

Lessons Learned



Improving Academic Achievement Through Physically Fit Students

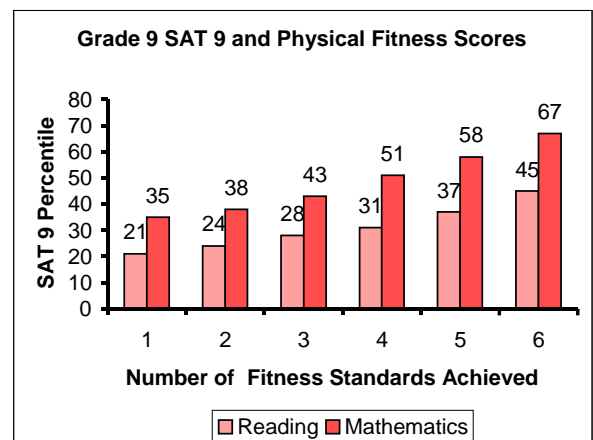
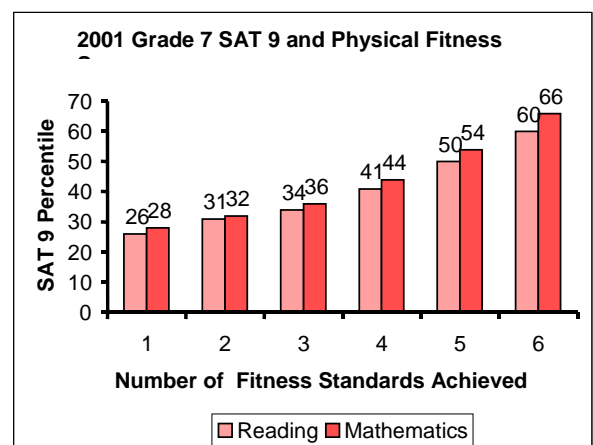
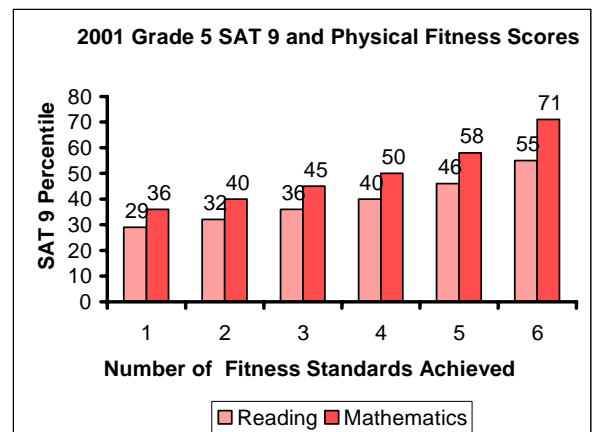
State Superintendent of Public Instruction in California, Delaine Eastin, noted that research completed in California validates the philosophic approach of the Greeks who thousands of years ago promoted improving spirit, mind, and body.¹

The California Department of Education (CDE) found a distinct relationship between the physical fitness of students and their academic achievement. The study individually matched scores from the administration of the 2001 Stanford Achievement Test, Ninth Edition (SAT-9), which is part of California's Standardized Testing and Reporting Program, with the results of the state-mandated physical fitness test, known as the *Fitnessgram*, also given in 2001. The study matched reading and mathematics scores with fitness scores of 353,000 fifth graders, 322,000 seventh graders, and 279,000 ninth graders. The bar graphs for each grade level show a significant relationship between the fitness and achievement.¹

Being physically fit was related to academic achievement:

- Higher achievement was associated with higher levels of fitness at each of the three grade levels measured.
- The relationship between academic achievement and fitness was greater in mathematics than in reading, particularly at higher fitness levels.
- Students who met minimum fitness levels in three or more physical fitness areas showed the greatest gains in academic achievement at all three grade levels.¹

State Superintendent Eastin identified physical education classes as a primary source for promoting physical fitness. In California, physical education classes are required from kindergarten throughout high school. Fitness testing is also mandated in grades five, seven and nine. Fitness testing using the *Fitnessgram*, developed by the Cooper Institute for Aerobics Research, assesses cardiovascular endurance, body composition, abdominal strength and endurance, trunk strength and flexibility, upper body strength and endurance and overall flexibility - the six major health-related components of physical fitness.



References

1. National Association for Sport and Physical Education. New Study Proves Physically Fit Kids Perform Better Academically. December 10, 2002.
2. Shepard RJ, et al. Required physical activity and academic grades. A controlled study. In J Ilmarinen and I Vaelimaeki, eds. Children and Sport. Pediatric work Physiology. Berlin, Germany. Springer-Verlag. 1984, 58-63.
3. Dwyer, T, et al. Relation of academic performance to physical activity and fitness in children. *Pediatric Exercise Science*, 2001,13:225-237,1979,3:196-202.
4. Sallis JF, et al. Effects of health-related physical education on academic achievement. Project SPARK, *Research Quarterly for Exercise and Sport*, 1999, 70(2), 127-134.
5. Centers for Disease Control and Prevention. *Guidelines for School and Community Programs: Promoting Lifelong Physical Activity*. March 1977.

Physical education is an integral part in the learning process of children. Some schools that provide quality physical education programs for their students note:

- A positive relationship on academic achievement, even though time on academic task is reduced because students are enrolled in a physical education ²;
- Increased concentration;
- Improved mathematic, reading and writing scores ²⁻⁴;
- Reduction in disruptive behaviors ²⁻⁴.
- Increases self-esteem and reduced anxiety and stress, which may have a positive effect on student's scholastic achievement.⁵

CDC *Guidelines for Promoting Lifelong Physical Activity* states that physical education programs for young people are most likely to be effective when they:

- Require physical education for all students from kindergarten through 12th grade on a daily basis.
- Increase the amount of time that students are active in physical education classes.
- Eliminate or sharply reduce the practice of granting exemptions for physical education classes.
- Emphasize enjoyable participation in lifelong physical activity.
- Offer a diverse range of competitive and non-competitive activities that are appropriate for different ages and abilities.
- Develop student skills and confidence to participate in physical activity.
- Provide access to safe facilities outside of school hours.⁵

Promoting quality physical education that results in higher fitness levels is one way schools can assist their students achieve academically. Conducting periodic fitness tests provide students feedback with data that allow the development of individual fitness goals. Providing periodic reports to parents and students, along with encouraging individual goal setting, encourages continuous improvements in fitness levels. Promoting all dimensions of the child – physical, social, emotional will promote gains in the intellectual dimension.

Fitness Development Process

To develop physically active and fit students, specific opportunities need to be provided to ensure they will learn the information and skills necessary to be active and fit for a lifetime. Students need to be provided with opportunities to:

1. Learn about fitness concepts (e.g. importance of regular activity, areas of health related fitness, methods for developing each area of fitness);
2. Participate in conditioning activities (stretching, strength and aerobic activities);
3. Learn about each fitness test item (e.g. what it measures, why it is important, how test is administered);
4. Assess fitness levels;
5. Interpret results, set goals, and plan a personal fitness improvement program;
6. Participate in fitness activities to achieve goal;
7. Seek support that encourages achievement of goals;
8. Reassess fitness levels;
9. Celebrate and recognize achievements.

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