Manchester Township School District’s

Project R.E.T.T

Revolutionizing Exercise Through Technology

Grant Proposal
Executive Summary

Open your window on a sunny afternoon, and what do you hear? You may hear birds chirping, or maybe children playing? Odds are these days that you'll hear the birds, but not the children. As kids spend more time in front of television, computer, and video screens, their physical activity levels have decreased, and their body weights have increased. Obesity among children aged 6 to 11 has more than doubled in the past 20 years, going from 6.5% in 1980 to 17.0% in 2006. The rate among adolescents aged 12 to 19 more than tripled, increasing from 5% to 17.6% (Ogden, 2008). The Surgeon General of the United States has proclaimed the number one health issue in the United States to be the obesity of our young people, and the United States Secretariats of Health and Human Services and of Education have prepared a report to the President of the United States on the poor health of children in the United States (U.S Surgeon general, 2008). Obese young people are more likely than children of normal weight to become overweight or obese adults, and therefore more at risk for associated adult health problems, including heart disease, type 2 diabetes, stroke, several types of cancer, and osteoarthritis (U.S Department of Health, 2008). Children are not getting the recommended levels of moderate or vigorous activity, 10 percent are completely inactive, and physical activity levels fall as adolescent’s age (Ogden, 2008).

Physical activity interests of children have changed and school physical education programs often do not match the interest of children. The need for a new approach to get kids motivated to become more active is evident. Project R.E.T.T will replace traditional gym equipment with 21st century technology, such as, Nintendo’s WII, Dance Dance Revolution exergame program, and heart rate monitors, in an effort to implement a unique physical activity program that will be designed to encourage students to exercise more. The intent of the program will be to integrate the games into gym classes, replacing the monotony of jumping rope or running laps, in an effort to increase participation among all students, rather than the few athletes in every class. The ultimate goal is to decrease students B.M.I (Body Mass Index) numbers. The program will implemented in all P.E classes by the physical education staff and will be geared toward grades K-5 thru K-12, this adds up to about 2000 of the 3250 students that attend the Manchester Township school district.

Our proposal requests $27,218.70 to purchase Nintendo Wii Fit gaming systems, Dance Dance Revolution games, and heart-rate monitors. This would allow us to implement this new approach into all our physical education classes. Any future funding for Project R.E.T.T will be budgeted for through the physical education departmental budget.

The Manchester School District is driven by a passion to continually establish their commitment to the health and well-being of their students. With the crisis of childhood obesity gripping every school and every community, the staff at Manchester is eager to implement Project R.E.T.T, and dedicated to improving the quality of their students’ lives.
Manchester Township School District  
121 Rt. 539  
Manchester NJ, 08724

November 17, 2009

Henry Wadsworth, Director of Research and Marketing  
Super Global Tech, Inc.  
145 West Crescent Drive  
Dallas, TX 75208-1928

Re: Project R.E.T.T

Dear Mr. Wadsworth,

Manchester Township School District is pleased to present this proposal for your review. We look forward to partnering with you to pilot a new physical education program aimed at fighting childhood obesity and inactivity among our youth. Many children are inactive or do not reach the minimum requirement of physical activity for their age level. The need for a new approach to get kids motivated to become more active is evident. Our proposal requests $27,218.70 to purchase Nintendo Wii Fit gaming systems, Dance Dance Revolution games, and heart-rate monitors.

This grant would enable us to transform our physical education program from, the traditional equipment, to one that incorporates these new technologies that encourage running, jumping, and stretching. Integrating gaming into gym classes, replacing the monotony of jumping rope or running laps, will increase participation among all students, rather than the just the few athletes in every class. The Wii and DDR is a great way to introduce physical activity to students who might not be interested in joining a team sport or other school related activity. The majority of school students don’t play competitive team sports, but as educators we still have a responsibility to keep students in good health. Our overall goal would be to stem the alarming increase in childhood obesity while maintaining student interest.

We appreciate Super Global tech, Inc. taking an interest in encouraging our students to exercise more. Please contact me 732-123-4567 if you require any further information or have any questions concerning this proposal.

Thank you,

Joe Gioia  
Computer Specialist  
Manchester Township School District
1. **Organizational Information**

Manchester Township Board of Education  
151 Rt. 539  
Manchester, NJ 08759  
Joe Gioia  
Computer Specialist  
732-350-5900  
jgioia@manchestertwp.org

3. **Organizational Background**

Manchester Twp. is a Pre-K-12 school district with approximately 3,250 students attending five schools in Manchester Township, Ocean County, New Jersey. Manchester Twp. has three elementary schools: Ridgeway Elementary School (Gr. Pre-K-5), Whiting Elementary School (Gr. Pre-K-5), and Manchester Township Elementary School (Gr. K-5). These three schools feed into Manchester Township Middle School (Gr. 6-8), and then to Manchester Township High School (Gr. 9-12). Manchester Twp. is also the receiving district for approximately 180 high school students from neighboring Lakehurst Borough. In addition, the district has the administrative responsibility for the state Regional Day School (Special Education) located in Jackson, New Jersey. The township is noted for containing the Lakehurst Naval Air Station, the site of the infamous Hindenburg disaster of May 6, 1937.

The Township of Manchester is committed to becoming a community in which the well-being of children is of primary importance and whose policies and programs treat young people as the foundation of our town’s future. Whether it is through the townships recreation programs or through the schools physical education program, Manchester provides activities that focus on providing safe and positive experiences for all children.

**Our District's Mission**

Manchester Township School District's mission is to forge a strong partnership between the school and community. Through this partnership it will seek to provide high-quality, student-centered education that addresses the needs of the whole person within a healthy, democratic environment. A vital part of the program is the expectation that all students achieve the New Jersey Core Curriculum Standards. Its staff will consist of caring, competent professionals empowered to provide a stimulating, relevant and rewarding academic program to their students.

Fostering the self-worth of each student will give Manchester Township's graduates high expectations for themselves so they become responsible citizens prepared to meet the demands of the 21st century. They will develop an appreciation and tolerance for each person's contribution to society.
The following list of beliefs and goals reflects what is truly important to us as a school district. These are not beliefs and goals that change from time to time, situation to situation, or person to person, but rather they are the underpinning of our school district.

**Our Beliefs**
- Build strong foundations in the early grades.
- Students must be active participants in learning.
- Learning should be exciting, purposeful and fun.
- Each student should reach his or her individual potential.
- Children learn best in a secure environment.
- Education involves the whole community.
- Integrity, service, and excellence are core beliefs.
- Respect for different opinions shall be fostered.
- Motivation and pride are important factors in the search for excellence.

**Our Goals**
- To promote optimum level of health in all pupils and staff.
- To assist students in becoming increasingly responsible for their own health.
- To foster an atmosphere of teamwork within the classroom, the school and the community.
- To provide the best possible facilities for physical education.
- To identify health problems and needs of pupils and staff.
- To provide health education and health counseling for pupils, parents, and staff.

**4. Needs Assessment/Problem**

Obesity among children aged 6 to 11 that has more than doubled in the past 20 years, going from 6.5% in 1980 to 17.0% in 2006. The rate among adolescents aged 12 to 19 more than tripled, increasing from 5% to 17.6% (Ogden, 2008). The Surgeon General of the United States has proclaimed the number one health issue in the United States to be the obesity of our young people, and the United States Secretariats of Health and Human Services and of Education have prepared a report to the President of the United States on the poor health of children in the United States (U.S Surgeon general, 2008).

Manchester is not immune to this problem. A survey was sent out to all our physical education teachers asking them to survey the number of students who could be categorized as obese (based on a weight & height chart), along with each student’s activity levels (Students were asked how often they exercise?). The results showed that 1 out of every 5 students, or 20% could be categorized as being obese. The results of the activity survey showed; 1 in 3 (35%) do not participate in vigorous physical activity regularly.

Obesity is the result of too few calories expended (not enough exercise) for the amount of calories consumed (Daniels, Arnett, & Eckel, 2005). Obese youth are more likely to have risk factors for cardiovascular disease (CVD), such as high cholesterol or high blood pressure. In a
population-based sample of 5- to 17-year-olds, 70% of obese children had at least one CVD risk factor (Freedman, Zuguo, & Srinivasan, 2007). In addition, children who are obese are at greater risk for bone and joint problems, sleep apnea, and social and psychological problems such as stigmatization and poor self-esteem (Daniels, Arnett, & Eckel, 2005). Obese young people are more likely than children of normal weight to become overweight or obese adults, and therefore more at risk for associated adult health problems, including heart disease, type 2 diabetes, stroke, several types of cancer, and osteoarthritis (U.S Department of Health, 2008). Healthy lifestyle habits, including physical activity, can lower the risk of becoming obese and developing related diseases (Daniels, Arnett, & Eckel, 2005). Project R.E.T.T is aimed at tackling childhood obesity by increasing the activity levels of students.

5. Project Description

Physical activity interests of children have changed, and school physical education programs often do not match the interest of children. The need for a new approach to get kids motivated to become more active is evident. Project R.E.T.T will replace traditional gym equipment with 21st century technology, such as, Nintendo's WII, Dance Dance Revolution exergame program, and heart rate monitors in an effort to implement a unique physical activity program that will be designed to encourage students to exercise more. The intent of the program will be to integrate the games into gym classes, replacing the monotony of jumping rope or running laps, in an effort to increase participation among all students, rather than the few athletes in every class.

How the program will be run: P.E instructors will have students take a body test and establish baseline data. The students will set goals. They select training categories; difficulty levels, and sees demonstrations. Students will have to earn their way to advanced levels of the game by satisfactorily completing less difficult, previous levels. There will be 25 DDR mats available each class. Students will use the DDR for the whole class period (40 minutes). Each class will be run by two physical education teachers. At the end of the class period students will record their results and chart their BMI (Body Mass Index) weight and heart rates. Student progress is documented during daily each gym class.

Timeline

The timeline below shows the dates and planned events throughout the semester for Project R.E.T.T. The systems will be installed and ready for all physical education teachers to use during the first week of January.
Goals & Objectives

The proposed project is an alternative approach to physical education and the resolution of the youth obesity and health problem. The overall goals of this project are as follows:

- Children will participate more during physical education class, in fun, non-traditional sports.
- Every child participating in the program will increase the amount of physical activity daily, moving toward the minimum requirements recommended by health officials.
- Project R.E.T.T will make parents become aware of the youth health issues and understand the need to maintain child health; parents and students will receive a health report for their children.
- District administrators, community leaders, and parents will acknowledge the need for a quality, comprehensive, alternative physical education plan and support such a plan.
- Project R.E.T.T will develop non-traditional activities that are of interest to the school population and provide P.E. teachers with skills and knowledge to create new activity interests for children.
- Project R.E.T.T will increase participation and build an interest in non-traditional activities by the student body.
- Students will strive to decrease their BMI (Body Mass Index) weight. BMI will be taken before the start of the program and then again after an 8 week semester by physical education teachers.
- Students will strive to increase their heart rates during PE classes. Heart rate monitors will record students heart rates at the being of the program and then again after an 8 week semester.
- Students who achieve better scores on the BMI and heart rate be rewarded with certificates at the end of the 8 week semester

Rationale/Justification

The proposal addresses the identified needs by increasing the amount of activity and participation among students who would normally not be inclined to be active or participate in a traditional physical education program. In a recent article on technology in P.E. classes by eschoolnews.com, Fran Cleland, president of the National Association for Sports and Physical Education (NASPE), one of the country's most prominent physical education organizations, stated, "It's motivating for students, it's intriguing to them, it really captures people's attention, and it gives you a vehicle for talking about healthy lifestyles and consistent physical activity patterns (Carter, 2008)."

Grade Levels Participating in Project R.E.T.T

The program will be geared toward grades K-5 thru K-12 which adds up to about 2000 of the 3250 students that attend the school district. High school and middle school students have gym class every day and will have the option to use the DDR and Wii systems 5 days per week. Elementary students only attend gym class once a week. Students will have the systems available to them during their regularly scheduled gym class along with their daily recess.

6. Evaluation
The methods of evaluation include the use of objective measures that are clearly related to the intended outcomes of the project and will produce quantitative and qualitative data to the extent possible.

**Evaluation Procedure**

Every P.E instructor in each school will have students take a body test and establish baseline data consisting of their baseline BMI (Body Mass Index) and a baseline heart rate. Students will set fitness goals for themselves. Example: Mary would like to lower her BMI by 10 points and increase her heart rate by 20%. BMI and heart rate charts will be posted in every gymnasium so students can reference their progress and compare it against established standards on the charts. The students will select training categories; difficulties levels, and see demonstrations. Students will earn their way to advanced levels of the game by satisfactorily completing less difficult, previous levels. Students record their results on and chart their BMI (Body Mass Index) weight and heart rates after each class. Student progress is documented each time they play the game.

Mid-year & Final Survey: A survey will be given mid-year to check the progress of the program and at the end of the project for administrators, physical education teacher participants, a representative sampling of students, and staff. The purpose is to analyze the goals and outcomes of the program and the success in achieving those goals.

1. Students will be asked how many points their BMI was lowered?
2. How many times a week did they participate in the program?
3. Did they meet their target goals?
4. Did they feel the program was successful in helping them to become more active participants in gym class?
5. What did they like/dislike about the programs?
6. Suggestions for improvements?

These methods of evaluation will provide performance feedback and permit periodic assessment of progress toward achieving intended outcomes. The number of evaluations provides immediate feedback for physical education classes. The opportunity to provide mid-course (mid-year or sooner) changes is readily available. For example, if a student feels that using the Wii/DDR only twice a week is not helping him increase his health and fitness levels, adjustments can be made. The students can request to use the DDR more often to help them keep on track with their goals. The survey at the mid-point of the grant also provides for feedback on meeting the goals of the project and the outcomes and allows for performance feedback with time to reassess and adjust hitting the desired outcomes.

7. **Budget**

The budge shows the breakdown of all the equipment that will be needed for Project R.E.T.T. The amounts shown are for the district wide implementation of the program. Below the budget you will find the breakdown for each school.
### Project R.E.T.T Budget

<table>
<thead>
<tr>
<th>Line #</th>
<th>Item</th>
<th>Amount</th>
<th>Cost</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Polar F6 Heart Rate Monitors</td>
<td>125</td>
<td>$49.99</td>
<td>$6248.75</td>
</tr>
<tr>
<td>2</td>
<td>Nintendo Wii Gaming Systems</td>
<td>5</td>
<td>$199</td>
<td>$995</td>
</tr>
<tr>
<td>3</td>
<td>DDR Metal Dance Pads</td>
<td>125</td>
<td>$159</td>
<td>$19,875</td>
</tr>
<tr>
<td>4</td>
<td>DDR Software</td>
<td>5</td>
<td>$19.99</td>
<td>$99.95</td>
</tr>
<tr>
<td></td>
<td><strong>Total Cost</strong></td>
<td></td>
<td></td>
<td><strong>$27,218.70</strong></td>
</tr>
</tbody>
</table>

Line 1: Each school will get 25 heart rate monitors each 5 schools + 25 per school = total of 125
Average class size was 25 students per school.

Line 2: Each school will be getting 1 Nintendo Wii (5 schools total)

Line 3: Average class size is 25 students per school. In order to allow each student to have a
dance pad 125 pads will be needed. 5 x 25 =Total 125.

Line 4: 1 software program will be needed for each school. 5 total.
References


Attachments

All financial statements, operating budget, and tax-exempt status can be found at: http://www.manchestertwp.org/district/boarded_budget_2009-10_userfriendly.HTM
Collaborators, Supporters, & Key Staff

David Trethaway
Superintendent

Craig Lorentzen, CPA
Business Administrator

Dr. Judith Nappi
Director of Curriculum

Clifford Conover
Technology Coordinator

Keith Lister, Vice Principal
Athletic Director

Physical Education Instructors
Thomas Scheffler
Dawn Sullivan
Kevin Piotrowski
Patricia McGrorry
Brenda Sheftall

For additional information of Project R.E.T.T