The link between student health and academic achievement is well documented. Thus, many school districts and schools across the country are developing and implementing strategies to help students practice healthy eating and physical activity habits. Some of these strategies include health education, physical education programs that teach essential movement concepts and skills, opportunities to participate in physical activity throughout the whole school day, parental and community involvement, and additional activities that promote a healthy lifestyle.

This resource guide is provided on behalf of the University of Mississippi RebelWell Campus Committee and the University of Mississippi School of Education. It is intended to provide practical “how-to” information for faculty and staff at the K-8 level on some of the aforementioned strategies. Provided within this guide are strategies on how to effectively implement recess, ways to promote and develop health in the classroom and school environment, and multiple resources and methods to integrate physical activity into the whole school day.

As a service to its users, the University of Mississippi RebelWell Campus Committee and the University of Mississippi School of Education offer links from its guide to resources and websites developed by other organizations. These links are provided as a resource only. Unless specifically stated, the inclusion of such links does not imply endorsement or support of information, products or services offered by an organization. Information contained on such linked resources should be independently verified.

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For more information or to provide feedback about these resources, contact Alicia Stapp, assistant professor of health and physical education, University of Mississippi, School of Education at 662-915-7350 or acstapp@olemiss.edu.
Creating a Healthy Classroom and School
A Resource Guide for Educators

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1. Recess

a. Recess is an Essential Component of the School Day

Recess is a necessary unstructured part of the school day for students to take a break from structured environments and all of the daily academic expectations. As such, students are given the opportunity to engage in choice during allotted recess time(s). Choices may entail activities and companions. These options are beneficial for students who need to socialize, make choices and develop problem-solving skills. Additional evidence is provided below as to why recess is a critical part of the school day.

- Recess contributes to a **POSITIVE SCHOOL CLIMATE.** (London, et al., 2014).
  - According to London et al. 2014, a positive school climate includes physical and emotional safety, positive relationships with adults and peers, support for learning, and an environment that fosters school connectedness and engagement.

- Recess **ACTIVATES THE BRAIN** through physical activity (Pica, 2010).
  - Current brain research shows that the brain is more active when a child is moving, rather than sitting in a sedentary position.
  - Movement increases blood flow in the brain and activates the brain derived neurotropic factor (BDNF).
  - A study completed on 40 elementary-aged students examined a composite brain scan. One scan showed students who were sedentary for 20 minutes, and the other composite scan showed students who walked on a treadmill for 20 minutes. After the 20 minutes, students were asked to complete a cognitive task that tapped into working memory. The students who were physically active scored significantly higher than the sedentary students (Hillman et al., 2009).

- Recess **INCREASES SOCIAL AND EMOTIONAL DEVELOPMENT.**
  - Recess encourages a different social and emotional dynamic than the classroom.
    - Students take part in unstructured language and nonverbal communication, problem solving and conflict resolution that pertain to their interactions during recess (Jambor, 1986).
  - Recess may be the only time of day students exhibit and practice social competencies.
    - The playground is one of the few places students can “confront, interpret, and learn from meaningful social experiences” (Jambor, 1986).
  - A 2010 Gallup survey of approximately 2,000 elementary school principals indicated that 96 percent of the principals agreed that recess can have a significant impact on social development (Vialet & Wilson, 2013).

- Recess has a positive impact on **CLASSROOM BEHAVIOR.**
  - A study of 11,000 elementary-aged children indicated that recess positively increased classroom behavior. Students who had 15 minutes of recess per day scored significantly higher than those who had less than 15 minutes (Barros, Silver & Stein, 2009).
Recess increases ACADEMIC BEHAVIOR.
- Sixty percent of fourth-grade students showed an increase in on-task behavior on days where recess was included in the curriculum. Children who have ADHD are among those who benefit most. (Jarett, 2009).

Recess is HEALTHY.
- Recess is the best place for children to burn calories, practice physical skills, and experience the euphoric feeling that movement brings through increased endorphin production.

b. Children’s Right to Play!

“We believe that recess is a right, not a privilege. Article 31 of the U.N. Convention on the Rights of the Child (unicef.org/crc) recognizes the right of the child to rest and leisure, to engage in play and recreational activities appropriate to the age of the child and to participate freely in cultural life and the arts. We believe that recess, with its fun, movement, and opportunities to socialize through play, is a basic need and that policies against recess, whether made at the school system, school, or teacher level, discriminate against children. Depriving a child of recess as punishment is similar to depriving a child of lunch. It is not only unfair, it is also unhelpful. Just as hungry children cannot concentrate well, children deprived of breaks cannot concentrate well either. Sometimes the most disruptive children need recess the most” (Jarett & Waite-Stupiansky, 2009).

c. The Administrator’s Role

- Administrators play a significant role in how effectively recess is implemented throughout the school. Addressing the categories below can help aid in developing a successful recess plan.
  - Decisions about
    - Recess Schedule
    - Recess Expectations
    - Recess Activities
    - Recess Supervisors
    - Active Recess Indoors/Inclement Weather
    - Maintaining a Safe Recess Environment
    - Evaluating Recess
  
See the following website for additional checklists, worksheets, and guidelines for effective and quality recess. bit.ly/QualityRecess

- The list below provides some thoughts and suggestions about developing an effective recess plan from Susan Weltworth, an elementary school principal in central Pennsylvania.
  - Schedule recess every day for primary and elementary-level children. Breaks from academics are important, and children need opportunities to practice positive social interactions.
  - Agree on basic rules that apply throughout the school building and the day.
  - Build a repertoire of games that encourages cooperation and responsibility and avoids conflicts.
  - Teach the games using modeling and practice. Reinforce children’s prosocial skills throughout the school year.
  - Provide enough materials and equipment for several groups of children to play the same game. Help students make choices about which games to play.
  - Provide teacher supervision during recess, and encourage the children during play (Jarett & Waite-Stupiansky, 2009).
d. The Teacher’s Role

Things to Remember!

◆ It does not need to be difficult.
◆ Extensive lesson plans or workshops are not necessary.
◆ Intense physical fitness routines are not necessary.
◆ Proper supervision is essential.
◆ Consistent expectations and playground behaviors must be taught and reinforced.

e. Making Recess an Effective and Participatory Environment

- Supply Equipment - Oftentimes students will not participate in recess simply because they find themselves bored and unengaged. There may be a lack of equipment available, wherein children are forced to partake in games such as tag, chase and running games. On the other hand, providing the same equipment every day (e.g., basketballs/kickballs) tends to also create an environment of complacency. To make the recess environment more engaging and adaptable for all children, teachers should try to incorporate different equipment for students.

Examples of equipment are
◆ Beanbags, hula hoops, Chinese jump ropes, tennis balls, Frisbees and volleyballs. If equipment is unavailable from the physical education teacher, ask the school’s PTO to provide funding or attain funds through grant sites such as donorschoose.org or adoptaclassroom.com.

- Develop Simple Activities - When choosing activities for your classroom and to alleviate additional work, remember the following:
  ◆ Utilize activities that students are familiar with or have them create an activity.
  ◆ Group activities should remain small.
  ◆ The main objective of recess games should not be to “score.”
  ◆ Develop activities that are appropriate for all fitness levels and meet the developmental needs of all students.

- “Free Time” = Productive Time

As a teacher, it is imperative to appreciate recess as a valuable learning experience. Its importance in being allocated as such should be visible during the school day. For example, a teacher would not walk into a math classroom and say “Hello class, today we are going to have a free day.” On the contrary, there might be stations set up for students to choose from and rotate through. Recess can be set up the same way. However, remember to change the activities so that students do not experience the same things every day and become bored. By setting up stations you are still allowing “free time,” as they are allowed to make a choice in what they want to do.

- Coordinate with the Physical Education Teacher

Use the expertise of physical education teachers. Physical education teachers may be able to give insight or a quick workshop on supervision of the playground. They may also share games with faculty and staff. Additionally, they may be willing to teach a few playground games to students during the first part of the semester. All of the above actions would minimize any playground altercations that may arise.

- Additional Faculty, Staff and Community Members to Involve In Recess
  ◆ School Nurses
  ◆ School Wellness Committee
  ◆ Recess Assistants
  ◆ Parents (Parent-Teacher Organization)
  ◆ School Board Members
  ◆ Behavior Specialists

- 10 Ways to Be Active Indoors

The website below provides multiple ways for the classroom teacher and students to be active indoors. In a more constricted area, it is imperative to have clear and consistent indoor recess expectations.

bit.ly/Indoor_Recess

f. Consistent Playground EXPECTATIONS!

◆ Teach and reinforce expectations throughout the year.
2. Promoting Positive Health in the Classroom

a. Teachers as Healthy Role Models

- Demonstrate healthy habits in the classroom
  - Encourage physical activity in the classroom
  - Use student rewards that promote health (water bottles, jump ropes, Frisbees, walks with an administrator of their choice, etc.)
  - Encourage students to participate in before, during or after-school physical activity programs
  - Model healthy behaviors (being active, consuming healthy food and beverages)
  - Make recess part of every school day
  - Encourage healthy snacks and beverages for celebrations
  - Incorporate health education into academic subjects (45 minutes per week)

- Allow Access to Drinking Water
  - Water bottle and drinking fountain
  - Send a note home to parents indicating water bottles are allowed
  - Staying hydrated improves cognitive functioning. Water feeds the brain!

b. Constructive Classroom Rewards

- Rewarding children in the classroom does not need to involve candy and other foods that can undermine a child’s diet and health and reinforce unhealthy eating habits. A wide variety of alternative rewards can be used to provide positive reinforcement for children’s behavior and academic performance (CDC, 2013).

- Constructive Reward Examples
  - Movement Celebrations
  - Social
  - Recognition
  - Privileges
  - Rewards for a Class
  - School Supplies
  - Toys
  - Fashion
  - Miscellaneous
  - Point/Raffle/Auction System
  - Quarterly Schoolwide Reward
  - bit.ly/classroom-rewards

3. Provide and Encourage Physical Activity throughout the School Day

- The Department of Health and Human Services recommends as part of its physical activity guidelines that children and adolescents should participate in 60 minutes or more of physical activity each day.

- National Association of Sport and Physical Education (NASPE)
  - The document provided by NASPE outlines resources for implementing physical activity throughout the whole school day.
  - bit.ly/NASPE-training
a. Physical Activity - Before and After School Programs

- **Steps to Take**
  - Survey faculty, staff and students to address interests before developing any before or after-school physical activity program
  - Seek out resources that are readily available
  - Identify those who are interested in sponsoring a club or activity
  - Attain permission from your administrator to begin a before or after-school physical activity program
  - Address parental consent that will be needed
  - Plan out the program (days, times, requirements) and address expectations

**Sample Programs/Clubs/Activities**

- The Walking Classroom - thewalkingclassroom.org/our-program
- Walk and Bike to School Program - walkbiketoschool.org

- **Aerobic Activities**
  - Walking Club
  - Running Club
  - Dance Club
  - Soccer Club
  - Basketball Club

- **Muscle Strengthening Activities**
  - Gymnastics
  - Stretching Club (Yoga)
  - Balance Ball/Resistance Band Club

- **Bone Strengthening Activities (Many cross over with the two categories above)**
  - Jump Rope Club
  - Tennis Club
  - Running Club
  - Hopscotch (hopping, skipping, jumping)

b. Creating an Active Classroom

- **Physical Activity B,L,T**
  - Physical Activity **Brain Breaks**
    - Brain breaks provide a way to refocus, re-energize and reorganize the brain for learning. They typically last 2-4 minutes. However, brain breaks can last longer when integrated into a lesson.
    - Brain Gym - braingym.org
    - ABC Fitness - davidkatzmd.com/docs/ABCManual.pdf
    - Go Noodle - gonoodle.com
    - Jammin Minute - jamschoolprogram.com
    - Move to Learn - movetolearnms.org
    - Brain Breaks - curriculum.austinisd.org/pe_health/resources/BrainBreaks
  - Physical Activity Integration for **Academic Lessons**
    - Action Based Learning - abllab.com
• PE Central - pecentral.org/lessonideas/classroom/classroom.asp
• Take 10 - take10.net/whatisTake10.asp?page=new
• Active Academics - activeacademics.org+
• American Heart Association - bit.ly/AHA_Play60

Physical Activity for Transitions
• From Partner/Group Work
  ◦ High-Five Cincos - Students give five high-fives and return to seat.
• Back to seats
  ◦ Animal Movements - Give students an animal and corresponding action to transition back to their seat.
• Between Stations
  ◦ Syllable Walk - Students take a step for every syllable in a word that is said out loud until they reach their next station.
  ◦ Can’t Touch This - Touch five walls, four tables, three chairs, shake two hands, give one high-five and return to seat or next station.
• Cleaning Up
  ◦ Pick up shapes - Students pick up shapes of objects that the teacher calls out until all items are cleaned up.
• Lining Up (Wait Time)
  ◦ Silent Math Toss - Teacher provides a math fact and tosses a soft tag ball (nerf football works too) to a student who then answers with the product.
  ◦ Follow the Mirror - Teacher or student leads the class in a mirroring session, where the students mimic the movements of the leader. Movements can represent a specific vocabulary word, pattern, letter, or can be random.
• Bathroom/Water Fountain
  ◦ Pathways - Provide pathways on the floor for students to follow to the bathroom or water fountain (straight, curved, zig-zag, diagonal).

Inclusion Suggestions
• Variation in body parts, speed and number of repetitions can be modified
• Mobility - Many movements may be completed from a seated position or with different body parts. Enact the help of aids
• Sensory - Use follow the leader method

Supporting the Classroom Environment for Physical Activity
• Kinesthetic Seating/Desks
  ◦ Standing Desks
  ◦ Wobble Discs
  ◦ Bike Desks
  ◦ Rolling Desks
  ◦ Wobble Chairs
  ◦ Glider Desks

Providing Quality Physical Education
In addition to providing recess, before and after-school programs, and physical activity in the classroom, it is imperative for students to have access to quality physical education at school.

Thomas McKenzie, a principal developer of SPARK, describes quality physical education as:
• “Health Optimizing Physical Education (HOPE)” “This is a positive learning environment where students learn fitness and motor skills via a sequential and progressive path towards becoming physically educated people. Participation is individualized, yet there are opportunities to accumulate movement experiences with partners and groups. The emphasis is more on cooperation than competition, and developing competencies in lifelong activities rather
than traditional team sports. HOPE advocates for all students to engage in moderate to vigorous physical activity at least 50% of class time and to promote physical activity during and outside of the PE class.” (McKenzie et al., 2012)

d. Connecting with Parents and the Community
- School or Classroom Website
- Advertise Events
- Activities for Students and Parents
- Encourage parent participation on Wellness Committees
- Weekly or Monthly Newsletters

4. Research

a. Books
- **Action Based Learning** - Jean Blaydes Moize puts brain-based learning into action with teacher friendly, “kid-tested, kid-approved” strategies that move students to learn! See the “articles” tab. actionbasedlearning.com
- **Brain Rules** - This resource entails 12 key rules that scientists know about how the brain works. John Medina details each of the key rules and its application to science as well as to school and the workplace. Medina is a developmental molecular biologist and research consultant. He is an affiliate professor of bioengineering at the University of Washington School of Medicine. He is also the director of the Brain Center for Applied Learning Research at Seattle Pacific University. brainrules.net
- “Spark, The Revolutionary New Science of Exercise and the Brain” by John Ratey, M.D. - This book presents groundbreaking research linking the connection between exercise and the brain’s performance. Evidence shows how even moderate exercise will supercharge mental circuits to beat stress, sharpen thinking, enhance memory and much more. Chapter 2 is dedicated to physical activity and education. johnratey.com

b. Research Studies
- **Physical Activity Increases:**
  - **Time on Task**
    - Classroom physical activity leads to increased on-task behavior (Webster et al., 2015).
    - Time on task in the elementary classroom increases significantly in the presence of physically active lessons (Greico et al., 2009).
  - **Academic Achievement**
    - Allotting 20+ minutes per day of curricular-based physical activity breaks showed a significantly positive effect on reading fluency and mathematics scores, as measured by CBMs (Erwin et al., 2013).
    - Physically active academic lessons increased standardized test scores by 6 percent (Donnelly & Lambourne, 2011).
  - **Reduction in ADHD and Asthma Medication**
    - Students who participated in activity bursts in the classroom showed significant improvements in both strength and flexibility. In addition, schools saw a 7 percent decrease in use of ADHD medication and a 5 percent decrease in asthma medication (Katz et al., 2010).
  - **Smaller Increases in BMI**
    - Increases in BMI were significantly smaller in elementary schools that conducted more than 75 minutes of active academic lessons per week (Donnelly et al., 2009).

5. Additional Resources
- Let’s Move Active Schools - letsmoveschools.org
- Fuel Up to Play 60 - fueluptoplay60.com
- In this classroom, the kids can’t sit still - wapo.st/IRmaNNS
- CDC - Healthy Schools - cdc.gov/healthyschools/obesity/facts.htm
References


Donnelly, J., Lambourne, K., (2011). Classroom-based physical activity, cognition, and academic achievement, *Preventive Medicine, (52)*, 1, S36-S42.


Allow Access to Drinking Water

- Allow students to visit the water fountain throughout the school day and to carry water bottles in class.
  - Send a note to parents that students will be allowed to bring water bottles to your class, though not mandatory. If bottles are filled at home, ask parents to use only plain water.
- Inform school maintenance staff if water fountains are not clean or are not functioning properly.

Access to drinking water throughout the day gives students a healthy alternative to sugar-sweetened beverages.¹ Staying hydrated may also improve student cognitive function.²

Use Student Rewards that Support Health

- Do not use food or beverages to reward student achievement or good behavior.
  - Avoid giving students candy or food coupons.
- Use nonfood items, activities and opportunities for physical activity to recognize students for their achievements or good behavior.
  - Offer stickers, books, extra time for recess, or walks with the principal or teacher.

Children are at risk of associating food with emotions and feelings of accomplishment when food is used in the classroom as a reward. This reinforces the practice of eating outside of meal or snack times and encourages students to eat treats even when they are not hungry. This practice may create lifetime habits of rewarding or comforting oneself with unhealthy eating.

MAKE CELEBRATIONS AND FUNDRAISERS HEALTHIER

• Encourage parents to provide healthy foods and beverages for birthday and classroom parties if food is served.
  ■ Send a note to parents suggesting healthier options, such as fruits, vegetables, or whole grain snacks.
• Consider nonfood celebrations such as guest speakers, an extra recess period, or class games.
• Use healthy foods, physical activity events, or nonfood items for fundraising activities.
  ■ Consider selling items such as produce, wrapping paper, candles, or student artwork.
  ■ Organize events that engage students, families, and the community.
    » Basketball or golf tournaments, bicycle rides, walk-a-thons, dance-a-thons, car washes, or auctions are healthy fundraising alternatives.

CREATE A PHYSICALLY ACTIVE CLASSROOM

• Incorporate movement into academic lessons or add short bursts of activity (5-20 minutes) to regularly planned break times.
  ■ Read a book aloud while students walk at a moderate pace around the room, and then ask students to identify the verbs or action words in the book by acting them out through physical activity.
  ■ Take students for a walk indoors or outdoors as part of a science lesson.
• Include content about fitness, movement skills and the importance of physical activity as part of math, science or writing lesson plans.
• Work with the physical education teacher to get ideas, information, and resources to help students stay physically active throughout the school day.

Incorporate physical activity breaks in the classroom to help keep students focused and well-behaved.

MAKE RECESS PART OF EACH SCHOOL DAY

• Schedule at least 20 minutes of recess per day for elementary school students, in addition to their regularly scheduled physical education class.
• Encourage students to play during recess.
  ■ Provide equipment, such as jump ropes and sports balls.
  ■ Organize games, such as four-square, active tag, or flag football.
• Provide opportunities for students to be active indoors when the weather is bad or times when outdoor play space is unavailable.
**Do Not Use Physical Activity as Punishment**

- Do not punish students by forcing them to participate in or by withholding opportunities for physical activity.
  - Do not punish students by requiring them to run laps or do push-ups.
  - Do not exclude students from physical education class or recess.

Children may have negative feelings toward physical activity if they are forced to participate in physical activity as punishment. Further, withholding students from physical education or recess for bad behavior or poor academic performance deprives them of the health benefits of physical activity and the chance to develop essential physical activity skills. Physical education and recess may even improve students’ behavior, attention, and test scores.

**Include Healthy Eating and Physical Activity Topics in Health Education**

- Teach students about healthy eating and physical activity recommendations.
  - Encourage students to participate in 60 minutes or more of physical activity every day, consume a healthy diet based on the Dietary Guidelines for Americans, and reduce sedentary screen time (e.g., television, video games, computer usage).
  - Encourage students to identify their own healthy behaviors and set personal goals for improvement.
  - Incorporate health education into other subjects such as math and science.
- Extend healthy lessons outside of school by assigning homework for families to complete together.
- Meet with the school nurse to promote consistent health messages in your classroom. Consider asking the school nurse, or other health services staff, to lead a specific health lesson.

**Watch Out for Student Weight Concerns and Stigma**

- Address and intervene on all types of bullying, including weight discrimination and teasing about body shape or size.
- Refer students with signs of eating disorders, binge eating, or other weight concerns to the appropriate school staff such as the school nurse, counselor, psychologist, or school social worker.

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Tips for Teachers: Promoting Healthy Eating and Physical Activity in the Classroom

**Encourage Students to Participate in School Physical Activity Programs**

- Support students in participating in intramural sport programs, interscholastic sports, physical activity clubs, or walk-and-bike to school programs.
- Promote school-led physical activity events, such as walk to school days, fun runs, and field days.
- Volunteer to organize or provide adult supervision to before and after school physical activity programs.

**Become a Healthy Role Model**

- Model healthy behaviors to students by being active and consuming healthy foods and beverages.
- Get involved in your school’s employee wellness program or consider starting one.
  - School wellness programs can include onsite opportunities for physical activity such as walking clubs, point-of-decision prompts that encourage use of stairwells, increased access to healthy foods, educational activities such as lectures or written materials, skill-building activities, or reward programs.

**Become Familiar with Your School’s Health Policies**

- Read your district’s local wellness policy and understand how the policy affects practices in your classroom.
- Get involved in your school health council or school health team.
  - Suggest that the council or team assess healthy eating and physical activity policies and practices. If there is no school health council or school health team, consider starting one at your school by bringing together a variety of school staff, parents, and community members.

**Sources:**
- National Center for Safe Routes to School
- CDC’s Youth Physical Activity: The Role of Schools
- School Employee Wellness: A Guide for Protecting the Assets of our Nation’s Schools
- CDC’s School Health Index: Self-Assessment & Planning Guide

[www.cdc.gov/healthyyouth](http://www.cdc.gov/healthyyouth)
[www.cdc.gov/bam](http://www.cdc.gov/bam)
1-800-CDC-INFO