



Naperville Central High School's Learning Readiness P.E. program has been engaging students in meaningful physical activity since 2003.

Paul Zientarski, the former LRPE coordinator at the school uses scientific evidence to show students and others that physical activity positively affects cognition.

### Naperville Central

Level: High School

Enrollment: 2,947

Low Income: 6.5%

- 75% White
- 13% Asian
- 5% Black
- 5% Hispanic

(ISBE School Report Card)

### Learning Readiness P.E.

Naperville Central High School appears to be an average public high school in an upper-middle class community; however, the school's physical education program is not so average. Since 1992, Naperville Central has been utilizing heart rate monitors during P.E. in order to ensure students are working in their targeted heart rate zones and maximizing the benefits of P.E. Since then, major strides have been made by the school and district with the ultimate goal of running a P.E. program that truly benefits their students' overall health, wellness, and learning readiness.

In 2003, Naperville Central determined that some of their students were not performing at grade level because of poor reading skills. The school formed an academic reading class for these students and created a before-school or zero hour P.E. class so that students taking the elective reading class could still participate in P.E., as mandated by the state of Illinois. This became Learning Readiness P.E. (LRPE), a class designed based on research that indicated students who were physically active and fit were more academically alert.

Paul Zientarski, who was the first LRPE Coordinator at the school, saw this zero hour as an opportunity to test whether or not physical activity could have an impact on the academic performance of his students. Thus began his school's journey towards enhanced P.E.

### Physical Activity is Brain Food

Data consistently show that since the inception of the program, students who participated in LRPE increased their literacy and math capabilities. The LRPE program emphasizes the importance of staying active and uses a variety of facilities to encourage

that—such as climbing walls, kayaks, ropes courses, dance rooms, and weight training; it isn't your average gym.

More exceptional than the P.E. resources is how Zientarski has applied current scientific knowledge to his program. Neuroscience research shows that the more fit a student is, the better his or her academic performance. Therefore, every P.E. class includes a cardio work out of some kind for at least twenty minutes, coupled with the use of heart rate monitors to ensure that students are reaching their targeted heart rate zones. The district has also ensured that their students understand the emphasis they place on fitness and wellness. As Zientarski says, "Since we understand how exercise helps the brain function, we want to make sure that the high school students understand how and why it helps them academically."

Another huge focus of LRPE is foregoing larger teamed sport games for small-sided games (i.e. 4 on 4 soccer) instead—the goal, after all, is to have students engaging in more moderate to vigorous physical activity.

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**-Paul Zientarski**

**Former LRPE Coordinator  
Naperville Central High School**

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**–Paul Zientarski,**  
Former LRPE  
Coordinator,  
Naperville Central  
High School



**Paul Zientarski (above)**

## Begin With Professional Development

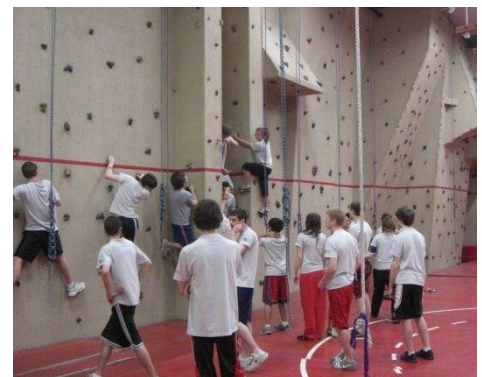
Beginning in the mid-1980s, Zientarski and the Naperville District Coordinator, Phil Lawler, began to brainstorm ways they could improve their P.E. curriculum. Zientarski and Lawler had a vision of collective professional development that quickly grew into a one day conference held in DuPage County for P.E., Health, and Driver’s Education teachers. The annual conference is recognized nationally and averages an astonishing 1200+ attendees.

## The Path to Change

Heart rate monitors were the first investment the school made in enhancing P.E., money for which came from a local fundraiser. District P.E. coordinator Lawler recognized that when his students played regular gym sports like football, they were not reaching their targeted heart rate. “These monitors really gave us the evidence that things needed to change, and now we have Pass Ball, a form of ultimate Frisbee with a football that requires students to spend a lot more time running.” said Zientarski.

These changes didn’t come without resistance; students who were typically seen as athletic realized that they also had to put work into their P.E. class to maintain their targeted heart rate zone, which vary from student to student based on their personal fitness.

The administration’s support of the P.E. department was instrumental in securing the school’s Carol White Physical Education Program grant that funded a new climbing wall and ropes courses. The LRPE curriculum, which was developed by Lawler and Zientarski in house, aligns P.E. class with a student’s specific learning needs, for instance, by scheduling P.E. before math or reading class for low performing students. Technology like heart rate monitors and TriFit software, used for data collection and analysis, has been used extensively in Naperville. “Physical education is more than a few baseball bats and basketballs. You need to arm physical education teachers with the proper technology, like heart rate monitors and software to track their students’ fitness,” Zientarski said.



**Students Engaging in LRPE**



[www.iphionline.org](http://www.iphionline.org)



## Resources

### Learning Readiness

#### P.E.

[www.learningreadinesspe.com](http://www.learningreadinesspe.com)

### TriFIT Software

[www.polar.com](http://www.polar.com)

### FITNESSGRAM®

[www.fitnessgram.net](http://www.fitnessgram.net)

### Dr. John Ratey

[www.johnratey.com](http://www.johnratey.com)

### Enhance P.E. Task Force

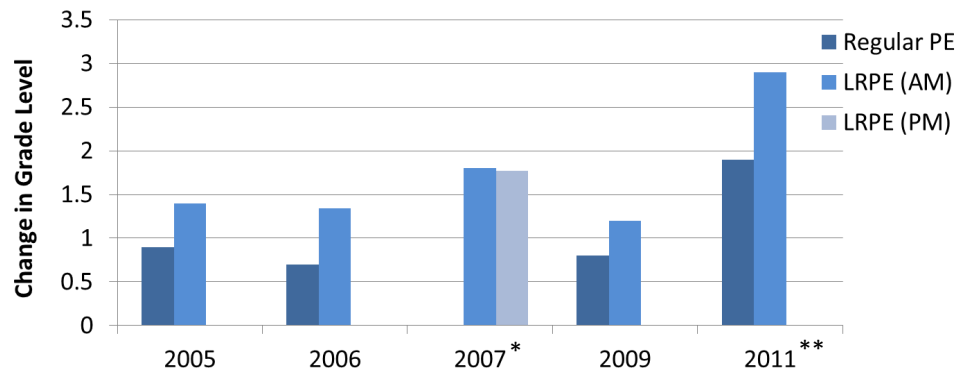
[www.isbe.net/EPE/html/EPETF.htm](http://www.isbe.net/EPE/html/EPETF.htm)

### The Community Guide

[www.thecommunityguide.org](http://www.thecommunityguide.org)



## Figure 1. P.E. and Literacy Improvement

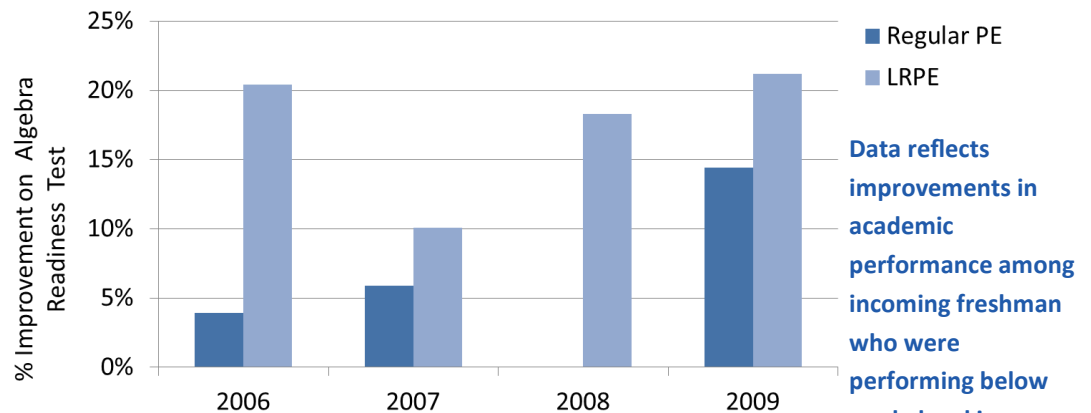


Reading level evaluated using the *Nelson-Denny Reading Test*

\*No students permitted to opt-out of LRPE in 2007

\*\* 2011 data includes students from Naperville North High School

## Figure 2. P.E. and Algebra Improvement



Math skills evaluated using the *Algebra Readiness Test*

No regular P.E. was held in 2008

Data reflects improvements in academic performance among incoming freshman who were performing below grade level in reading and math.

## Showing the Connection

Zientarski and the Naperville administration recognized early on that LRPE helps students academically (Figures 1 and 2). Naperville Central employs FITNESSGRAM® so that both teachers and students can track individual fitness progress. The success of Naperville's LRPE program is largely due to the community of supportive parents. Zientarski specifically attributes the visit Dr. John Ratey, professor of psychiatry at

Harvard Medical School who first conceptualized LRPE, to the publicity that created awareness and ongoing support from the community. Although Zientarski and Lawler are now retired, the current P.E. coordinator Neil Duncan continues their legacy and hopes the school can further improve its program by enabling parents to track the comparison between their student's academic performance and physical fitness.



For more information, contact Paul Zientarski  
630. 961.0525 [pzientarski@naperville203.org](mailto:pzientarski@naperville203.org)

[www.iphionline.org](http://www.iphionline.org)