

SPARK for Learning

Effects of Physical Activity on Learning



St. Anthony School

- Serve the needs of students identified with learning disabilities who are struggling in their regular schools.
- Currently, we have 80 students.
- Approximately 1/3 of our students also have other diagnoses including ADHD, language delays, or behavioural concerns.



St Anthony's Pilot Project

- Based on work by Dr. John Ratey linking exercise to learning
- Modelled after revolutionary physical education program in the US
- Main thrust of program is that sustained moderate to vigorous activity improves brain function



What is Happening in the Brain During Exercise?

- Increased production of brain cells
- Increased levels of neurotransmitters
- Increased blood vessels in the brains
- Increased levels of BDNF - fertilizer for the brain

Research on Exercise and Learning

Sustained moderately intense exercise for approximately 20-30 minutes has a significant impact on:

- Student focus and attention to task
- Behavior and mood regulation
- Learning and academic achievement



Key Goals

- School Wide morning exercise - to promote learning and improve student behavior/focus
- Promote positive and healthy school environment
- Educate staff, students and parents about health and wellness



What We Are Doing

Students and Staff

- exercising 30 minutes every morning
- ten minute movement break in the afternoon (to re-energize in the afternoon)



What We are Doing

1. Staff Wellness Program – modeling appropriate nutrition and fitness lifestyles
2. Parent Information Nights
 - SPARK project information night
 - Nutrition information session
 - Family Activity night

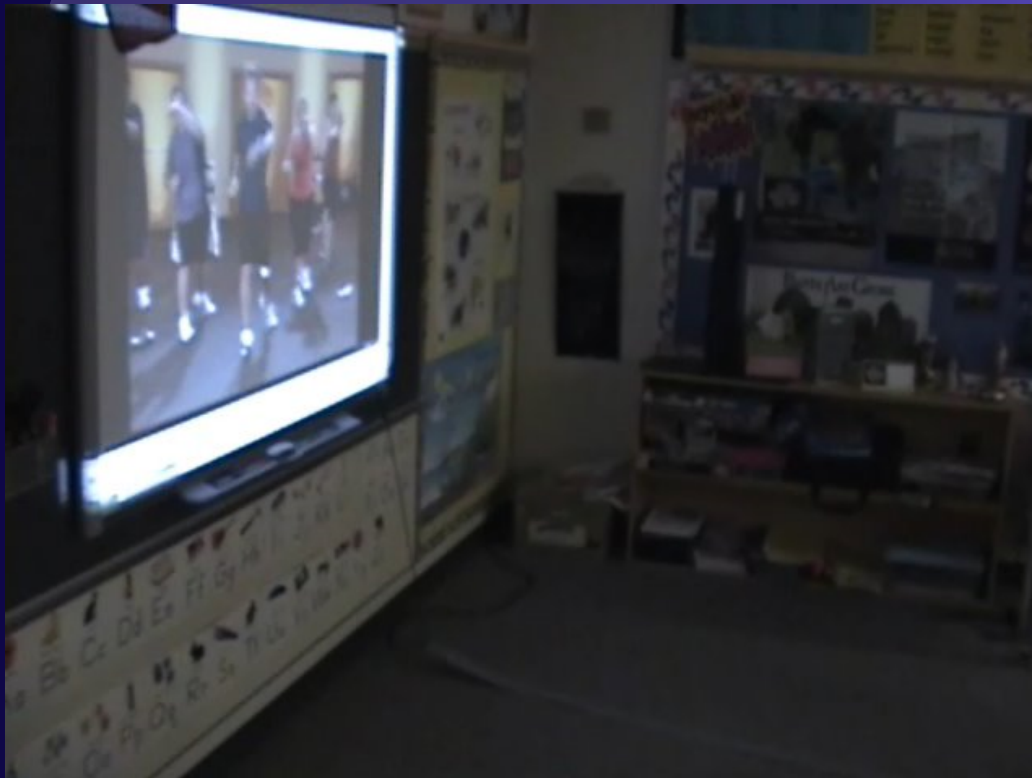


Assessment

- Standardized assessment
 1. Academic Progress: Woodcock Johnson - 3rd Edition
 2. Behavioral Improvements: Conners - 3rd Edition (short version)
 3. Fitness Progress: FitnessGram
- Informal assessment
- On-going Consultation

In Class

- Exercise area in the portable
- Exercise video in classroom



Modified Game

- Playing a game in the gym where students are constantly moving



Circuits

- Classes are split into groups and exercise for one minute at different circuit stations in the hallways (upstairs and downstairs)



Resources

1. High Cost Equipment
 - heart rate monitors
 - Cardio equipment
2. Low Cost Equipment
 - The human body
 - Therabands
 - Other

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Planning and Scheduling

Questions?

BETWEEN FRIENDS



ACTUALLY, THIS RESEARCHER SAYS PHYSICAL HEALTH IS A MAJOR COMPONENT OF HAPPINESS AND THAT EXERCISE MAKES US HAPPY



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