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## **Educating Children on the Benefits of Physical Activity**

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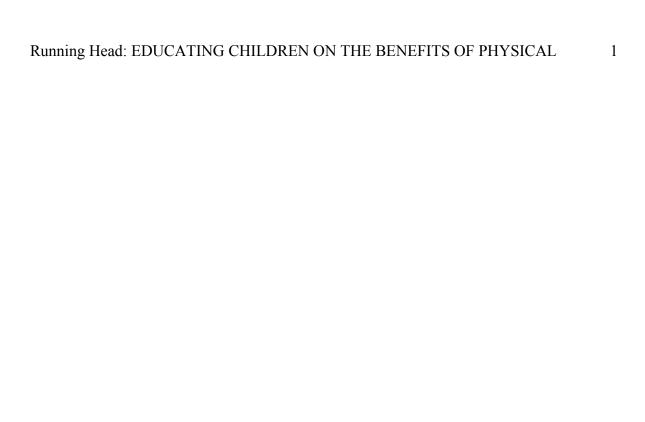
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Educating Children on the Benefits of Physical Activity

Nancy Recinos

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

#### Educating Children on the Benefits of Physical Activity

#### Introduction

The increased use of technology has lead to a decrease in physical activity engagement by elementary aged children, and children are often unaware of how a sedentary lifestyle increases the risk of childhood diseases and illnesses, such as obesity and diabetes. In order to increase understanding about the importance of physical activity, I designed a two-day curriculum on the benefits of physical activity and presented it to a class of third grade students at Natividad Elementary School in Salinas, California.

#### **Needs Statement**

A sedentary lifestyle is one in which a person performs little to no physical activity and spends an excessive amount of time sitting (Ebbeling, Pawlak, Ludwig, 2002). Excessive engagement in various types of media, such as TV shows, video games, e-books, and social networking websites has contributed to the increase of sedentary lifestyles adopted by many people, and, in particular, children. Rideout, Roehr, and Roberts (2010) found that children typically spend over seven and a half hours in front of a screen. Instead of engaging in play, which requires physical movement, children are adopting a more sedentary lifestyle and increasing their risk of developing a health issue (Ebbeling, Pawlak, Ludwig, 2002). Children may benefit physically, emotionally, and mentally when they partake in physical activity and exercises. By increasing children's knowledge of different types of exercises and their benefits, they may increase their understanding of a healthy lifestyle.

During the school day, 97% of a child's time is spent sitting down (Cardin, De Clercq, De Bourdeaudhuij, Breithecker, 2004). Once school is over, many children continue to stay

sedentary when they arrive home because of activities such as watching TV, using the phone, and playing video games. As children spend more time in front of a TV or phone and less time engaged in physical activity or exercise, their risk of developing a health problem increases. Lack of physical activity in children has been shown to increase the risk of childhood obesity (Hills, King, & Armstrong, 2007). The rate of childhood obesity is rising at an alarming rate and is contributing to various health issues found in children, such as cardiovascular disease, high blood pressure, and breathing problems (Ebbeling, Pawlak, & Ludwig, 2002). Along with physical health issues, children who are overweight also face mental health problems caused by a sedentary lifestyle. Overweight children reported feelings of anxiety, depression, low self-esteem, and body dissatisfaction (Russell-Mayhew, McVey, Bardick, & Ireland, 2012). These issues can be mitigated by educating children on how to develop healthy eating and physical habits.

Children--specifically--benefit physically, mentally, and emotionally from partaking in physical activity and exercise. According to the CDC (2015), children should get at least one hour of physical activity each day. The type of physical activities and exercises that children partake in can vary between aerobic (e.g. rollerblading, dancing) and flexibility activities (e.g. yoga, stretching). Aerobic and flexibility exercises provide children with many short and long-term health benefits that go beyond body composition. Higher-order cognitive processes, such as executive functioning, become engaged when children are engaged in physical activities that utilize goal-oriented behavior and the coordination of motor movements (Best, 2010). Additionally, yoga, a flexibility exercise, has been found to lower stress levels among children and increase overall health and well-being, as well as improve concentration (Hagen & Nayar,

2014; Peck, Kehle, Bray & Theodore, 2005). The benefits provided by physical activity and flexibility exercise further highlight the need to educate children on how to establish healthy physical routines.

Helping children gain an understanding of the importance of physical activity and flexibility exercises is essential in helping them adopt healthy lifestyles that will benefit them throughout their life. Given that children are becoming more sedentary and have a lack of education regarding the importance of physical activity and flexibility exercises, I have created a two-day lesson plan for a third grade classroom at Natividad Elementary School located in Salinas, California. This project aims to introduce young children to the positive aspects of engaging in physical activity and flexibility exercises, as well as showing them how they can perform different types of exercises on their own. By educating children about the importance of physical activity we—parents, caretakers, educators—are helping children pave the way to a healthier and longer life.

### **Development Application**

By the time children reach third grade--between the ages of eight and nine--they experience slow and steady growth in their physical development (National Library of Medicine, 2018). Although the speed of development decreases throughout childhood, children continue to improve motor skills that were accumulated in earlier years. Children may naturally seek to participate in activities that bring joy and excitement to them, such as jumping rope, riding a bike, playing tag, or climbing a tree. If given opportunities to engage in these types of activities, children can begin to improve their coordination, develop a sense of balance and rhythm, and learn physical fitness skills that will benefit their health for the rest of their lives (McKinney,

James, Murray, Nelson, & Ashwill, 2018). According to the California Department of Education [CDE] (2006), by third grade, students should be able to hold basic stretches for an increased period of time as well as provide explanations as to why certain stretches are beneficial for specific physical activities. Basic knowledge about flexibility can also help to mitigate any injuries that could occur to children during physical activities. Additionally, children should be able to participate in vigorous aerobic activities that require movement of large muscle groups that increase their breathing and heart rate and describe the relationship between body movement and cardiovascular health (CDE, 2006). Children with inadequate knowledge of healthy habits are at a higher risk of developing a health issue later in life. Research has linked sedentary behavior in children with the increase of childhood obesity and the development of type 2 diabetes or cardiovascular disease (Centers for Disease Control and Prevention [CDC], 2018). As children continue to age, they experience a slow down in their physical development. However, with proper physical activity, they can continue to improve their physical skills and decrease their risk of developing a health or mental problem. In order to combat the negative consequences of sedentary behavior, I am creating a two day curriculum to help children understand how staying physically active provides long-term health benefits.

#### Consideration of Diversity

My project will be conducted at Natividad Elementary School in Salinas, California. The ethnic composition of Natividad Elementary school is not very diverse. According to the School Accountability Report Card (SARC; 2018), Natividad Elementary School is .3% African American, .6% Asian, 2.1% Filipino, .6% White, .2% Native Hawaiian or Pacific Islander, and 95.6% Hispanic or Latino. It is likely that my participants will reflect the ethnic composition of

the school. Furthermore, 68.7% of the students are English Learners. I will be presenting both lessons in English. As a result, it is possible that participants will not understand the content or be able to participate in discussions and activities due to the lack of English proficiency. Since I will be presenting the lesson to just one third grade classroom at Natividad Elementary School with which am affiliated, other children in the school are excluded from the content and discussions that will occur. Culturally, Hispanic and Latino populations are collectivist societies where emphasis is placed on the needs of the family as a whole rather than the needs of an individual (Caballero, 2011). Duties to the family (i.e., helping with child care, contributing to housework) may become more valued and considered more important than health or physical activity. The content of my project focuses on individual improvement and the establishment of lifelong physical habits that may not align with the mindset of a collectivist culture. Lastly, participants will need to showcase the ability to perform exercises that require the movement of large body muscles and balance. Content has not been modified, and thus students who are not able-bodied may have difficulty completing tasks or may not be able to participate at all.

### **Learning Outcomes**

By the end of the project, participants will:

- 1. differentiate between aerobic and flexibility exercises.
- 2. execute at least three flexibility activities (i.e., yoga poses).
- 3. list at least three health benefits of both aerobic and flexibility exercises.

#### Method

#### Day 1

I began by introducing myself and telling the students why I was there. Then, I opened up the PowerPoint presentation on Flexibility Exercise and gave the students two minutes to come up with their own definition of flexibility. See Appendix A. Then, I asked the students to share their definition of flexibility with the person sitting next to them. The students engaged in conversation with one another for two minutes. I then re-grouped the students and asked for volunteers to share the definition they came up with. Once a few students had shared, using the powerpoint, I provided them with the actual definition of flexibility, as well as examples and benefits of flexibility exercise. When I was presenting the examples of flexibility exercises, I demonstrated a few stretches for the students, such as toe touches and neck rolls. After the presentation was over, I read the book, I am Yoga (Verde, 2015). Following the book, I guided the students through six yoga poses for fifteen minutes (i.e. child's pose, downward dog, tree pose, reverse warrior, warrior II, star pose). See Appendix B. Throughout the yoga poses, I walked around the classroom to make any needed corrections to the students' poses, such as telling them to flatten their back or to point their foot in the right direction. After the yoga activity, I had a five minute discussion with the students about the benefits of flexibility exercises.

#### Day 2

I began the day with a five minute review on flexibility to refresh the participants minds about the day prior. Then, I opened up the PowerPoint presentation on aerobic exercise. See Appendix C. I presented the students with the definition of aerobic exercise and asked them to come up with their own examples of aerobic exercise before providing examples from the PowerPoint presentation. Following the examples, I reviewed some key terms to remember about

aerobic exercise, as well as the benefits of aerobic exercise. Upon completion of the presentation, the students and I worked together to create a t-table that listed the benefits of both flexibility and aerobic exercise for ten minutes. The t-table was completed on a poster sheet. See Appendix D. Then, in order to assess the students' understanding between aerobic and flexibility exercises, the students completed a worksheet in which they had to determine whether the photos and scenarios provided where aerobic or flexibility exercise. See Appendix E.

#### Results

Learning outcome 1 was that participants would execute at least three yoga poses correctly. I believe this learning outcome was met. During the yoga activity, the participants were able to physically move their bodies in order to imitate the pose I was in. I assessed whether the students were posed correctly by observing them while they were holding the pose and then walking around the room to inspect and correct any incorrect poses. See figure 1 for photographs of students executing three yoga poses. I presented the participants with six different poses that varied in difficulty (e.g. child's pose, star pose, tree pose). Two of the poses that were easier for the students were child's pose and star pose. During these two poses, the participants were all able to execute them without needing any correction. The poses that were mildly difficult were downward dog, warrior II and reverse warrior. Downward dog, warrior II and reverse warrior require multiple steps in order to achieve the right position. The students did have some difficulty in having the correct foot pointing in the right direction or having the correct knee bent (e.g., their left foot would be pointing forward when the pose required the right foot to be pointing forward). Even though I did make these minor corrections, all the students were able to do the poses. Some students did have difficulty with certain poses, for example

balancing on one foot during tree pose, but they were still able to accurately position themselves and hold the position for a few seconds. In total, all 24 participants were able to follow along and execute all six poses correctly. See table 1.

Learning outcome 2 was that participants would list at least three health benefits of aerobic and flexibility exercise. During the class completion of the t-table and discussion about the benefits of aerobic and flexibility exercise, participants were able to provide the physiological health benefits of both types of exercise. Additionally, students provided both short and long-term benefits of both types of exercises. Throughout the discussion, participants did repeat some benefits but made them relevant to their lives. For example, one student stated that aerobic exercise "makes you a better athlete" and another student reworded that statement to "makes you a better soccer player." In total, participants listed seven benefits for each exercise, which does not fully represent each of the 24 participants in the room. However, the responses were sufficiently representative and had consensus among the participants which make me feel that this learning outcome was met. See Figure 2 for a list of their responses.

Learning outcome 3 was that participants would differentiate between aerobic and flexibility exercise. This outcome was measured through the individual completion of a worksheet in which participants would have to label an image or scenario as a flexibility exercise or aerobic exercise. As I was walking around the classroom, I took notice of which students were receiving help from their peers in order to complete their worksheet. In total, 22 out of 24 students completed their worksheet independently with a score of 12 out of 12 correct, and two students partially completed the worksheet with correct answers. To analyze the participants' responses, I simply looked over their worksheets to see if any responses were wrong and tallied

the incorrect responses. See table 3. I feel that this learning outcome was also met because over 90% of the participants completely and successfully labeled the given images and scenarios correctly.

#### Discussion

I believe this project was successful. Throughout each lesson, participants were engaged and actively participating in the discussion. The participants were successful at applying the information and concepts they learned to their own lives. Due to the participants' current age and stage of physical development, they were able to meet the physical demands placed on their bodies during the yoga activity. Additionally, they were able to discuss how engaging in physical activity, such as yoga, can help benefit their bodies and increase their physical abilities. The physical development of the participants was typical for children their age. They were able to hold stretches for a longer period of time, as well as use their developed sense of balance to hold yoga positions that required them to balance. Most importantly, they were able to provide reasons as to why certain exercises were beneficial for their health.

Regarding diversity, I believe that my project included a majority of the people who participated. Although the participants in the classroom were all English Language Learners, during the presentation, they engaged and asked questions when they did not understand a concept or a term being presented. This told me that the information being provided was new to the participants. When completing the scenario portion of the worksheet, two participants, who have a difficult time with reading in English, asked their peers for answers or help with reading the scenario. I encouraged the two participants to read and answer the scenario to their best ability before confirming with a classmate. Furthermore, all the participants were able to

participate during the yoga activity. None of the participants had any physical disabilities or ailments that prevented them from participating. I believe that by walking the participants through different poses that varied in difficulty provided an opportunity for everyone to participate.

If I had to do this over again, I would make two changes. The first is that I would have spent more time discussing the mental health benefits of aerobic and flexibility exercise. It is difficult to imagine that children can experience stress or anxiety at such a young age. The reality is that many factors, such as parental expectations or the desire to fit in with peers, can lead children to feel anxiety or stress. Physical exercise is a coping mechanism that children can utilize to combat negative emotions and enhance their overall well-being. Furthermore, another change I would make is to arrange for a bigger room for the physical activities. The classroom I presented in did not provide enough room for the twenty-four participants to spread out and have adequate space to do the yoga poses. The participants would bump hands or feet if they were in poses that required them to spread out. Regardless, I feel that the participants learned a lot of new concepts and information that they can apply to their daily lives in order to live a long and healthy life.

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Table 1

Number of participants who were able to execute poses correctly

	Number of participants in correct position
Child's pose	24
Downward Dog	24
Warrior II	24
Butterfly	24
Star pose	24
Tree pose	24

Table 2
List of participants' responses about the benefits of aerobic and flexibility exercise

Flexibility	Aerobic	
Stay flexible when older	Increases energy	
Helps blood flow	Helps body use oxygen	
Toned body	More muscles	
Better athlete	Prevent diseases	
Stretches muscles	More endurance	
Prevent injury	Sleep better	
Stay healthy	Maintain healthy weight	

Table 3

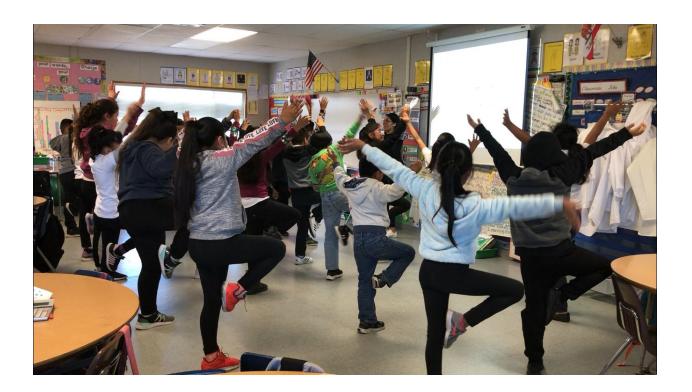
Percentage correct for each worksheet question

	-
	Percent Correct
Question 1	100%
Question 2	100%
Question 3	100%
Question 4	100%
Question 5	100%
Question 6	100%
Question 7	100%
Question 8	100%
Question 9	100%
Question 10	100%
Question 11	100%
Question 12	95%
Question 13	100%
Question 14	100%
Question 15	95%
Question 16	100%

Figure 1
Images of students executing yoga poses







# Appendix A

## Flexibility Exercise PowerPoint



WHAT DOES FLEXIBILITY MEAN?

# FLEXIBILITY

STRETCHES YOUR MUSCLES AND HELP YOUR BODY STAY FLEXIBLE

MORE FREEDOM OF MOVEMENT IN EXERCISE AND EVERY DAY ACTIVITIES

CAN YOU THINK OF AN EXAMPLE OF A FLEXIBILITY EXERCISE?









## WHEN SHOULD I STRETCH?

- : 3 : TIMES A WEEK
- BEFORE AND AFTER PHYSICAL ACTIVITY LIKE RUNNING OR SOCCER

## HOW DO I STRETCH?

- 1. STRETCH THE MUSCLE GROUPS YOU ARE GOING TO USE OR USED
- 2. GET INTO A POSITION WHERE YOU CAN FEEL YOUR MUSCLES ACTIVATE
- 3. HOLD FOR 10-20 SECONDS WITHOUT BOUNCING

## BENEFITS OF FLEXIBILITY EXERCISES

- PREVENTS INJURIES.
- REMAIN FLEXIBLE AS YOU GET OLDER
- More Range of Motion
- PERFORM BETTER
- MORE STRENGTH

## BENEFITS OF FLEXIBILITY EXERCISES

- REDUCES MUSCLE TENSION
- IMPROVES JOINT HEALTH
- INCREASES BLOOD FLOW TO THE MUSCLES
- FEELS GOOD!
- BETTER ATHLETES/DANCERS



## Appendix B

List of yoga poses for learning outcome 1

## Poses

- Child's pose
- Downward Dog
- Warrior
- Warrior II
- Star
- Tree

Appendix C

Aerobic Exercise Presentation





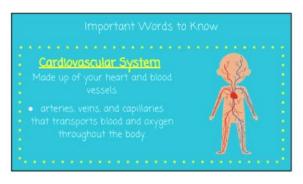
What do you think Aerobic Exercise is?



# Aerobic exercise: Uses your large muscle groups Rhythmic Can be done for a long time











Can you think of some examples of Aerobic Exercise?

#### Benefits of Aerobic Exercise

- Improves how your body uses oxygen better
- Increases energy
- You can workout for more time
- Helps reduce the risk of disease

#### Benefits of Aerobic Exercise

- Helps you maintain a healthy weight
- Helps reduce stress
- Improves sleet

Appendix D

## *T-table for learning outcome 2*

Aerobic Exercise	Flexibility Exercise	
1.	1.	
2.	2.	
3.	3.	

## Appendix E

Worksheet for learning outcome 3

## Aerobic or Flexibility?

What type of exercise are the children doing in the photos? Write your answer on the line below the picture





1)







3) \_\_\_\_\_





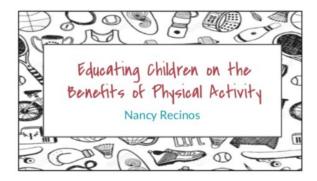




5)_	6)7)_	
Read t	he scenario (sentence) and determine what type of exercise is bei	ng performed.
1.	Gabby has dance class every Monday and Wednesday.	
2.	Tommy bends over and touches his toes for 15 seconds.	
3.	Aiden does 50 jumping jacks in 2 minutes.	
4.	Alex goes to folklorico practice after class.	
5.	During recess, Maria jumps rope for 10 minutes. When she is do breathing hard.	one she is sweating and
6.	Every Sunday, Daniel goes for a 3 mile bike ride with his dad.	
7.	Ana reaches up to the sky with her hands for 10 seconds.	
8.	After chasing her dog around, Becca feels her heart beating fast. did she do?	What type of exercise
9.	Becca reaches up to pick an apple out of a tree.	

Appendix F

Capstone Presentation





# Physical Development

By third grade, children should:

- have a developed sense of balance, rhythm, and coordination (CDE, 2016)
- be able to hold basic stretches for an increased period of time (CDE, 2016)
- be able to engage in vigorous aerobic activity that requires the use of large muscle groups (CDE, 2014)



# Learning Outcomes

By the end of the project, students will:

- 1. execute at least three yoga poses correctly
- list at least three health benefits of both aerobic and flexibility exercises
- differentiate between aerobic and flexibility exercises

## Method

## Day 1: Flexibility

- Presentation on Flexibility Exercise
  - Definition
     Examples
  - Examples
     How/When to stretch
  - Benefits
- Read Book I am Yoga
- Activity
  - O Yoga

