



ABC for Fitness™

Teacher Manual

© 2006 David Katz, Revised September 2008



ABC for Fitness™ Teacher Manual

©2006 David Katz, Revised September 2008



Dr. David Katz, MD, MPH, FACPM, FACP
and the ABC for Fitness™ Development Team

Physical Activity Consultant:

Marvin Christley, MS, New Haven Public Schools

Contributing Editor:

Jean Mee, EdD

Physical Education & School Health Education Consultant
Connecticut State Department of Education

Other Team Members:

Catherine Katz, PhD

Deborah Kennedy, PhD

Judy Treu, MS, RD

Allison Cuomo, BS

John DeBlasio, BS

With special thanks to elementary school administrators and teachers
in the Independence School District in Missouri for their ideas and suggestions

Additional thanks to the Michigan Department of Education
for permission to use *Brain Breaks* learning activities
and to the North Carolina Department of Public Instruction
for permission to use *Energizers Classroom-Based Physical Activities*

ABC for Fitness™ graphic was designed by Chris Wrinn

Photographs were provided by Marvin Christley and John DeBlasio

Drawings of children exercising were used with the permission of Phil Black,
inventor of FitDeck® cards (available from the website <http://fitdeck.com>)



A-B-C For Fitness™

Activity Bursts in the Classroom

Dear Teachers and School Administrators,

At this time when childhood obesity is epidemic, and what used to be “adult onset” diabetes is occurring with increasing frequency in children under age 10, our kids need regular physical activity more than ever. But pressures on schools - in part related to the federal No Child Left Behind legislation - are causing reductions, not increases, in daily physical activity. In other words, No Child Left Behind is leaving more and more of our kids ON their backs, all day long!

Physical activity is vital for children’s health. It is also vital for their attentiveness and concentration. As a parent of 5 children myself, I know all too well that young children can be restless and rambunctious. They need to move. Rambunctiousness is a normal, healthy childhood condition- and calls out for recess, not Ritalin. It is perhaps no coincidence that as daily physical activity levels decline, the diagnosis of attention deficit hyperactivity disorder is made with ever increasing frequency.

But how do we reconcile our children’s needs for regular activity, with the needs of schools to dedicate as much time to possible to teaching? How, in other words, do we reconcile the square peg to the round hole? By whittling the peg, or re-drilling the hole, of course! Enter ABC for Fitness™.

Inspired by my own son, Gabriel, who at the time was 5 years old, ABC for Fitness™ is a program designed to convert wasted time in school into productive, health-promoting activity bursts. The program is based on the amount of time TEACHERS say they typically waste during the school day in disciplining restless or inattentive children. By breaking activity into short “bursts” that can be delivered right in the classroom throughout the day, ABC for Fitness™ provides teachers a means to dissipate the restless energy of their pupils; keep the children alert and focused; and never interfere with teaching time. In fact, since creative teachers, and the training manual, have approaches to teaching during the activity bursts, teaching time can increase with this program.

ABC for Fitness™ is offered to schools at no cost in dollars. It comes at no real cost in time. And it can be in addition to any other physical education program a school may provide. The program is intended to promote health and fitness; enhance concentration and the behavioral environment in the classroom; and help optimize academic performance.

As a parent, I will be deeply gratified if children in your school benefit from ABC for Fitness.™ And Gabriel will certainly be pleased and proud of himself!

With all best wishes,

David L. Katz, MD, MPH, FACPM, FACP
Director, Yale Prevention Research Center
Founder, ABC for Fitness Program
www.davidkatzmd.com



Contents

Chapter 1: Overview.....	5
Welcome to ABC for Fitness™	
Why is Physical Activity Important?	
Chapter 2: Planning for Activity Bursts.....	9
Managing Activity Bursts and the Physically Active Classroom	
Classroom Space Diagrams	
Addressing Potential Challenges	
General Tips for Exercise	
Chapter 3: The Basics of Activity Bursts.....	15
Components of an Activity Burst	
General Instructions for Activity Bursts	
Customizing the Activity Bursts for Your Classroom	
Varying the Number and Length of Activity Bursts	
Stretches (Including Muscle Chart)	
Core Activities (or Warm-ups or Cool-downs)	
Chapter 4: Activity Burst Selection.....	30
Selecting Activity Bursts to Meet Your Needs	31
General Activity Bursts for Fitness	32
<u>Basic Activity Bursts</u>	<u>Grades</u> 32
Refer to Chapter 3	K-5
<u>Advanced Activity Bursts</u>	<u>Grades</u> 32
Morning Routine	K-5
Wiggles	K-5
Exercise March	K-5
Take Five for Fitness	K-5
Circuit Training	2-5
The 12 Days of Fitness	2-5
Sports Galore	2-5
<u>Activity Bursts of Imagination</u>	<u>Grades</u> 39
Imaginative Ideas for Warm-Up/Cool-Down	K-5
ABC for Fitness™ Chant	K-5
Bursts to the Beat (Using Music)	K-5
Let's Swim	K-5
As If	K-3
On the Farm	K-2
It's a Zoo in Here	K-2



Activity Bursts for Learning and Fitness		44
What is Physically Active Learning? (Introduction)		44
<u>Language Arts</u>	<u>Grades</u>	45
Alphabet Body Shapes	K-2	
Air Writing	K-2	
Over, Under, Around, and Through	K-2	
Stop and Scribble	2-5	
Frozen Vocabulary	2-5	
25 Stories	3-5	
Story Tell	3-5	
Sentence Shape-Up	4-5	
Relay What You Learn	4-5	
<u>Social Studies</u>	<u>Grades</u>	53
Compass Points	2-5	
Geography Stretch	2-5	
Impersonate the State	4-5	
Living History	4-5	
<u>Music</u>	<u>Grades</u>	57
Move to the Front	K-2	
Old McDonald	K-2	
Marching Band	K-5	
<u>Math</u>	<u>Grades</u>	60
Numbered Wall Touches	1-3	
Inches, Feet and Yards, Oh My!	1-4	
Math and Movement	1-5	
Math Stations	3-5	
<u>Science</u>	<u>Grades</u>	64
Leaf Line	K-5	
Space Jam	1-3	
Planetary Fitness	4-5	
Jump Start Your Heart	4-5	
In a Heartbeat	4-5	
<u>Health</u>	<u>Grades</u>	70
Go Bananas!	K-2	
Heart Smart	3-5	
What's for Dinner?	3-5	

Chapter 5: Resources..... 73

Physically Active Learning Resources
 Music Resources
 Pedometers
 Fit Deck® Jr. cards



Chapter 1

Overview



Welcome to ABC for Fitness™!

What is ABC for Fitness™?

ABC for Fitness™ is a school physical activity program for elementary school students. It helps take the time that teachers spend getting restless children to settle down, or distracted students to concentrate – and convert this into structured, productive bursts of supervised physical activity.

What is the mission of this program?

Our mission is to provide a fun, simple, engaging, no-cost, effective program that encourages physical activity in the classroom. By breaking physical activity into short sessions, ABC for Fitness™ enables most children to accumulate at least 30 minutes of physical activity each day. By increasing daily physical activity for children, ABC for Fitness can help promote health and fitness, while contributing to efforts to combat the spread of childhood obesity and diabetes, and related health conditions. ABC for Fitness increases physically active time during the school day without decreasing - and possibly even increasing! - the time dedicated to teaching.

Will ABC for Fitness™ take away from classroom learning time?

Research shows that school-based physical activity does not compromise children's academic performance students or standardized test scores, even if it takes away time from other academic subjects.¹⁻⁵ By combining creative teaching techniques with structured activity bursts, ABC for Fitness™ can actually offer the opportunity to increase teaching time each day.

Is ABC for Fitness™ intended to replace physical education classes?

ABC for Fitness™ is designed to fit physical activity into small intervals throughout the school day. It is intended to supplement, rather than replace, physical education programs in schools. We encourage classroom and physical education teachers to collaborate in offering physical activity in their respective settings in ways that complement each other.

Which schools can benefit from ABC for Fitness™?

All schools can benefit from this program. Schools unable to make time for formal physical education classes can make time for ABC for Fitness.™ And since the program is available free of charge, schools unable to fund physical education programs can afford ABC for Fitness.™

Can ABC for Fitness™ be tailored to meet the needs of schools?

ABC for Fitness™ is designed to offer “activity bursts” performed for a few minutes at a time, adding up to a baseline level of 30 minutes of activity per day. For example, your school could choose to offer 5 sessions per day averaging about 6 minutes each. Activity bursts of slightly shorter or longer length, and slightly fewer or more in number, are perfectly acceptable variations on the theme and should be tailored to suit your needs.

We recommend that your school first determine, through informal or formal polling, how many minutes of “down time” that teachers experience with their students during classroom sessions. That becomes the “straw” that you can turn into “gold”! Use that amount of time - 4 minutes, 6 minutes - as the period for each activity burst. Then distribute the bursts throughout the day.



Why is Physical Activity Important?

Physical activity provides many benefits that can positively affect children's health, their mental and social well-being, and their performance in the classroom.

First and foremost, physical activity can greatly benefit children's health. In the U.S., childhood obesity has become a major concern. Since the early 1970s, average weight has been steadily increasing among children from all socioeconomic levels, racial and ethnic groups, and regions of the country.⁶ Recent data shows that 17% of US children and adolescents are now overweight (at or above the 95th percentile of gender-specific body mass index for age growth charts).⁷

If a more inclusive definition of overweight were applied to children, it's likely that 50% or more of children in the US would qualify! The rate of childhood obesity is a true crisis.^{8,9}

The increase in childhood overweight has been accompanied by higher levels of weight-related conditions such as Type 2 diabetes, high blood pressure, sleep apnea, gallstones, and depression.⁶ The incidence of type 2 diabetes among adolescents, though still not high, has increased by a factor of more than 10 in the past two decades.⁶ For children born in the U.S in 2000, the lifetime risk of diabetes is estimated to be about 1 in 3 for males and 2 in 5 for females.¹⁰

Less than a generation ago, "type 2" diabetes was called "adult onset" diabetes because it was unknown in children. It is now increasingly common in children under the age of 10.

Physical activity can play a key role in combating the growing epidemics of obesity and diabetes. It contributes to weight loss and helps prevent obesity. It strengthens muscles and makes them more flexible. It strengthens the capacity of the lungs to breathe. In addition, it may help reduce the risk for heart disease, Type 2 diabetes, and certain cancers.

Prevention is the key to avoiding the onset of inactivity-related conditions and diseases. While exercise is an important antidote to overweight and obesity, as well as depression and low self-esteem, preventing these problems from occurring in the first place is an even better strategy. The experience of most adults will confirm that it is easier to keep moving than to get moving after long periods of inactivity. It is easier to maintain a healthy body weight than to fight back against overweight and obesity. These truths apply to young people, too. Engaging in physical activity during childhood increases the chance of remaining physically active as an adult.

Along with its roles in helping to keep children healthy, prevent chronic conditions, and develop an active lifestyle, physical activity has many other benefits. It can reduce the effects of stress, while at the same time stimulating brain activity and increasing the ability to concentrate. Reducing stress can make it easier for children to develop physically, mentally, intellectually, and socially. Ultimately, this may help them perform better in the classroom.

In addition, exercising in a group setting with other children can instill a sense of belonging. It can also help them develop important life skills such as taking turns, sharing, and cooperating with others. This in turn can have a positive effect on the classroom environment.



References for Chapter 1

1. Ahamed Y, Macdonald H, Reed K, et al. School-based physical activity does not compromise children's academic performance. *Medicine & Science in Sports & Exercise*, 2007; 39 (2):371-376.
2. Carlson SA, Fulton JE, Lee SM, et al. Physical education and academic achievement in elementary school: data from the Early Childhood Longitudinal Study. *American Journal of Public Health*, 10.2105/AJPH.2007.117176
3. Dwyer T., Blizzard, L., and Dean, K. Physical activity and performance in children. *Nutrition Reviews*, 1996; 54(4 part 2):S27-31.
4. Sallis J, McKenzie T, Kolody B, 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. Shephard, R.J. Habitual physical activity and academic performance. *Nutrition Reviews*, 1996; 54(4 part 2), S32-S36.
6. Ludwig DS. Childhood obesity: the shape of things to come. *New England Journal of Medicine*, 2007; 357:2325-7.
7. Ogden CL, Carroll MD, Curtin LR, McDowell MA, Tabak CJ, and Flegal KM. Prevalence of overweight and obesity in the United States: 1999-2004. *Journal of the American Medical Association*, 2006; 295(13):1549-55.
8. Katz DL, O'Connell M, Njike VY, Yeh MC, and Nawaz H. Strategies for the prevention and control of obesity in the school setting: systematic review and meta-analysis. *International Journal of Obesity* (London), 2007; July 31 [Epub ahead of print].
9. Katz DL. Obesity...Be Dammed! What it will take to turn the tide. *Harvard Health Policy Rev.* 2006; 7:135-151.
10. Venkat Narayan KM, Boyle JP, Thompson TJ, et al. Lifetime risk for diabetes mellitus in the United States. *Journal of the American Medical Association*, 2003; 290:1884-1890.



Chapter 2

Planning for Activity Bursts

The purpose of this manual is to serve as a guideline for simple, yet enjoyable, ways to increase children's health. It is written from the perspective that the activities described will be conducted under appropriate adult supervision in controlled environments at all times. The author cannot identify all situations and/or risks to which participants might be exposed as they engage in these activities. Users are, therefore, cautioned that there is no substitute for common sense and an on-going alertness and that they are ultimately responsible for ensuring the safety of children's activities so that they might reap the benefits of this program in a safe and enjoyable fashion.



Managing Activity Bursts and the Physically Active Classroom

Activity bursts and physically active learning should be engaging and fun! A natural by-product of physical activity is a certain level of noise. However, it is unnecessary and unacceptable for children to run around the classroom screaming and talking loudly. The occurrence of loud and unruly behavior is an indicator that the purposes of the activity bursts and physically active learning are not being met. Students have learned the routines and behavior standards for cooperative group learning and activity centers in classrooms, and similar routines and standards must be established for this approach as well.

Activity bursts are, by definition, short episodes of physical activity and exercise. Routines for engaging in activity should be commensurate with the time dedicated to the burst. For example, students are given succinct directions for a brief physical activity. Gross motor activity is stimulating and, understandably, children will become excited. Consideration and planning should include a cool-down (see *General Tips for Exercise* in this chapter) to accommodate the physiological slowing down of heart rate, oxygen flow, and generation of adrenaline and endorphins. Classroom routines such as collection and distribution of materials, straightening of learning centers, or other student-managed tasks, are ideal for this purpose.

Planning for physically active learning in the classroom should include (1) consideration for neighboring classrooms, (2) rearranging of classroom furniture, (3) realistic and safe movement within the available space, and (4) routines that empower students to manage themselves appropriately within the time and space. Some physically active schools designate a specific schedule for physical activity and physically active learning (for example, during the first fifteen minutes of every hour).

Just as planning for any other learning is sequenced for progression and developmental appropriateness, planning for Activity Bursts in the Classroom and the overall physically active learning environment should be similarly planned. Increases in duration and intensity of physically active learning episodes should be progressive and incremental, and behavioral expectations and learning purposes should be clearly communicated to students. Consequences for failure to meet behavioral expectations should also be clearly defined and applied in a consistent and timely manner.

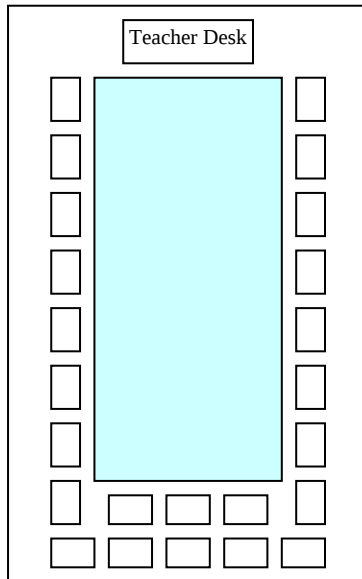
When teachers and students have learned to manage physical activity in the classroom, the learning environment will become an engaging and enjoyable one for both students and teachers.



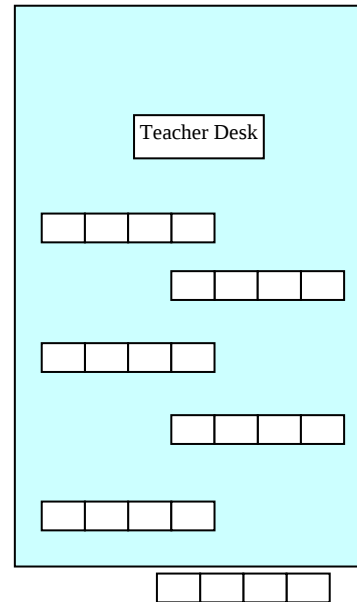
Classroom Space Diagrams

If space in the classroom is an issue based on your current layout of desks, you may want to rearrange the desks to provide more space for students to move in the classroom. Below are four examples of alternative layouts that should prove conducive to offering *ABC for Fitness*[™] activity bursts. Before trying any of these, please make sure that your school policy allows you to reconfigure the classroom space.

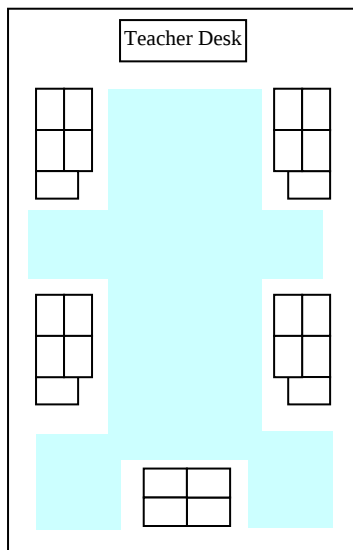
Horseshoe



Staggered Formation



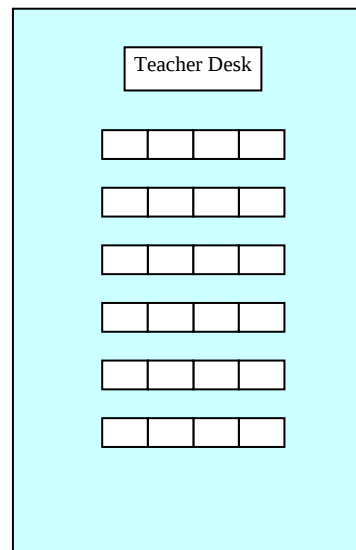
Cluster Formation



 = student desk

 = available space

Tight-Row Formation



Adapted from On the *Other Side of the Wall: Physical Education Activities in Limited Space and Classrooms* by William T Price, Program Coordinator, University of South Florida School of Physical Education, Wellness, and Sport Studies. Posted on the internet in 2002 with credits given to the Tampa Metro Civitan Club. Accessed from the website address <http://pe.usf.edu/projects/civitan/projects/wall/wall.html> on 6/14/07.



Addressing Potential Challenges

Potential Challenge	Strategy
Limited classroom space OR No option of rearranging desks	- Have children stand behind their desks and jog or hop in place. - Have the children run around the school building on a nice day. - Have the children walk quietly down the hall with alternating high knees. - Set up 4 stations in each corner of the room. Post a picture of 1 activity at each station. Send $\frac{1}{4}$ of the class to each station, and switch every minute.
Cost	- The ABC for Fitness™ program is free. Any equipment mentioned in this manual (such as pedometers) is optional. - You can raise funds for any optional equipment if you want to use it.
Time	- The amount of time it takes to calm/ discipline “energetic” children is basically the amount of time it takes to have the children perform a burst of activity. Consider ABC for Fitness™ a “healthy” tradeoff for your students. - If several short bursts seem like too much, vary the number and length of bursts.
Students’ reluctance to participate	- Some individual students may be reluctant to participate due to lethargy, shyness, or feeling self-conscious. - Do not punish these students or bring undue attention to them. Over time, they may become more involved in the bursts.
Transitioning back to learning	- If the class takes awhile to settle down after the bursts, try these suggestions: - End with a “silent burst” where everyone is quiet. - Vary the type of music used. For example, try classical music. - End with a variation on “Simon Says” such as “Do as I’m doing, follow me; walk back to your seats slowly, follow me.” - Turn the lights down after the burst. - Ask students to direct their attention to their breath as they gradually slow down and catch their breath.
Students’ boredom with bursts	- Vary the stretches and bursts. - Have students take turns leading them. - Add music, or vary the music that you already use.



General Tips for Exercise

Here are some tips to encourage healthy exercise and minimize the risk of injury.

1. Warm-up

A warm-up is a lower-intensity or lower-speed activity used to prepare for an athletic event or exercise session. It helps decrease the risk of injury, along with the risk of muscle soreness that may occur after exercise. The goal is to increase circulation around the body while preparing the body for the workload to come. It makes muscles pliable, while escalating the delivery of oxygen and nutrients to muscles by increasing blood flow. Lastly, warming up prepares your muscles for stretching, which is the next tip to come.

What you need to know about muscle soreness

Muscle soreness is unlikely with these brief bursts of activity. However, it helps to understand what muscle soreness is in case any students ask about it.

There are two common kinds of exercise-related muscle soreness:

- **Acute soreness** can occur during or immediately after exercise. It often goes away after 1-2 minutes of rest. If it goes away, you can continue to exercise. If discomfort persists, you should stop.
- **Delayed soreness** usually occurs 24 to 36 hours after a workout. It can happen to someone who is not used to a lot of activity, or a new type of activity. It is part of a normal response as the body adapts to exercise. Once the muscles recover, this process can lead to greater muscle strength.

Muscle soreness is most likely to occur after trying a new exercise or activity or with an increase in intensity, frequency or duration of exercise. To reduce the soreness, avoid working the same muscle groups on consecutive days and add low-intensity exercise, such as walking, to your workout. If soreness lasts for more than 7 days, see a doctor.

To help prevent or minimize delayed soreness, include a warm-up and cool-down. You can allow time for muscles to adapt to activity by gradually increasing physical activity over a few days.

REFERENCES:

- *Ask a Fitness Specialist: Delayed Muscle Soreness after Exercise: What Causes It?* 2006, Mayo Clinic Staff. Accessed on the website www.mayoclinic.com/health/muscle-soreness/AN00933 on 4/9/08.
- Michael Ross. *Delayed-Onset Muscle Soreness: Work Out Now, Pay Later?* *The Physician and Sportsmedicine* Vol. 27, Issue 1 (January 1999). Accessed on the website www.physsportsmed.com/issues/1999/01_99/muscle.htm on 4/9/08.



2. Stretching

Stretching is extending your body to achieve a healthy range of flexibility. The goal is to allow you to move with a greater extent of motion through increasing joint mobility and stability. Stretching is also used to prevent injuries of the hamstring, quadriceps, calf, etc. It can help muscles to lengthen, which will make it easier to exercise and perform other daily activities. Stretching reduces muscle tension, enhances muscular coordination, and delays onset of muscle fatigue. After a good warm-up and quality stretch, it's time to start the exercise at hand.



3. Aerobic exercise

Health experts advise that children get a total of at least 1 hour of aerobic exercise a day. It should be preceded by a warm-up, and followed by a cool-down.

For the purpose of ABC for Fitness™, aerobic exercise is any activity that increases breathing and heart rate. Under ideal circumstances, you should aim for at least 30 minutes of aerobic activity during the school day. In addition, you should include a brief warm-up prior to each activity burst, and cool-down when the activity burst is completed.

4. Cool-down

The purpose of a cool-down is to slow your level of physical activity gradually, from high intensity to low intensity. It should follow aerobic exercise. It helps the heart rate and breathing return to normal, prepares muscles for the next activity, and helps prevent muscle cramps or spasms. A cool-down will also provide time for the entire class to calm down, settle back into their seats, and be ready to learn.

5. Fluid intake

Drinking plenty of water is extremely beneficial for overall health. Water helps maintain proper muscle tone while eliminating wastes and toxins from the body. Water also relieves constipation and is essential for a healthy lifestyle. It may be appropriate for children to drink 4 to 6 fluid ounces of water after an activity burst. It should be readily available if needed for any children who are thirsty.

6. Classroom safety

This program is designed to be safe in any classroom. Before starting the activity bursts, arrange desks, tables, and other various objects in a way that will allow free movement of your students relative to these objects and other students. For ideas on how to arrange your classroom, please refer to the classroom space diagram on page 11.



Chapter 3

The Basics of Activity Bursts



Components of an Activity Burst

Under ideal circumstances, you should aim for a total of at least 30 minutes of activity bursts during the school day. Each activity burst should have 3 components:

- a warm-up that includes stretching/and or low intensity activity
- a core activity that increases breathing and heart rate
- a cool-down

Each time a new burst is performed, you may select a new warm up, core activity, and cool down. Here are some examples.

A. **Warm-Up** (see pp. 19-21 for stretches and pp. 22-29 and 39 for other activities)

This can include stretching and/or low intensity activity. Here are some examples:

Stretches

Hamstring stretch
Quadriceps stretch
Back stretch

Triceps stretch
Neck stretch
Calves stretch

Light aerobic activity

Walking

Arm circles

B. **Core Activity** (see p. 22-29)

Here are some sample activities that can count as the core activity. Make sure the students maintain a high intensity for the duration of the core activity.

Strength activities

Hop scotch
Bear walk
Squat thrusts
Lunges

Squats
Arm circles
Star jumps

Aerobic activities

Skiping
Jogging
Sliding
Gallopig

Jumping in place or around room
Walking quickly
Hopping on 1 foot
Dancing to music

C. **Cool-Down** (see pp. 19-21 for stretches and pp. 22-29 and 39 for other activities)

This may include stretching and/or low intensity activity. It is designed to help the students calm down, settle into their chairs, and be ready to learn. As part of the cool-down, you may also ask students to be still and pay attention to their breath (see “Watch Your Breath” at the bottom of page 39).



General Instructions for Activity Bursts

- Select an activity burst for the class to follow. In the beginning, or when using a new activity, you can copy the picture and place it on the wall or chalkboard for the children to see.
- Start with a warm-up. Examples are stretching, walking in place, or a slower version of the activity burst that you have selected.
- Increase the speed and intensity of the activity. This is the core of the activity burst.
- Cool down after the high-intensity activity. Examples are walking in place, or a slower version of the activity burst.
- If any children are thirsty, offer them water to drink.

Customizing the Activity Bursts for Your Classroom

You may switch the intensity level based on the behavior of the class during a particular activity burst. As you know from your own teaching experience, classes can differ from one year to the next in terms of their behavior and the amount of classroom management required to deal with behavior issues. In addition, students can vary in terms of overall levels of fitness; this may be especially true at the time you first start to lead the activity bursts.

To accommodate the average fitness and behavior level among students at any given time, refer to the chart below. This chart provides guidance for varying the time spent on warm-ups, activity bursts, and cool-downs based on classroom needs.

Intensity Levels:

Intensity levels are general indicators of how long students should perform the warm-up, core activity, and cool-down, based on the class's overall levels of fitness and behavior.

1. Low fitness levels and/or restless

Students primarily are not very athletic and/or are generally very restless.

2. Average fitness levels and/or on task 75% of the time

Students are of average athletic ability and/or are rather well behaved.

3. High fitness levels and/or very well behaved

Students are very athletic and/or are very well behaved.

INTENSITY LEVEL	ACTIVITY COMPONENTS Options to combine warm up, core activity, and cool down		
	A	B	C
	Warm-Up	Core Activity	Cool-Down
1. Low fitness / restless	1 minute	2 minutes	3 minutes
2. Average fitness / on task	1 minute	3 minutes	2 minutes
3. High fitness / well-behaved	30 seconds	5 minutes	30 seconds



Varying the Number and Length of Activity Bursts

ABC for Fitness™ is designed to be offered as approximately 5 activity bursts of approximately 6 minutes each. However, if this option does not work on a given day, you may want to adapt the length and number of activity bursts to suit your needs, as long as they add up to a total of approximately 30 minutes.

The basic intent is to take roughly the proportion of each class time that you may be using to discipline restless children in the classroom, and convert that into productive, physically active time. Since teaching can be done during activity bursts, used as intended, ABC for Fitness™ should increase teaching time, not decrease it.



Stretches

Here are some examples of stretches that you may include as a part of the warm-up component. A muscle chart is provided in this section for your information.

STRETCHING TIPS:

- *Stretch each side 2 to 3 times. Do not stretch to the point where you are in pain.*
- *Choose at least 2 stretches. You do not need to perform all of the stretches before each burst.*

SAFETY TIPS:

- *Before starting the activity bursts, arrange desks, tables, and other various objects in a way that will allow free movement of your students relative to these objects and other students. Make sure that the desks and chairs are stable if used for stretching.*
- *Ask students to be mindful of where they are relative to other students while doing the exercises, so they will not interfere with the other students' personal space.*

Hamstrings Stretch (Option 1)

- Put your leg on the desk, keeping it straight.
- Lean forward, extend your arms toward your foot, until you feel a slight pull. Hold it for a slow count of 10.
- Stretch both sides equally.
- Make sure the desk/table or chair is secure.
- If the desk/table is too high, you can use a chair.



Hamstrings Stretch (Option 2)

- Sit on the floor with one leg straight in front of you.
- Lean forward, extend your arms toward your foot, until you feel a slight pull. Hold it for a slow count of 10.
- Stretch both sides equally.



Quadriceps Stretch

- Hold onto a chair, desk or wall to balance.
- Stand on one foot while putting your opposite foot behind you. Slowly pull your opposite foot upwards.
- Grab your ankle with your hand, behind your body.
- Pull your foot until you feel the muscle stretching. Hold for a slow count of 10.
- Stretch both sides equally.
- To get more of a stretch, lean forward slightly.





Calves Stretch

Hold onto a desk, table, or chair. Make sure the equipment that you are stretching on (desk, chair, or table) is secure.

- Put one leg in front. Bend it, with your knee leaning forward.
- Keep your back leg straight with the sole of the foot flat on the ground.
- Lean forward so you feel the stretch in the calf. Hold for a slow count of 10.
- Stretch both sides equally.



Triceps Stretch

- Put your hand on your back, reaching over your shoulder.
- With the opposite hand, grab your elbow and pull it back until you feel a stretch.
- Hold for a slow count of 10.
- Stretch both sides equally.



Upper Back / Shoulder Stretch

- Put one arm straight, across your body.
- With your opposite hand, reach under your straightened arm and pull at your elbow toward your body until you feel a stretch. Hold for a slow count of 10.
- Stretch both sides equally.



Arm / Shoulder Stretch

- Reach over your shoulder with one hand. Try to grab your other hand that is reaching from up behind your back.
- The goal is to connect your hands and pull slightly. However, you do not have to connect hands to get a stretch.
- Stretch both sides equally.



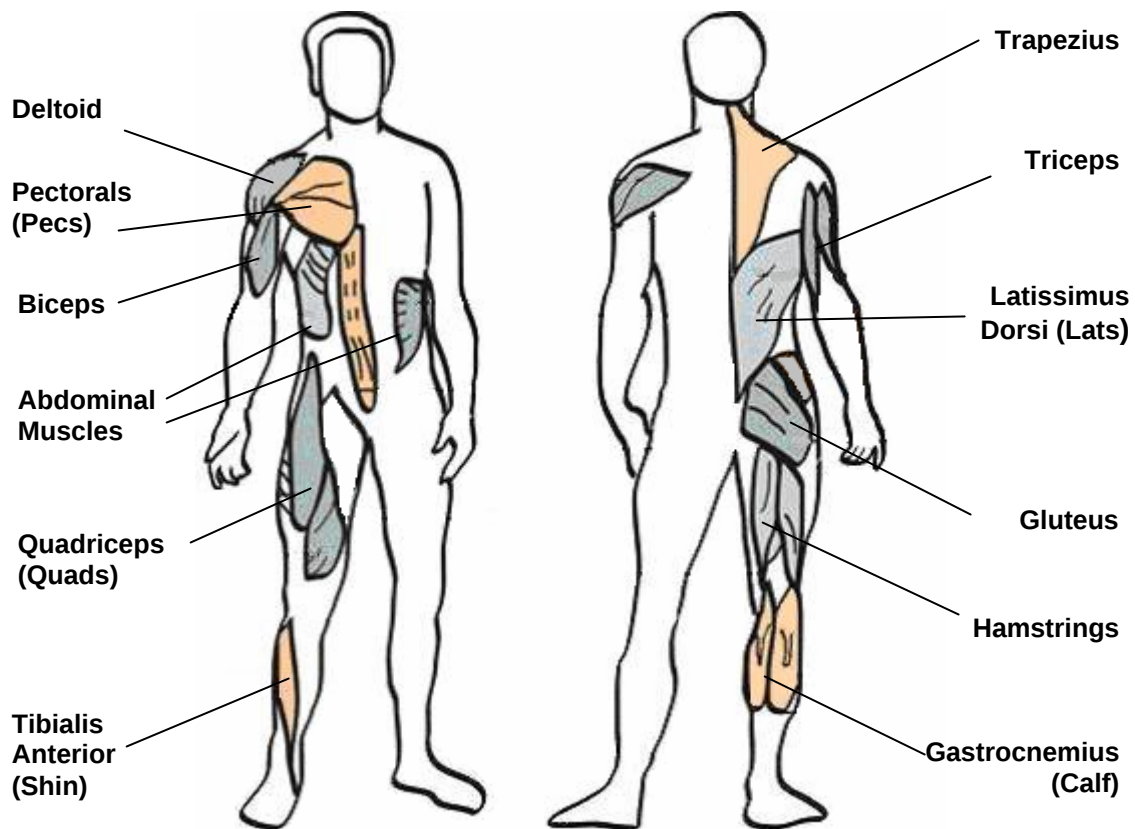


Neck Stretch

- Lean your head to one side until you feel a stretch. If you use your hand to help pull, pull it lightly.
- Hold for a slow count of 10.
- Stretch both sides equally.
- You can also gently lean your head forward and backward, or slowly rotate it in a clockwise or counter-clockwise direction.



MUSCLE CHART



*Adapted from the website www.weightlossresources.co.uk/exercise/muscles/muscle_diagram.htm
(Accessed 7/31/08)*



Core Activities

The next few pages provide some sample activities. They may count as the core activity if done at an intense pace which is sustained for the duration of the activity. If done slowly, they may count as part of the warm-up or cool-down.

For additional ideas for core activities, you may want to purchase a set of FitDeck Jr.® cards described in Chapter 5 of this manual. These can serve as an optional resource to complement the *ABC for Fitness™* manual.

MUSIC TIP:

- *You may want to add music to accompany the activity bursts, if students enjoy it and school policy allows. Some music suggestions are provided in the Resources section of this manual.*

SAFETY TIPS:

- *Before starting the activity bursts, arrange desks, tables, and other various objects in a way that will allow free movement of your students relative to these objects and other students.*
- *Ask students to be mindful of where they are relative to other students while doing the exercises, so they will not interfere with the other students' personal space.*
- *Some of these activities require students to lie down on the floor, or to place their hands on the floor. Use these activities at your discretion.*





Jog in Place

- Jog in place.
- Move your arms up and down, or alternate with bicep or triceps curls.



Knee Lifts

- Start by jogging in place.
- Alternate a regular jog with bringing your knees up high in the front.
- Return to a regular jog.
- Alternate by bringing heels back to the buttocks.
- Resume a regular jog.



Calf Raisers

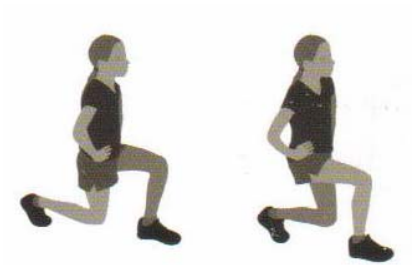
- Start in a standing position with your feet flat on the floor.
- Raise your heels high while balancing on your toes.
- While keeping your legs straight, bring your heels back down, but not quite touching the floor.
- Repeat as often as instructed by the teacher.
- When you are done, bring your heels down to the floor.



Electric Slide

- Start with feet together and arms at your sides.
- Move to the left by sliding the left foot out to the side, while moving both arms up until parallel to the ground.
- Put both feet together and move arms down to the side.
- Move to the right by sliding the right foot to the side, while moving both arms up until parallel to the ground.
- Put both feet together and move arms down to the side.





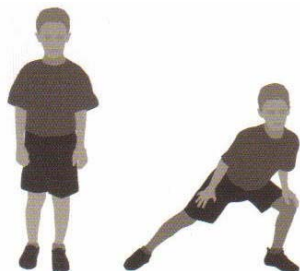
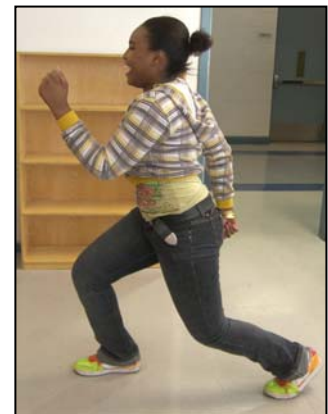
Lunge

Alternate steps while staying in a lunge position. Switch legs. Don't let your knee go past your toes.



Alternate Lunge

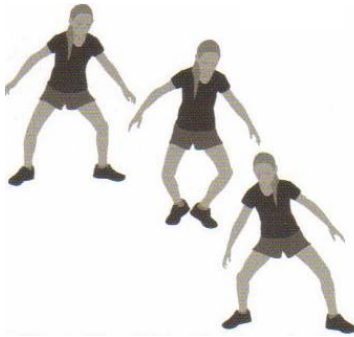
Over-extend your arms and legs while walking.



Side Lunge

Lean to the side with one leg in a bent motion, while extending the other leg outward with your foot firmly on the ground. Alternate sides.





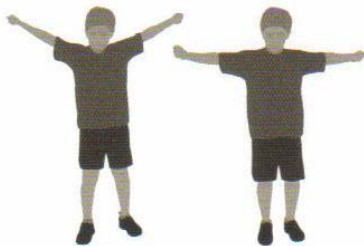
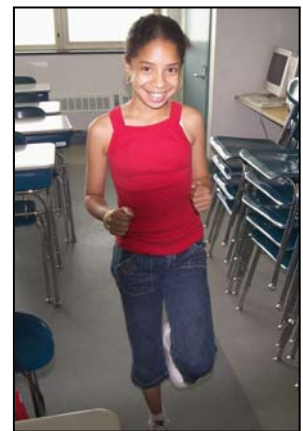
Side Slide

Side shuffle from left to right. Do not cross feet.



Hopping on One Foot

Hop on one foot. Alternate feet.



Arm Circles

Make circular motions with your arms, changing both the size and speed of the circles.





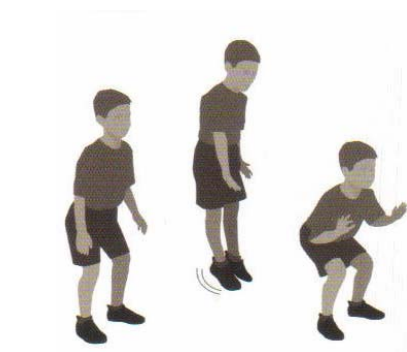
Jumping Jacks

Jump with your hands over your head and feet split apart.



Star Jump

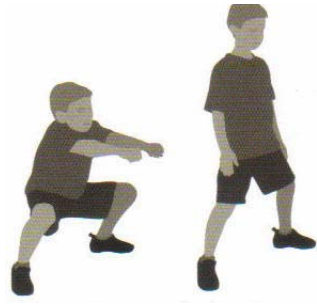
Start in a squat position. Then explode into the air with your arms outward.



Squat Jump

Use both feet to jump, land in a squat position.





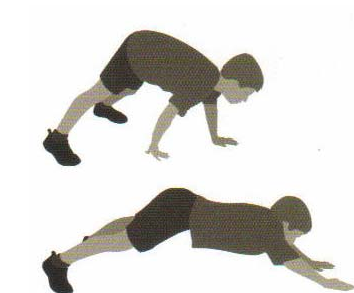
Squats

Start in a standing position, then crouch down into a squat position.



Bear Walk

Start with hands and feet on the floor, then begin to crawl.



Push-up Crawl

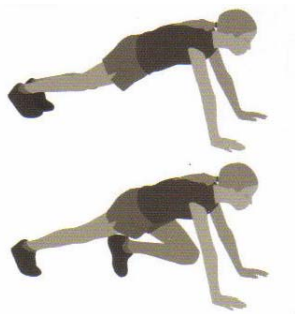
Start in a push-up position, then use your hands to walk forward.





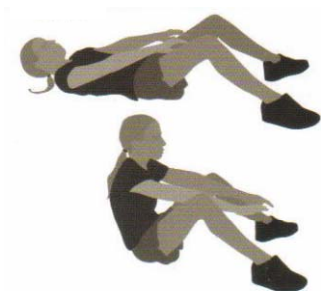
Crab Crawl

Crawl on hands and heels.



Mountain Climbers

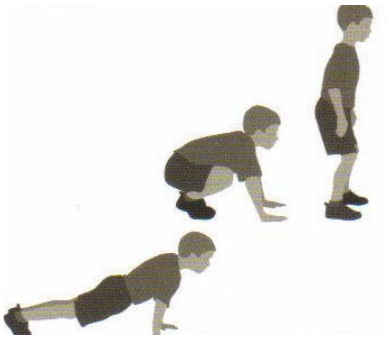
Start in a push-up position. Then alternate the knees to the chest.



Sit-up

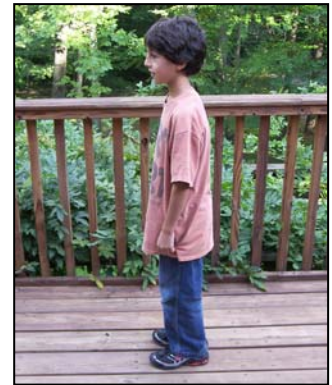
Lay on your back with knees bent. Use your stomach muscles to rise from the ground.



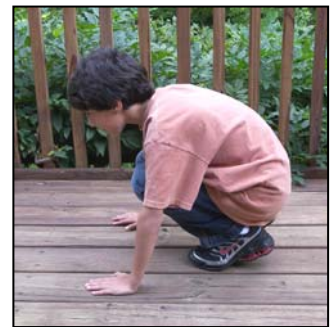


Squat Thrusts

1. Start in a standing position.



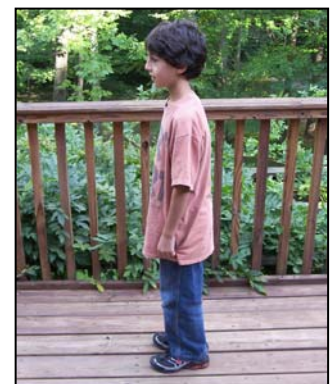
2. Move into a squat position.



3. Move into a push-up position.



4. Return to a standing position.





Chapter 4

Activity Burst Selection



Selecting Activity Bursts to Meet Your Needs

Now that you know the basics of activity bursts, you can apply the ideas in this chapter as strategies to offer the activity bursts based upon your students, your class schedule, and your intended purpose. You can vary the types of activity bursts that you offer from day to day, within the course of a day, and from subject to subject.

The following pages describe and give examples of the types of activity bursts listed below. You can use these as your primary source of ideas for activity bursts, and adapt them if needed to suit your needs. Alternatively, you can consider these as “jumping off points” for developing other creative ideas for activity bursts.

Several examples in this chapter have been used with the permission of other educators who developed them. In these cases, the citation for the source (such as *Brain Breaks* or *Energizers*) is listed below the activity. The website addresses for these and other free sources of physically active learning strategies are found in the Resources section of this manual.

1. General Activity Bursts for Fitness	
Basic Activity Bursts (See Chapter 3)	Encourage constructive movement. Help students channel their energy. Get the students back on task. Help the students to calm down.
Advanced Activity Bursts (See pages 33-38)	Combine sets of movements into engaging classroom activities. Contribute to overall fitness by increasing muscle strength, muscle endurance, flexibility, and/or cardiovascular endurance.
Activity Bursts of Imagination (See pages 39-43)	Use creativity to move in the classroom. Can be used with students of any age. Work best with K-2 students. Help students understand how their bodies move in relationship to the world around them.

2. Activity Bursts for Learning and Fitness	
Activity Bursts for Language Arts, Social Studies, Music, Math, Science, and Health (See pages 44-72)	Facilitate hands-on learning. Involve the whole body in actions that give learners the chance to experience the learning. Are fun and engaging. Are memorable to learners. Help increase learning and retention.



1. General Activity Bursts for Fitness

Basic Activity Bursts (See Chapter 3)

Instructions for the basic activity bursts are found in Chapter 3 of this manual. You can use these activity bursts to provide a break between classes, and to meet the students' need to move periodically during the course of a day. Although the basic activity bursts are not directly related to learning in the classroom, they can help students to be alert and focused, and to channel their energy so they can get back on task and focus their attention on learning.

The other benefit of the basic activity bursts, as with all the activity bursts, is to encourage physical activity. By spreading activity bursts over the course of the day, you can help your students to accumulate at least 30 minutes of physical activity each day.

Advanced Activity Bursts (See pages 33-38)

The next few pages provide some examples of advanced-level activity bursts. Rather than focusing on one core activity, the advanced activity bursts combine sets of movements into engaging classroom activities. In addition, they contribute to overall fitness by increasing muscle strength, muscle endurance, flexibility, and/or cardiovascular endurance.

Before leading any of these activity bursts in the classroom, make sure that your students have first mastered their understanding of, and ability to perform, the basic activity bursts. Then use your judgment to try out the advanced activity bursts. If the students enjoy doing them, you may want to alternate between the basic and advanced activity bursts over the course of a day. This will offer students variety and new challenges.



	Morning Routine
Grade level	K-5
Formation	Students standing at their desks or in an open area
Equipment	None
Directions	1. Have students begin the day with a series of simple activities lasting 30 seconds or more: - Jumping jacks - Knee lifts - Flap arms like a bird - Hopping - Scissors (feet apart then cross in front, feet apart then cross in back) 2. Follow each activity with a basic stretching movement: - Reach for the sky - Runner's stretch - Butterfly stretch (sit with bottom of feet together) - Knee to chest - Rotate ankles - Scratch your back 3. Hold stretches for 10 - 30 seconds. 4. Repeat a different simple activity followed by a new basic stretch as many times as desired.
Source	Adapted from <i>Energizers Classroom-Based Physical Activities</i> , 3 rd Edition July 2006. North Carolina Department of Public Instruction, © 2005, NCPE is Active. Retrieved April 4, 2008, from NCPE4ME website: www.ncpe4me.com/energizers.html



	Wiggles
Grade level	K-5
Formation	Students standing at their desks or in an open area
Equipment	None
Directions	1. Jog in place while doing the following activities. 2. On teacher's signal, the students begin to wiggle their fingers. 3. Then their fingers and wrists. 4. Then their fingers, wrists, and forearms. 5. Then their fingers, wrists, forearms, and elbows. 6. Then their fingers, wrists, forearms, elbows, and shoulders. 7. Then their fingers, wrists, forearms, elbows, shoulders, and rib cage. 8. Then their fingers, wrists, forearms, elbows, shoulders, rib cage, and hips. 9. Then their fingers, wrists, forearms, elbows, shoulders, rib cage, hips, and knees. 10. Then their fingers, wrists, forearms, elbows, shoulders, rib cage, hips, knees, and head. Variations: • Start from toes and work your way up (toes, knees, hips, etc.). • Repeat activity without jogging as cool down.
Source	Adapted from <i>Energizers Classroom-Based Physical Activities</i> , 3 rd Edition July 2006. North Carolina Department of Public Instruction, © 2005, NCPE is Active. Retrieved April 4, 2008, from NCPE4ME website: www.ncpe4me.com/energizers.html



Exercise March	
Grade level	K-5
Formation	Students standing at their desks or moving in a circle
Equipment	None
Directions	1. Call out one verse at a time of the chant. Students will repeat each verse of the chant. 2. Students can march in place at their desks, or you can lead them in a circle around the room. Chant: I don't know what you been told Exercise is good for the soul When we march, our knees stay high And feel the burn all through our thigh We stretch our bodies every day Before we do sports and go out and play Building our muscles can't be wrong It helps to keep our bodies strong Sound off (Leader) 1, 2 (Students) – <i>students stop and perform 2 jumping jacks</i> Sound off (Leader) 3, 4 (Students) – <i>students stop and perform 2 jumping jacks</i> Sound off (Leader) 1, 2, 3, 4 (Students) – <i>students stop and perform 4 jumping jacks</i> Repeat Variations: • The students create their own chant • The students perform arm circles instead of jumping jacks. • The students perform lunges instead of jumping jacks.
Source	Marvin Christley, physical education teacher, New Haven Public Schools



	Take Five for Fitness										
Grade level	K-5										
Formation	Students standing by their desks or in an open area										
Equipment	None										
Directions	1. The teacher and/or students will pick 5 exercises. 2. The class will perform each exercise for 1 minute. Examples of exercises: <table> <tr> <td>Chair dips</td><td>Sit-ups</td></tr> <tr> <td>Jumping jacks</td><td>Running in place</td></tr> <tr> <td>Lunges</td><td>Push-ups</td></tr> <tr> <td>Squats</td><td>Bear walk</td></tr> <tr> <td>Free dance moves</td><td>Crab crawl</td></tr> </table>	Chair dips	Sit-ups	Jumping jacks	Running in place	Lunges	Push-ups	Squats	Bear walk	Free dance moves	Crab crawl
Chair dips	Sit-ups										
Jumping jacks	Running in place										
Lunges	Push-ups										
Squats	Bear walk										
Free dance moves	Crab crawl										
Source	Marvin Christley, physical education teacher, New Haven Public Schools										

	Circuit Training
Grade level	2-5
Formation	Students standing by their desks or in an open area
Equipment	Optional: CD player and upbeat music
Directions	1. Have the students perform the following exercises for 1 minute each, in the following order (mix up the order if it is more convenient). - Jogging in place - High knees - Jumping jacks - Hopping with one or both feet 2. The purpose is to vary the exercises within the core activity so that all the major muscle groups are utilized. Variations: ▪ Set up activity stations in the classroom. A picture of each exercise can be posted there. The children walk to the next station when their 1 minute activity ends. Once you set this up, it can be used throughout the day, week or semester. You may change the posted exercise by selecting any core activity listed in Chapter 3. ▪ Exercising to songs that are 1 minute in length can be fun. When the song changes, the students change stations.
Source	Marvin Christley, physical education teacher, New Haven Public Schools



The 12 Days of Fitness	
Grade level	2-5
Formation	Students standing in an open area with plenty of space between them
Equipment	The holiday tune, “The 12 Days of Christmas”
Directions	1. Students will act out the following fitness song, with a chance to catch their breath between verses. If time allows, you can do this in the manner of “the 12 Days of Christmas:” • Starting with the verse “Us all standing still in 1 place.” • Followed by “2 squat jumps” and “us all standing still in our space” • Progressively adding 1 more line at a time to each new verse. 2. With each line of the song, the students will perform the corresponding activity. “On the first day of fitness, my trainer gave to me...” 12 jumping jacks 11 raise the roofs (bend arms, then push up toward the ceiling) 10 knee lifts 9 arm circles 8 jogs in place 7 jumping ropes (imaginary jump rope) 6 star jumps 5 hula hoops (imaginary hula hoop) 4 hopscotch steps 3 side slides 2 lunges And us all standing still in 1 place Variations: • Write the activities on the board or poster board to make them easier for children to follow and to sing along. • Fitness activities can be sung straight through as written for a shorter activity or repeated as in the original song.
Source	Adapted from <i>Energizers Classroom-Based Physical Activities</i> , 3 rd Edition July 2006. North Carolina Department of Public Instruction, © 2005, NCPE is Active. Retrieved April 4, 2008, from NCPE4ME website: www.ncpe4me.com/energizers.html



	Sports Galore
Grade level	2-5
Formation	Students standing at their desks or in an open area
Equipment	None
Directions	1. Call out the following sports skills for students to mimic for at least 10-15 seconds each. - Shooting a jump shot - Running through tires - Batting a baseball - Serving a tennis ball - Downhill skiing - Spiking a volleyball - Swinging a golf club - Throwing a football - Juggling a soccer ball - Shooting an arrow - Shooting a hockey puck - Swimming underwater - Fielding a ground ball and throwing it to first base - Dunking a basketball
Source	Adapted from <i>Energizers Classroom-Based Physical Activities</i>, 3rd Edition July 2006. North Carolina Department of Public Instruction, © 2005, NCPE is Active. Retrieved April 4, 2008, from NCPE4ME website: www.ncpe4me.com/energizers.html



Activity Bursts of Imagination

(See pages 39-43)

These bursts use the concept of creativity to move in the classroom. They can be used with students of any age. They may be particularly useful for K-2 students in helping them apply their sense of creativity and imagination to the concept of moving in the classroom. They can also help the students understand how their bodies move in relationship to the world around them.

	Imaginative Activities for Warm-Up / Cool-Down
Grade level	K-5 (varies depending on the activity)
Formation	Varies depending on the activity
Equipment	None
Directions	Copy This (warm-up) One or more people can be leaders, including the teacher and/or students. The leader will create a series of movements that the class will mimic. Countdown (cool-down) Count backwards from a certain number. By the time the leader gets to one, students are in a seated position. Job Mimic (warm-up, cool-down) Name a profession, and have the students act like that profession. Example: fisherman, basketball player, dancer, boxer, etc.. Slow Motion (cool-down) The class may move around the room or remain in place, moving as slowly as possible. Students over accentuate their movement. Tick Tock (warm-up, cool-down) When you say “Tick Tock, it’s _____ o’clock, students perform that repetition of the chosen exercise. Example: “Tick Tock, it’s 4 o’clock”(4 jumping jacks) Visualization (cool-down) Students close their eyes and imagine themselves in a relaxed state. You can give cues to help them relax. Watch Your Breath (cool-down) Ask the students to watch their breath.. It may help them quiet down and relax. They don’t need to change their breathing patterns. Instead, they can pay attention to the flow of their breath as they inhale and exhale.
Source	Marvin Christley, physical education teacher, New Haven Public Schools



	ABC for Fitness™ Chant
Grade level	K-5
Formation	Students standing in an open area
Equipment	Poster-sized copy of the words in the chant Or words of the chant written on a board
Directions	1. Display the chant in the size of a poster, or write it on a board. 2. Have the students start by reciting the ABC for Fitness™ chant below, followed by reciting each letter and the name of the activity, all while acting out the activity suggested by each letter. 3. For younger students, write only the letters of the alphabet.
Source	Marvin Christley, physical education instructor, New Haven Public Schools

ABC for Fitness™ Chant	
“ABC for Fitness™ is easy to see how academics and fitness can benefit me! Not just you, not just me, but all of us, you see!”	
A is for arm circles B is for bounce C is for clap D is for dance E is for energize F is for flap our arms G is for gallop H is for hop I is for inhale J is for jumping jacks K is for kick L is for lunge M is for march	N is for now we bow O is for open your arms P is for point to the ceiling Q is for quench your thirst R is for run S is for skip T is for twist U is for unite (hold hands) V is for vanish W is for wiggle X is for <u>eXtra</u> energy! Y is for yes I can (point to self) Z is for zoo



	Bursts to the Beat (Using Music)
Grade level	K-5
Formation	Choose a formation appropriate to the music selected
Equipment	CD player; one or more music CDs
Directions	1. If school policy allows, you can use music to accompany some or all of the activity bursts. Several sources of children's music are listed in the Resources section at the end of this manual. 2. Use faster-paced music for the core activity. If desired, used slower-paced music as part of a cool-down. Variations: • Use the music to accompany class dances, marches, musical plays, or imaginative activities that encourage physical activity (e.g., having children move like bees to the "Flight of the Bumblebee"). • Incorporate music into your lesson plans. For example, have children move to the sound of a classical music selection. Or use world music selections to introduce lessons about people from other cultures.
Source	Yale Prevention Research Center

	Let's Swim
Grade level	K-5
Formation	Students standing at their desks or in an open area
Equipment	None
Directions	1. Each time you say a certain word related to swimming, the students perform the action related to that word. 2. Increase the intensity level from a medium to a fast pace. <u>Movements:</u> Front stroke – Students move arms as if to swim forward. Side stroke – Students move arms as if to swim sideways. Back stroke – Students move arms as if to swim backwards. Breast stroke – Students move arms as if to do the breast stroke. Jump in – Students jump into the air and land squatting down to the ground as if to simulate jumping into a pool or lake. <u>Intensity Levels:</u> Calm waters – Students move at a medium pace. Sharks in the water – Students move at a fast pace.
Source	Marvin Christley, physical education teacher, New Haven Public Schools



	As If
Grade level	K-3
Formation	Students standing at their desks
Equipment	None
Directions	1. Read sentences to the class. Have students act out each sentence for 30 seconds. Jog in place as if a big scary bear is chasing you. Walk forwards as if you're walking through chocolate pudding. Jump in place as if you are popcorn popping. Reach up as if grabbing balloons out of the air. March in place and play the drums as if you're in a marching band. Paint as if the paint brush is attached to your head. Swim as if you are in a giant pool of Jell-O. Move your feet on the floor as if you are ice skating. Shake your body as if you are a wet dog. 2. Students may create their own sentences for additional activities. Variation: • Use a tree map for children to generate additional action words.
Source	Adapted from <i>Energizers Classroom-Based Physical Activities</i> , 3 rd Edition July 2006. North Carolina Department of Public Instruction, © 2005, NCPE is Active. Retrieved April 4, 2008, from NCPE4ME website: www.ncpe4me.com/energizers.html



	On the Farm
Grade level	K-2
Formation	Students standing at their desks or in an open area
Equipment	Optional: flash cards or pictures of farm animals
Directions	1. Call out the names of various farm animals (pig, cow, chicken, horse, rooster, sheep, dog). Call out only one name at a time. 2. Students will mimic the farm animal (sounds and movement) until you call out the name of a new farm animal. Variation: • Students call out the names of the animals.
Source	Adapted from <i>Energizers Classroom-Based Physical Activities</i> , 3 rd Edition July 2006. North Carolina Department of Public Instruction, © 2005, NCPE is Active. Retrieved April 4, 2008, from NCPE4ME website: www.ncpe4me.com/energizers.html

	It's a Zoo in Here
Grade level	K-2
Formation	Students standing at their desks or in an open area
Equipment	Optional: flash cards or pictures of zoo animals
Directions	1. Call out the names of various zoo animals (monkey, bear, snake, elephant, giraffe, kangaroo, lion, tiger). Call out only one name at a time. 2. Students will mimic the zoo animal (sounds and movement) until you call out the name of a new zoo animal. Variation: • Students call out the names of the animals.
Source	Adapted from <i>Energizers Classroom-Based Physical Activities</i> , 3 rd Edition July 2006. North Carolina Department of Public Instruction, © 2005, NCPE is Active. Retrieved April 4, 2008, from NCPE4ME website: www.ncpe4me.com/energizers.html



2. Activity Bursts for Learning and Fitness

What is Physically Active Learning?

Physically active learning, or kinesthetic learning, is commonly translated to mean “hands-on learning” and “learning by doing.” Modalities, or instructional aids, such as “math manipulatives” illustrate this concept. By seeing, handling, moving, grouping, adding and taking away items representing numbers, learners employ multiple modes of perception to process numeric concepts. Physically active learning extends learning experiences beyond sitting and moving tiles around on desks by involving the whole body in actions that give learners opportunities to experience learning and make sense of new concepts and ideas.

Language meaning and word origins can be learned through simple movement activities such as children standing in a circle imitating numbers on a clock face and rotating in a “clockwise” or “counterclockwise” direction. All directional words and concepts, such as over, under, around and through, can be illustrated and reinforced through movement.

Scientific and mathematical concepts lend themselves particularly easily to physically active learning. Learners can develop understanding of relationships through movement by, for example, pacing off dimensions to calculate the area of a space, or standing big and tall or squatting to be short and small. Critical thinking and problem-solving skills are effectively facilitated when students appreciate the hardships faced by Revolutionary War soldiers and the time it took to move military forces when they fill a pack with items a soldier would have carried and wear the pack on a long hike. The learning of technology skills can be facilitated in combination with spatial relationships when learners experience the arrangement of a keyboard by moving around on a gigantic replica of the keyboard laid out in tape on the floor or drawn in chalk on the playground.

Nearly all concepts can be taught and learned in physically active ways. Physically active learning is more fun and engaging than inactive learning and should not be limited to the physical education class. The physical education teacher is a great resource for collaborating on the development of physically active ways to teach just about anything. Physically active learning experiences are memorable to learners. In addition to being enjoyable, the concepts learned in physically active ways help learners to connect their experiences to new learning while providing the experiential foundation and context needed for learning that some children have not yet had. Physically active learning is a “2-fer” – involving the kinesthetic mode will increase learning and retention, and when gross motor activity is incorporated into learning oxygen flow is increased throughout the body, including the brain. It is logical, then, that more oxygen in the brain increases cognitive performance.

In addition to improving performance and infusing fun into academic learning, physically active learning has physical and mental health benefits. Properly managed, physically active learning potentially can improve attendance by making the classroom more engaging and enjoyable, and can produce improvements in behavior, too.



Language Arts

	Alphabet Body Shapes
Grade level	K-2
Subject area	Language Arts
Formation	Students standing at their desks or in a circle (with or without partners)
Equipment	None
Directions	1. Say the name of a letter in the alphabet. 2. Ask the students to create that letter with their bodies or with a partner. 3. After the students create the letter, ask the class for words that start with that letter. 4. When you are done with that letter, lead the students in an activity burst of your choice. Then move on to the next letter of the alphabet.
Source	Marvin Christley, physical education teacher, New Haven Public Schools

	Air Writing
Grade level	K-2
Subject area	Language Arts
Formation	Students standing at their desks or in small groups.
Equipment	None
Directions	1. Call out the name of an activity (jumping, hopping, marching, etc.). Students will perform this activity by moving in place or around the room. 2. Call out a letter, number, word or shape. Students will stop their activity, and draw the letter, number, word or shape in the air using their hand, arm, leg, elbow, knee, or any combination of body parts. 3. Call out the name of another activity. The students will perform this new activity until you call out another letter, number, word or shape.
Source	Adapted from <i>Energizers Classroom-Based Physical Activities</i> , 3 rd Edition July 2006. North Carolina Department of Public Instruction, © 2005, NCPE is Active. Retrieved April 4, 2008, from NCPE4ME website: www.ncpe4me.com/energizers.html



	Over, Under, Around and Through
Grade level	K-2
Subject area	Language Arts
Formation	Students standing at their desks or in a circle
Equipment	None
Directions	1. To help demonstrate the concept of prepositions, choose a set of activities during which students will go over, under, around, and through imaginary or real objects. 2. Lead the line of students around the room, following this pattern for at least 30 seconds each. <u>Example</u> – Over a sea of sticky peanut butter, under a tree, through a giraffe’s legs Over.... A steep mountain A wiggly bridge A thorny bush A rocky path Under... A subway Water A big dog A limbo stick Around ... An elephant A corner A dirty trash can A sleeping giant Through... A creaky door A long tunnel A haunted house A sea of Jell-O
Source	Adapted from <i>Energizers Classroom-Based Physical Activities</i> , 3 rd Edition July 2006. North Carolina Department of Public Instruction, © 2005, NCPE is Active. Retrieved April 4, 2008, from NCPE4ME website: www.ncpe4me.com/energizers.html



	Stop and Scribble
Grade level	1-5
Subject area	Language Arts
Formation	Students standing at their desks with partners
Equipment	Piece of paper and pencil for every 2 students
Directions	1. Call out the name of an exercise (jumping, jogging in place, marching in place, jumping jacks, hopping, knee lifts). 2. Students begin the exercise. They continue moving until you call out a spelling word. 3. Students stop the exercise. They work in pairs to try to spell the word correctly on a piece of paper. 4. After 10 to 15 seconds, calls out a new exercise. 5. Continue until all spelling words are used. 6. As students cool down, write the correct spelling on the board and have students check their work. Variation: • Apply the same concept to review spelling words. • Conduct this activity outside, using sidewalk chalk instead of paper and pencil.
Source	Adapted from <i>Energizers Classroom-Based Physical Activities</i> , 3 rd Edition July 2006. North Carolina Department of Public Instruction, © 2005, NCPE is Active. Retrieved April 4, 2008, from NCPE4ME website: www.ncpe4me.com/energizers.html



	Frozen Vocabulary
Grade level	1-5
Subject area	Language Arts
Formation	Students standing at their desks
Equipment	None
Directions	1. Start by having students perform an activity while standing next to their desks (e.g., jogging, jumping jacks, hopping, or knee lifts). 2. Students perform this activity for 30 seconds, or until you call out a vocabulary word. Then the students freeze. 3. Call on a volunteer to use the vocabulary word properly in a sentence. 4. When a student uses the vocabulary word properly in a sentence, all the students resume the physical activity or begin a new activity. Variations: 1. Ask students to define the vocabulary word. 2. Ask students to spell the vocabulary word. 3. Ask students to name a synonym or antonym of the word. 4. For math, students can give the sum, difference, or quotient of 2 numbers.
Source	Adapted from <i>Energizers Classroom-Based Physical Activities</i> , 3 rd Edition July 2006. North Carolina Department of Public Instruction, © 2005, NCPE is Active. Retrieved April 4, 2008, from NCPE4ME website: www.ncpe4me.com/energizers.html



	25 Stories
Grade level	3-5
Subject area	Language Arts
Formation	Students moving from desk to desk
Equipment	One pencil and piece of paper for each student
Directions	1. Students start by writing a couple of lines for a story on a piece of paper on their desk. 2. On Cue: When you say “switch” or ring a bell, students perform an activity burst. Then each student moves to the next desk and continues writing the story. Students keep writing until your cue to switch to the next desk. 3. Students must initial the paper next to their writing sample. 4. At the end of the activity, students who are willing will read their stories out loud. Rules for students: • Read the previous part of the story you are continuing before adding any new sentences to the story. • Write legibly, and follow grammar rules. • You are not allowed write the same thing on every paper. • You are encouraged to be creative. Variations: • You can give the students a specific subject to write about. • When a story is read out loud, the class can evaluate together whether it is grammatically correct or follows along with the initial story topic.
Source	Marvin Christley, physical education teacher, New Haven Public Schools



	Story Tell
Grade level	3-5
Subject area	Language Arts
Formation	Students standing at their desks or moving around the class
Equipment	None
Directions	1. The teacher and/or students create a story that involves movement. 2. After the story is created, the teacher and/or students read the story. The class performs the action words (verbs). 3. An initial example of this is "John pulled out his chair, sat down and began to eat." The students simulate pulling out the chair, sitting down, and pretending to eat. Variation: • Ask the students to perform movements corresponding to certain parts of a sentence. Examples: Do arm circles when you hear a noun. Jump when you hear a verb. • At some point, when you say "story tell," students must find a new desk or seat at which to sit. The story continues until it is completed.
Source	Marvin Christley, physical education teacher, New Haven Public Schools



	Sentence Shape-Up																								
Grade level	4-5																								
Subject area	Language Arts																								
Formation	Students standing at their desks																								
Equipment	None																								
Directions	1. Write the following parts of a sentence and corresponding exercise on the board. <table><tr><td>Noun</td><td>=</td><td>Arm circles</td></tr><tr><td>Verb</td><td>=</td><td>Jumping jacks</td></tr><tr><td>Adjective</td><td>=</td><td>Lunges</td></tr><tr><td>Pronoun</td><td>=</td><td>Push ups</td></tr><tr><td>Adverb</td><td>=</td><td>Arm circles</td></tr><tr><td>Preposition</td><td>=</td><td>Jogging in place</td></tr><tr><td>Conjunction</td><td>=</td><td>Knee jumps</td></tr><tr><td>Interjection</td><td>=</td><td>Hop scotch</td></tr></table> 2. As you slowly read a sentence or point to the words in a created sentence, the students will perform the corresponding exercise. The students will keep performing each exercise until you move on to the next part of the sentence. Example: • The boy (arm circles) ran (jumping jacks) to the small (lunges) house (arm circles). Variations: • Use different exercises for variety. • Have the students perform additional exercises that correspond to the punctuation needed in the sentence or paragraph (example: jumping high in the air for an exclamation point).	Noun	=	Arm circles	Verb	=	Jumping jacks	Adjective	=	Lunges	Pronoun	=	Push ups	Adverb	=	Arm circles	Preposition	=	Jogging in place	Conjunction	=	Knee jumps	Interjection	=	Hop scotch
Noun	=	Arm circles																							
Verb	=	Jumping jacks																							
Adjective	=	Lunges																							
Pronoun	=	Push ups																							
Adverb	=	Arm circles																							
Preposition	=	Jogging in place																							
Conjunction	=	Knee jumps																							
Interjection	=	Hop scotch																							
Source	Marvin Christley, physical education teacher, New Haven Public Schools																								



	Relay What You Learn
Grade level	4-5
Subject area	Language Arts
Formation	Students standing in 2 lines / rows
Equipment	• Containers labeled with sticky notes according to grammar objective • Counting chips (poker chips, paper clips, buttons, pennies, etc.) • Chart paper • Markers • Labeled index cards, or an information list for teacher
Directions	1. Have students line up in 2 evenly numbered rows, forming teams (extra students can take turns being teacher's helper). The first person in line wears a "start" sign; the last one wears a "finish" sign. 2. Explains that this is a relay race based on spelling/grammar questions and that students are to run (or hop) towards a table and place a chip in the container that corresponds to the correct answer to the question. They are then to run/hop around the perimeter of their side of the room, back to the end of the line and jog in place until the line is finished. 3. Once the relay is completed, review the answers with students and create a tally graph or point chart to compare which side of the relay line placed the most chips in the correct containers. 4. The line that completes the relay first and keeps jogging should receive extra points. 5. Extra points may also be given when a team displays good sportsmanship. 6. The team with the most points is the winning team. Variations: • Containers labeled with vowels (long/short) • Parts of grammar (nouns, verbs, adjective, etc.) • Rules of grammar (question marks, exclamation point, periods) • Homophones (too, two, to, there, their, they're, etc.) • Math answers corresponding with math questions
Source	Marvin Christley, physical education teacher, New Haven Public Schools



Social Studies

	Compass Points
Grade level	2-5
Subject area	Social Studies / Geography
Formation	Students standing in an open area, where each student has enough space to move in all 4 directions from a central point
Equipment	Chart of a compass face (large enough for students to see)
Directions	1. Begin by instructing the class on how a compass works. Explain the concepts of North, East, South, and West, and their variations (Northeast, Northwest, Southeast, and Southwest). 2. Arrange the students so each one is facing you and has enough space to move in all 4 directions from a central point. Tell the students that this will be their starting point. 3. Call out various directions: “South”, “Northwest,” etc. The students must quickly face in the proper direction and jump in that direction, then jump back to return to the starting point. 4. If any students have incorrect “answers,” have them return to the starting point, and then call out the direction a second time. If they still miss the answer, explain that if they are facing north, their right side is to the east, their backs are to the south, and their left side is to the west. Variations: • If space allows, vary the instructions with each new direction on the compass. For example, “north jump two times, or south 4 steps.” • Alternate the caller (first the teacher, then a student).
Source	Adapted from Brain Breaks , an online resource developed by the Michigan Department of Education in cooperation with the Michigan Association of Health, Physical Education, Recreation and Dance (MAHPERD), Albion College, Concordia College, and University of Michigan. Posted on the internet in 2005 with credits given to Michael Bucholtz, University of Michigan. Accessed from the web address www.emc.cmich.edu/BrainBreaks/ on 4/7/08.



	Geography Stretch
Grade level	2-5
Subject area	Social Studies / Geography
Formation	Students standing by their desks or in an open area
Equipment	None
Directions	1. Name a geographic location, and have the students stretch or step in that direction. For each location, state whether to move relative to where they are, or relative to another geographic location. 2. Students stretch or step: - To the right for west - To the left for east - Up high for north - Down low for south Examples: Stretching arms forward, backward, to the left, to the right Stepping one foot forward, backward, to the left, to the right Variations: • Stretching to the East = stretching left side of body Stretching to the West = stretching right side of body • The further the distance between locations, the longer the stretch or step 10 second stretch = Distance less than 100 miles 20 second stretch = Distance more than 100 miles 30 second stretch = Distance more than 1000 miles Examples: 10 second stretch = Maine to New Hampshire 30 second stretch = Maine to California
Source	Marvin Christley, physical education teacher, New Haven Public Schools



	Impersonate the State
Grade level	4-5
Subject area	Social Studies / Geography
Formation	Students standing at desks or in a circle
Equipment	None
Directions	1. Collect information on your state or another state. Look for activities unique to that state that may be familiar to your students (e.g., hiking the Grand Canyon in Arizona). If you're not sure where to find this information, try an internet search for that state's office of tourism. 2. Create a list of activities that the students can physically act out. Lead the class on an imaginary tour of that state. Let the students act out each activity for at least 30 seconds. When they are done, ask the students to guess which state they are "touring." Example 1: California Dreamin' March across the Golden Gate Bridge. Surf in the Pacific Ocean. Climb up a Redwood Tree. Pretend you're an actor and wave to all your fans. Stomp the grapes / pick the oranges. Ski on the Sierra Nevadas. Climb Mount Whitney. Crawl through the Death Valley Desert. Example 2: Travel the Tarheel State (North Carolina) Hike the Appalachian Trail. Whitewater raft on the Nantahala River. Fish at the Outer Banks. Go swimming in the Atlantic Ocean. Fly a kite at Kitty Hawk. March like a soldier from Fort Bragg. Drive a racecar around the Rockingham Raceway. Climb to the top of Cape Hatteras Lighthouse. Variation: • Assign one state to each student, or to groups of students. Ask them to create a list of activities for that state. Then have each student or group of students lead the class on the "tour" of that state.
Source	Adapted from <i>Energizers Classroom-Based Physical Activities</i> , 3 rd Edition July 2006. North Carolina Department of Public Instruction, © 2005, NCPE is Active. Retrieved April 4, 2008, from NCPE4ME website: www.ncpe4me.com/energizers.html



Living History	
Grade level	4-5
Subject area	Social Studies / History
Formation	Students standing in an open area
Equipment	None, or props relative to the history lesson (if they are safe to use)
Directions	1. Choose an American history or world history lesson that you plan to teach. Decide how to relate it to an opportunity for students to act out the lesson in a memorable way, while allowing them to be physically active. 2. Review the history lesson with the class. 3. Give students the opportunity to physically act out what the people in the history lesson would have experienced. Example 1: Revolutionary War Fill a pack with items that a soldier might have carried. Carry and wear the pack on a long “hike.” Cross the Delaware River in cold weather. Example 2: Pioneers heading to the western U.S. March along / ride along a trail. Stop to get water from a stream. Chop wood to create a campfire. Wash your clothes in a stream. Example 3: Pony Express Ride on horseback to the first stop on the mail delivery route. Change horses/riders at this stop. Move on to the next stop. Deliver a large sack of mail at the final destination.
Source	Yale Prevention Research Center, based on a suggestion from teachers in the Independence School District in Missouri



Music

NOTE: You can find other ideas for music in the Resources section.

	Move to the Front
Grade level	K-2
Subject area	Music
Formation	Students standing in a line
Equipment	A drum, whistle, or any other musical instrument
Directions	1. Have the students line up one in front of the other. The student in the front of the line is the engine. The student in the back is the caboose. 2. The student who is the engine can lead the other students wherever he/she wants to take them. Tell students that when they are the engine, they need to pay attention to where they are going, and to keep in mind what everyone else is doing. 3. While the engine is leading the class around, the teacher bangs on a drum or plays a musical instrument. 4. When the teacher picks up the beat, the caboose goes to the front of the line and becomes the engine. Variations • If the students are well behaved, you could have the students who become the “engine” pick a new locomotor movement every time they come up to the front of the line. If they are doing well with this method, they could have many lines with each of the lines having an engine and a caboose. • To make this activity easier for younger students, use two different noises - one beat to march by and a different signal (i.e. a bell, whistle, hand clap) to signal a change in leaders. • Try using two lines as a double train to allow for more changes to be the leader.
Source	Adapted from Brain Breaks , an online resource developed by the Michigan Department of Education in cooperation with the Michigan Association of Health, Physical Education, Recreation and Dance (MAHPERD), Albion College, Concordia College, and University of Michigan. Posted on the internet in 2005 with credits given to Aaron Walter of the University of Michigan and Dan Nichols of Plain Elementary School in Simpsonville, SC. Accessed from the web address www.emc.cmich.edu/BrainBreaks/ on 4/7/08.



Old McDonald	
Grade level	K-2
Subject area	Music
Formation	Students in an open space with plenty of room
Equipment	None
Directions	1. Tell the students to stand up. Allow ample space for each student to perform the activity bursts. 2. Sing a variation of the song “Old McDonald” beginning with the first verse below. <u>Example of first verse</u> Old (Teacher’s name) had a class, E-I-E-I-O And in that class they did some jumping jacks E-I-E-I-O With a jumping jack here and a jumping jack there Here a jumping jack There a jumping jack Everywhere a jumping jack Old (Teacher’s name) had a class, E-I-E-I-O <u>Ideas for activities</u> Jumping jacks Hop Skip 3. Repeat with a new verse and corresponding activity. Adaptation • Students who are hearing-impaired can read the words to the song. If they have some ability to hear, they can stand close to the teacher to hear the song better.
Source	Adapted from Brain Breaks , an online resource developed by the Michigan Department of Education in cooperation with the Michigan Association of Health, Physical Education, Recreation and Dance (MAHPERD), Albion College, Concordia College, and University of Michigan. Posted on the internet in 2005 with credits given to Shelly West of the University of Michigan. Accessed from the web address www.emc.cmich.edu/BrainBreaks/ on 4/7/08.



	Marching Band
Grade level	K-5
Subject area	Music
Formation	Students standing in groups in open areas of the classroom
Equipment	(1) Tape or CD player; (2) marching song such as “76 Trombones” (3) optional toy instruments or musical instruments
Directions	1. Have the students pretend they are in a marching band. Designate an area of the classroom for each section of the band; students can choose an instrument from that section. 2. Tell the students to march in place while pretending to play the instrument they have selected. They will start by marching in place fast as if they were coming out onto the field. 3. When the song begins the students will “play” their instruments while marching for about 4 to 5 minutes. Variations: • Use the activity to introduce the different instruments of a band and the sounds they make. Have the students listen for which instruments are more prominent than others. Try replicating the marching beat of the song to increase counting and rhythmic skills. • (Grades 3-5) To incorporate music education, discuss the background of the song before engaging the students in the activity. For example, if using a march by John Philip Souza, talk about his career as a famous composer, his reputation as the “March King,” and how he wrote the national march “The Stars and Stripes Forever.” You can also discuss the time period in which the song was written. Have the students think about what the march was intended for - i.e., a military march, a parade, etc. Adaptations: • Students with lower body limitations can focus on playing the drums. • Students who are hearing impaired can pretend to be the band director, or play instruments to feel the vibrations of the music.
Source	Adapted from Brain Breaks , an online resource developed by the Michigan Department of Education in cooperation with the Michigan Association of Health, Physical Education, Recreation and Dance (MAHPERD), Albion College, Concordia College, and University of Michigan. Posted on the internet in 2005 with credits given to Bakara Oni Lewis, University of Michigan. Accessed from the web address www.emc.cmich.edu/BrainBreaks/ on 4/7/08.



Math

	Numbered Wall Touches
Grade level	1-3
Subject area	Math
Formation	Students lined up in the center of the room or down the middle of the hallway
Equipment	Masking tape, paper
Directions	1. Place a long strip of masking tape (long enough for all the students to stand on) either in the center of the classroom or down the middle of the hallway. 2. Tape pieces of paper with odd numbers on one side of the wall. Do the same with the even numbers on the opposite wall. 3. Have the students stand on the tape facing you. 4. Explain that you will call out either an odd or an even number each time, and that examples of odd and even numbers are taped to the wall for visual clues. 5. When you call out a number, the students should side shuffle to the correct side of the room or hallway, touch the wall, then side shuffle back to the midline. Variations: • Vary the level of physical activity by using a variety of activities (hopping, walking, etc.). • Hold up a paper with the number written on it for a visual clue. • To illustrate the concept of odd vs. even numbers, choose an odd number such as 5. Ask 5 children to come to the front of the room and pair up. You will have 2 pairs of 2 children and 1 odd person without a pair. For every odd number, there will always be one person who will not be teamed with someone. • For older children, you could use this activity as a review or a test by having them call out the multiples of the number that you gave them as they moved towards the wall. (Example: $9 \times 3 = 27$)
Source	Adapted from Brain Breaks , an online resource developed by the Michigan Department of Education in cooperation with the Michigan Association of Health, Physical Education, Recreation and Dance (MAHPERD), Albion College, Concordia College, and University of Michigan. Posted on the internet in 2005 with credits given to Tom Weinmann and Albion College. Accessed from the web address www.emc.cmich.edu/BrainBreaks/ on 4/7/08.



	Inches, Feet and Yards, Oh My!
Grade level	1-4
Subject area	Math
Formation	Students lined up around the perimeter of the room, or standing at desks
Equipment	None
Directions	1. Have students start with feet side by side and move one set of toes ahead of the other set of toes to represent “inches” or “small.” 2. Have students place one foot in front of the other to represent “feet” or “medium.” 3. Have students take one giant step forward or backward to represent “yards” or “large.” 4. Call out different measurements: Example—Move forward 2 feet, back 5 inches, sideways 1 yard. 5. Have all students move in the same direction. 6. Have students jump and stretch between measurements for at least 30 seconds. Variations: • Add directions (right, left, forward, back). • Use the metric system with older students.
Source	Adapted from <i>Energizers Classroom-Based Physical Activities</i> , 3 rd Edition July 2006. North Carolina Department of Public Instruction, © 2005, NCPE is Active. Retrieved April 4, 2008, from NCPE4ME website: www.ncpe4me.com/energizers.html



	Math and Movement
Grade level	1-5
Subject area	Math
Formation	Students standing in an open area
Equipment	None
Directions	1. Arrange students so each one has enough space to perform an activity burst. 2. Students recite equations while performing the activity. Grades 1-2 $1 + 1 = 2$, that's true $2 + 2 = 4$, close the door $3 + 3 = 6$, pick up sticks $4 + 4 = 8$, that's great $5 + 5 = 10$, clean the den $6 + 6 = 12$, put up shelves $7 + 7 = 14$, that's keen $8 + 8 = 16$, looking lean $9 + 9 = 18$, time to clean $10 + 10 = 20$, that's plenty Grades 3-5 $1 \times 1 = 1$, that's fun $2 \times 2 = 4$, let's do more $3 \times 3 = 9$, that's fine $4 \times 4 = 16$, eat your greens $5 \times 5 = 25$, exercise you'll stay alive $6 \times 6 = 36$, no tricks $7 \times 7 = 49$, time to shine $8 \times 8 = 64$, close the drawer $9 \times 9 = 81$, almost done $10 \times 10 = 100$, that's it Variation: • Insert other math problems into this format.
Source	Marvin Christley, physical education teacher, New Haven Public Schools



	Math Stations
Grade level	3-5
Subject area	Math
Formation	Students in teams at 5 activity stations
Equipment	Math exercise cards created before hand
Directions	1. Create a set of 5 cards, each with a math problem that represents what students are currently learning in class. Make the math problems appropriate to the grade level you are teaching. 2. Divide the class into five teams 1 through 5, to use the 5 activity stations. Each station will be assigned to 1 exercise. 3. Each team goes to its designated station and reads the math question at the station. Once the team members decide on the answer, they must perform the designated exercise for the number of times representing that answer. 4. When all the teams have performed the answer, say “switch” (or another designated cue). The teams rotate clockwise to the next station and perform the exercise. 5. Continue until all 5 stations are completed. Example of Cards: Station 1: $(5 + 23) / 2$ Station 2: $(34 + 4) / 2$ Station 3: $(7 \times 7) - 19$ Station 4: $(2 + 2) + (5 \times 5) - 9$ Station 5: $25 - 13$ = Jogging in place = Jumping Jacks = Arm circles = Lunges = Squat jump (Answer = 14) (Answer = 19) (Answer = 30) (Answer = 20) (Answer = 12)
Source	Marvin Christley, physical education teacher, New Haven Public Schools



Science

	Leaf Line
Grade level	K-5
Subject area	Science
Formation	Students standing in groups in an open space in the classroom
Equipment	Leaves brought from home (1 leaf per child)
Directions	1. Assign students in advance to bring in a leaf that has fallen from a tree (have several extra leaves available in case students have forgotten them). Alternatively, collect leaves from different types of trees in the school yard. 2. Have students get into groups based on the type and/or size of leaves. If they are grouped based on the size of leaves, ask them to line up in order from the smallest to the largest leaf. 3. Have students move to groups based on leaf color, shape, and texture. Discuss the differences among the leaves. 4. (For grades 3-5) Have students try to identify what type of tree each leaf came from. Discuss the types of trees in class. 5. In between discussions, students can act out the following for at least 1-2 minutes each while running in place. • Tree swaying in the wind • Tree during a thunderstorm or hurricane • Tree weighted down with snow
Source	Adapted from <i>Energizers Classroom-Based Physical Activities</i> , 3 rd Edition July 2006. North Carolina Department of Public Instruction, © 2005, NCPE is Active. Retrieved April 4, 2008, from NCPE4ME website: www.ncpe4me.com/energizers.html



	Space Jam
Grade level	1-3
Subject area	Science
Formation	Students standing at desks or in an open area
Equipment	None
Directions	1. Read the story to the students and have them identify each verb or “action” word. Pause while they act out each verb in place for 15 seconds. 2. Continue until the end of the story. Hi, my name is Zippy and I live on a space station. Today, I’ll lead you on a tour through space. Let’s put on our moon boots to walk through space. The first stop is Mercury, the closest planet to the sun. Mercury is very hot so, OUCH, be careful and step quickly so your feet don’t burn. Mercury has many craters. On the count of 3, let’s jump into a crater. 1 – 2 – 3, JUMP! Climb out so we can march to Venus. Venus is the second planet from the sun. It has very strong winds and volcanoes. See if you can walk in the wind without blowing over. A lot of its surface is covered with lava...here comes some . . . RUN! The next stop is Earth, the third planet from the sun. 71% of the Earth’s surface is water, so hop in and start swimming. Our next stop is Mars, known as the red planet. The largest mountain in space is located on Mars. See if you can climb to the top! Jupiter is the fifth planet from the sun. It’s made up of mostly gas and clouds. Find a cloud and see if you can float on it. Saturn is the sixth planet. It has a rocky core and lots of ice. WHOA, there’s a huge piece of ice, be careful and slide across it. There are rings of gases around Saturn. Hop on one of these rings and spin in circles. Uranus is our next stop. It has a small rocky core. Can everyone tiptoe across Uranus watching out for the ice? On to Neptune. It has four rings and big storms with fast winds. It also has 13 moons. Quick, duck! Here comes a moon, move to the left so you don’t get hit. Pluto, our last stop, is the furthest from the sun. It’s so small that some people don’t count it as a planet. It’s a cold place because it’s SO FAR from the sun. Shiver and rub your hands together to stay warm. This ends our tour of space. Let’s hop back to the space station.
Source	Adapted from <i>Energizers Classroom-Based Physical Activities</i> , 3 rd Edition July 2006. North Carolina Department of Public Instruction, © 2005, NCPE is Active. Retrieved April 4, 2008, from NCPE4ME website: www.ncpe4me.com/energizers.html



Planetary Fitness																																					
Grade level	4-5																																				
Subject area	Science																																				
Formation	Students standing in a designated area, with room to move																																				
Equipment	None																																				
Directions	1. Ask the students to stand in a designated area. 2. On the board, name and number each planet in order of its distance from the sun. <table> <tr><td>Mercury</td><td>1</td></tr> <tr><td>Venus</td><td>2</td></tr> <tr><td>Earth</td><td>3</td></tr> <tr><td>Mars</td><td>4</td></tr> <tr><td>Jupiter</td><td>5</td></tr> <tr><td>Saturn</td><td>6</td></tr> <tr><td>Uranus</td><td>7</td></tr> <tr><td>Neptune</td><td>8</td></tr> <tr><td>Pluto*</td><td>9</td></tr> </table> 3. Assign a particular type of activity (such as a jumping jack, squat thrust, etc.) for each planet. For each “number” of the planet, have the students perform that number of repetitions (reps) of the assigned activity for that planet. Example: <table> <tr><td>Mercury</td><td>1 jumping jack</td></tr> <tr><td>Venus</td><td>2 squat thrusts</td></tr> <tr><td>Earth</td><td>3 knee jumps</td></tr> <tr><td>Mars</td><td>4 lunges</td></tr> <tr><td>Jupiter</td><td>5 hops on 1 foot</td></tr> <tr><td>Saturn</td><td>6 arm circles</td></tr> <tr><td>Uranus</td><td>7 squats</td></tr> <tr><td>Neptune</td><td>8 side slides</td></tr> <tr><td>Pluto*</td><td>9 hop scotches</td></tr> </table> * NOTE: According to recent scientific consensus, Pluto is no longer considered a planet. However, you may want to include Pluto and use this as an opportunity to discuss Pluto.	Mercury	1	Venus	2	Earth	3	Mars	4	Jupiter	5	Saturn	6	Uranus	7	Neptune	8	Pluto*	9	Mercury	1 jumping jack	Venus	2 squat thrusts	Earth	3 knee jumps	Mars	4 lunges	Jupiter	5 hops on 1 foot	Saturn	6 arm circles	Uranus	7 squats	Neptune	8 side slides	Pluto*	9 hop scotches
Mercury	1																																				
Venus	2																																				
Earth	3																																				
Mars	4																																				
Jupiter	5																																				
Saturn	6																																				
Uranus	7																																				
Neptune	8																																				
Pluto*	9																																				
Mercury	1 jumping jack																																				
Venus	2 squat thrusts																																				
Earth	3 knee jumps																																				
Mars	4 lunges																																				
Jupiter	5 hops on 1 foot																																				
Saturn	6 arm circles																																				
Uranus	7 squats																																				
Neptune	8 side slides																																				
Pluto*	9 hop scotches																																				
Source	Marvin Christley, physical education teacher, New Haven Public Schools																																				



Jump Start Your Heart	
Grade level	4-5
Subject area	Science
Formation	6 groups of students, each at a different activity station
Equipment	6 pieces of paper labeled with the parts of the heart and corresponding assignment for physical activity
Directions	1. Discuss the role of the heart as a pump for the body. The blood travels from the right atrium to the right ventricle. From there it travels to the lungs and back to the left atrium. It then travels to the left ventricle. From there it goes to the rest of the body, and back to the right atrium. This process repeats itself over and over. 2. Label 6 activity stations with the following names / activities: • Right atrium Jog in place • Right ventricle Shadow box • Lungs Jumping jacks • Left atrium Pretend to jump rope • Left ventricle Squat • Body Pretend to chop wood Write the following information on the board: Right Atrium → Right Ventricle → Lungs → Left Atrium → Left Ventricle → Body 3. Send groups of students to each station. 4. Call out “start your heart” and have students practice the activity that corresponds to their respective stations. Then have them stop. 5. Call out “blood flow.” One by one, in the order listed above, each group performs the activity corresponding to that part of the heart. 6. Rotate the groups of students to the next activity stations. 7. Call out “start your heart” after students have moved to new location. 8. Continue until all groups of students have gone to each station. Variations: • Have students demonstrate other physical activities that can help strengthen the heart (jumping, swimming, jogging, etc.).
Source	Adapted from <i>Energizers Classroom-Based Physical Activities</i> , 3 rd Edition July 2006. North Carolina Department of Public Instruction, © 2005, NCPE is Active. Retrieved April 4, 2008, from NCPE4ME website: www.ncpe4me.com/energizers.html



In a Heartbeat							
Grade level	4-5						
Subject area	Science						
Formation	Students standing near their desks, with room to move						
Equipment	A watch that counts in seconds; pencils and paper to record heartbeat						
Directions	1. Explain how the heart works. Relate this to physical activity and cardiovascular fitness. 2. Teach the students how to locate and count their pulse. - A Have them place their fingers on their wrist, or neck. B. Tell them to count the number of beats for 10 seconds. While the students count their pulse, time them for 10 seconds. C. Tell them to multiply this number by 6 to get their heart rate in beats per minute. The product represents their resting heart rate.   Average Resting Heart Rate for Children * <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Age</th><th>Resting Heart Rate</th></tr> </thead> <tbody> <tr> <td>5-7 years</td><td>65</td></tr> <tr> <td>8-11 years</td><td>62</td></tr> </tbody> </table> * Source: Horizon Blue Cross Blue Shield of New Jersey. Accessed from the website www.horizonblue.com/shapeitup/siu_heart_rate.asp on 4/9/08 <i>CONTINUED ON THE NEXT PAGE....</i>	Age	Resting Heart Rate	5-7 years	65	8-11 years	62
Age	Resting Heart Rate						
5-7 years	65						
8-11 years	62						



3. Explain the concept of a **target heart rate**.*

A target heart rates let you measure your initial fitness level and monitor your progress in a fitness program. This approach requires measuring your pulse periodically as you exercise and staying within 50 to 85 percent of your maximum heart rate. This range is called your **target heart rate**.

*Source: American Heart Association, www.americanheart.org

TARGET HEART RATE Count the number of heartbeats for 10 seconds. Multiply this number by 6.			
Age	Minimum Heart Rate Range	Training Heart Rate Range	Maximum Heart Rate Range
	60%	70%	80%
7	127	170	213
8	127	169	212
9	126	168	211
10	126	168	210
11	125	167	209
12	124	166	208

- Engage in different kinds of exercises for specific periods of time (for example, 2 minutes per exercise). Upon completion of each exercise have students count their pulse again for 10 seconds, and multiply this number by 6 to get their heart rate.
- Ask the students to compare their resting heart rate to their heart rate after each exercise.

Source

Adapted from **Brain Breaks**, an online resource developed by the Michigan Department of Education in cooperation with the Michigan Association of Health, Physical Education, Recreation and Dance (MAHPERD), Albion College, Concordia College, and University of Michigan. Posted on the internet in 2005 with credits given to Beth Barrett, University of Michigan. Accessed from the web address www.emc.cmich.edu/BrainBreaks/ on 4/7/08.



Health

	Go Bananas!
Grade level	K-2
Subject area	Health
Formation	Students standing at desks
Equipment	Barrel of monkeys Optional: trail of paper bananas
Directions	1. Empty the barrel of monkeys. 2. Pick up one monkey. Each time, say GO BANANAS! 3. Students jump as high as they can one time, then GO BANANAS by wiggling their bodies in all directions or imitating a monkey. 4. Continue to pick up one monkey at a time and say GO BANANAS! while students perform the corresponding activity. 5. Discuss bananas and how unique they are: • Color • Peel • Shape • Nutritional value • Snack ideas • Where they grow Variation: • Make a trail of paper bananas. Have the students follow the trail using different types of movements: marching, hopping, etc.
Source	Adapted from <i>Energizers Classroom-Based Physical Activities</i> , 3 rd Edition July 2006. North Carolina Department of Public Instruction, © 2005, NCPE is Active. Retrieved April 4, 2008, from NCPE4ME website: www.ncpe4me.com/energizers.html



	Heart Smart
Grade level	3-5
Subject area	Health
Formation	Students standing near their desks or in an open area
Equipment	None
Directions	1. Discuss the heart: Where is it located? Left side of the chest. What size is it? Size of a fist. Function? Deliver blood to the body. What strengthens the heart? Jumping, swimming, jogging. (Students will act out each activity) What weakens the heart? Inactivity, smoking, unhealthy diet. 2. Call out the name of a habit that strengthens or weakens the heart. If the habit strengthens the heart, students will respond by jumping for 15 seconds. If the habit weakens the heart, students will respond by squatting for a few seconds. Riding a bike - jump Watching TV all the time—squat Walking your dog - jump Smoking cigarettes – squat Dancing with your friends – jump Skating – jump Never eating fruits/vegetables – squat Shooting baskets – jump Playing PlayStation all the time – squat Eating fast food – squat Raking the leaves - jump Taking the stairs – jump Taking the elevator – squat Swimming – jump Variation: Have students think about their own habits and how they might affect their hearts.
Source	Adapted from <i>Energizers Classroom-Based Physical Activities</i> , 3 rd Edition July 2006. North Carolina Department of Public Instruction, © 2005, NCPE is Active. Retrieved April 4, 2008, from NCPE4ME website: www.ncpe4me.com/energizers.html



What's for Dinner?	
Grade level	3-5
Subject area	Health
Formation	Students sitting at / standing next to their desks
Equipment	Paper plates (1 per students), crayons, markers
Directions	1. Give each student 1 plate. 2. Students will draw a nutritious or typical meal on their plates. 3. Students will then choose a partner and stand up at their desks. One partner will hold both plates. 4. On teacher signal, all students with plates will create their own aerobic movement at their desks using both plates for 30 seconds. 5. Teacher will identify a student performing an appropriate aerobic movement and have the entire class follow the activity for 10-15 seconds. Examples - Waving plates up and down in front of body - Swimming underwater using plates for fins - Jumping jacks while holding plates 6. Students repeat variations of movements. 7. Have students return to desks with their own plates. 8. Discuss a nutrition concept such as healthy food choices or portion sizes. Have students identify the healthful foods that they drew on their plates.
Source	Adapted from <i>Energizers Classroom-Based Physical Activities</i> , 3 rd Edition July 2006. North Carolina Department of Public Instruction, © 2005, NCPE is Active. Retrieved April 4, 2008, from NCPE4ME website: www.ncpe4me.com/energizers.html



Chapter 5

Resources



Physically Active Learning Resources

The following resources are available free of charge from the internet.

Brain Breaks

WEBSITE: www.emc.cmich.edu/BrainBreaks

Brain Breaks is an online resource for elementary classroom teachers, with activities designed to help incorporate physical activity into language arts, music, math, science, and social studies lessons. Developed by the Michigan Department of Education in cooperation with the Michigan Association of Health, Physical Education, Recreation and Dance, Albion College, Concordia College, and the University of Michigan.

CircusFit

WEBSITE: www.circusfit.com

Ringling Bros. CircusFit lessons combine health and science information with physical movement and exercise so that fitness can be integrated into almost any curriculum or time frame. Each lesson features a *CircusFit* character and “Word of the Day,” allowing teachers to incorporate character education and vocabulary building with fitness development.

Energizers

WEBSITE: www.ncpe4me.com/energizers.html

Energizers are classroom-based physical activities that integrate physical activity with academic concepts. These are short activities that classroom teachers can use. There are different sets of activities available for elementary and middle school classes. Provided by the North Carolina Department of Public Instruction.

Health E Tips - Just-A-Minute (JAM) School Program

WEBSITE: www.healthetips.com/jam-program.php

The *JAM School Program* brings health education and daily activity into the classroom. JAM is designed to teach healthier lifestyle habits to children and adults. It delivers a weekly 1-minute exercise routine (the JAMmin’ Minute) and a monthly health newsletter (Health-E-Tips).

Move in the Classroom

WEBSITE: www.moveintheclassroom.com

This website provides a set of quick one-sentence tips to incorporate physical activity into various subject areas (art, language arts, math, psychology, science, social studies, speech communication, and foreign languages). Provided by Julian Reed, EdD, Assistant Professor of Health and Exercise Science at Furman University, Greenville SC.



Music Resources

If school policy allows, you may want to use music to accompany some of the activity bursts. A few suggestions are listed below (we recommend that you preview samples of music prior to purchase to determine if they are appropriate for your students). Some teachers have also used classical music selections.

Kimbo Educational

WEBSITE: www.kimboed.com

Kimbo is a children's educational music company that publishes CDs and DVDs for learning, fitness and fun. CDs are available for a variety of exercise themes such as dance, aerobics & exercise, marches & rhythms, musical play, and yoga for children.

Laurie Berkner Band

WEBSITE: www.twotomatoes.com/site

Laurie's CDs and DVDs can be ordered from the website or by calling 877- 687-4277. Songs range from catchy tunes with fun themes like dinosaurs, bumble bees, or goldfish to old favorites such as "She'll be Comin' Round the Mountain" and "The Erie Canal."

Putumayo Kids

WEBSITE: www.putumayo.com/en/putumayo_kids.htm

Putumayo Kids introduces children to other cultures by using fun, upbeat music from around the world. Examples include African, Asian, Caribbean, Celtic, French, Hawaiian, and Latin music. It offers multicultural activity kits and CDs for use in the classroom.

Songs for Teaching

WEBSITE: www.songsforteaching.com

Educational experts provide tested ideas for using music in lesson plans - many with lyrics, sound clips, and teaching suggestions. This site contains pages for teachers to peruse. Innovative teachers share their classroom pointers and extension activities using children's music. Songs from a wide variety of artists are presented by academic subject.

Station to Station Music

WEBSITE: <http://store.shopstationpe.com/sttostcd.html>

Station to Station CDs are formatted to manage student movement. Divide the room into stations and start the music. When the music stops, the students stop and rotate to the next station. When the music starts again, the students begin to move. Several selections are available, including classical, country, hip hop, jazz, Latin, pop, and world music.



Pedometers

Pedometers are an optional addition to this program. You may be able to arrange for companies or organizations to donate pedometers for your class (ask a local store or sport supply center that sells them). If you are unable to arrange for a donation, you can hold a fund-raiser to cover costs. You don't need a fancy version that monitors heart rate or calculates calories burned.

Once you have obtained the pedometers, there are many fun ways that you can use them in your class and school. Here are some guidelines:

1. Give each child a pedometer and set it up according to the directions. The pedometer is set according to the length of the child's stride.
2. Once you have set up the pedometers, have students attach them to their belt, or to their pants at waist level.
3. Develop a chart with the child's name and a place to record number of steps taken each day (see example below). You can either check their pedometer readings each morning and chart it, or ask their parents to chart the number of steps each night, re-set the pedometer for the next morning, and offer them encouragement.
4. In the classroom, create a bulletin board with the goal stated clearly. Update the board weekly with either the distance traveled or number of steps that each child took. Use stickers or pens to track progress across your state, or to the moon.
5. Set realistic goals for the next week, with tips to increase distance. Distribute medals to the highest achievers.
6. You can also create healthy competitions with other classes or schools as you race to your destination. Examples are simulating a walk across your state, or the distance of an historic trail traveled by pioneers. Local vendors can donate prizes in exchange for publicity from the competition.

DAILY DISTANCE LOG

1. Once you are dressed for the day, attach the step counter to your clothing.
2. If you change clothes, put the pedometer on your new set of clothing.
3. If you take a shower, remove the pedometer.
4. Just before you go to bed, record the distance on the pedometer. Re-set it to 0.

Day	Date	Day of the week	Distance traveled
1			
2			
3			
4			
5			
6			
7			



FitDeck® Jr. Cards



The drawings of children exercising that appear in this manual were used with permission from Phil Black, inventor of FitDeck® cards for children and adults. FitDeck Jr.® is a 50-card exercise regimen for children ages 5 to 16 years. The exercises call for basic body movements and require no equipment. Each card contains illustrations and instructions for 50 different upper, middle, lower and full body exercises. Samples of the cards are shown on the next page.

The cards are colorful and fun, and the exercises have kid-friendly names like “Inchworm,” “Snow Angels,” “Flamingo,” and “Red Rover.” Also included is a booklet with 70 FitDeck Jr. games that can be played alone, with a friend, parent, teacher, or in a large group setting.

If you want to use these cards to provide more ideas for activity bursts, you can order them from the FitDeck® website at <http://fitdeck.com> or from other websites such as www.Amazon.com.

ABC for Fitness™ teachers qualify for a 15 % discount!

If you order FitDeck® cards from the website <http://fitdeck.com>, you can receive a 15% discount by typing “ABC” in the coupon discount code area when you reach the “checkout” step of the order process. See example below.

Enter your coupon name to receive a discount

Coupon Discount ●

ABC ●



Samples of FitDeck Jr® Cards

The actual size of each card is larger than the samples shown below.

THE FLAMINGO

Full Body

6 10 12

• Hop on one foot
• Alternate feet

JUMPING JACKS

Full Body

6 10 14

• Jump with hands over head and feet split apart

BUNNY HOPS

Full Body

4 6 10

• Hop on two feet

RUSSIAN MARCH

Lower Body

4 6 10

• Walk with arms straight out in front
• Kick opposite hand with each step

ROLL-O's

Upper Body

10 20 30

• Make circular motion with arms
Tip: Vary size and speed for added variety

SQUATTERS

Lower Body

8 10 16

• Stand with wide stance; hands on hips
• Bend at the knees and squat down
Tip: Try not to bend upper body forward