



Welcome to Today's Webinar!

***School-Based Physical Fitness and
the Link to Improved Student
Academic Outcomes and School
Climate***

This event will begin at 2:00 p.m. Eastern Time.

School-Based Physical Fitness and the Link to Student Academic Outcomes and Improved School Climate Brief



October 2015



In Brief

School-Based Physical Fitness and the Link to Student Academic Outcomes and Improved School Climate

Victoria Stuart-Cassel

Children and adolescents need opportunities to regularly engage in fun and age-appropriate physical activities to maintain healthy development and fitness.¹ Schools can offer a safe and supervised environment for promoting children's physical activity to help reduce the risk of obesity and other negative health outcomes. Studies show, however, that children's access to school-based fitness activities, such as physical education (PE) and recess, has declined in the past 15 years.² This trend has been tied to the enactment of federal legislation that raised academic standards and increased pressure on schools to improve school accountability and reduce educational disparities for underperforming students. Schools responded to these new requirements by allocating more time within the school day to core academic subjects, like mathematics and reading, with the belief that increased instructional time would translate into better academic outcomes.³

More recent perspectives reflect a shift in thinking about the value of school physical activity, challenging the notion that efforts to boost student achievement must come at a cost to children's physical health. Notably, in a recent press release, U.S. Secretary of Education Arne Duncan advocated for dedicating more time to fitness-promoting activity in schools, arguing that "helping students become more active physically also helps students become more successful academically."⁴ This statement finds support in a growing body of evidence suggesting that physical activity and physical education, offered within the context of the school day, are not only essential for children's healthy development but also may contribute to children's academic achievement and positively impact school climate and conditions for learning in schools.

This brief will do the following:



The National Center on Safe Supportive Learning Environments



- Is funded by the U.S. Department of Education's Office of Safe and Healthy Students.
- Provides training and support to federal grantees, including 22 grantees funded under the Project Prevent Program and other state administrators; administrators of districts and schools; teachers; support staff at schools; communities and families; and students.
- Has a goal to improve schools' conditions for learning through measurement and program implementation, so that all students have the opportunity to realize academic success in safe and supportive environments.

*The content of this presentation was prepared under a contract from the U.S. Department of Education, Office of Safe and Healthy Students to the American Institutes for Research (AIR). This presentation does not necessarily represent the policy or views of the U.S. Department of Education, nor do they imply endorsement by the U.S. Department of Education.



Chat Pod



If you have a question for the presenters, please type it in the Chat Pod, or e-mail ncssle@air.org during the webinar.

Feedback Form

Question	Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree	No Vote	Broadcast Results
This Webinar improved my understanding of the covered topics.	<input type="radio"/>	<input type="checkbox"/>				
I will use information from this Webinar.	<input type="radio"/>	<input type="checkbox"/>				
Ample time was provided for answering questions.	<input type="radio"/>	<input type="checkbox"/>				
Overall, this Webinar was a good use of my time.	<input type="radio"/>	<input type="checkbox"/>				

At the end of the presentation, a series of questions will appear. Please provide feedback on this event so that we can better provide the resources you need. All answers are completely anonymous and are not visible to other participants.

For assistance during the webinar, please contact the National Center on Safe Supportive Learning Environments at ncssle@air.org.



1

Webinar Welcome

Norris Dickard, Healthy Students Group Leader, Office of Safe and Healthy Students, U.S. Department of Education

2

Physical Activity and Academic Achievement

Shannon Michael, Ph.D., Health Scientist, Centers for Disease Control and Prevention

3

Physical Activity and School Climate

Rebecca London, Ph.D., Research Professor, University of California Center for Collaborative Research for an Equitable California, UC Santa Cruz

4

Addressing Physical Activity at the State and Local Level

Josh Grant, Coordinator, Office of Middle/Secondary Learning, West Virginia Department of Education



1

Describe the research evidence showing a link between physical activity and academic achievement.

2

Share key recommendations from recent research on physical activity.

3

Discuss the connection of physical activity to improved school climate.

4

Review effective strategies for increasing student activity levels.

Polling Question #1



Which of the following best describes your role?

- State education agency (SEA) staff
- Local education agency (LEA) staff
- Carol M. White Physical Education Program [PEP] grantee
- Other federal grantee (e.g., Project Prevent, ESSC, School Transformation)
- Physical education teacher
- School administrator
- Classroom teacher
- School nurse
- Health teacher
- Community stakeholder
- Other

Polling Question #2



Which of the following best describes the primary reason you chose to participate in this webinar on physical activity and its link to academic achievement and school climate?

- I want to learn how physical activity can impact academic achievement and school climate.
- I want to learn what others have done to address academic achievement and school climate through physical activity.
- I want to obtain strategies and resources to enhance academic achievement and school climate through physical activity.
- Other (please type description into Chat Pod)

Webinar Welcome

Norris Dickard, Healthy Students Group Leader, Office of Safe and Healthy Students, U.S. Department of Education





Physical Activity and Academic Achievement

Shannon Michael, PhD, MPH, Health Scientist, Centers for Disease Control and Prevention





- **Children and adolescents should do 60 minutes (1 hour) or more of physical activity daily**
 - Aerobic
 - Muscle strengthening
 - Bone strengthening
- **Activities should be age-appropriate, enjoyable, and varied.**

How Active Are Kids?



- **Only 27% of high school students achieve the recommended 60 minutes per day every day of the week!**
 - Higher for males (37%) than females (18%)
 - Decreases from 9th grade to 12th grade (30%–24%)

- **Only 29% of high school students attend physical education daily.**
 - Higher for males (35%) than females (24%)
 - Decreases from 9th grade to 12th grade (42%–20%)



Why Should Schools Provide Opportunities for Physical Activity?



- **Most children and adolescents attend school**
 - Captive audience
 - Ideal place for them to learn about physical activity and practice skills
- **Help students achieve some or all of the recommended 60 minutes of physical activity through**
 - Physical education
 - Recess
 - Classroom physical activity breaks
 - Physical activity clubs or sports
- **Students who are physically active...**
 - Benefit physically, mentally, and emotionally
 - Can do better in school

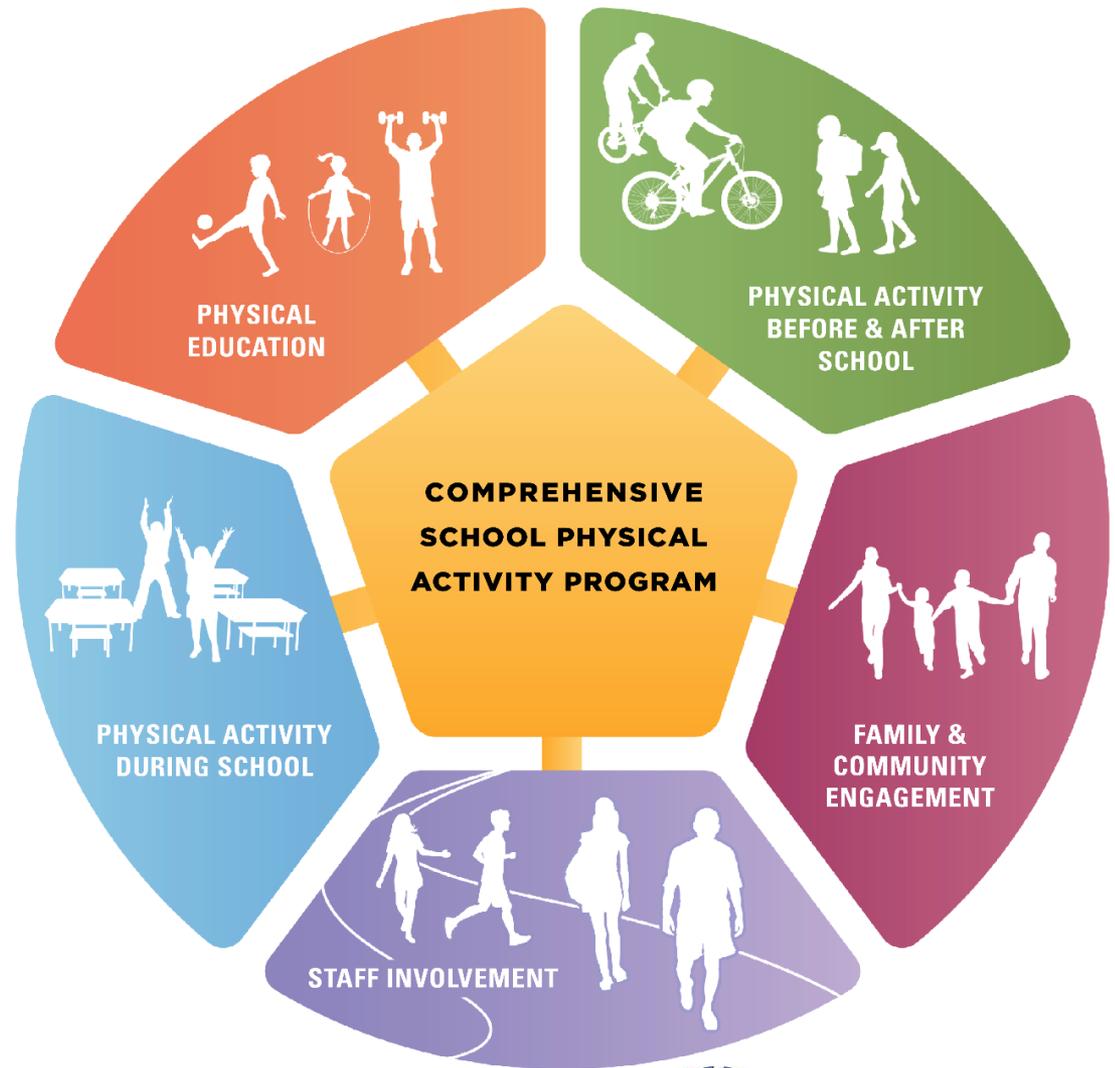
Whole School, Whole Community, Whole Child



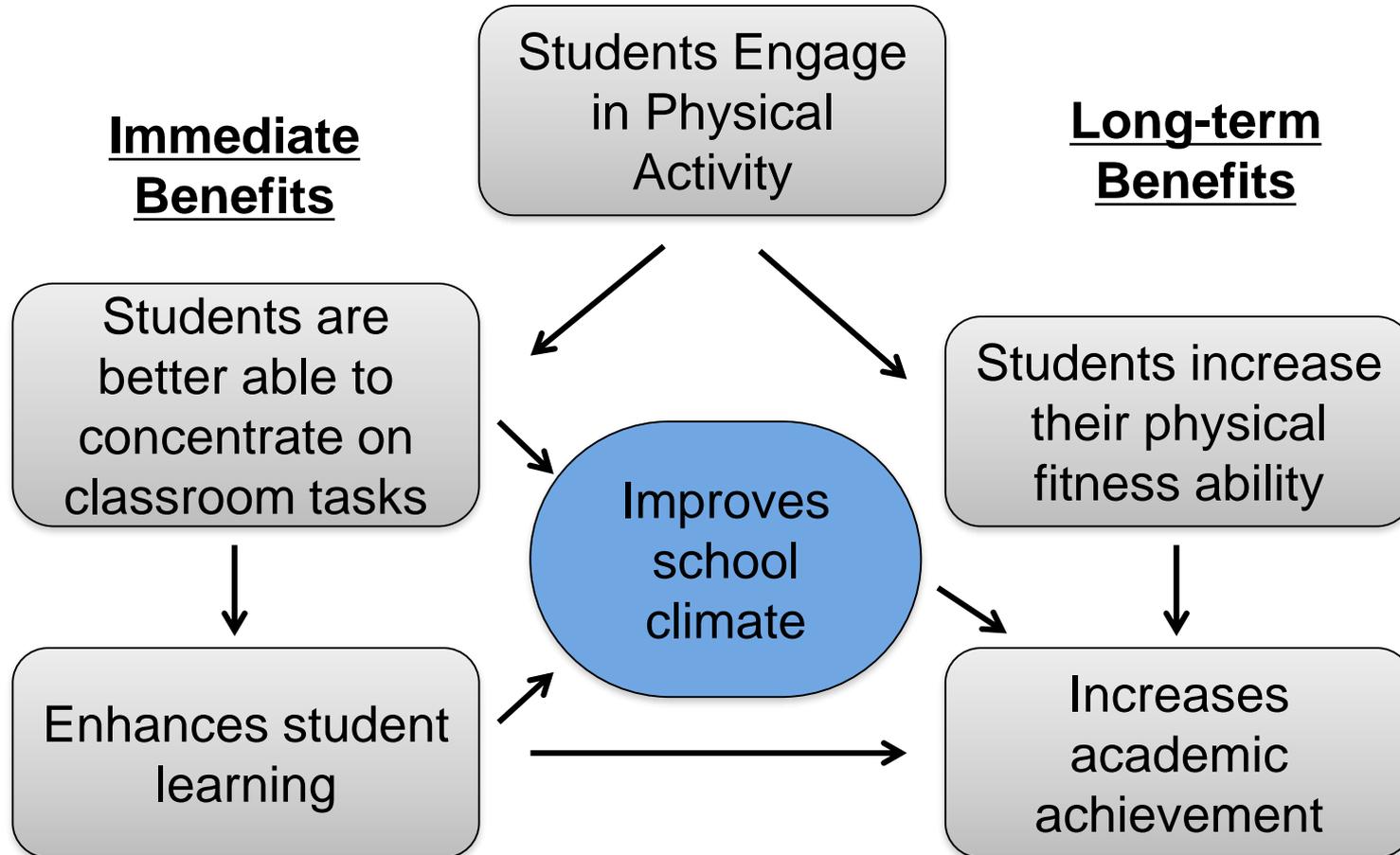
Comprehensive School Physical Activity Program



- **National framework**
- **5 components**
- **Foundation is physical education**
- **Goal is for students to have...**
 - More opportunities for physical activity in school
 - Increased participation in physical activity



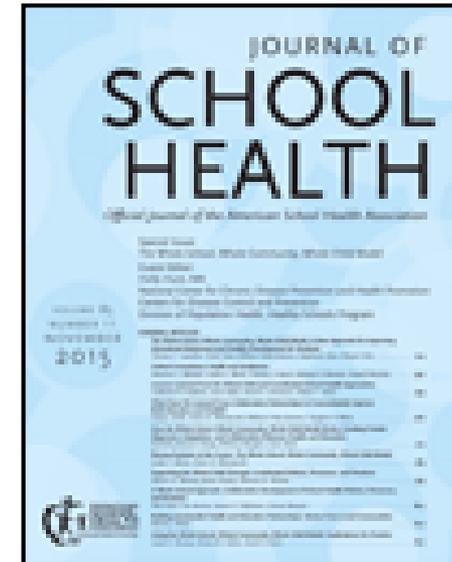
Process of Physical Activity Impacting Academic Achievement





- **CDC, ASCD, and partners**
- **November 2015 issue**
- **10 articles**
- **One article on...**

Critical Connections: Health and Academics



Academic Achievement Defined



Students' cognitive skills and attitudes

- Concentration
- Memory
- Mood

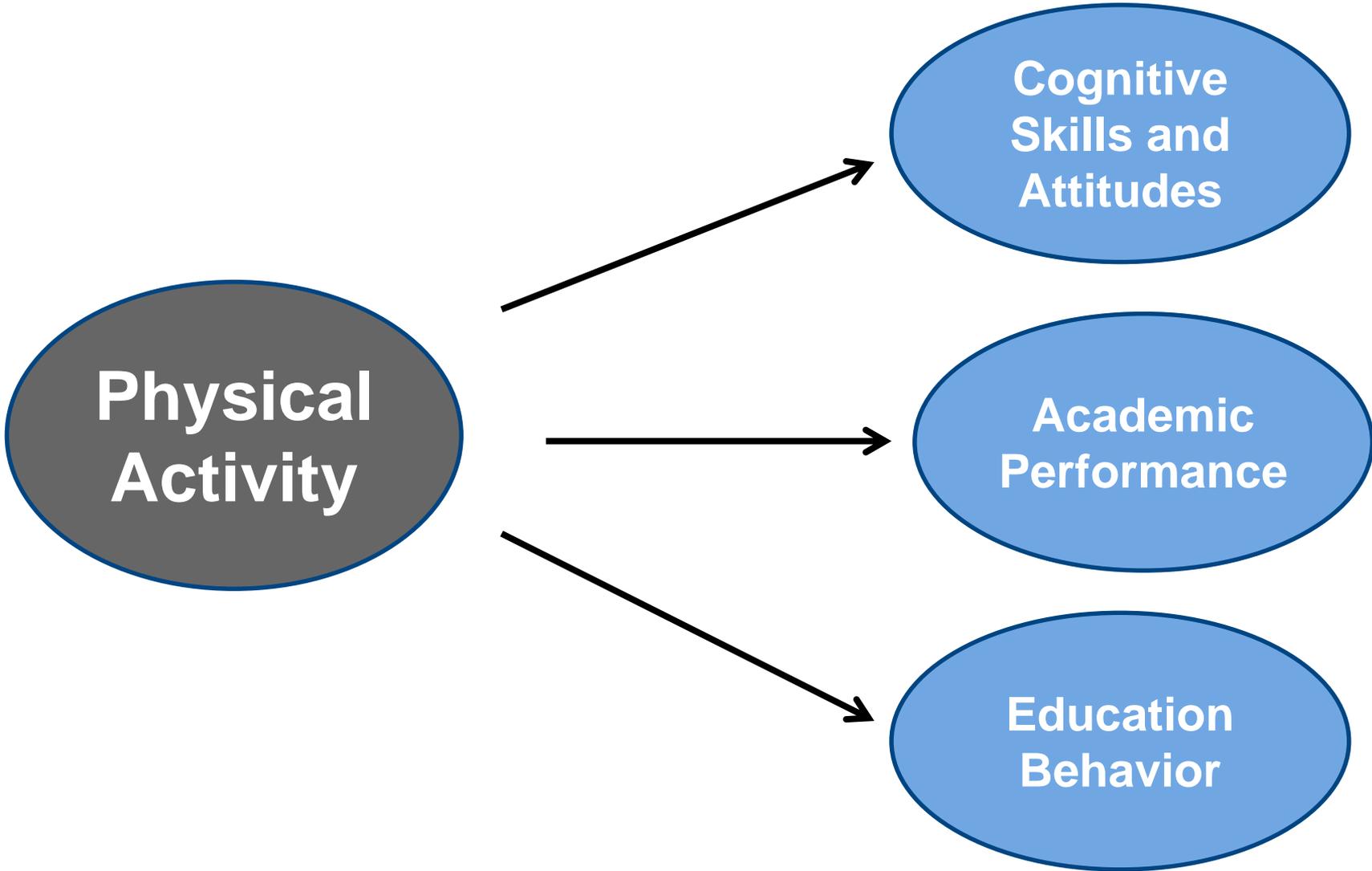
Academic performance

- Class grades
- Standardized tests
- Graduation rates

Education behavior

- Attendance
- Drop out rates
- Behavioral problems at school

Findings for Physical Education, Physical Activity, and Academic Achievement



Findings for Physical Education, Physical Activity, and Academic Achievement



- **Over 50 years of research on physical activity and academic achievement**
- **28 reviews on research on physical activity and academic achievement**
 - 410 articles
 - 259 unique articles
- **Included physical fitness and physical activity**
- **Included all types of school-based physical activity**
 - Physical education
 - Recess
 - Classroom physical activity breaks
 - Physical activity after school (sports)
- **Examined different aspects of academic achievement**

4 Meta-analyses



Since 1997, there have been 4 meta-analyses that have examined different aspects of physical activity and academic achievement:

- Exercise has a positive effect on cognitive performance
- Physical activity has a positive effect on cognitive performance
- Physical activity has a positive effect on academic achievement
- Based on 20 experimental studies, students participating in physical activity have improved academic achievement

Findings for Different Aspects of Physical Activity in School and Academic Achievement

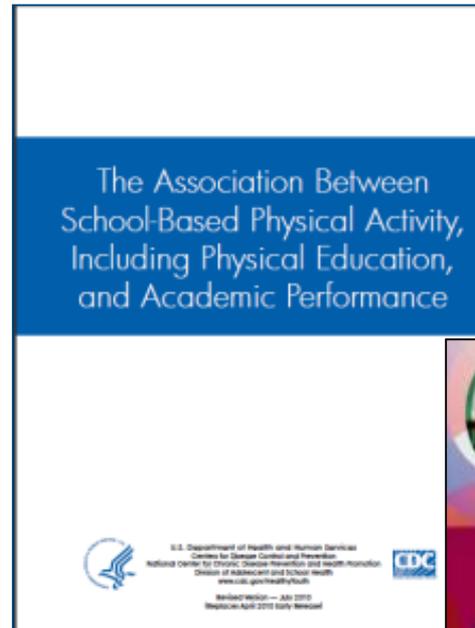


Physical Activity Practice	Related Academic Achievement Outcomes
Students who are physically active	Better grades, school attendance, and classroom behaviors
Increased participation in physical education class	Better grades, standardized test scores, and improved classroom behavior
Time spent in recess	Improved cognitive performance and classroom behaviors
Participation in brief classroom physical activity breaks	Improved cognitive performance, classroom behaviors, and education outcomes
Participation in extracurricular physical activities	Higher GPAs, lower drop-out rates, and fewer disciplinary problems

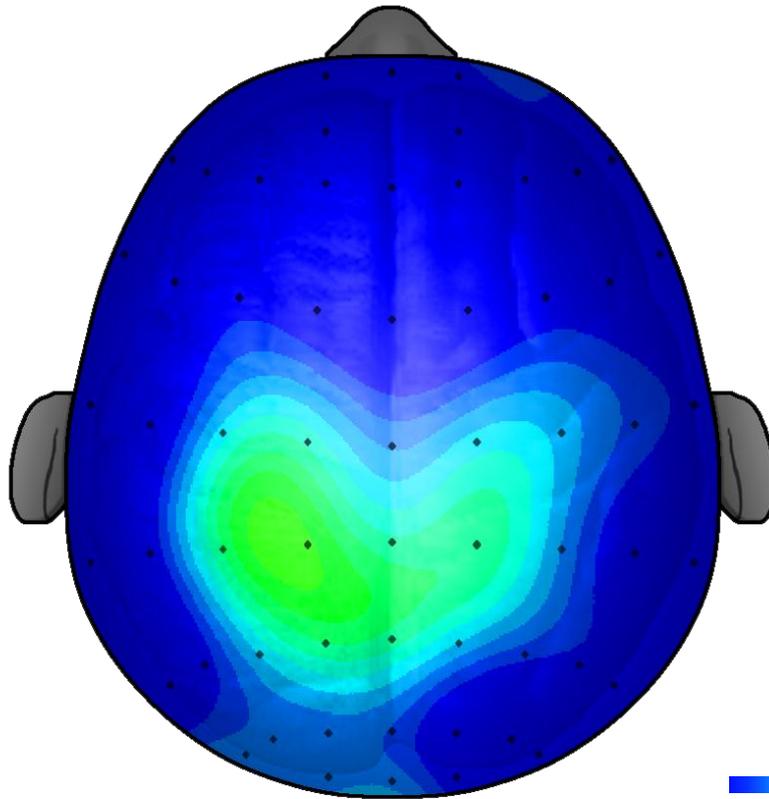
CDC's Resources on Physical Activity and Academic Achievement



- **2010 Report**
- **Health and Academic Achievement overview document**
- **Presentation slides with notes**
- **Podcast on physical activity and academic achievement**
<http://www2c.cdc.gov/podcasts/player.asp?f=8634967>

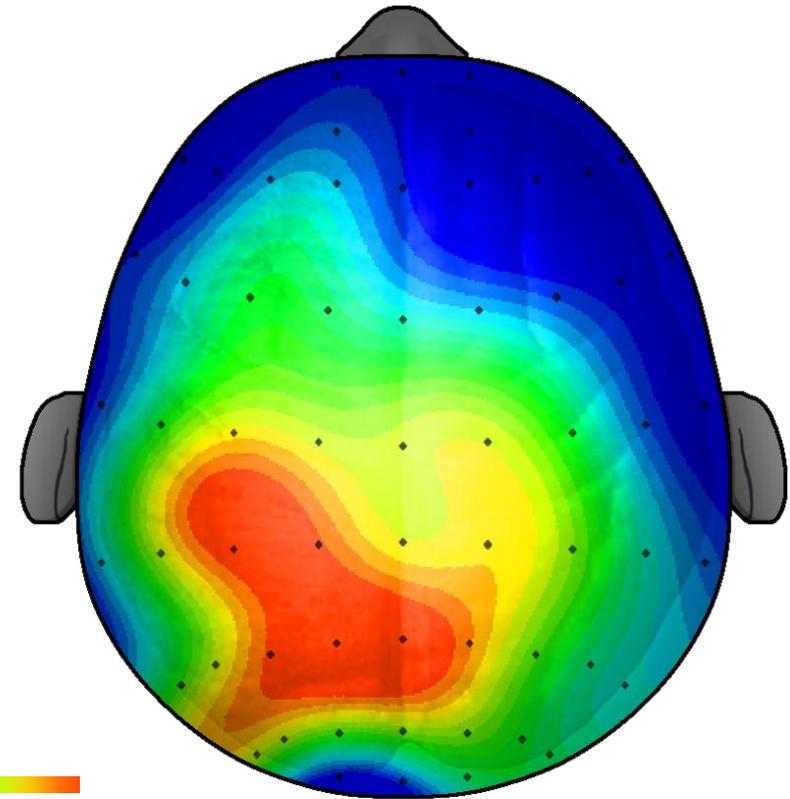
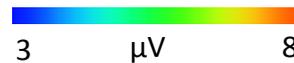


Composite Attentional Allocation of 20 Students Taking the Same Test



After 20 minutes of

Sitting Quietly



After a 20 minutes of

Walking

New Study by National Institutes of Health: Brief Intervals of Exercise for Kids



■ Methodology

- Randomly assigned 28 healthy, normal-weight children to two groups
 - remained seated for 3 hours and engaged in sedentary activities
 - alternated sitting with 3 minutes of moderate-intensity walking

■ Findings

- Children who had 3 minutes of moderate-intensity walking every half hour had lower levels of blood glucose and insulin
- Breaks into school class time might be part of effective strategies to prevent obesity-related illnesses
- Need larger study to confirm findings

What's Happening in Schools?



RECOMMENDATION:

Students should do 60 minutes (1 hour) or more of physical activity daily

REALITY:

Many students are not getting opportunities to be active.

Over half of all schools have **10%** or less of their students walking or biking to and from school.



Only **45%** of all schools provide opportunities for students to participate in classroom physical activity breaks.



Less than **4%** of schools require daily physical education.

Only **55%** of all schools offer opportunities for students to participate in physical activity clubs or intramural sports programs.

Whole School, Whole Community, Whole Child



Federal Initiatives to Support Comprehensive School Physical Activity Programs



Let's Move. Active Schools



BASIC

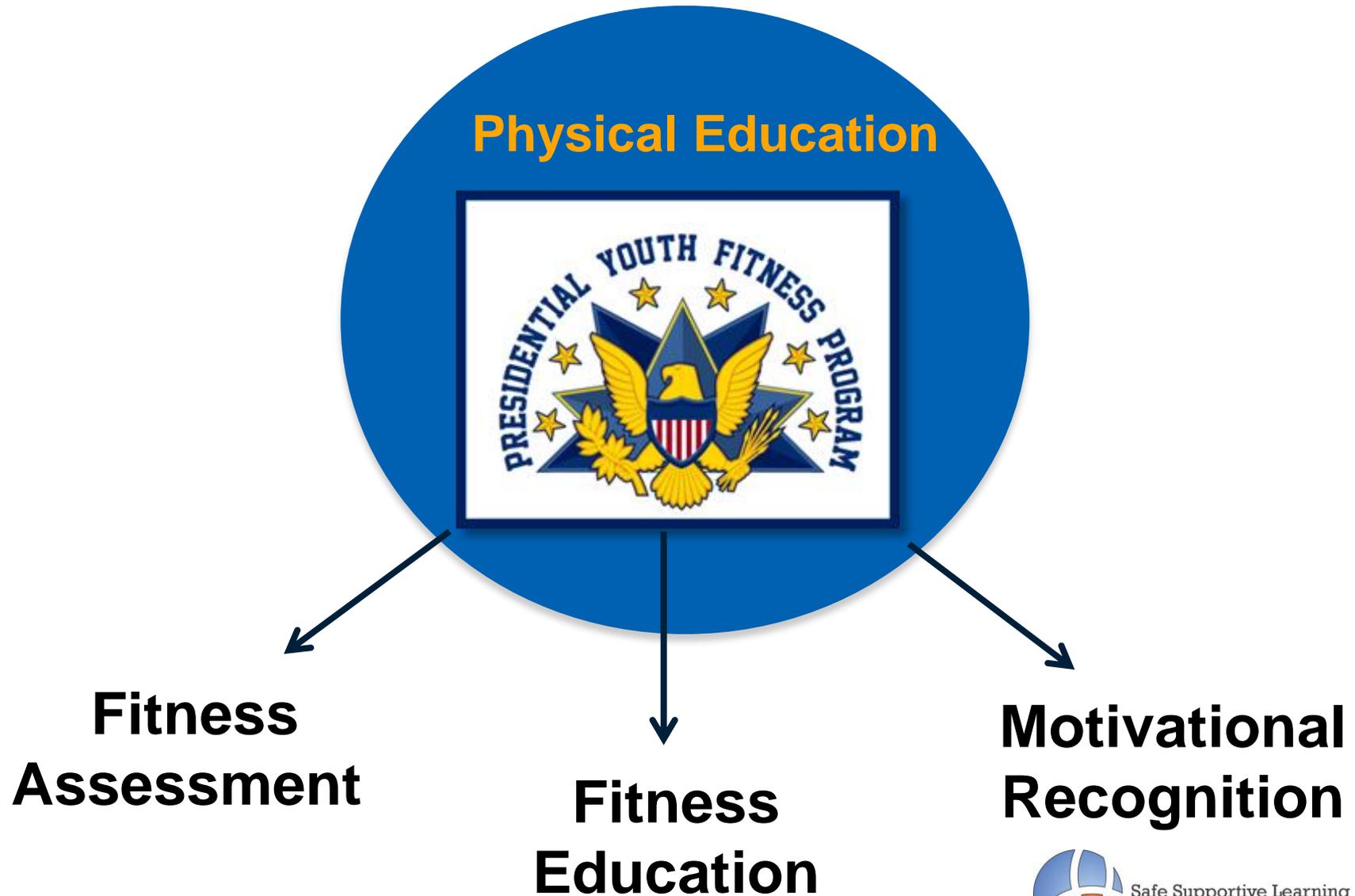


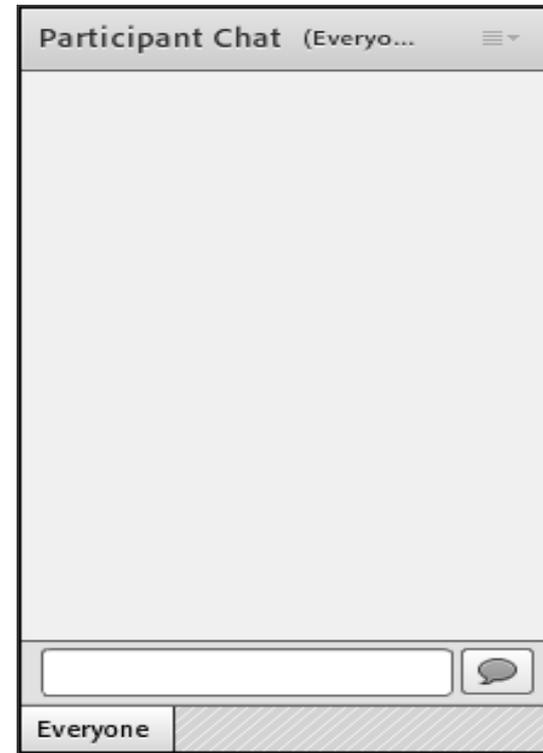
ENHANCED





Presidential Youth Fitness Program





If you have a question for the presenters, please type it in the Chat Pod, or e-mail ncssle@air.org during the webinar.



Physical Activity and School Climate

Rebecca London, PhD, Research Professor, UC Santa Cruz



Outline for the Presentation



- 1 Describe what we mean by school climate.
- 2 Discuss the different school contexts that promote physical activity and school climate.
- 3 Focus in on recess and review the American Academy of Pediatrics policy statement on recess.
- 4 Look at an example of one program that addresses these recommendations.
- 5 Talk about how these lessons can apply across school contexts for physical activity.

What Do We Mean by School Climate?



NCSSLE defines school climate as having the following three domains:

Engagement

Cultural and linguistic competence

Relationships

School participation

Safety

Emotional safety

Physical safety

Bullying/
Cyberbullying

Substance abuse

Emergency readiness

Environment

Physical environment

Instructional environment

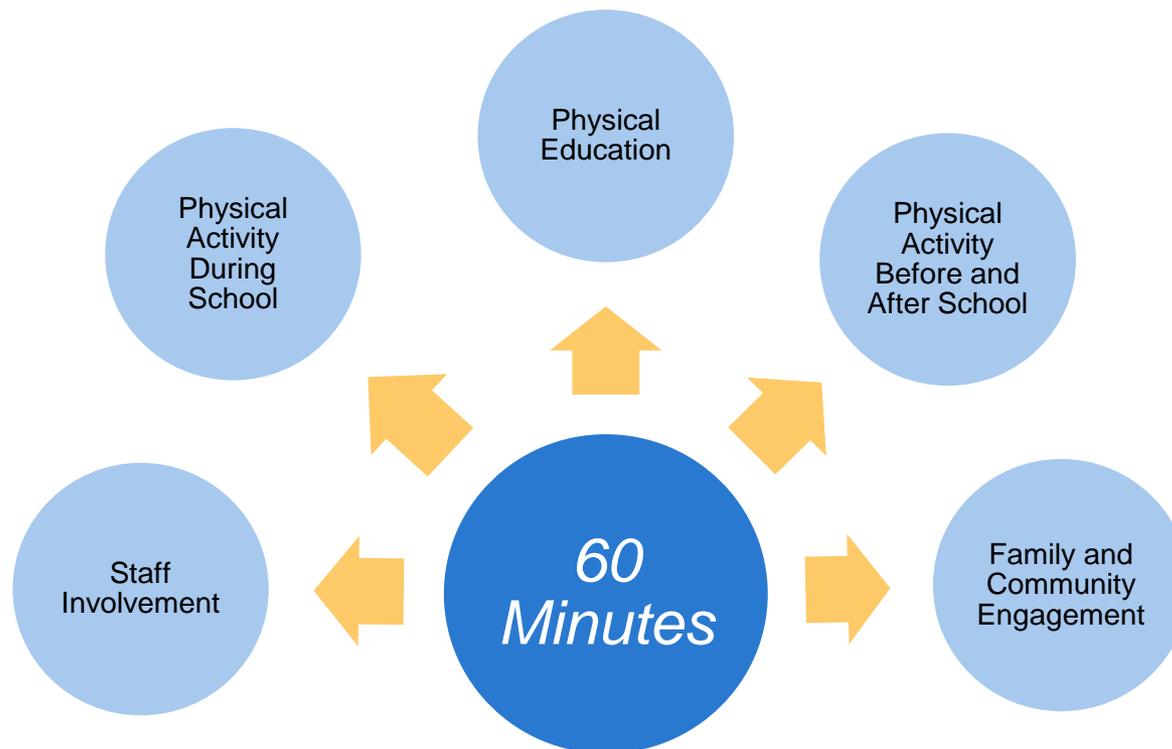
Physical health

Mental health

Discipline



Comprehensive School Physical Activity Program



Contexts that Affect School Climate



- **Inside classrooms:** This is where students spend the most time, and it is the most structured time of day
- **Free time:** At lunch and recess, instructional breaks, as well as study halls, advisory periods, and in hallways
- **Schoolwide events and programs:** For instance during school assemblies, rallies, festivals, open houses—both during and outside the school day (can include parents)
- **One-on-one interactions:** When students meet with counselors, administrators, or other adults or peers
- **Before and after school:** Any programs run by the school or its partners; school sports, music, theater, or arts; other clubs



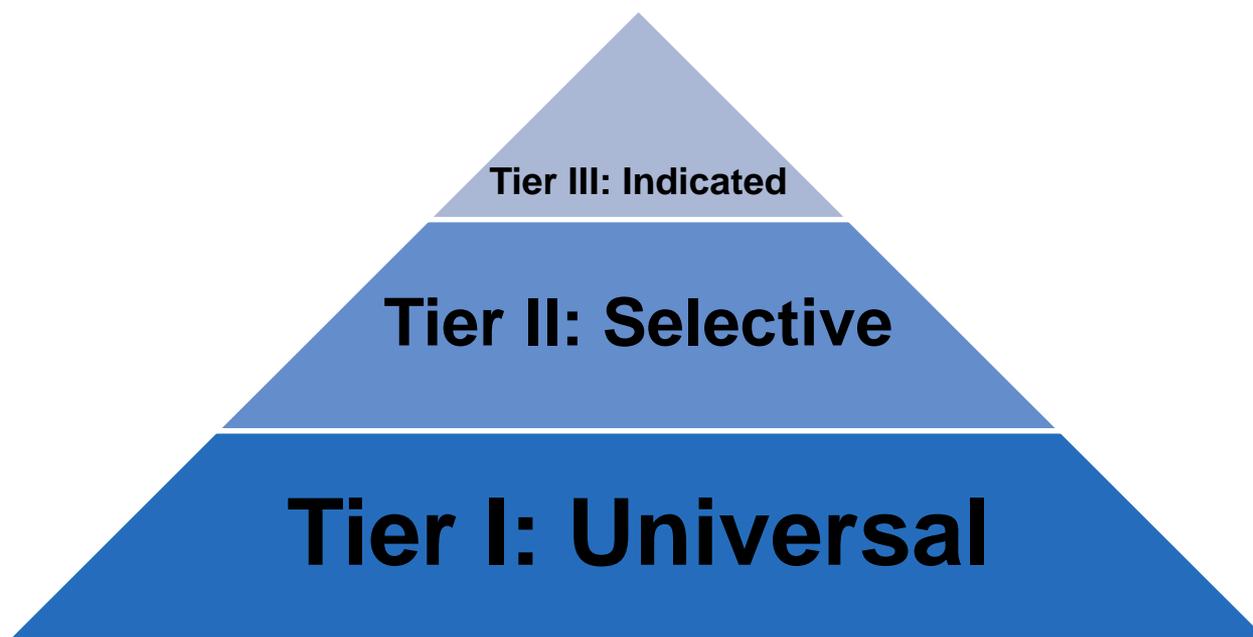
In which of the following school contexts does your program provide physical activity that could affect school climate? (Check all that apply.)

- In classrooms
- During free time
- During schoolwide events and programs
- In one-on-one interactions
- Before and after school

School Climate and Physical Activity in the Multi-Tiered Systems of Support Rubric



- **Physical activity and school climate enhancing activities are Tier I, universal**
- **The same principles for supporting these activities should apply across all school contexts**





- **American Academy of Pediatrics’ policy statement**
 - Describes the importance of recess in aiding “whole child” development, including academic, social and emotional, and physical benefits
 - Outlines guidelines for implementing high quality recess: attention to safety and supervision; social and emotional skill building; school policies related to recess
 - Directed at recess, but applies to other times of day as well
- **But isn’t recess a time all kids have fun?**
 - Recess can be withheld, either as a policy or in individual cases
 - Recess can feel unsafe for children for a variety of reasons
 - Attention to recess is important for promoting positive school climate
- **What is a high quality recess?**
 - Appropriate games, space, equipment available
 - Inclusive, positive, and engaged environment, both adults and students
 - Organized, but not structured

Playworks: Example of Program Providing High Quality Recess



- **Aims to improve recess in low-income elementary schools**
- **Full-time coach placed at schools to engage with students all day**
- **Junior coach program to foster leadership**
- **Students can choose what they play**
- **Core values include:**
 - Inclusive behavior
 - Positive language
 - Consistent rules and norms
 - Conflict resolution
 - Engagement in play
 - Adults playing alongside children



Which of these values does your physical fitness program currently reflect? (Check all that apply.)

- Inclusive behavior
- Positive language
- Consistent rules and norms
- Conflict resolution
- Engagement in physical activity
- Adults participating alongside students



Randomized Controlled Trial of Playworks conducted by Mathematica Policy Research

Increased student physical activity levels Children in Playworks schools spent significantly more time in vigorous physical activity at recess (14% versus 10% of recess time, a 43% difference)

■ **Increased student feelings of safety**

-Playworks teachers' average rating of students' feelings of safety at school was 20% higher than the average ratings reported by teachers in control schools

■ **Reduced bullying**

-Teachers in Playworks schools reported significantly less bullying and exclusionary behavior during recess, a 43% difference in average rating scores

■ **Decreased time for student to transition back to learning**

-Teachers in Playworks schools reported spending significantly less time to transition from recess to learning activities (34% fewer minutes)

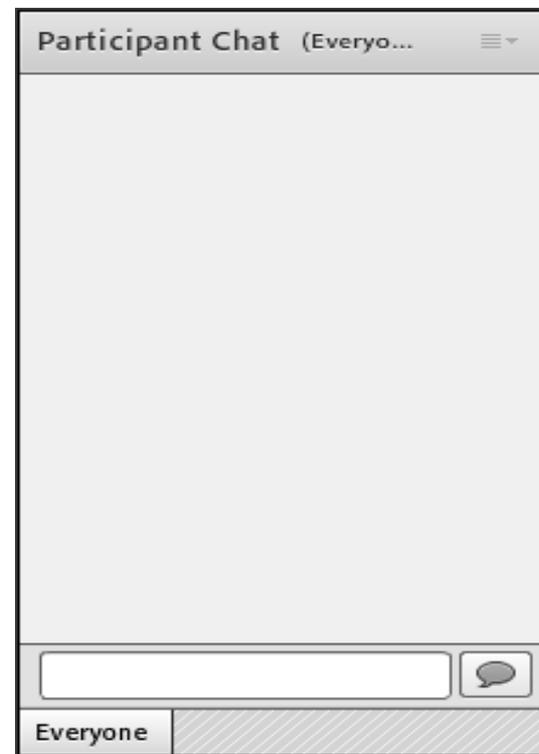
-Increased value placed on organized play at school by teachers

Recommendations for Using Physical Activity to Enhance School Climate



Recommendation	Practices that promote school climate
Allow students daily physical activity	<ul style="list-style-type: none">• Permit daily physical activity for students in PE, recess, or free time regardless of their behavior, missed schoolwork, or the weather
Ensure physical and emotional safety	<ul style="list-style-type: none">• Support conflict resolution tools like rock-paper-scissors• Provide age- and activity-appropriate equipment• Establish rules and norms for activities as well as designated locations where they are played
Provide opportunities for engagement	<ul style="list-style-type: none">• Allow students to choose their activities from several different offerings• Create an inclusive environment where everyone can participate• Support ongoing participation through positive encouragement
Foster adult-student relationships	<ul style="list-style-type: none">• Adults support activity by participating with or cheering for students• Adults model inclusive and positive behaviors
Foster student-student relationships	<ul style="list-style-type: none">• Create leadership programs for students• Encourage activities that mix up students across their friend groups• Create noncompetitive environment

Questions?



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Addressing Physical Activity at the State and Local Level

Josh Grant, Coordinator, Office of Middle/Secondary Learning, West Virginia Department of Education



Presentation Overview



1

West Virginia Policy Relating to Physical Education & Physical Activity

2

West Virginia Physical Activity Accomplishments

3

How We Made Statewide Training Happen

4

Results From Increased Physical Activity

5

Greenbrier CHOICES





Elementary School K-5

- At Least three times a week for 30 min.
- At least 50% of time spent in moderate to vigorous-intensity physical activity (MVPA)

Middle School 6-8

- One period daily for a semester
- 50% MVPA

High School 9-12

- One required credit
- 50% MVPA

Grades 4 - HS

- *FITNESSGRAM*®



Elementary School

- 30 min. daily for **All** Students

Middle School

- 30 min. daily – MVPA Opportunities **must** be provided

High School

- 30 min. daily - MVPA Opportunities **should** be provided



- **West Virginia won it's 3rd straight JAM World record with 176,849 participants; 11.17% of WV population.**



- **The President's Council on Fitness, Sports & Nutrition (PCFSN), Recognizes WV as first state to have at least one school enrolled within each school district.**





West Virginia Department of Education Office of Early Learning Video Series



Dr. Michael J. Martirano
West Virginia Superintendent of Schools



Dr. Jamie Jeffrey, MD
Pediatrics, CAMC & Associate Professor, WVU



Mike DeRose
Principal, Kanawha Elementary, Wood Co.



Sabrina Runyon
Principal
Lenore K-8 School, Mingo Co.



West Virginia Physical Activity Accomplishments



- **Physical Activity Trainings occurred to train over 400 classroom teachers and administrators to impact over 150,000 students.**
- **Karen Bonnett: SHAPE High School Physical Education Teacher of the Year**



- **Challenging every WV Elementary School to be a Let's Move Active School (LMAS)**



How We Made Statewide Training Happen



Healthy Schools Program



KidStrong Conference
Building community and school partnerships

TRY THIS
west virginia

Building Blocks for
Healthy Communities



Safe Supportive Learning
Engagement | Safety | Environment

Results from More Physical Activity in Schools



- ***“Positively impacted test scores, attendance, behavior and attitudes. First month report indicated zero discipline violations and test scores raised 33 points in one grade level.”***

Sabrina Runyon - Principal Lenore K-8



- ***“Increased PA in the morning has greatly reduced tardiness and students are more anxious to get to school, more focused, and discipline has been minimized to hardly anything at all.”***

Mike DeRose - Principal Kanawha Elementary



- ***“Increased PA through MIM has led to more fluent reading, neater handwriting, and students fine motor skills, gross motor skills, and overall social behavior has improved.”***

Wade Armentrout- Principal Moorefield Elementary





- **Children’s Health Opportunities Involving Coordinated Efforts in Schools (CHOICES)**
- **Carol M. White Physical Education Program Grant**
- **Components: Community, Healthcare, School**
- **Integrated approach to adolescent health promotion**





- Enhanced PE Curriculum focused on lifetime physical activities rather than traditional sports.
- PECAT & Assessments
- Culturally relevant



As a result:

- 89.4% said they would like to participate in the chosen PAs in their communities in which they live.
- 78.3% said they would like to join an after-school program with these PAs.



**“Healthy, active
students make
better learners”**



Joshua Grant

Coordinator

Office of Middle / Secondary Learning

Building 6, Room 603

1900 Kanawha Boulevard East

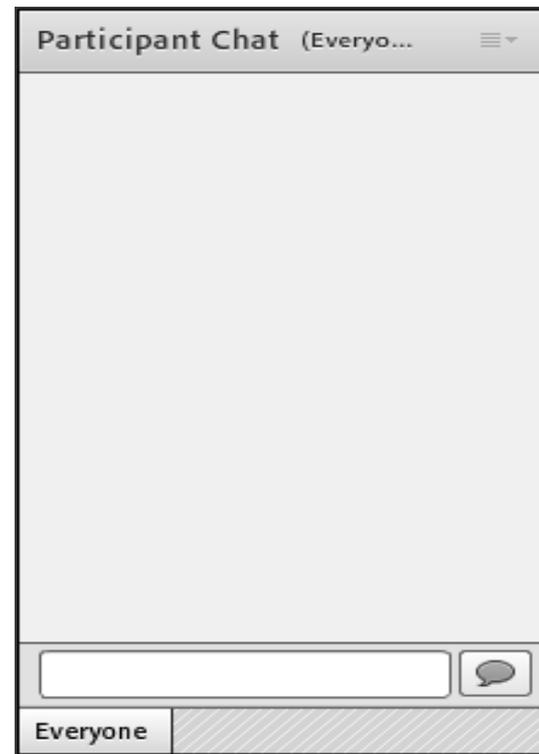
Charleston, WV 25305-0330

304.558.5325 P

304.558.1834 F

E-mail: jgrant@k12.wv.us

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