional 14 copies of the proposal as requested.

If you have questions or need additional information, please contact me. Thank you for your time and consideration.

Sincerely,

Megan Kennedy

Dietetics Student Brigham Young University

145 South 200 East #12

Provo, Utah 84606 Phone: 801-856-9064

Email: megankennedyukr@gmail.com

my Hly

Project Title: Development of a Physical Activity Program for the Utah County Mountainland Head

Start Program

Funds Requested: \$1,694

Team Members' Names:

Megan Kennedy (Project Manager)

Dietetics Student

Brigham Young University

145 South 200 East #12

Provo, Utah 84606

Phone: 801-856-9064

Email: megankennedyukr@gmail.com

Chelsea McBride

747 North 200 East #8

Provo, Utah 84606

Phone: 970-214-1436

Email: chelsea61111@gmail.com

Anna Arnett

1060 East 450 North #226

Provo, Utah 84606

Phone: 408-201-2737

Email: arnettannac@gmail.com

Natalie Wachlin:

457 North 750 East

Provo, Utah 84606

Phone: 847-754-7217

Email: nwachlin@gmail.com

Project Collaborator:

Stephanie Ensign, RD, CD

Nutrition Services Coordinator

Mountainland Head Start, Inc.

264 West 300 North

Provo, Utah 84601

Phone: 801-375-7981 Ext. 153

Email: sensign@mountainlandheadstart.org

Abstract

The aim of the proposed project is to implement a program to encourage family activity and hydration for families of students who participate in Mountainland Head Start. This program will be implemented in four phases: 1) Development and distribution of teaching materials, including setting up a bulletin board, developing and passing out physical activity tracker sheets, and developing and teaching a physical activity lesson plan, 2) Writing and distributing letters asking for donations for prizes from local stores and businesses, 3) Evaluation of the program by through collection and recording of tracker sheets, and 4) Holding a raffle to distribute prizes to families who participate in the program. In phase one, four dietetics students will collaborate with the dietitian at Mountainland Head Start and then design and implement set up of a bulletin board, pass out physical activity tracker sheets, and teach a physical activity lesson plan. In phase two, the dietitian at Mountainland Head Start and the four dietetics students will write letters and visit stores to ask for donations for prizes. In phase three, the teachers at Mountainland Head Start will collect physical activity tracker sheets from students and the dietetics students will record the amount of physical activity that each student completed with his/her family. In phase four, families who participated in the program will receive raffle tickets and the Mountainland Head Start dietitian will hold a raffle for the donated prizes. The end goal of this project will be to design and pilot a physical activity program that will be used at Mountainland Head Start every school year. The total budget request is \$1,694 to carry out a four month project (September 2015 – December 2015).

IV.a. Needs Statement

In 2007, 1 in 5 Utah preschoolers were classified as either overweight or obese. ¹ Nationally and locally, these trends continue to scale upwards. ¹ Furthermore, children from low-income households are more likely to be overweight. ²⁻³ Childhood obesity is correlated with decreased self-esteem, social functioning, and psychomotor development as well as increased sleep disorders, blood pressure, dyslipidemia, and risk of cardiovascular disease. ⁴⁻⁹ Due to the myriad of consequences associated with childhood overweight and obesity, efforts must be made to decrease incidence. Proper diet, exercise, and hydration can help children achieve or maintain a healthy body weight. ¹⁰⁻¹⁴

Mountainland Head Start is a pre-school program for children ages 3-4 from low-income families. ¹⁵In the Juab, Utah and Wasatch, Utah counties, Mountainland Head Start serves 817 children. ¹⁵ Since this pre-school program serves many children coming from low-income families, Mountainland Head Start is an ideal facility where prevention and intervention programs could help decrease the rates of obesity and overweight in Utah children. The Healthy People 2020 objective EMC-4.3 is to "increase the proportion of schools that require cumulative instruction in health education that meet the US National Health Education Standards." ¹⁶ In line with this objective, the new proposed Head Start Performance Standards state that Head Start centers must give nutrition and physical activity education that are understandable to individuals with low health literacy. ¹⁵

During the preschool years, parents have a substantial effect on their child's physical activity and diet behaviors. Studies show that a parents' level of physical activity is directly correlated with their child's level of physical activity and BMI. 17-18 Physical activity promotion programs have shown to be successful when parents participate in activities with their children. 19-21

As a part of the preschool program, Mountainland Head Start already provides students with one meal daily, served family style. Students are offered a variety of nutritious food sitting down with classmates and an instructor, and are shown how to take proper portion sizes. However, Mountainland Head Start does not have a physical activity education program. Stephanie Ensign, the dietitian at Mountainland Head Start, recognizes this gap in education and believes that there is room for improvement. She asked our team to develop a physical activity program that will encourage students to do at least 20 minutes of physical activity a day with their parents or families.

The purpose of this project is to decrease the incidence of childhood overweight and obesity by encouraging physical activity and water consumption, using a family behavior change intervention model. Using a beloved figure, Pete the Cat, our proposed program will encourage students to be active with their families while keeping hydrated. The children will be encouraged to complete activity logs to track the amount of activity they do as a family. As families complete activities and fill out the logs together, relationships will be strengthened and physical activity behaviors reinforced. If successful, Mountainland Head Start can use the material created by the Brigham Young University dietetics students to implement the program in future years.

IV. Grant Narrative

IV.a. Needs Statement

IV.b. Project Goals and Objectives

IV.b.1. Goal

Families with children enrolled in Mountainland Head Start will implement healthy living practices by being physically active together and having appropriate water intake.

IV.b.2. Long-term Outcome Objectives

- 1. By September 2016, 50% of families of children enrolled at Mountainland Head Start will reach the goal of 100 minutes of physical activity each week as a family.
- 2. By September 2016, 50% of families of children enrolled at Mountainland Head Start will reach the goal of drinking water after each session of physical activity as a family.

IV.b.3. Short-Term Impact Objectives

- 1. By December 2015, 70% of families of children enrolled at Mountainland Head Start will reach the goal of 100 minutes of physical activity each week as a family.
- 2. By December 2015, 70% of families of children enrolled at Mountainland Head Start will reach the goal of drinking water after each session of physical activity as a family.

Implementation/Process Objectives:

Implementatio	implementation/1 rocess objectives.				
1.1, 2.1	To create one physical activity and water tracker sheet for 50 families by				
	October 1, 2015.				
1.2, 2.2	Write a newsletter that introduces the physical activity and water program by				
	October 1, 2015 to be distributed via email to 50 families				
1.3, 2.3	To create one lesson plan to introduce the physical activity and water intake				
	program to the parents and children at Mountainland Head Start by October				
	12, 2015				
1.4	To create on bulletin board which promotes family physical activity by				
	October 7, 2015.				

IV.c. Project Description and Methodology

IV.c. 1. Project Overview

Four dietetics students from Brigham Young University will be responsible for developing a program targeted to students at Mountainland Headstart (ages 3-4), encouraging them to be physically active and remain hydrated while exercising with their family. The program will take place October-December 2015 and begin again starting January-May 2016 corresponding to the new school semester. Each student will be given a weekly activity log where they will color in shoes from the popular children's book *Pete the Cat*. For every 20 minutes that the student spends doing physical activity with their family, they can color in a shoe. The student with the most shoes colored at the end of the fall school semester will be awarded a prize. The dietetics students will be responsible for creating materials for program promotion and teaching an initial 10-minute promotional lesson plan to kick start the program. Then, teachers at Mountainland Headstart will administer the activity logs weekly and encourage students to complete and turn in the logs at the end of the week.

IV.c.2. Promotional Lesson Plan

Using Pete the Cat, teachers will introduce the program during a 10-minute lesson plan. The dietetics students will show a YouTube video from a personal laptop connected via a HDMI cord to an overhead projector. This video is a lively reading of Pete the Cat complete with songs and pictures of the book pages. The video can be accessed at: https://www.youtube.com/watch?v=5 z1NbeYQ2Y. In the book, Pete the Cat does various activities in his white shoes, each of which make his special white shoes turn a different color. After the video, the children will be asked the question, "What activities do you like to do in your shoes with your family?" Children can stand up and act out different activities they do in their shoes such as running in place, jumping jacks, or dancing. The dietetics students will emphasize to the students that Pete is being active which is why his shoes turn so many colors. Students will then be given a blank white shoe that they will color to show that they are being active in their shoes, just like Pete.

IV.c.3 Activity Logs

Every Friday the students will be given an activity log by their respective teachers. On the front side of the activity log will be a picture of Pete the Cat will be centered on the page with 7 blank shoes surrounding him. Children will be instructed to color one shoe every time they spend 20 minutes doing a physical activity with their family and have a drink of water afterwards. Students will be encouraged to fill in all the shoes by the next Friday when they will receive a new activity log for the coming week. On the backside of the activity log will be a newsletter for the parents that explains the program and gives suggestions of activities that the family can do together.

IV.c.4 Bulletin Board

In order to promote this program, the dietetics students will create a bulletin board that will be set up at the Mountainland Headstart Provo Center where children and visiting parents can view it. The title of the bulletin board will be "Stay Cool. Drink Water" The poster will feature Pete the Cat in a sweatband holding a water bottle. There will be a sign next to Pete that says "Stay Cool. Drink Water".

IV.c.5 Student Prize

Every week when activity logs are collected, teachers will make a record of how many shoes the child colored indicating physical activity and hydration. At the end of the school semester, in December, the teacher will add up the scores and the child with the highest number of shoes will win an iPad. After Winter Break, the program will start again.

IV.d. Evaluation Plan

To determine if the goals and objectives or this project are met, the following evaluations will be conducted for process objectives and impact/outcome objectives.

IV.d.1 Process Evaluation

The number of physical activity/hydration tracker sheets printed and the number of students that receive these tracker sheets will be recorded to ensure that every student at Mountainland Head Start receives a tracking sheet. The number of families that receive the monthly newsletter via email will also be recorded to estimate how many families will be notified of the program. The number of classes that teach the students the physical activity/hydration lesson will also be tracked to ensure that each class of students will be taught about physical activity and hydration. The bulletin board

will be completed by October 7th, 2015 and Stephanie Ensign will review the board by October 19th, 2015.

IV.d.1 Impact/Outcome Evaluation

To track the number of families that participate in the program and record how much physical activity each family completes. On December 2^{nd} , 2015, the four Brigham Young University Students will collect the physical activity tracker sheets from Stephanie Ensign to tally and record physical activity and hydration. Stephanie Ensign will collect and record tracker sheets again in September 2016.

IV.e. Sustainability

Most materials developed for this project, including the physical activity and hydration tracking sheet, the lesson plan, and newsletter will be saved on a flash drive for next year. Thus, these materials can be used for years after the initial project period ends; the program coordinator plans to use these materials as templates to modify slightly each year.

V. Budget

TOTAL COST

INDIRECT COSTS (20% of direct costs)

V.a. Itemized Budget DIRECT COSTS A. Salaries and Wages 1. Senior Personnel a. 4 Undergraduate students: Dietetics B. Total Salaries and Wages C. C. Materials and Supplies D. Total Direct Costs (B to D) \$\frac{\text{V.a. Itemized}}{\text{Budget}}\$ \$\frac{\text{V.a. Itemized}}{\text{Budget}}\$ \$\frac{\text{Salaries}}{\text{Salaries}}\$ \$\frac{\text{5780}}{\text{632}}\$ \$\frac{\text{5632}}{\text{51412}}\$

\$282

\$1,694

V.b. Budget Narrative

DIRECT COSTS

A. Salaries and Wages

1. Senior Personnel

a. **3 Undergraduate students: Dietetics:** \$780 = 4students x 15 hours x \$13/hr. Students will create a flyer, design a tracking sheet for physical activity and hydration, create a bulletin board, and teach a lesson plan.

B. Total Salaries and Wages: \$780

C. Materials and Supplies

- 1. Poster paper (for decorating bulletin board): \$8
- 2. Water bottle (for decorating bulletin board): \$8
- 3. Copy paper (for printing flyers informing parents of the program): \$14
- 4. Ribbons (for decorating bulletin board): \$4
- 5. iPads (for a raffle drawing that families can enter based on their participation in the program): \$600

D. Total Direct Costs

Total costs for B through C equal \$1,412.

INDIRECT COSTS

Indirect Costs equal \$282 (20% of total direct costs)

TOTAL COST

Total Direct and Indirect Costs equal \$1,694 (\$1,412 + \$282)

References

- Childhood Overweight and Obesity Trends. National Conference of State Legislatures. http://www.ncsl.org/research/health/childhood-obesity-trends-state-rates.aspx Updated February 21, 2014. Accessed October 25, 2015.
- 2. Kim K, Shin SC, Shim JE. Nutritional status of toddlers and preschoolers according to household income level: overweight tendency and micronutrient deficiencies. *Nutr Res Pract*. 2014;9(5): 547-53.
- 3. Oddo VM, Jones-Smith JC. Gains in income during early childhood are associated with decreases in BMI z scores among children in the United States. *Am J Clin Nutr.* 2015;101(6):1225-31.
- 4. Griffiths LJ, Parsons TJ, Hill AJ. Self-esteem and quality of life in obese children and adolescents: a systematic review. *Int J Pediatr Obes*. 2010;5(4):282-304.
- 5. Mendez RM, Estay CJ, Calzadilla NA, Duran AS, Diaz-Narvaez VP. Comparison of psychomotor development in preschool Chilean normal weight verus overweight/obesity. *Nutr Hosp.* 2014;32(1):151-5.
- 6. Vale S, Trost SG, Rego C, Abreu S, Mota J. Physical activity, obesity status, and blood pressure in preschool children. *J Pediatr*. 2015;167(1):98-102.
- 7. Lima MC, Romaldini CC, Romaldini JH. Frequency of obesity and related risk factors among school children and adolescents in a low-income community. A cross-sectional study. *Sao Paulo Med J.* 2015;133(2):125-30.
- 8. Gutierrez HA, Rizo BMM, Martinez AN, Cortes CE. Systolic pressure, abdominal obesity and body fat, metabolic syndrome predictors in Spanish preschoolers. *Nutr Hosp.* 2015;31(5):2109-14.
- 9. Kozhevnikova OV, Namazova-Baranova LS, Abashidze EA, et al. Obstructive sleep apnea syndrome in children as a risk of cardiovascular pathology development. *Vestn Ross Akad Med Nauk*. 2015;(1):32-40.
- 10. Wen LM, Rissel C, He G. The effect of early life factors and early interventions on childhood overweight and obesity. *J Obes*. 2015:964540.
- 11. Lien AS, Cho YH, Tsai JL. Effectiveness evaluation of healthy lifestyle interventions in childhood obesity prevention: a systematic review. *Hu Li Za Zhi*. 2013;60(4):33-42.
- 12. Koncsos P, seres I, Harangi M, et al. Favorable effect of short-term lifestyle intervention on human paraoxonase-1 activity and adipokine levels in childhood obesity. *J Am Coll Nutr*. 2011;30(5):333-9.

- 13. Thury C, de Matos CV. Prevention of childhood obesity: a review of the current guidelines and supporting evidence. *S D Med*. 2015;Spec No:18-23.
- 14. Stookey JD, Del Toro R, Hamer J, et al. Qualitative and/or quantitative drinking water recommendations for pediatric obesity treatment. *J Obes Weight Loss Ther*. 2014;4(4):232.
- 15. Annual Report. Mountainland Head Start, Inc. http://www.mountainlandheadstart.org/About_Us.cfm?subpage=555515_Updated 2015. Accessed October 15, 2015.
- Healthy people 2020 Objectives: Early and Middle Childhood. Office of Disease Prevention and Health Promotion. http://www.healthypeople.gov/2020/topics-objectives/topic/early-and-middle-childhood/objectives Updated 2014. Accessed October 25, 2015.
- 17. Kim HS, Park YH, Park HB, Kim SH. Estimation of effects of factors related to preschooler body mass index using quantitative regression model. *Asian Nurs Res.* 2014;8(4):293-9.
- 18. Hesketh KR, Goodfellow L, Ekelund U, et al. Activity levels in mothers and their preschool children. *Pediatrics*. 2014;133(4):e973-80.
- 19. Morgan PJ, Collins, CF, Plotnikoff RC, et al. The "Healthy Dads, Healthy Kids" community randomized controlled trial. A community-based healthy lifestyle program for fathers and their children. *Prev Med.* 2014;61:90-9.
- 20. Watson PM, Dugdill L, Pickering K, et al. Service evaluation of the GOALS family-based childhood obesity treatement intervention during the first 3 years of implementation. *BMJ Open.* 2015;5(2):e006519.
- 21. O'Dwyer MV, Fairclough SJ, Knowles Z, Stratton G. Effect of a family focused active play intervention on sedentary time and physical activity in preschool children. *Int J behave Nutr Phys Act*. 2012;9:117.

Track Your Family Activities

For every 20 minutes that you spend being active together as a family, you can color in one of *Pete the Cat's* shoes. For each shoe that you color in, you will be entered into a drawing for a prize! The drawing for prizes will take place the 2nd week in December.

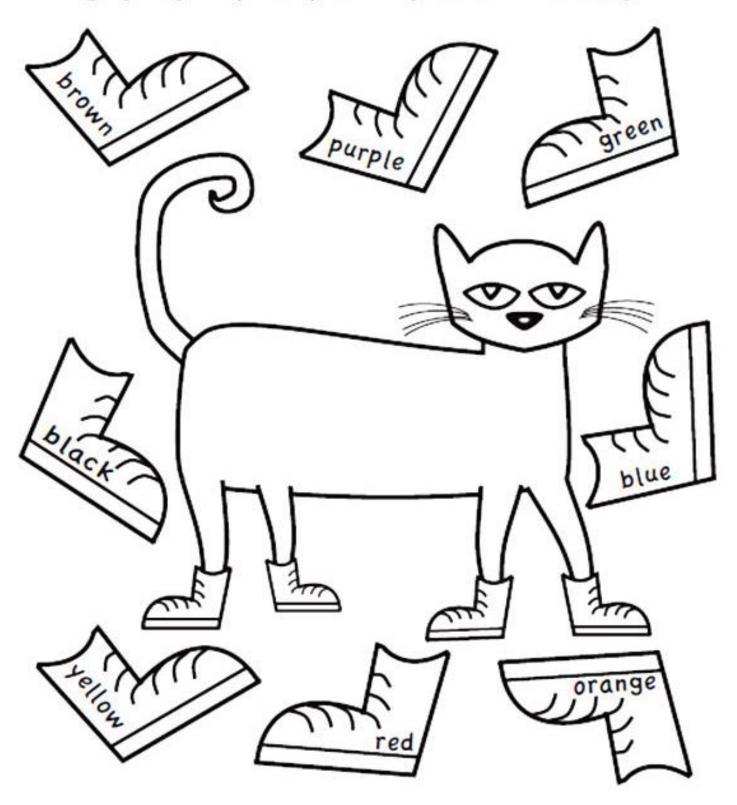
Any activity that gets your family moving together counts! However, here are suggestions for fun ways to get you and your family moving together:

- Go on a family walk
- Ride bikes together
- Rake leaves
- Turn up the music and dance
- Play catch
- Go swimming
- Clean the house
- Play at the park
- Play games such as duck-duck-goose, hide and seek, follow the leader, or Simon says
- Take a nature hike
- Kick a ball
- Play leap frog, or hop around the house





It's Pete the Cat!



Name:____

LESSON PLAN

Title: Be Active in Your Shoes	Name: Megan Kennedy
Target Audience: 3-4 year old Mountainland Headstart Kids	Method: Interactive Instructional

Terminal Objective		Termina	al Concept		
Children will list ideas of activities that they are excited about doing			n will be physically active with their family.		
with their family.					
Children will be able to log their family activity on the activity log					
sheet.					
Domain Taxonomic Level					
Affective	Application				
References					
	o Cat by Eric Lituria and James Desa				
	ne Cat by Eric Litwin and James Dean		Nantaukita akaas saladan matadala baliki sasa		
around	Love My White Shoes children's book, Activ	rity Logs, E	Blank white shoes, coloring materials, ball to pass		
Pre-assessment		Introdu	Introduction		
Who likes Pete the Cat?		Read Pete the Cat			
Time (if in class): 30 sec					
			Time: 5 min		
Supporting Objectives	Content Outline	Time	Learning Experiences		
The children will explain	Read Pete the Cat with the sing-along	5 min	Children will sing along with the book recording.		
the activities Pete the Cat	recording.				
does in his white shoes.					

Children will list activities	Look at how active Pete the Cat is in his	2 min	Jumping jacks
they can do to be active.	white shoes. What are some activities		Throw around a ball
	we can do to be active like Pete?		Run in place
			Dance
Children will list reason why they should be active and drink water.	Reasons to be active and drink water (list if not identified by the children): • Makes you feel good • Grow big and strong • Keeps you fueled and refreshed • Can have fun with your family	1 min	Ask: Why is it important to be active and drink water?
Children will list ways that their family can be active together.	It can be more fun to be active with other people. Especially with your parents!	5 min	Ask: What do you and your family like to do together? What could you and your family do together? Activity: Pass around the ball and have kid with the ball say what they like to do with their family/what their family can do together
Children will describe one activity that they want to do with their family.	Choose one new activity that you want to try with your family this week.	5 min	Pass out blank shoes for them to color like their chosen activity.

Assessment

Take home this activity log sheet and color in a shoe for every 20 minutes that you are doing activity with your family

Closure

Have fun!

Gaant Chart

Mountainland Head Start Physical Activity Promotion

2015 Sept-15-15 Sept-30-15 Oct-15-15 Oct-31-15 Nov-15-15 Nov-30-15 Dec-15-15 COMPLETED Task 1 Meet as a team, select PM, decide on facility 9/8/2015 2 Submit community project online form 9/8/2015 Х 3 Contact Stephanie to set date for meeting 9/11/2015 Х 9/18/2015 4 Meet with Stephanie to plan project Х 5 Meet with Dr. Richards to discuss project 9/24/2015 х 6 Submit Goals and Objectives 9/29/2015 Х 7 Write Project Description 10/13/2015 Х 8 Write Methodology & Materials 10/13/2015 9 Set and allocate budget 10/13/2015 Х 10 Submit Description, Methodology/Materials, Budget 10/13/2015 Х 11 Write and Design Flier 10/13/2015 Х 12 Review flier with Stephanie 10/13/2015 Х 13 | Correct Flier, Submit Final Draft 10/13/2015 х 14 | Submit Bulletin Board Sketches 9/23/2015 Х 15 Buy supplies for bulletin board 10/14/2015 Х 16 | Set up bulletin board 10/14/2015 х 17 | Make activity/water tracker х 9/30/2015 18 Write article to go out in monthly newsletter 10/15/2015 Х 9/29/2015 19 Write lesson plan 20 Teach family activity lesson plan 10/20/2015 Х 21 Write evaluation plan 10/20/2015 Х 10/20/2015 22 Write Sustainability Х 10/20/2015 23 | Submit Evaluation plan and sustainability Х 24 Write Transmittal Letter 11/3/2015 х Х 11/3/2015 25 Write Title Page Х Х 26 Write Abstract 11/3/2015 Х Х 27 Write Needs Statement 11/3/2015 Х Х 28 Write References 11/3/2015 Х х 29 Submit Transmittal Letter, Title Page, Abstract, Needs Statement, References 11/3/2015 Х х 12/10/2015 30 | Collect Water/Activity Trackers Х 31 Evaluate participation х 12/13/2015

Logic Model: Mountainland Head Start

Goal(s): Families with children enrolled in Mountainland Head Start will implement healthy living practices by being physically active together and having appropriate water intake.

Inputs

- Water bottle
- Poster paper
- Glue
- Ribbons
- Command Strips
- iPad
- Sweathand
- Aluminum Foil
- Scissors
- Stapler
- Markers
- Crayons
- Time
- Nutrition Students
- MHS Employees

Outputs (Implementation/Process Obj.)

Activities

- 1.1, 2.1 To create one physical activity and water tracker sheet for 50 families by October 1, 2015.
 1.2, 2.2 Write a newsletter that introduces the physical
- activity and water program by October 1, 2015 to be distributed via email to 50 families
- 1.3, 2.3 To create one lesson plan to introduce the physical activity and water intake program to the parents and children at Mountainland Head Start by October 12, 2015
- 1.4 To create on bulletin board which promotes family physical activity by October 7, 2015.

Participants:

Mountainland Head Start Families

Assumptions: The education and activities we provide and promote will encourage families to increase physical activity and hydration.

Impact - Outcome

Short/Medium-TermObjectives

- 1. By December 2015, 70% of families of children enrolled at Mountainland Head Start will reach the goal of 100 minutes of physical activity each week as a family.
- 2. By December 2015, 70% of families of children enrolled at Mountainland Head Start will reach the goal of drinking water after each session of physical activity as a family.

Long-term Objectives

- 1. By September 2016, 50% of families of children enrolled at Mountainland Head Start will reach the goal of 100 minutes of physical activity each week as a family.
- 2. By September 2016, 50% of families of children enrolled at Mountainland Head Start will reach the goal of drinking water after each session of physical activity as a family.

External Factors:

Home environment; Culture; Lack of time; Lack of motivation

Evaluation Plan

- Process evaluation:
 - 1.1, 2.1 Number of trackers printed, number of families that receive trackers
 - 1.2,2.2 Number of families emailed newsletter
 - 1.3,2.3 Number of classes taught
 - 1.4 Completion of bulletin board
- Impact/Outcome (or summative) evaluation:
 - Short Term 1.1,2.1 Long Term 1.1,2.1 Collection and recording of physical activity and hydration tracking sheets