



# Bicycle and Pedestrian Curricula Guide

Making the Case for Bicycle and Pedestrian Youth Education





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For more information, visit [www.saferoutespartnership.org](http://www.saferoutespartnership.org).

### Authors:

- David Cowan, Program Manager, Safe Routes to School National Partnership
- Robert Ping, State Network Director, Safe Routes to School National Partnership

### Reviewers & Advisors:

- Jessica Bogli, Director, Bogli Consulting
- Scott Bricker, America Walks, Campaign Manager
- Deb Hubsmith, Director, Safe Routes to School National Partnership
- Flori Jans, Physical Education Teacher, Homestead Elementary, Centennial, Colorado
- Diana Owens, Assistant Director of Education, The Bicycle Coalition of Greater Philadelphia
- Dan Persky, Director of Education and Advocacy, Active Transportation Alliance
- Rick Price, Safe Cycling Coordinator, Fort Collins Bicycle Co-op

### Interviewed:

- Dan Connaughton, Program Director, Florida Traffic and Bicycle Safety Education Program
- Roger Dibrito, Teacher Trainer, Journeys from Home
- Buzz Feldman, Safe Routes to School Coordinator, St. Vrain School District
- Breen Goodwin, Education Director, Bicycle Coalition of Greater Philadelphia
- Wendi Kallins, Program Director, Marin County Bicycle Coalition
- Robin Stallings, Executive Director, BikeTexas
- Preston Tyree, Education Director, League of American Bicyclists

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Dear Friends,

Every child walks. And since the late 1800's most children have ridden a bicycle for recreation or transportation at some point in their lives. It is important, therefore, that children learn how to navigate streets and intersections, learn the rules of the road, and understand how to be safe when sharing the streets with automobiles. These skills will carry through into adulthood, helping to create active lifestyles.

In fact, up until the 1970's nearly half of all children in the US walked or bicycled to school. Since then there has been a steady decline in the number of students walking and bicycling to school, which inspired the Safe Routes to School movement. By 2005, with **funding from the federal government**, and growing concern from those interested in health and obesity reduction, pedestrian and bicycle initiatives experienced unprecedented growth.

Since 2005, the **Safe Routes to School National Partnership** has led efforts to advance the national Safe Routes to School movement, find the funding to support programs, create supportive policies, and develop reports and guides that share best practices among Safe Routes to School practitioners throughout the country. It is our hope that the Bicycle and Pedestrian Curricula Guide will also serve this purpose.

While bicycle and pedestrian safety education existed since long before the Safe Routes to School movement began, the influx of Safe Routes to School funding has created exponential growth in the need for bicycle and pedestrian safety curricula and materials. Governmental and nonprofit organizations have recognized the benefits of providing bicycle and pedestrian safety instruction and are working diligently to ensure that it is an initiative that endures.

We hope that this guide will be valuable to educational practitioners and policy makers, government employees, parents, and students. The first two sections of this guide provide background and tips for systematic implementation of bicycle and pedestrian safety education. For teachers, parents, after school instructors, bike club leaders, or bicycle and pedestrian professionals you will find that the Description of Categories section will help you to choose a quality curriculum that meets your needs. Finally, the Inventory contains an index of information regarding various curricula around the country, that are each represented by a curriculum summary page which provides a snapshot of that particular program, as well as a link to more information.

We are hopeful that you will find this information not only helpful in your path but in the path of many others "walking" down this same road.

Sincerely,

Deb Hubsmith  
Director  
Safe Routes to School National Partnership



# Making the Case for Bicycle and Pedestrian Education

## Overview

A basic understanding of bicycle and pedestrian safety skills can play an important role in the health and growth of today's students into adulthood. Children are pedestrians their entire lives and bicycling is increasing in popularity; providing them the tools to do so safely should be of the utmost importance to parents, educators and community members. Just as schools teach mathematics to support students in making good financial decisions and teach technology to help students navigate the increasing reliance on computers, walking and bicycling, it could be argued, are skills and habits that every child and adult will use throughout life, so everyone should learn to do it safely and efficiently.

The responsibility of teaching students to safely navigate traffic on foot and by bicycle, like many life skills, should be a responsibility shared between the home and school. Investing in ongoing trainings for children not only prepares them for a lifetime of walking and bicycling, but also lays the foundation of their knowledge about traffic safety in general. Students should begin to learn about pedestrian traffic safety at a very young age so that by middle school they will be able to apply this knowledge to operating a bicycle, skateboard, scooter, roller-blades, wheelchair, or any other vehicle as they approach adulthood. Implementing pedestrian education at an early age, and continuing to build upon that foundation during the years that follow is critical to empowering children to live an active and healthy lifestyle that includes safely walking or bicycling to school, the store, the park, or a friend's house. Enabling children through education is the first step in encouraging that lifestyle.



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## The European Model

For years, countries, cities and schools in Europe have seen the benefits of investing in bicycle and pedestrian education and infrastructure. Schools in Denmark have required road safety education in primary and secondary schools since 1994,<sup>1</sup> contributing to the safety education of the 45% of Danish children who bicycle to school.<sup>2</sup> Eventually, these students become adults, who in Denmark make 24% of their trips less than five kilometers by bicycle, and 36% of Danish adults bicycle to work at least once a week.<sup>3</sup> Despite the large number of Danes that bicycle and walk for transportation, the number of bicycle crashes resulting in a fatality decreased by over fifty percent between 1997 and 2006.<sup>4</sup> Meanwhile, a Children's Traffic Club in the United Kingdom starts teaching students about road safety as early as 3 and 4 years old<sup>5</sup>, encouraging a lifetime of good decisions near automobile traffic.

Several of these European communities have as many as 20 times the number of adults who bicycle for transportation compared to the average U.S. city.<sup>6</sup> These high levels of walking and bicycling can, in part, be attributed to early lessons that teach the student bicyclist and pedestrian about the benefits of active transportation while reinforcing safety concepts. These European communities have capitalized on the benefits of investing in bicycle and pedestrian education, while communities and school districts in the United States are still working to catch up.

## Bicycle Education: The Current U.S. Landscape

In 2008 alone, 52,000 bicyclists were injured in traffic crashes throughout the United States and an additional 716 were killed.<sup>7</sup> A bicycle and its rider, legally considered a vehicle, are required to learn and obey the same laws as motorists. With this responsibility on the roads comes the need to ensure that young bicyclists understand traffic laws and can safely maneuver their bicycles.

In the early 1970's a surge in bicycle sales led the U.S. Department of Transportation's National Highway Traffic Safety Administration to get involved in bicycle safety programs out of a concern that there would be an increase



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in bicyclist fatalities.<sup>8</sup> With very little data to act as the foundation of educational programs, federal, state, and local governments as well as nonprofit organizations began to build the case for effective bicycle safety curricula by developing, implementing and testing various strategies. Since then, many curricula have been developed to meet the various needs of the practitioner. Overall, this learning process has begun to refine curricula to focus on the specific needs of this audience: children.

### Pedestrian Education: The Current U.S. Landscape

In 2009, the National Highway and Traffic Safety Administration (NHTSA) estimates that 13,000 children age 14 and younger were injured in pedestrian related crashes and an additional 244 were killed<sup>9</sup>. While the number of pedestrian collisions among children has dropped significantly since the early eighties, this could be attributed to a likely decrease in the overall exposure of children to pedestrian activities, not to an improvement in conditions or behaviors.<sup>10</sup>

Pedestrian safety education can be taught in virtually any classroom. It is here that students learn fundamental traffic safety skills such as recognizing stop signs, looking both ways before crossing the street, and dangers of the parking lot. Unfortunately, pedestrian education in the classroom often ends with these elementary messages. Pedestrian skills, from deciding when to cross the street to judging the speed of oncoming traffic, are integrated incrementally by children over time. Because of this, many are coming to understand that pedestrian education should be an ongoing effort on the part of parents and schools at multiple stages during a child's development.

Research conducted on the effectiveness of pedestrian related curricula has demonstrated that implementing effective curricula can have dramatic effects on the safe behaviors of the participating children. One study in particular showed that a five year old who received pedestrian safety training was able to perform at the same level as an eleven year old who had never received the training.<sup>11</sup>

**Enforcement** – Partnering with local law enforcement to ensure traffic laws are obeyed in the vicinity of schools (this includes enforcement of speeds, yielding to pedestrians in crosswalks and proper walking and bicycling behaviors) and initiating community enforcement such as crossing guard programs.

**Encouragement** – Using events and activities to promote walking and bicycling.

**Evaluation** – Monitoring and documenting outcomes and trends through the collection of data, including the collection of data before and after the intervention(s).<sup>12</sup>

The burgeoning Safe Routes to School movement has drawn attention and popularity from many stakeholders, including local governments, school districts, administrations, teachers, parents and students all with the goal of improving active transportation and safety to reduce traffic and improve health. All stakeholders can play important roles in identifying funding and implementing bicycle and pedestrian education in schools and communities.



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### Safe Routes to School



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Safe Routes to School is a growing national and international movement to increase walking and bicycling and improve safety, following a decline in walking and bicycling that started in the 1970's. In 2005 a federal Safe Routes to School funding program was established by Congress, administered by state departments of transportation, that provides grant funds and/or technical assistance to schools and communities, and many communities and schools are also funding their own programs. Safe Routes to School consists of the "Five E's":

**Engineering** – Creating operational and physical improvements to the infrastructure surrounding schools that reduce speeds and potential conflicts with motor vehicle traffic, and establish safer and fully accessible crossings, walkways, trails and bikeways.

**Education** – Teaching children about the broad range of transportation choices, instructing them in important lifelong bicycling and walking safety skills and launching driver safety campaigns in the vicinity of schools.

### RESOURCES

Child Pedestrian Safety Education – National Highway and Traffic Safety Administration

<http://tinyurl.com/childpedsafetyed>

Traffic Education of Children 4-12 Years Old

[http://www.swov.nl/rapport/Factsheets/UK/FS\\_Traffic\\_education\\_children.pdf](http://www.swov.nl/rapport/Factsheets/UK/FS_Traffic_education_children.pdf)

Latest Trends in Child Pedestrian Safety – Safe Kids USA

<http://tinyurl.com/latest-trends-childped-safety>

Starting a Safe Routes to School program – Safe Routes to School National Partnership <http://www.saferoutespartnership.org/local/4191>

Planning a Bicycle or Pedestrian Education program – National Center for Safe Routes to School <http://www.saferoutesinfo.org/guide/education/index.cfm>



End Notes

- 1 "Pedestrian and Bicyclist Safety and Mobility in Europe," International Technology Scanning Program. February 2010. Accessed: January 5th, 2011. <http://www.international.fhwa.dot.gov/pubs/pl10010/pl10010.pdf>
- 2 "Cycling Statistics From Denmark," Cycling Embassy of Denmark. Accessed January 14th , 2011. <http://www.cycling-embassy.dk/2010/03/08/cycling-statistics-from-denmark/>
- 3 "Cycling Statistics From Denmark," Cycling Embassy of Denmark. Accessed January 14th , 2011. <http://www.cycling-embassy.dk/2010/03/08/cycling-statistics-from-denmark/>
- 4 "Bicycling Statistics," Cycling Embassy of Denmark. Accessed January 20th, 2011. <http://www.cycling-embassy.dk/statistics/>
- 5 "Pedestrian and Bicyclist Safety and Mobility in Europe," International Technology Scanning Program. February 2010. Accessed: January 5th, 2011. <http://www.international.fhwa.dot.gov/pubs/pl10010/pl10010.pdf>
- 6 "Bicycling in America in 2003," America Bikes. Accessed: February 16th, 2011. <http://www.bikeleague.org/media/facts/pdf/BicyclinginAmerica02to03.pdf>.
- 7 "Traffic Safety Facts 2008 Data: Bicyclists and Other Cyclists," National Highway Traffic Safety Administration. Accessed: January 2nd, 2011. <http://www.nrd.nhtsa.dot.gov/pubs/811156.pdf>
- 8 "National Bicycle Safety Education Curriculum," Federal Highway Administration. Accessed: January 2nd , 2011. <http://www.bicyclinginfo.org/education/resource/intropdf.pdf>
- 9 "Traffic Safety Facts 2009 Data: Children," Federal Highway Administration. Accessed: January 6th, 2010. <http://www.nrd.nhtsa.dot.gov/Pubs/811387.pdf>
- 10 "Child Pedestrian Education: Applying Learning and Developmental Theories to Develop Safer Street Crossing Strategies," National Highway Traffic Safety Administration. Accessed: January 10th, 2010. <http://www.nhtsa.gov/DOT/NHTSA/Traffic%20Injury%20Control/Articles/Associated%20Files/811190.pdf>
- 11 "Child Pedestrian Education: Applying Learning and Developmental Theories to Develop Safer Street Crossing Strategies," National Highway Traffic Safety Administration. Accessed: January 10th, 2010. <http://www.nhtsa.gov/DOT/NHTSA/Traffic%20Injury%20Control/Articles/Associated%20Files/811190.pdf>
- 12 "Educator's Guide: Getting Students Active through Safe Routes to School," Safe Routes to School National Partnership. Accessed: January 2nd, 2011 (page 14) <http://www.saferoutespartnership.org/media/file/EducatorsGuide.pdf>



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Bicycle Transportation Alliance



# Importance of this Guide

Over the past 10 years, a large pool of materials has become available throughout the country on bicycle and pedestrian curricula. As this pool has grown there has not been a reliable way for educators or advocates to assess these existing curricula or to judge which curriculum is best suited for their local needs. It is the intention of this guide to help practitioners and others choose a curriculum that best informs the needs of their particular student population on how to safely behave on a bicycle or on foot.

## For Children

It has been demonstrated that physical activity in the day of a child contributes to better overall health<sup>13,14</sup>, further activity<sup>15</sup>, effective learning, and the ability to stay on task<sup>16</sup>. Walking and bicycling are good for children, yet surveys show that active transportation has become less prevalent. With the decline of bicycling and walking to school in the last few decades, many students of this generation are missing the opportunity to explore the world through diverse means. For the first time in human history, this generation may live shorter, less healthy lives than their parents.

Children will benefit from bicycle and pedestrian safety instruction. Implementing a successful bicycle and pedestrian curriculum will give children the tools they need to lead more healthful and productive lives.



*Bicycle Colorado*

## For Advocates and Community Members

Creating safe places and opportunities for children to walk and bicycle through infrastructure development will, ultimately, create a safer and more livable environment for everyone. Increasing the number of informed bicyclists and pedestrians through education will inevitably create more demand for the use of bike lanes, paths and trails, bike racks, safer street crossings, and lower traffic speeds.

The more bicyclists and pedestrians there are, the safer everyone will be, as statistics show that even as the number of bicyclists increases the rate of crashes can remain flat<sup>17</sup>. This demonstrates that that there is, indeed, safety in numbers. As drivers become accustomed to seeing bicyclists and pedestrians they adjust their expectations accordingly and learn to share the road. Educating students and parents on safe bicycling and walking skills encourages and enables them to participate in these activities more frequently, and improves their travel behaviors, a practice which contributes to a safer environment for walking and bicycling for everyone.

An increase in walking and bicycling creates further need for safe facilities that provide more opportunities for children to be active. Neighborhoods that include thoughtful designs for walkability have been shown to have lower obesity rates than less walkable neighborhoods.<sup>18</sup> Therefore, improving upon existing design to create more walkable and bikeable spaces can impact the rate of obesity in any given neighborhood while providing safe places for residents to recreate.

Creating informed pedestrians and bicyclists through education will inspire demand for better facilities and improve conditions, which will in turn create more pedestrians and bicyclists. In the short term, bicycle and pedestrian education and activity can lead to safer communities, and in the long term can contribute to better connected, healthier and happier communities.



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## For Physical Education Teachers

For physical education teachers tasked with generating active, healthy students, the physical nature of bicycle and pedestrian course activities are a natural fit. PE teachers are in an excellent position to ensure that students receive this training.

However, despite evidence that more time in physical education classes will contribute to better academics and healthier children,<sup>19,20</sup> PE teachers are still limited in the amount of time in which they have access to students. This reduction in class time has made many physical education teachers rethink their approaches and hone in on skills that are fundamentally critical to the lifelong health and well-being of their students; bicycle and pedestrian education in the classroom is not only one of these fundamental skills, but bicycle and pedestrian education also contributes to the mission of the Alliance for Health, Physical Education, Recreation and Dance (AAPERD) which aims for "a society in which all individuals enjoy an optimal quality of life through appreciation and participation in an active and creative, health promoting lifestyle"<sup>21</sup>.

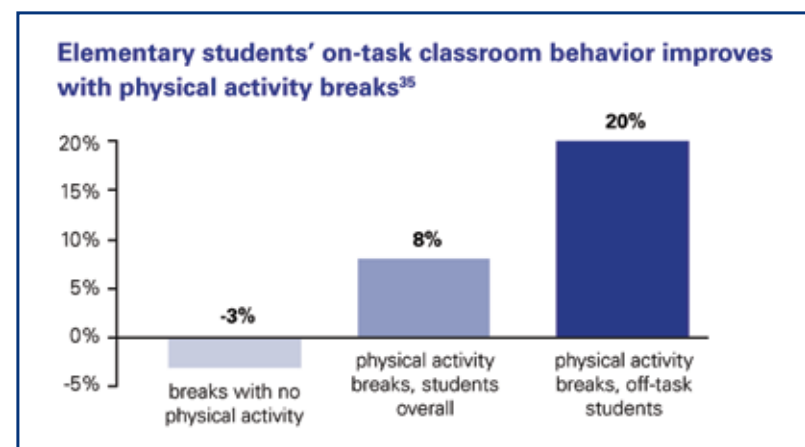
Physical education teachers who choose to incorporate bicycle and pedestrian education into their classroom bestow their students with a lifelong skill that can, and will, be used outside of the classroom for decades beyond the first lesson.

## For Other Teachers

Physical education teachers are not the only teachers who benefit from implementing bicycle and pedestrian curricula in the classroom. Classroom teachers, who struggle to meet the academic standards of the Elementary and Secondary Education Act (previously known as No Child Left Behind) while managing the behavior issues due to a rise in Attention Deficit Hyperactivity Disorder (ADHD), sensory processing disorders and general classroom discipline, can also benefit from having more students walking and bicycling. A recent study<sup>22</sup> has contributed to the growing quantity of research that students who walk and bicycle to school are more alert and concentrate better than those who do not.

A 12 week research project conducted in 2006 observed the effects of providing elementary students with a short activity break. The break increased student's time focused and spent on-task by eight percent but more impressive was the 20 percent increase in on-task time by students who were normally the least on-task.<sup>23</sup> (see chart)

Curricula that are tailored to State Standards or Common Core Standards (Common Core Standards are intended to provide a clear and consistent expectation of what students need to learn so teachers and parents know what they need to do in order to help them) provide the opportunity for teachers to promote walking and bicycling while meeting school requirements during their classroom time. Many bicycle and pedestrian curricula meet education standards,



Active Living Research: [http://www.activelivingresearch.org/files/Active\\_Ed.pdf](http://www.activelivingresearch.org/files/Active_Ed.pdf)

and can be intertwined with interesting activities in subjects like English, science, social studies, art and math. Teachers looking to implement these curricula should choose based on compliance to their **state's chosen standards**.

Taking the time during school hours to actively promote walking and bicycling to school through a traffic safety and awareness curriculum gives students the guidance they need to participate in active transportation on their way to and from school which allows them to arrive for class relaxed, refreshed, and ready to learn.

## For School Administrators

The widespread effects of teaching bicycle and pedestrian skills are also beneficial to school administrators. Although teaching these concepts to students ideally occurs in the classroom, the effectiveness and overall outcome of this type of program is far more positive when implemented as a piece of a Coordinated School Health Program (CSHP), a concept of the Centers for Disease Control and Prevention, a Safe Routes to School program, or integrated into the federally required school district wellness policy that reinforces the concepts taught in the classroom. A CSHP is made up of eight components<sup>24</sup> which include physical education, health education, healthy school environment, health promotion for staff and family and community involvement.<sup>25</sup> Each component of a CSHP can include policies that promote walking and bicycling for fitness and health beginning, of course, with implementing lessons in the classroom.

## Addressing Limited Class Time

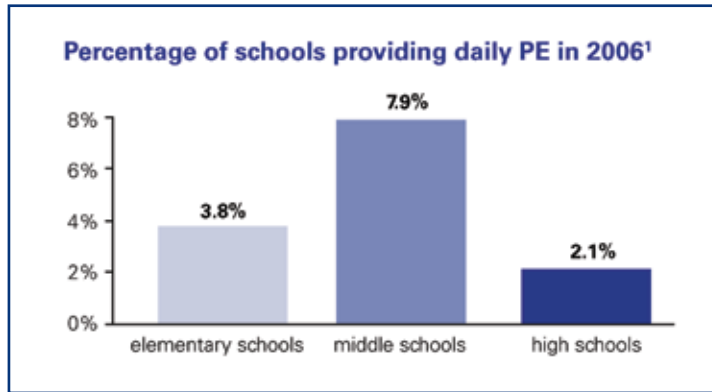
In 2006, less than 4 percent of elementary schools and 8 percent of middle schools in the United States offered daily physical education to their students.<sup>26</sup>

In order to encourage physical activity beginning in early childhood and improve student physical health and academic performance, those looking to implement bicycle and pedestrian programs in the PE classroom must address the ongoing reduction in the amount of daily physical activity provided to students. The Elementary and Secondary Education Act (ESEA) encourages schools and their teachers to prepare to meet testing requirements in subjects like math and English. As a result, school administrators have



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Active Living Research: [http://www.activelivingresearch.org/files/Active\\_Ed.pdf](http://www.activelivingresearch.org/files/Active_Ed.pdf)

seen the need to cut, if not entirely eliminate<sup>27</sup> PE programs to free up time and money to reallocate to test preparation through increased time spent teaching core subjects.

Administrators who are working toward a higher level of achievement on their Student Assessment Programs (SAP) by cutting this critical period of the day, may actually be decreasing their students potential - according to recent research, maintaining or increasing that PE time can lead to improved grades and scores on standardized achievement tests.<sup>28</sup>

### Physical Activity Shown to Increase Academic Performance

A study conducted in more than 500 Virginia elementary schools that reduced or eliminated the amount of time students spent in music, art, and physical education, examined the effect on academic performance. Decreasing or eliminating the time in these classes did not increase student academic performance.<sup>29</sup>

This study and others<sup>30</sup> make a noteworthy point that the addition of physical education into the daily routine of a child does not appear to negatively affect their overall academic achievement or their performance on standardized tests. In fact, some studies suggest that the additional time students are given actually improves their performance,<sup>31,32</sup> and further research has shown that daily physical activity is tied to student academic performance and attitude toward school.<sup>33</sup>

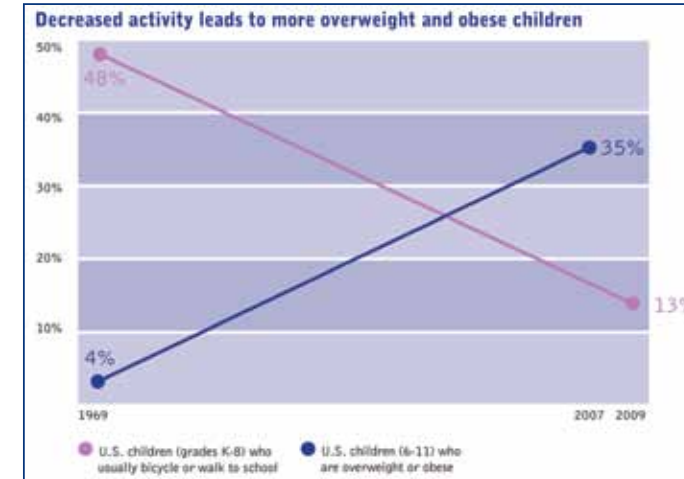


Bicycle Transportation Alliance

Meanwhile, parents are noticing the value of daily physical activity for their children. A recent survey concluded that 95 percent of parents surveyed felt that daily activity improved their child's academic performance and should be a part of K-12 education.<sup>34</sup>

### Addressing Student Health

As budget cuts further limit physical education class time and ESEA's standards push schools into spending less time being physically active, the nation's youth are simultaneously becoming increasingly obese and at risk for chronic health disease. According to the Centers for Disease Control and Prevention, childhood obesity has more than tripled in the past 30 years. The number of overweight or obese children aged 6 to 11 years increased from four percent in 1969 to 35% in 2007.<sup>35,36</sup> This increase coincided with an alarming decrease in students walking and bicycling to school. (See Chart)



Safe Routes to School National Partnership



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These startling statistics are only the beginning. The childhood obesity epidemic, fueled by less healthy food choices and chronic inactivity, has led to further health problems including asthma, cardiovascular risk factors that lead to adult morbidity, diabetes and significant psychological impact on the obese child.<sup>41</sup> Students simply aren't as healthy as they once were.

Meanwhile, studies have shown that students who have a higher level of physical fitness have been associated with better rates of attendance and fewer disciplinary incidents with regards to violence, drugs, alcohol or truancy.<sup>42</sup> Student attendance has also been negatively affected by the increase in student asthma. Among the four million students who reported an asthma attack in 2002, it is estimated that 12.8 million school days were missed.<sup>43</sup> Schools and communities concerned with these statistics are engaging youth through comprehensive, collaborative, and community oriented programs like Michelle Obama's Let's Move and Safe Routes to School to begin addressing overall student health. Bicycling and walking to school and in daily life is part of this solution.



### Addressing School Transportation Costs

Good models for local policies around school transportation focus not just on busing, but also on the safety of children who walk and bicycle to and from school. Many of these models set conditions for the determination of safe walking zones – or on the contrary, areas that are unsafe for walking and bicycling, resulting in those children being bused. In the most proactive approach, local communities can seek to fix those safety issues, allowing children to walk and bicycle again, and reducing busing costs.<sup>44</sup>

Hazard busing, the act of transporting students short distances by bus because of unsafe conditions between the home and the school, can be a difficult road block for busing costs. Good policies identify “the types of hazards that are unacceptable for children walking and bicycling and link ‘hazard bus’ funding for the children to an eventual fix for the hazard. When the hazards are repaired, children who live close to a school can safely walk or bicycle, and the school district can save on school transportation costs.”<sup>45</sup>

Under financial duress, many school districts have been cutting school bus funding and other transportation costs to unearth cost saving measures. While advocates of walking and bicycling to school may see the need to cut these expenses, it would be irresponsible to cut bus routes without introducing a concurrent effort to address student safety concerns, as this will likely lead to greater traffic congestion, poorer air quality, and higher parent transportation costs due to an increase in parents driving children to school. As school administrators discuss the possibility of bus cuts, the first consideration should be how to make it safer and easier for students to arrive at school through active methods such as walking and bicycling, and through innovative policies, education and Safe Routes to School programs.<sup>46</sup>

While bicycle and pedestrian education is not the whole solution to a problem as complex as school transportation costs, as a piece of a Coordinated School Health Plan or Safe Routes to School program it can help alleviate unnecessary transportation costs to the school.

### Addressing School Safety

Bicycle and pedestrian education can benefit schools and their administrators by contributing to an improved arrival and dismissal procedure. Adequately educating students and parents about traffic safety through bicycle and pedestrian education can contribute to safer behaviors during these chaotic periods of the school day. Teachers who are responsible for corralling students during arrival and dismissal will be grateful to an administration that helps tame a wild and seemingly disorganized part of the day.

### Community Relations

Building strong relations with the community is a goal of all schools. The most dependable predictor of parent involvement at a school and with their child at home are the school programs and practices that involve parents in the school and its lessons.<sup>19</sup> Bicycle



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and pedestrian instruction, as a part of a larger Safe Routes to School program, can literally bring parents to the door of the school, providing more opportunities for engagement and conversation. Encouraging parents to walk and bicycle with their child instead of drive allows them occasions to connect with their child each morning and works to decrease the traffic near the school.

Other community members such as law enforcement and local businesses can become more involved with the school through the personal encounters and opportunities created by walking and bicycling programs. Creating this connection between the community and the school through walking and bicycling can help build relationships with key stakeholders and ensure that the needs of the school are prioritized by the community leaders, elected officials, and the voting public.<sup>47</sup>



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## RESOURCES

**Educator's Guide – Safe Routes to School National Partnership**  
<http://www.saferoutespartnership.org/educatorsguide>

**Evidence Based Physical Activity for School-Age Youth**  
<http://tinyurl.com/evidence-based-physical-act>

**Effect of Physical Education and Activity Levels on Academic Achievement in Children**  
<http://tinyurl.com/pe-activity-levels>

**Active Education: Physical Education, Physical Activity and Academic Performance**  
[http://www.activelivingresearch.org/files/Active\\_Ed.pdf](http://www.activelivingresearch.org/files/Active_Ed.pdf)

**School Walk and Bike Routes: A Guide for Planning and Improving Walk and Bike to School Options for Students**  
<http://tinyurl.com/school-walk-routes>

**What School Administrators Can Do to Enhance Student Learning by Supporting a Coordinated Approach to Health**  
[http://www.ashaweb.org/files/public/Miscellaneous/Administrators\\_Coordinated\\_Approach\\_Support.pdf](http://www.ashaweb.org/files/public/Miscellaneous/Administrators_Coordinated_Approach_Support.pdf)

**State Education Standards**  
<http://www.educationworld.com/standards/state/index.shtml>



## End Notes

- 13 Bungum, T. L., and M. L. Vincent. "Determinants of Physical Activity Among Female Athletes." *American Journal of Preventive Med.* no. 13 (1997):115–122.
- 14 Butcher, J. "Socialization of Adolescent Girls into Physical Activity." *Adolescence* no. 18 (1983):753–766.
- 15 Sirard JR, Riner WF, McIver KL and Pate RR. "Physical Activity and Active Commuting to Elementary School." *Medicine and Science in Sports and Exercise*, no. 37(2005): 2062–2069.
- 16 Mahar M, Murphy SK, Rowe DA, Golden J, Shields AT, Raedke TD. "Effects of a Classroom-Based Program on Physical Activity and On-Task Behavior." *Medicine and Science in Sports and Exercise*, no. 38 (2006):2086-2094.
- 17 "Portland Bicycle Count Report 2009," City of Portland. Accessed: January 11th, 2011. <http://bikeportland.org/wp-content/uploads/2010/01/bikecount2009reportfinal.pdf>
- 18 Frank, Lawrence D., et al. "Stepping towards causation: Do built environments or neighborhood and travel preferences explain physical activity, driving, and obesity?" *Social Science & Medicine*, 65 (2007) , 1898–1914.
- 19 McNaughten D, Gabbard C. "Physical exertion and immediate mental performance of sixth-grade children. " *Perceptual and Motor Skills* 77 (1993):1155- 1159.
- 20 Caterino MC, Polak ED. "Effects of two types of activity on the performance of second-, third-, and fourth-grade students on a test of concentration." *Perceptual and Motor Skills* 89 (1999):245-248.
- 21 "AAHPERD Mission Statement," American Alliance for Health, Physical Education, Recreation and Dance. Accessed January 14th, 2011. <http://www.aahperd.org/about/mission.cfm>
- 22 Jarrett OS, Maxwell DM, Dickerson C, Hoge P, Davies G, Yetley A. "Impact of recess on classroom behavior: group effects and individual differences," *The Journal of Educational Research* 92(1998):121-126.
- 23 Jarrett OS, Maxwell DM, Dickerson C, Hoge P, Davies G, Yetley A. "Impact of recess on classroom behavior: group effects and individual differences," *The Journal of Educational Research* 92 (1998):121-126.
- 24 "Coordinated School Health: Components of Coordinated School Health," Centers for Disease Control. Accessed: January 5th, 2011. <http://www.cdc.gov/HealthyYouth/CSHP/components.htm>
- 25 "Physical Education Curriculum Analysis Tool," Centers for Disease Control and Prevention. Accessed: January 10th, 2011. <http://www.cdc.gov/HealthyYouth/pecat/pdf/PECAT.pdf>
- 26 Lee, S. M., Burgeson, C. R., Fulton, J. E., & Spain, C. G. "Physical education and physical activity: Results from the School Health Policies and Programs Study 2006," *Journal of School Health*, 77 (2007), 435–463.
- 27 "2010 Shape of the nation report," National Association for Sport and Physical Education and American Heart Association. Accessed: December 30th, 2010. <http://www.aahperd.org/naspe/publications/upload/Shape-of-the-tion-Revised2PDF.pdf>
- 28 "Active Education: Physical Education, Physical Activity and Academic Performance," Active Living Research. Accessed: January 13th, 2011. [http://www.activelivingresearch.org/files/Active\\_Ed.pdf](http://www.activelivingresearch.org/files/Active_Ed.pdf)
- 29 Wilkins, J. L., Graham, G., Parker, S., Westfall, S., Fraser, R. G., & Tembo, M. "Time in the arts and physical education and school achievement," *Journal of Curriculum Studies*, 35 (2003): 721–734.
- 30 Coe, D. P., Pivarnik, J.M., Womach, C.J., Reeves, M.J., & Malina, R.M. "Effect of physical education and activity levels on academic achievement in children," *Medicine and Science in Sports and Exercise*, 38 (2006):1515-1519
- 31 "Active Education: Physical Education, Physical Activity and Academic Performance," Active Living Research. Accessed: January 13th, 2011. [http://www.activelivingresearch.org/files/Active\\_Ed.pdf](http://www.activelivingresearch.org/files/Active_Ed.pdf)
- 32 Nelson MC, Gordon-Larson P. "Physical activity and sedentary behavior patterns are associated with selected adolescent health risk behaviors," *Pediatrics* 117 (2006):1281-1290.
- 33 "Physical Education is Critical to a Complete Education," National Association for Sport and Physical Education. Accessed: January 17th, 2011. <http://www.aahperd.org/naspe/standards/upload/Physical-Education-is-Critical-to-a-Complete-Education-2001.pdf>
34. "Parents' views of children's health and fitness: A summary of results," National Association for Sport and Physical Education, Accessed: January 25th, 2011. <http://nccic.acf.hhs.gov/node/24651>
- 35 "Prevalence of Obesity Among Children and Adolescents: United States, Trends 1963-1965 Through 2007-2008," Centers for Disease Control and Prevention. National Health and Nutrition Examination Survey (NHANES), Accessed: January 25th, 2011. [http://www.cdc.gov/nchs/data/hestat/obesity\\_child\\_07\\_08/obesity\\_child\\_07\\_08.htm](http://www.cdc.gov/nchs/data/hestat/obesity_child_07_08/obesity_child_07_08.htm)
- 36 Singh, Gopal K., Kogan, Michael, D., and Van Dyck, Peter C. "Changes in State-Specific Childhood Obesity and Overweight Prevalence in the United States From 2003 to 2007." *Archives of Pediatrics and Adolescent Medicine*. 164.7 (2010).
- 37 2009 National Household Travel Survey (NHTS). U.S. Department of Transportation Federal Highway Administration. (January 2010). Accessed: January 25th, 2011. <http://nhts.orl.gov/publications.shtml>.
- 38 Singh, Gopal K., Kogan, Michael, D., and Van Dyck, Peter C. "Changes in State-Specific Childhood Obesity and Overweight Prevalence in the United States From 2003 to 2007." *Archives of Pediatrics and Adolescent Medicine*. 164.7 (2010).
- 39 "Prevalence of Obesity Among Children and Adolescents: United States, Trends 1963-1965 Through 2007-2008," Centers for Disease Control and Prevention. National Health and Nutrition Examination Survey (NHANES). Accessed: February 22, 2011. [http://www.cdc.gov/nchs/data/hestat/obesity\\_child\\_07\\_08/obesity\\_child\\_07\\_08.htm](http://www.cdc.gov/nchs/data/hestat/obesity_child_07_08/obesity_child_07_08.htm)
- 40 "Transportation Characteristics of School Children, Report No. 4." Washington, DC: Nationwide Personal Transportation Study, Federal Highway Administration. (July 1972)
- 41 J J Reilly, E Methven, Z C McDowell, B Hacking, D Alexander, L Stewart, C J H Kelnar. "Health consequences of obesity," *Archives of Disease in Children* 88 (2003):748–752. Accessed: January 10th, 2010. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1719633/pdf/v088p00748.pdf>
- 42 Davis, C.L., Tomporowski, P.D., Boyle, C.A., Waller, J.L., Miller, P.H, Naglieri, J.A., et al. "Effects of aerobic exercise on overweight children's cognitive functioning: A randomized control trial," *Research Quarterly for Exercise and Sport* 78 (2007): 510-519.
- 43 "Asthma," Centers for Disease Control and Prevention, Accessed: February 22, 2011. <http://www.cdc.gov/HealthyYouth/asthma/>
- 44 "School Bus Cuts," Safe Routes to School National Partnership. Accessed: January 3rd, 2011. <http://www.saferoutespartnership.org/state/bestpractices/schoolbuscuts>
- 45 "School Bus Cuts," Safe Routes to School National Partnership. Accessed: January 3rd, 2011. <http://www.saferoutespartnership.org/state/bestpractices/schoolbuscuts>
- 46 "School Bus Cuts," Safe Routes to School National Partnership. Accessed: January 3rd, 2011. <http://www.saferoutespartnership.org/state/bestpractices/schoolbuscuts>
- 47 "Educator's Guide: Getting Students Active through Safe Routes to School," Safe Routes to School National Partnership. Accessed: January 2nd, 2011 (page 14) <http://www.saferoutespartnership.org/media/file/EducatorsGuide.pdf>



Bicycle Colorado



# Policies and Funding that Aid in School Implementation

In order to have access to schools, facilities, local streets around schools, and even to pay for instruction and equipment, advocates may need to achieve local policy changes first. Safety fears, limited classroom time, poor street conditions, fast-moving traffic or a reluctant principal can make it difficult or impossible to provide beneficial bicycle and pedestrian safety education and skills training at a school or school district. Here are some steps that can help to overcome these barriers:

## Access to the Classroom

Acquiring a curriculum that matches state teaching standards can help gain access and acceptance by school administrators and teachers. Check to see if there is a state or local curriculum that has been shown to meet the state's standards by the department of education. This type of curriculum will be more widely accepted by schoolteachers. Should there not be a curriculum that conforms to your state standards, many curriculum developers are willing to adapt theirs to meet different state standards.

Many principals are reluctant to allow for outside instruction in classrooms, especially in schools that are underperforming according to federal standards. In these schools, classroom time is extremely valuable, and care must be taken to demonstrate to principals and teachers why a bicycle or pedestrian course is valuable enough to take up precious time. The previous section dedicated to school administrators used in tandem with the **Getting Students Active through Safe Routes to School: Policies and Action Steps for Education Policymakers and Professionals** published by the Safe Routes to School National Partnership will provide excellent resources for demonstrating the need for this.



Neighbor NAV

In addition, many programs expect the school itself to implement a curriculum. To gain access to classrooms and even the school in general, local volunteers or paid staff can teach, reducing the burden of course preparation and responsibility. Talk to the principal about how the course will take place, and reassure the principal of the quality of the program and its components, or use feedback from others that have used the curriculum to bolster its success. Once the effect of the curriculum is demonstrated it is often easier to get buy in from teachers and staff to continue teaching the curriculum in the future. There may already be champions among the school staff who are willing to host a class or work to get the principal's buy in. Speak to the staff to gauge interest and recruit champions.



Bicycle Transportation Alliance

## Allowing Bicycling and Walking

Some principals, and in some cases whole school districts, do not allow bicycling or even walking to school due to safety fears in the surrounding neighborhood. These fears typically range from 'stranger danger' because there is an element of street crime, to traffic safety dangers due to poor infrastructure conditions or speeding traffic and poor parental driving behaviors. These policies should be addressed by first investigating their origin and then working with the school administration to identify possible alternate solutions to their concerns, which may require establishing components of a Safe Routes to School program.

To find out more about addressing school bicycle and walking policies go to: [http://www.saferoutesinfo.org/resources/collateral/barrier\\_policy\\_tip\\_sheet.pdf](http://www.saferoutesinfo.org/resources/collateral/barrier_policy_tip_sheet.pdf)

Fear of legal liability due to children getting hit by cars, Fear of legal liability due to children getting hit by cars, bicycle, scooter or skateboard theft, or other problems is another common barrier to the school administration's acceptance of walking and bicycling to school, but it is largely an unproven risk. In fact, there are many more benefits of walking and bicycling than there are risks. School policy should generally allow bicycling and walking to school.

For more information on minimizing liability risk and federal volunteer protections, go to: <http://www.nplanonline.org/childhood-obesity/products/SRTS-resources>.



## Bicycle Parking and Security

Providing a secure, well-located bicycle rack(s) or a fenced, covered bicycle corral with enough capacity to safely and conveniently store enough bicycles for the student population is critically important. Since bicycle safety instruction creates interest in bicycling, there may be a corresponding increase in the number of students riding to school on bicycles, skateboards, scooters, roller blades or wheelchairs. Bicycles, scooters and skateboards are big enough to need outdoor or indoor storage. Some schools may have limited space for bicycle racks, so additional racks could go on adjacent sidewalks or other nearby locations. However, the farther away from high foot traffic areas, the greater the risk of theft and damage to bicycles while they are locked during the school day or during evening or weekend events. Schools should provide racks – state SRTS programs and other funding sources and volunteers may be a source to pay for or build on-campus or off-campus racks, covers, lockers or corrals.

Bicycle racks should not be the older-style 'wheel-benders' that secure only one wheel and not also the frame. Bicycle racks need to have at least two 'touch-points', so that a bicycle lock can secure the front wheel and frame, and even the back wheel, simultaneously.



photo credits (left to right)  
Bike Rack at Elementary School, © Jesse Kunerth | Dreamstime.com  
www.pedbikeimages.org | Dan Burden  
www.pedbikeimages.org | Mike Cynecki

Schools should have the right amount of appropriate racks on campus, or nearby. Bicycle racks are most secure when surrounded by a 'corral', a fenced or walled in area that includes a lockable entrance point. This type of facility can reduce theft and vandalism, but may require a school representative to lock and unlock during the school day.

Covered bicycle racks that protect bicycles from rain are also going to provide additional comfort and protection, and may therefore increase the number of students riding to school. Covers can be built or purchased, and installed by a licensed contractor, the school facilities staff, or even by volunteers, depending on the school district's construction policy.

## Getting Funding

There are funds available through your state Safe Routes to School program that can be utilized for bicycle and pedestrian education and training. Check with your Safe Routes to School coordinator at the state department of transportation. These funds come from the federal government, are typically accessed through an annual application process, and usually require a local government agency to be the primary grantee. Your state may have already adopted a curriculum that can be utilized and paid for with state Safe Routes to School or other funds. Some states contract with an organization that provides direct instruction or a train-the-trainers model. In these, teachers or community members receive training and then go into schools and teach bicycle and pedestrian safety. Go to [saferoutespartnership.org/state](http://saferoutespartnership.org/state) to access information about your state's Safe Routes to School program.



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Safe Routes to School is not the only funding source available. Grants may be available through local health and other foundations, the departments of education or health, and long term, consistent funding has been obtained by some communities through transportation or sales tax increases or traffic fines. You may be able to find other federal or local funding sources also, such as local or state transportation department safety funds, funding from the parks and recreation department, even the police department, hospitals and other health, safety or injury prevention organizations and agencies. Check with local bicycle and pedestrian advocates, agencies and even community and neighborhood groups that have an interest in the health and wellbeing of students. In addition, bicycle, pedestrian, and other outdoor and recreation retail, manufacturing or distribution businesses, bicycling, walking or running clubs and teams, and other types of businesses and physical activity groups may have an interest in sponsoring an education class or program.

## RESOURCES

**What Is Safe Routes to School?**

<http://www.saferoutespartnership.org/local/4149>

**School Bicycling and Walking Policies: Addressing Policies that Hinder and Implementing Policies that Help**

[http://www.saferoutesinfo.org/resources/collateral/barrier\\_policy\\_tip\\_sheet.pdf](http://www.saferoutesinfo.org/resources/collateral/barrier_policy_tip_sheet.pdf)

**Safe Routes to School Program Activities and Funding Information by State**

<http://www.saferoutespartnership.org/state>

**Resources on Safe Routes to School Programs: Liability**

<http://www.nplanonline.org/childhood-obesity/products/SRTS-resources>



# What to Choose? A Description of Curricula and Considerations

This Bicycle and Pedestrian Curricula Guide was designed in an effort to create a singular inventory of all known bicycle and pedestrian related curricula currently being utilized in the United States. In order to ensure the quality and effectiveness of this guide, we began by interviewing more than a dozen traffic safety experts throughout the country. The intention of this initial interview was to define the most relevant categories with which to measure bicycle and pedestrian curricula, as well as identify current trends in the implementation of these curricula. The categories included in this guide are a result of these conversations. In an attempt to access all available bicycle and pedestrian curricula, a survey was emailed to Safe Routes to School professionals, bicycle and pedestrian advocates, health focused organizations, and state departments of transportation to gather the currently available curricula from across the country. The Inventory section of this guide is a compendium of those responses and suggestions from industry leaders. We decided to only include curricula, and not hand outs or flyers. This is a living document; the curriculum inventory will be updated on-line with newly developed curricula and any other curricula that initially may not have been discovered. This guide was also reviewed by a national advisory committee comprised of prominent bicycle and pedestrian educators and advocates, in order to ensure its utility to the field.



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## Bicycle and Pedestrian Curricula Inventory

With the ongoing development of both bicycle and pedestrian curricula internationally and the influx of funding towards these projects in the US, it is increasingly important to ensure that curricula are held to a consistent standard. As discussed previously, as organizations began to develop curricula, not all of them addressed the most significant safety issues for child pedestrians or child bicyclists. Over time, those developing curricula have become more consistent in including these important features while others, due to restrictions in class time and funding, have forgone teaching many of the critical aspects of safety and instead developed curricula that can be easily integrated into everyday classroom education. Rather than attempt to categorically measure the effectiveness of each listed curriculum, this guide aims to describe the relevance of certain characteristics with regard to what our staff and advisors consider a well-designed, comprehensive curriculum, and we leave it to the practitioner to discern which curriculum best meets the goals of their program.



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## Description of Categories and Curriculum Summaries

Every curriculum in this guide includes information that describes important aspects of that curriculum, as listed below, to aid the practitioner in choosing curricula that best suits their needs. The choice of descriptive categories was determined by each curriculum's owner or developer through the completion of a questionnaire, and was not independently verified by the Safe Routes to School National Partnership. These categories are represented both in the curricula inventory and on each curriculum's summary. Curricula that have been evaluated for their effectiveness through research have also been identified as such on the summary page.

### CATEGORIES

Subject: Bicycle and/or Pedestrian	Skills Based Education	Grade Level
Type of Instruction	Other Instructional Content	Program Duration
Requires Equipment	Cost	Meets State Education Standards
Intended Skill Level Trained	Intended Skill Level	Measures Student Learning Through Pre/Post Testing
Wrap-Around Materials	Adaptations for Special Needs students	Contact Information/ Link to Download

When utilizing the bicycle and pedestrian curricula guide it is important to fully understand the significance of each chosen category. The following descriptions aim to give the reader a better understanding of each category.



## Subject: Bicycle and/or Pedestrian

This first category allows the user to sort the list into either bicycle or pedestrian curricula. While some curricula identify strictly as bicycle or pedestrian, others contain separate teaching strategies for each mode and will be identified as both bicycle and pedestrian curriculum.

It is important to note that a curriculum that is categorized as 'bicycle' could be a bicycle safety presentation, a bicycle rodeo or skills clinic that includes student riding, a fully comprehensive course, or just bicycling subject matter as a part of a math or English lesson. They may range from a brief, less than one hour presentation to a comprehensive, multiple-hour program with on-street riding. In order to further define the specifics of the curriculum, the user must utilize the Other Instructional Content and Skills Based Education categories.

## Skills Based Education

As advocates diligently work to institutionalize bicycle and pedestrian education, several innovative methods for teaching these important concepts have come forth that adequately address the decrease in the availability of time and resources through the "traditional" classroom.

Students integrate critical concepts through skill acquisition, which involves three stages of development: the Cognitive Stage, the Associative Stage, and the Autonomous Stage.<sup>48</sup> In the cognitive stage the student is given instructions on how something is done and the student's knowledge about these concepts grows. In the example of bicycle safety, the Cognitive Stage allows the student to learn about important safety concepts, but not how to apply them on the bicycle itself.

The Associative Stage allows the student to make important connections from the Cognitive Stage by applying those in a skill-based setting. There must be ample opportunity for the student to transfer Cognitive Stage concepts into activities for the skill to ultimately transfer. In the bicycle safety example, a bicycle rodeo or group ride might allow the opportunity for the student to move to the Associative Stage, but often the time allotted to these activities isn't enough for complete skill transfer.

The final stage of skill acquisition, the Autonomous Stage, comes after the student has transferred the initial cognitive understanding through the Associative Stage and has practiced the skill enough that it comes with less cognitive effort. In our bicycle safety example, this stage of acquisition would only occur in a course that provides multiple hours of time and practice riding bicycles on the school campus, nearby park or trails, or on the street or sidewalk.

Using this theory to understand skill based education in the classroom, the practitioner can adequately surmise that if a curriculum doesn't include skills based education it is likely that students will not acquire any skills beyond the Cognitive Stage. Curricula that include a great deal of skills based education, such as after school bike clubs or other multiple hour skills courses in or out of school, will have a higher likelihood to transfer a student's traffic safety knowledge into safe riding or walking behaviors.



Sprockids

## Grade Level

The Grade Level category indicates the grade range with which the curriculum should be utilized. In general, you won't find many skills based bicycle safety courses aimed at kindergarteners, nor will you find rudimentary pedestrian safety materials designed for middle school students. This category is designed to help identify grade appropriate materials.

Choosing materials for the correct grade will also address the developmental appropriateness of various skills. For example, a child's ability to judge speed, sound and distance simultaneously isn't fully developed until around the age of 10.<sup>49</sup> While some quality curricula may be designed to teach bicycle safety concepts to students as young as 7, 8, and 9 years old, a developmentally appropriate curriculum would not encourage students to ride bicycles in traffic before they are old enough to make sound, safe decisions.

## Type of Instruction

There are various ways that information can be delivered to students. This guide only includes curricula that deliver information through an interactive module, in other words, those that require dynamic participation from students. Brochures and other types of passive materials were not included in this guide.

Curricula are organized into four categories of instruction: Train the Trainer, Teacher-Led, Trained Instructor-Led, and Computer-Aided. Some curricula fall into more than one of these categories. Each style of instruction holds its own unique benefits as well as its challenges.

### Train the Trainer

Utilizing the Train the Trainer curriculum is ideal for the overall quality of a program as it trains the instructor, whether a school teacher or community member, in the key messages and skills that are critical to an effective program. However, this method requires a large investment of time and energy on the part of the instructor, since attending a Train the Trainer course can take from several hours to several days. Train the Trainer programs can qualify for Professional Development Credits, which teachers and school administrators may find valuable.



Nieghbor NAV



### Teacher-Led

The Teacher-Led type of instruction, on the other hand, includes the information to be taught and directions for instruction inside the curriculum itself and the teacher should, after studying the curriculum, be able to adequately teach the concepts involved. Because the teacher will adapt a curriculum for their particular class, this model can be more sustainable than others. However, not every teacher will have a high level of expertise with bicycling or walking, even after studying a curriculum, so there can be limitations to the level of instruction passed on to students in these cases.

### Trained Instructor-Led

Bicycle and pedestrian advocacy groups, health departments and others, often employ or contract with professional bicycle or pedestrian safety and skills instructors who are able to deliver a curriculum for an interested teacher or school administration. This model, while perhaps less sustainable due to cost, ensures a high level of expertise in delivering the curriculum, and often the instructor's passion for active transportation is transferred to students, allowing students to become excited about walking and bicycling.

### Computer-Aided

Finally, relatively new to the arena, computer-aided instruction overcomes many of the issues of sustainability, cost, and to a lesser extent, expertise. Computer programs that walk students through much of the Cognitive Stage of the materials and tests for understanding will save the classroom or community teacher from needing to design an overall presentation to teach the materials. However, because currently many of the computer-aided curricula lack a vessel to transfer information to real world skill acquisition, they do not support the Associative or Autonomous learning stages, and within a comprehensive bicycle and pedestrian safety program should only be used as a precursor to more hands-on activities.

\*There are other types of bicycle and pedestrian-related curricula and information, such as Earn-a-Bike programs, where students learn about bicycle mechanics and/or other lessons. These types of programs can be a great addendum to traffic safety curricula. However, this guide does not cover those. This guide is only for curricula that provide traffic safety information and skill building.

### Other Instructional Content

There are other elements that may be included in many of the curricula in this guide, such as bicycle and pedestrian modules that integrate English, science, social studies, art, geography, environment, mapping, and other lessons. In the case that a curriculum includes bicycle and pedestrian related information in the form of other topics not specific to safety, this category will identify which additional subjects are included.



YBIKE

### Program Duration

One of the most significant challenges of curriculum implementation is time. When a school's academic performance is being assessed on subjects outside the realm of exercise and safety, it is difficult for educators to justify the time necessary to teach bicycle or pedestrian lessons. Therefore, when addressing the feasibility of a curriculum for a classroom, it is important to ensure that the materials can be implemented inside the allotted instructional time. In the case that it cannot, the appropriate curriculum may be one that is scalable and can be easily adjusted to fit inside of the available time period. The Program Duration category is an estimate of how much time is needed to teach one group of students the entire curriculum. In the case that the curriculum is scalable, the Program Duration category might include a range from least amount to the most amount of time necessary to complete it.

With regard to Train the Trainer models, additional time must be accounted for the teacher to attend the training and learn the skills necessary to adequately pass on those skills to students. This additional time is accounted for in the Program Duration category. The time investment in becoming a certified course trainer is an important investment towards providing a quality level of instruction, and once trained is not a reoccurring cost of time.

### Requires Equipment

The need for specific equipment, such as bicycles, bike fleets, bike racks, trailers and other transfer and storage methods, repairs, maintenance and helmets, are a notable requirement in the implementation of bicycle safety curricula. These logistical elements have inhibited some schools and communities from becoming involved with bicycle safety education, but have also led to the development of materials that attempt to pass on important traffic safety concepts without requiring these materials.

While some advocacy groups own bicycles, bike fleets, bike storage, transfer trailers and other items that they may lend or rent to interested parties, some school districts and clubs have taken the initiative to invest in their own. These groups take on the initial cost of the equipment and have to calculate for



PATH Hawaii







the ongoing costs of maintenance, repair, and liability. Curricula that require equipment take an additional effort to get off of the ground, but many programs have reported that these same courses garner the most enthusiasm from participants. Having equipment such as bicycles available to students can also ensure the ability to deliver a robust bicycle safety course, especially in lower-income schools.

## Cost

Accurately considering the total cost of the implementation of a bicycle and pedestrian safety curriculum is essential to the sustained success of the program. Safe Routes to School federally-funded state programs, local departments of transportation, obesity and health related foundations, hospitals and school districts, among others, have historically been the source of funding for the creation of bicycle and pedestrian safety curricula, and many have supported the initial or even ongoing costs of implementation. The intention of funding these efforts was often to create a sustainable, low or no-cost method for these classes to be taught. In other cases, developers have needed to offset the costs incurred in the development of the curriculum. They might charge for the curriculum itself or the training of instructors. Please note that there is no proven relationship between the cost of a curriculum and its overall quality. Curricula whose origin was funded by public agencies are likely offered for free, or at cost, because public funds were used to create the curricula.

Also, over the years, there has been a small but dedicated portion of the for-profit industry that has seen the importance of sufficiently addressing traffic safety with children of all ages; these businesses have developed their own teaching materials that are available for purchase.

The potential instructor or sponsor must also consider the cost of the curriculum, equipment, materials such as send-homes or student worksheets and, in the case of Train the Trainer models, sometimes the costs for a substitute teacher and attending the training itself. These costs are represented in the Cost category and explained in further detail on each individual curriculum summary page.



YBIKE

## Meets State Education Standards

Meeting a state's standards for teaching or Common Core Standards is a worthy goal for the developers of bicycle and pedestrian curricula. Teachers who are working towards meeting their instructional goals and preparing their students for testing, value each moment of instruction they have with their students. Ensuring that a bicycle and pedestrian curriculum meets standards allows a teacher to use a portion of, or an entire, curriculum to teach the concept of bicycle and pedestrian safety while meeting their overall goals for the school year. Integrating bicycle and pedestrian lessons into a state's standards increases the likelihood that it will be utilized year after year by time-starved teachers.

In the case of this bicycle and pedestrian guide, if the curriculum meets state standards the category will identify the state standards for which the curriculum was originally designed.

## Intended Skill Level Trained

This category reflects the final student outcome or skill level that the practitioner can expect after having administered the course. There is, in general, a correlation between the amount of time spent learning and a student's knowledge and/or skill level, nonetheless this classification is intended to convey the expected outcome of the course if administered in its entirety.

## Measures Student Learning Through Pre/Post Testing

Testing students before and after a program to measure their learning is a great technique for evaluating the program's overall effectiveness. It gives the practitioner feedback as to what portions of the curriculum are being internalized by the students. Many developers and practitioners use this process to identify which modules are efficient and which are not, in order to further refine their curriculum or implementation.

## Wrap-Around Materials

Some bicycle and pedestrian curricula also inform parents and other caretakers about the strategies that are taught in the classroom. This technique, often referred to as Wrap-Around, makes certain that students are getting a reinforced message by also educating their caretakers. Wrap Around materials enable caretakers themselves to receive safety lessons so that they can reflect information to their children in tandem with the child's curriculum instruction, including changes to older traffic safety concepts that are no longer considered safe practice that older adults may have received as children. For instance, many older adults learned that it was safer to ride a bicycle in the opposing direction of automobile traffic. It is now known that this behavior is unpredictable to drivers, and therefore less safe. Bicycles being operated on a roadway should always ride in the same direction, on the same side of the road, as other vehicles.

Wrap Around curricula will include send home materials for parents. For those searching for these materials in more than one language, the additional languages in which these materials are provided are indicated in the Wrap Around category on the inventory page and on the summary page for each individual curriculum.



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## Adaptations for Special Needs Students

This category refers to the scalability of the curriculum for students with special needs. A curriculum that indicates that it is adaptable for special needs students will include instructions for altering the existing materials to scale to the capabilities of a particular group of students.

## Contact Information/Link to Download

On each cover sheet you will find either the contact information for the curriculum developer, a link to download the curriculum, or in some cases both. In an attempt to make the curriculum easily accessible, a link was provided for those that are available online and for no cost. However, in situations where the curriculum has to be purchased or isn't currently available online, only the contact information was provided.

### RESOURCES

Physical Education Curriculum Analysis Tool (PECAT)

<http://www.cdc.gov/HealthyYouth/pecat/pdf/PECAT.pdf>

Health Education Curriculum Analysis Tool (HECAT)

<http://www.cdc.gov/HealthyYouth/hecat/>

State Standards: Find your State Education Standards

<http://www.educationworld.com/standards/state/index.shtml>



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### End Notes

48 Anderson, J. R. "Learning and Memory: An Integrated Approach," New York: John Wiley & Sons, Inc. Accessed: January 25th, 2011.  
<http://elib.tu-darmstadt.de/tocs/89959310.pdf>

49 Plumer, J., Kearney, J., Cremer, J. "Children's Perception of Gap Affordances: Bicycling Across Traffic-Filled Intersections in an Immersive Virtual Environment" Child Development 75 (2004), 1243-1253

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Bicycle	Pedestrian	Cost involved	Grade Level	Includes Skill Based Education	Under an hour	Over an hour	Over 10 hours	Training Skill Level	Wrap Around Materials	Other Instructional Content	Pre & Post Testing	Special Needs
	✓	Free	K-6	✓	✓	✓		B-I-A	✓		✓	
	✓	\$	PK-2	✓	✓	✓		B-I	✓		✓	
	✓	Free	K-8	✓	✓	✓		B-I	✓	✓	✓	
	✓	Free	K-8	✓	✓	✓		B		✓		
	✓	Free	1-3	✓	✓			B	✓			✓
	✓	Free	2-3	✓		✓		B	✓		✓	✓
	✓	Free	K-8		✓			B	✓		✓	
	✓	Free	K-5		✓	✓		B-I		✓		
	✓	\$	PK	✓	✓	✓		B	✓			
	✓	Free	K-5	✓		✓		B-I	✓		✓	
	✓	\$	K-3	✓	✓			B-I	✓		✓	

This inventory contains information and hyperlinks to the corresponding curriculum summary provided later in this guide. When using this tool in electronic form, you can easily navigate between the inventory and the summaries by clicking on their hyperlinks in the inventory and the simple "Return to Inventory" button located at the bottom of each summary page.

An excel database of this information is **available here**. The curricula included in this inventory were compiled and reported by the curriculum owner. If you do not see your curriculum included, you can submit it for future inclusion by filling out this **form**.

### Pedestrian Only

Child Pedestrian Safety Curriculum		National Highway and Traffic Safety Administration	56
I'm Safe! Walk with Me		Child Safety Solutions	63
Neighborhood Navigators		Oregon Safe Routes to School Program	68
nrg Walks		Center for Nutrition & Activity Promotion at Penn State Hershey Children's Hospital	69
PATH Ped Ed		People's Advocacy for Trails Hawaii	72
Pedestrian Safety Education		Bicycle Transportation Alliance	73
Safe Street Crossing Tips		Wayne State University - Transportation Research Group	81
Walking for Health and the Environment		WalkBoston and ERG	90
Walking with Bucklebear		Weiner/Seaman Productions	92
WalkSafe Educational Curriculum		University of Miami WalkSafe Program	94
WalkSmart		Oregon Center for Applied Science (ORCAS)	96

### Pedestrian & Bicycle

✓	✓	Free	3-6	✓	✓	✓	✓	B	✓	✓		✓	Bicycle and Pedestrian Safety Lesson Books		Active Transportation Alliance	43
✓	✓	Free	K-5	✓		✓		B	✓				Bicycle Colorado's Teacher Toolkit		Bicycle Colorado	44
✓	✓	\$	K-5	✓			✓	I-A	✓		✓		Elementary Traffic Education Program		Journeys From Home/Bike Ed America	61
✓	✓	\$	K-6	✓		✓	✓	B-I	✓	✓	✓		Elementary Traffic Safety Education Guide		Florida Traffic and Bicycle Safety Education Program	62
✓	✓	Free	K-6	✓		✓	✓	B-I	✓	✓			Iowa Kids on the Move		Iowa Bicycle Coalition	64
✓	✓	Free	K-8	✓		✓		N/A	✓	✓			Kentucky Safe Routes to School Curriculum		Kentucky Safe Routes to School Program	65
✓	✓	Free	2,4,6	✓		✓		B-I	✓				Marin Safe Routes to Schools		Marin County Safe Routes to School	66



Bicycle	Pedestrian	Cost involved	Grade Level	Includes Skill Based Education	Under an hour	Over an hour	Over 10 hours	Training Skill Level	Wrap Around Materials	Other Instructional Content	Pre & Post Testing	Special Needs		
✓	✓	Free	K-8	✓	✓	✓	✓	B-I	✓	✓	✓		Mississippi's Safe Routes to Schools Lesson Plans	Mississippi Dept. of Ed. Office of Healthy Schools ..... 67
✓	✓	Free	K-8		✓	✓		B		✓			Safe Routes in the Classroom	Safe Routes Nebraska ..... 76
✓	✓	✓	✓	✓		✓		A	✓	✓			Safe Routes Philly: Pedestrian and Bicycle Safety	Bicycle Coalition of Greater Philadelphia ..... 77
✓	✓	\$	4-8	✓		✓		I	✓		✓	✓	Safe Routes to School Traffic Safety Program	League of American Bicyclists ..... 78
✓	✓	Free	6-8		✓	✓	✓	I		✓			Safe Routes to Schools Middle School Educator Guide: Activities for Creating Safe and Healthy Communities	Safe Routes to School Alameda County ..... 80
✓	✓	Free	K-5	✓	✓	✓		B	✓	✓		✓	Safe Routes to Schools Walk and Roll K-5 Educator Guide: Activities for Creating Safe and Healthy Communities	Safe Routes to Schools Alameda County ..... 79
✓	✓	\$	4-5	✓			✓	B	✓	✓	✓		SafeCyclists	Bike Texas ..... 82
✓	✓	Free	3	✓		✓		B	✓		✓	✓	Safety City	New York City Dept. of Transportation Safety Ed ..... 83
✓	✓	Free	PK-6	✓		✓	✓	B-I	✓		✓	✓	Tampa Walk and Roll to School Program	St. Joseph's Children's Hospital of Tampa ..... 85
✓	✓	Free	Any	✓		✓	✓	B	✓	✓		✓	Walk Across Illinois	Active Transportation Alliance ..... 88
✓	✓	Free	1-6	✓		✓		B			✓		Walking Wisdom and Bike Driver's Ed	Bicycle Federation of Wisconsin ..... 91
✓	✓	Free	K-6	✓	✓			B	✓		✓		WalkSmart/BikeSmart Vermont	Center For Health and Learning ..... 96, 97

**Pedestrian & Bicycle (con't)**

**Bicycle Only**

✓		Free	6-8	✓			✓	B-I	✓				After School Bike Club	City of Madison - Traffic Engineering Division - Pedestrian and Bicycle Program ..... 42
✓		Free	6-8	✓		✓	✓	B-I-A	✓		✓		Bicycle Colorado's Teachers Toolkit: Middle School	Bicycle Colorado ..... 44
✓		\$	3-5	✓		✓		B	✓	✓			Bicycling for Fun: Fun Activities for Youth Cyclists	4-H Club ..... 46
✓		Free	4-8	✓		✓	✓	B-I-A	✓	✓			Bike Driver's Ed: A Cycling Skills Curriculum for Young Cyclists	Bike New York ..... 48
✓		\$	6-7	✓		✓		B-I	✓		✓		Bike Pro	PedNet ..... 50



Bicycle	Pedestrian	Cost involved	Grade Level	Includes Skill Based Education	Under an hour	Over an hour	Over 10 hours	Training Skill Level	Wrap Around Materials	Other Instructional Content	Pre & Post Testing	Special Needs
✓		Free	2-6	✓		✓		B	✓		✓	✓
✓		\$	K-3	✓	✓			B	✓		✓	
✓		\$	6-9	✓	✓	✓		B-I	✓		✓	✓
✓		\$	PK	✓	✓	✓		B	✓			
✓		Free	5-6	✓		✓		B-I			✓	
✓		Free	4-8	✓		✓		B-I			✓	
✓		Free	4-8	✓		✓		B-I	✓		✓	✓
✓		Free	K-5	✓		✓		B				
✓		Free	3-8	✓		✓		I	✓		✓	✓
✓		Free	4-7	✓		✓		I	✓		✓	✓
✓		\$	4-12	✓			✓	B-I		✓		
✓		Free	5-9	✓		✓		I	✓		✓	✓
✓		\$	6-8	✓		✓		I-A	✓		✓	
✓		N/A	4-8	✓	✓			I	✓		✓	N/A
✓		Free	4-12	✓		✓	✓	B-I	✓	✓	✓	

**Bicycle Only (con't)**

BikeSafe™ Educational Curriculum	University of Miami BikeSafe™ Program	51
BikeSmart	Oregon Center for Applied Science (ORCAS)	52
BLAST (Bicycle Lessons and Safety Training)	Youth Educational Sports Inc.	53
Bucklebear Gets Ready to Go	Weiner/Seaman Productions	54
BVSD BLAST (Bicycle Lessons and Safety Training) Program	Boulder Valley School District	55
Cycling Skills Clinic Guide	National Highway and Traffic Safety Administration	58
Drive Your Bike: From the Classroom to the Road	Cycles of Change	60
Organizer's Guide to Bicycle Rodeos	Lois Chaplin at Cornell University	70
PATH Bike Ed	People's Advocacy for Trails Hawaii	71
Safe Routes for Kids	Bicycle Transportation Alliance	74
Sprockids	Sprockids Technical Team	84
Urban Riders	Cascade Bicycle Club	86
Wheels in Motion	4-H Club	98
WiseRides	Oregon Center for Applied Science (ORCAS)	99
YBIKE - Presidio YMCA	Presidio Community YMCA Bicycle Program	100

## After School Bike Club

Arthur Ross, (608) 266-4761, bicycle@cityofmadison.com

Larry Corsi, (608) 267-3154, larry.corsi@dot.state.wi.us

- Creator:** City of Madison, Wisconsin - Traffic Engineering Division: Pedestrian & Bicycle Program
- Program Summary:** The After School Bike Club is designed to teach safe bicycling skills as well as to promote bicycling as a fun and lifelong activity to middle school aged students. The bicycle safety skills taught in this program are based on the League of American Bicyclists' League Cycling courses (www.bikeleague.org).

Students need to provide bicycles for the After School Bike Club and the lead instructor works with the students aided by adult volunteers. The club consists of eight 1.5-hour sessions that are typically taught after school one afternoon a week. The sessions consist primarily of on-road bicycle rides, some pre-ride discussion and frequent stop-and-discuss teaching opportunities. The program is flexible enough to accommodate students with varying skill levels.

- Challenges:** The course requires trained instructors, recruiting volunteer assistants, rental bicycles and helmets for students who need these. Transportation home for students at the end of the after school sessions is also needed.

- Contact for ordering/more information:**

Arthur Ross  
City of Madison Traffic Engineering Division  
PO Box 2986  
Madison, WI 53701-2986  
(608) 266-4761  
bicycle@cityofmadison.com

Larry Corsi  
Wisconsin DOT Bureau of Transportation Safety  
PO Box 7936 Madison, WI 53707-7936  
(608) 267-3154  
larry.corsi@dot.state.wi.us

## Bicycle and Pedestrian Safety Lesson Books

Dan Persky, (312) 427-3325, education@activetrans.org



- Creator:** Active Transportation Alliance
- Program Summary:** The two Bicycle and Pedestrian Safety Lesson Books by Active Transportation Alliance were developed for classroom and P.E. use. The lessons in each book can be used at any time, in any order and are short so that they can supplement the lessons and curricula already in use by elementary school teachers. Students work as a class, in small groups and independently to explore the safety guidelines, comprehend their purpose and internalize them for real-life use.

9 Lessons for the Classroom (between 30-50 minutes each) and 10-minute Activities for PE Class are made up of bicycle and pedestrian safety lessons compiled from existing Active Transportation Alliance curricular programs. The lessons themselves were created with the most significant safety issues for child bicyclists and pedestrians in mind. The books were developed with the support of classroom and physical education curriculum writers and consultants.

- Example of Success Story:** Eight elementary schools in Elmhurst, Illinois have recently adopted the new Bicycle and Pedestrian Safety Lesson Books for use by 4th and 5th grade teachers across the district. See one teacher's thoughts about the lesson books below:

"I really liked this book. Sometimes we get things from places and the lessons aren't planned well, etc. This was well thought out, the kids enjoyed it and they learned about transportation." – Elmhurst Elementary School Teacher

- Challenges:** Bicycle and pedestrian safety is not a topic of most school curricula. The lesson books overcome this challenge by aligning the lessons with state learning standards for math, science, social science and language arts. Students are encouraged to explore the benefits of active transportation while building their core skills.

- Contact for Ordering/More Information:**

Dan Persky  
Active Transportation Alliance  
9 W. Hubbard, Suite 402  
Chicago, Illinois 60654  
education@activetrans.org  
(312) 427-3325

**Subject:** Bicycle  
**Skill Based Education:** Yes, on road skills.  
**Grades:** 6th - 8th  
**Type of Instruction:** Trained instructor-led  
**Other Instructional Content:** None  
**Program Duration:** 12 hours (eight sessions, each 1.5 hours). Lead instructor should be a certified League Cycling Instructor from the League of American Bicyclists.

**Requires Equipment:** Yes. Requires bicycles, helmets, basic bicycle tools, including pump and patch kits, first aid kit, permission slips, law cards and maps.

**Cost:** Free

**Meets State Education Standards:** Unknown

**Intended Skill Level Trained:** Beginner to intermediate

**Measures Student Learning Through Pre/Post Testing:** No

**Wrap Around Materials:** Yes. Bicycle maintenance check list, law cards and maps.

**Adaptations for Special Needs Students (or scalable to various skill levels):** No

**Subject:** Bicycle and pedestrian  
**Skill Based Education:** Yes. Skill based education is included in the form of simulated street crossing practice, simulated street bicycling skills and in-class bicycle and pedestrian safety guideline role play.  
**Grades:** 3rd - 6th. Includes suggestions for adapting to older or younger students after each lesson.

**Type of Instruction:** Teacher-led. Training on how to use the Bicycle and Pedestrian Safety Lesson Books has been provided by Active Transportation Alliance's staff upon request.

**Program Duration:** 10 minutes – 10 hours. The overall length of the program is determined on a case by case basis. Some in-school lesson book users have chosen to create a week or two week intensive bicycling and pedestrian safety unit, while others have chosen to incorporate lessons into their schools periodically throughout the year.

**Other Instructional Content:** Language arts, social science, math and science.

**Required Equipment:** Yes

**Cost:** Free

**Meets State Education Standards:** Yes, Illinois.

**Intended Skill Level Trained:** Beginner

**Measures Student Learning Through Pre/Post Testing:** No

**Wrap Around Materials:** Yes. A bicycle and pedestrian safety guideline sheet is provided in the Classroom and PE Class Lesson Book for teachers to send home with students. The book, 9 Lessons for the Classroom, includes worksheets for students to take home as well as some homework suggestions to extend the lesson. All handouts for students are available in English and Spanish.

**Adaptations for Special Needs Students (or scalable to various skill levels):** Yes

Jenna Berman, (303)417-1544, x 13, Jenna@bicyclecolorado.org

Link for Download: [www.SafeRoutesColorado.org](http://www.SafeRoutesColorado.org) (on Library page under "resources")

**Creator:** Bicycle Colorado with funding from the Colorado Department of Transportation

**Program Summary:** Bicycle Colorado's Teacher Toolkit: Middle School was initially created in 2005 with the influence of other bicycle/pedestrian best practices from around the country and funding from the Department of Transportation. The original curriculum has been customized and expanded to include a comprehensive set of bike rodeo activity cards and related bicycle resources. Bicycle Colorado's Safe Routes to School Teacher Toolkit: Middle School is a compilation of lesson plans, resources, presentations and handouts.

The middle school toolkit includes lesson plans, sample presentations (that include rules of the road, basic bicycle maintenance and injury prevention), as well as a variety of resources including bike rodeo activity cards, empathy stations, as well as parent and student informational handouts and worksheets.

**Example of Success Story:** Through 2010, Bicycle Colorado has reached more than 25,000 students with bicycle and pedestrian education programs. The program has been implemented during PE and health classes, as well as in after-school bicycle clubs. The involved students have increased their knowledge, improved their bicycle handling skills and are now encouraged to find opportunities to walk and bicycle to school.

**Contact for Ordering/More Information:**

Jenna Berman, Education Director  
Bicycle Colorado  
1525 Market Street Denver, CO 80202  
Jenna@bicyclecolorado.org  
(303)417-1544, x 13

**Skill Based Education:** Yes. Middle school students may participate in an after-school bicycle club with bicycle skill building and group rides.

**Grades:** 6th - 8th

**Type of Instruction:** Teacher-led

**Program Duration:** Two to eight hours. The in-class program can be completed in as little as two class hours, but ideally requires four to five class hours while the on-bicycle sessions take longer.

**Other Instructional Content:** None

**Requires Equipment:** Yes. Requires basic equipment to conduct a bicycle skills course (cones, domes, chalk and obstacles). Students will need to provide their own bicycles and helmets for the on-bicycle portions of the program (bicycle skills course and extended rides).

**Cost:** Free

**Meets Colorado State Education Standards:** No

**Intended Skill Level Trained:** Beginner to advanced

**Measures Students Learning Through Pre/Post Testing:** Yes. Middle school students may be given an optional pre/post test (included).

**Wrap Around Materials (i.e. materials that are sent home and support in classroom lessons):**

Yes. Example parent newsletters are provided (available in Spanish). Example parent letters are available and participants are encouraged to support the program by signing their classes up to tracking bicycling/walking trips to school on [www.SafeRoutesColorado.org](http://www.SafeRoutesColorado.org). Handouts on walking/bicycling tips and walking school buses are also can be provided to parents.

**Adaptations for Special Needs Students (or scalable to various skill levels):** No

Jenna Berman, (303)417-1544, x 13, Jenna@bicyclecolorado.org

Link for Download: <http://saferoutescolorado.org/Library/index.php> (under "resources")



**Creator:** Bicycle Colorado with funding from the Colorado Department of Transportation

**Program Summary:** Bicycle Colorado's Safe Routes to School Teacher Toolkit has evolved over five years of providing bicycle and pedestrian education to K-5th students. The curriculum was initially created in 2006 with the influence of other bicycle/pedestrian best practices from around the country and funding from the Colorado Department of Transportation. This original curriculum was soon customized and expanded to include a comprehensive set of bicycle rodeo activity cards and related bicycle lessons. Bicycle Colorado's Safe Routes to School Teacher Toolkit is a compilation of lesson plans, resources, presentations and handouts. The toolkit includes lesson plans for students in kindergarten through 5th grades and accompanying resources such as bike rodeo activity cards, empathy station lesson plans for teachers, parent information (information on walking school buses, bicycle trains, etc.) and handouts (includes worksheets and handouts for students).

**Example of Success Story:** Through 2010, Bicycle Colorado has reached more than 25,000 students with bicycle and pedestrian education programs. Thousands of students have increased their knowledge, improved their bicycle handling skills and been enthused to find ways to walk and bicycle to school through this curriculum, while dozens of students have learned how to ride bicycles for the first time.

**Contact for Ordering/More Information:**

Jenna Berman, Education Director  
Bicycle Colorado  
1525 Market Street Denver, CO 80202  
Jenna@bicyclecolorado.org  
(303)417-1544, x 13

**Subject:** Bicycle (2nd-5th grades) and pedestrian (kindergarten-1st grades)

**Skill Based Education:** Yes

**Grades:** K - 5th

**Type of Instruction:** Teacher-led

**Program Duration:** 1.5 hours (two-45 minute class periods)

**Other Instructional Content:** None

**Required equipment:** Yes. Requires bicycles, cones, colored domes, chalk and other obstacles.

**Cost:** Free

**Meets State Education Standards:** No

**Intended Skill Level Trained:** Beginner

**Measures Students Learning Through Pre/Post Testing:** No

**Wrap Around Materials (i.e. materials that are sent home and support in classroom lessons):**

Yes. Example parent newsletters are provided (available in Spanish). Example parent letters are available and participants are encouraged to support the program by signing their classes up to tracking biking/walking trips to school on [www.SafeRoutesColorado.org](http://www.SafeRoutesColorado.org). Handouts on walking/bicycling tips and walking school buses are also can be provided to parents.

**Adaptations for Special Needs Students (or scalable to various skill levels):** No

Link for Ordering: <http://www.4-hmall.org/Category/4-hcurriculum-bicycle.aspx>

**Creator:** National 4-H Curriculum

**Program Summary:** The Bicycling for Fun Activities for Youth Cyclists is designed for use in small groups by National 4-H Curriculum. The activities include a description of the skills to be practiced, discussion questions, suggestions for additional activities and basic information to get started. This guide is a great primer for Boy Scout leaders, after school clubs and any other small group that want to improve bicycling skills.

Each lesson is broken out to indicate required materials, necessary preparations, skills and the “do” part of each activity, a question and answer section, a section on interesting additional information and finally, a section dedicated to taking the activity a little further for eager participants. The 4-H curriculum is designed to allow the student to integrate information through the experiential learning process.

**The learner outcomes for the curriculum include:**

1. Demonstrating safe cycling skills
2. Repair and maintenance of a bicycle
3. Planning and participating in cycling activities and events
4. Practicing the life skills of decision making, leadership, planning and organizing.

National 4-H suggests that this curriculum be used in tandem with 4-H’s Bicycle Helper’s Guide, which includes “learning by doing” activities that incorporate preparing to ride, riding, skill activities and games to play with the group.

**Example of Success Story:** The National 4-H has been distributing this curriculum since 1988 but recently redesigned it in 2006. It did not report on the success or challenges of its product.

**Subject:** Bicycle

**Skill Based Education:** Yes

**Grades:** 3rd - 5th

**Type of Instruction:** Teacher-led

**Program Duration:** Six hours (program is scalable)

**Other Instructional Content:** English, science and social studies.

**Requires Equipment:** Yes

**Cost:** \$3.95 per booklet

**Meets State Education Standards:** Unknown

**Intended Skill Level Trained:** Beginner

**Measures Student Learning Through Pre/Post Testing:** No. However, it does use a success indicator to gauge student’s comprehension.

**Wrap Around Materials (i.e. materials that are sent home and support in classroom lessons):** Yes. The work book is intended to go home with the student on an ongoing basis.

**Adaptations for Special Needs Students (or scalable to various skill levels):** No



Bicycle Colorado, ©Robert D. Jones/RDJonesPhoto.com



# Bike Driver's Ed: A Cycling Skills Curriculum for Young Cyclists



Richard Conroy, Director of Bicycle Education Program, [rconroy@bikenewyork.org](mailto:rconroy@bikenewyork.org)

Link for download: The curriculum is not downloadable. More information about the curriculum, training workshops and the bike fleet that goes with the curriculum can be found at: <http://tinyurl.com/bike-ny-cycling>

- Creator:** Bike New York, Bicycle Education Program
- Program Summary:** Bike Driver's Ed was developed by staff at Bike New York. It has been reviewed by an experienced middle school teacher, and presented at several New York and New Jersey AHPERD conferences. The curriculum has received excellent feedback from teachers and schools who have used it.  
  
The curriculum emphasizes basic bicycle-handling skills and traffic safety education for bicyclists, with an aim of preventing typical child crashes. It is a hands-on bicycle curriculum intended for after school programs, summer camps and weekend programs. It's not intended for a standard PE class lasting less than an hour.  
  
In designing the curriculum training workshop, Bike Driver's Ed examined leading bicycle curricula and focused on crash types with a high rate of youth involvement.  
  
The curriculum includes co-curricular elements for English vocabulary, social studies, math and science. Each unit has a "fun fact" on some aspect of the history and heritage of cycling as well as a vocabulary section. Uniquely, this curriculum contains a section on teaching new riders to ride a bike.
- Example of success story:** In three years this train-the-trainer program has trained 310 teachers at 24 training events. By a conservative estimate (only those schools/teachers who use their bike fleet report back) these teachers have reached more than 5,200 kids. Some schools, like Ocean, NJ have used the curriculum repeatedly. The curriculum was also used as the basis for the NJ Bike School summer camp program run during summers 2009 and 2010.
- Teacher feedback:** "I must say, I've been teaching Phys Ed for a long time. [Bike Driver's Ed] is probably my favorite unit that I've ever covered. It gives the kids a chance to work at their own level, be outdoors, get great exercise, use muscles that they haven't used in a while and it's bringing all the different abilities together in one unit. It's fabulous."  
--Southampton Intermediate School PE teacher, Long Island, NY, Spring 2010

**Subject:** Bicycle

**Skill Based Education:** Yes. Includes on-bicycle skills activities, helmet fitting and written activities.

**Grades:** 4th – 8th

**Type of Instruction:** Train-the-trainer

**Program Duration:** Between six and 16 hours, includes time for the train-the-trainer course and program implementation.

**Other Instructional Content:** English vocabulary, social studies, math and science.

**Requires Equipment:** Yes. Requires bicycles, domes or half-tennis balls, helmets, flat-paved area. Optional written activities require pencils and copies of the activities. Bike New York loans a fleet of bicycles to schools interested in teaching the Bike Driver's Ed curriculum

**Cost:** Free, but only distributed at training workshops.

**Meets State Education Standards:** Yes, New York and New Jersey.

**Intended Skill Level trained:** Beginner/intermediate

**Measures Student Learning Through Pre/Post Testing:** No

**Wrap Around Materials (i.e. materials that are sent home and support in classroom lessons):** Yes. There is a student activity book where teachers can copy written activities, and distribute to students.

**Adaptations for Special Needs Students (or scalable to various skill levels):** No

- Challenges:** Getting New York State and/or New York City Department of Education to adopt or require teaching bicycle safety by the 8th grade.  
  
We haven't been able to get most schools to transition from teaching a cycling unit in their PE or after school programs, to establishing a more full-fledged cycling program.  
  
The curriculum does not require any advanced bicycling skill; so school teachers can teach the basics, but it takes someone really dedicated and excited about bicycling to establish a more on-going bicycling program.  
  
It is difficult getting teachers who use the curriculum to report back.
- Contact for ordering/more information:** Richard Conroy  
Director of Bicycle Education Program  
[rconroy@bikenewyork.org](mailto:rconroy@bikenewyork.org)



PATH Hawaii



Sprockids



- **Creator:** PedNet Coalition (PedNet)
- **Program Summary:** The BikePro program is conducted by League Certified Cycling instructors and was initially based on the League of American Bicyclist's Kids II program before diverging into a curriculum that PedNet felt better fit the needs of their community and program.  
  
Led outside of school hours, the program aims to educate youth bicyclists through several sessions that outline the most important bicycle safety skills. BikePro is an active, engaging class that combines brief lecture and discussion sessions with bicycle skill drills and games. The goal of BikePro is to help students become competent "bike drivers," capable of using a bicycle for basic transportation needs.
- **Example of Success Story:** One group of graduates of PedNet's BikePro class began their school's "bike brigade", which consists of a large group of children who now ride together to school almost every day of the year. These same students are now going to the capitol for bicycle advocacy day to talk with their representatives about the importance of bicycling in their community!
- **Challenges:** The course requires outside funding, as well as bicycles and background training from the League of American Bicyclists.
- **Contact for Ordering/More Information:**  
Ian Thomas  
PedNet Coalition  
www.pednet.org

**Subject:** Bicycle  
**Skill Based Education:** Yes  
**Grades:** 6th - 7th  
**Type of Instruction:** Trained instructor-led  
**Program Duration:** Eight hours  
**Other Instructional Content:** None  
**Requires Equipment:** Yes  
**Cost:** \$70 per student for instruction by PedNet (cost funds one low income place)  
**Meets State Education Standards:** No  
**Intended Skill Level Trained:** Beginner/intermediate  
**Measures Student Learning Through Pre/Post Testing:** Yes  
**Wrap Around Materials (i.e. materials that are sent home and support in classroom lessons):** Yes  
**Adaptations for Special Needs Students (or scalable to various skill levels):** No



- **Creator:** University of Miami BikeSafe™ Program
- **Program Summary:** The BikeSafe™ educational curriculum was developed in 2009 and implemented in Miami-Dade County Parks and Recreation summer camp programming. The curriculum is designed to be taught by one to three BikeSafe™ instructors and has been used with class sizes as low as seven students and as high as 25 students.  
  
The three hour lesson includes both bicycle safety lessons with on-bike skills practice, a bicycle safety video, parts of the bicycle worksheet and overview, demonstration of the ABC Quick Check, student discussion on what to do to be ready to ride and a presentation on the rules of the road and how those rules keep bicyclists safe.  
  
Along with current BikeSafe™ efforts in county parks and after-school programs, BikeSafe™ staff members are currently working to adapt the current curriculum to work within middle school classrooms.
- **Contact for Ordering/More Information:**  
Jamie Caulkins  
University of Miami BikeSafe™ Program  
Lois Pope LIFE Center (1-40)  
1095 NW 14th Terrace  
Miami, FL 33136  
jhcaulkins@med.miami.edu  
(305)243-8115

**Subject:** Bicycle  
**Skill Based Education:** Yes  
**Grades:** 2nd - 6th  
**Type of Instruction:** Trained instructor-led  
**Program Duration:** Three hours (instruction is split between bicycle safety instruction and on-bike skills practice)  
**Other Instructional Content:** None  
**Requires Equipment:** Yes. Requires bicycles, helmets, cones, chalk or rope (any material that can be used to create a simulated road); paper and drawing materials.  
**Cost:** Free  
**Meets State Education Standards:** No  
**Intended Skill Level Trained:** Beginner  
**Measures Student Learning Through Pre/Post testing:** Yes  
**Wrap Around Materials (i.e. materials that are sent home and support in classroom lessons):** Yes, available in English, Spanish and Haitian-Creole.  
**Adaptations for Special Needs Students (or scalable to various skill levels):** No, BikeSafe™ staff have not taught any special needs students but the instruction is scalable to various skill levels.



- **Creator:** Oregon Center for Applied Science
- **Program Summary:** Bike Smart is an interactive CD-ROM program for children in kindergarten through 3rd grades. Using animation and video demonstrations, this self-paced program is fun and engaging. It teaches children the basic knowledge and skills they need to be safe on their bicycles. What differentiates the Bike Smart program from traditional safety curricula is its emphasis on breaking down complex skills into component parts. The program then teaches each of these skills to mastery before integrating them into the more complex task of riding in the street.
- **Example of Success Story:** The program was thoroughly evaluated in a randomized trial involving more than 200 students. The study demonstrated that after using the program, students were significantly better at (1) helmet placement, (2) identifying hazardous situations and (3) knowledge of safety rules than prior to using the program. The study also found that even children with no computer or reading skills were able to use the program.
- **Challenges:** The Bike Smart program incorporates several interactive tools. The use of animations to present traffic situations provides a means for removing irrelevant stimuli. The abstracted situations permit children to focus on critical details and respond to specific elements in the environment. By gradually replacing the animations with semi-abstracted examples (e.g., actual photographs of streets and intersections with animated cars, 3-D models with photographic backgrounds), generalizations from the abstracted scenes to the complex and dynamic situations are induced. The video materials used in the program enable the effective teaching of bicycle safety skills by presenting real-life examples of traffic related scenarios, which can greatly reinforce classroom lectures and printed material. The interactivity requires the learner to pay careful attention and respond overtly and frequently. Students get immediate corrective feedback and remediation, as needed.
- **Contact for Ordering/More Information:**  
Jay Thompson  
Oregon Center for Applied Science  
(866) 346-4880  
info@hcimarketplace.com

**Subject:** Bicycle

**Skill Based Education:** Yes. Virtual skill practice in animated and photographic traffic situations.

**Grades:** K - 3rd, most effective in 2nd - 3rd grades

**Type of Instruction:** Computer-aided instruction. Multimedia, self-paced CD-ROM designed for use at home or in the classroom. This program uses video, animation and interactive exercises to teach bicycle safety skills.

**Program Duration:** 40 minutes

**Other Instructional Content:** None.

**Requires Equipment:** Yes. PC: Microsoft Windows 98SE, 2000, or XP, Intel Pentium III 700MHz or higher. Mac: OS X version 10.2 or later, G4 processor. PC and Mac: 64 MB of free available system RAM (128 MB recommended), 16X or faster CD-ROM drive, video card with 16 bit ('high') color or better, 800x600 monitor with 32-bit color, mouse, sound card and speaker or headphones

**Cost:** \$19.95; call for bulk pricing.

**Meets State Education Standards:** No

**Intended Skill Level Trained:** Beginner

**Measures Student Learning Through Pre/Post Testing:** Yes

**Wrap Around Materials (i.e. materials that are sent home and support in classroom lessons):** Yes

**Adaptations for Special Needs Students (or scalable to various skill levels):** No



- **Creator:** Youth Educational Sports, Inc.
- **Program Summary:** The BLAST curriculum was developed and reviewed by experts from public health, school district, law enforcement, metropolitan transit engineers, parks and a USA cycling coach. The BLAST Package is broken up into three major pieces. "The Bike Channel", a 28 minute DVD/video, that uses fun newscast presentations of two young bicyclists involved in a vehicle crash. A news reporter calls on experts to explain how the crash happened. The newscast covers correct riding, environmentally friendly commuting to school and different aspects of the sport of bicycling. After viewing the DVD, the teacher is provided guidelines on conducting a bicycle workshop/ seminar with questions that related to the BLAST tutorial in order to engage youth in traffic safety discussions. The skills course, outlined in BLAST tutorial, is a fun way to learn the seven safe bicycle handling skills needed for youth to correctly execute looking over their shoulder for cars, signaling a turn and then executing the turn. After learning the mechanics of a turn they ride the simulated street skills course to practice turns. Each youth completing the BLAST skills course is provided a "certificate to ride". Finally, the BLAST track will keep the youth engaged to learn more bicycle skills by introducing beginning competition which includes materials on riding with traffic and other bicyclists. The BLAST program is successfully conducted annually by many organizations and agencies using only the BLAST curriculum.
- **Contact for Ordering/More Information:**  
Tana Ball  
P.O. Box 4384, Chatsworth, CA 91313-4384  
(818) 292-0779  
info@yesports.org  
<http://yesports.org>

**Subject:** Bicycle

**Skill Based Education:** Yes

**Grades:** 6th - 9th

**Type of Instruction:** Teacher-led. Includes a 28 minute presentational DVD and a workshop guide and skills course/track outlined in the tutorial giving step-by-step description of how to conduct the BLAST programs.

**Program Duration:** 30 minutes to eight hours. BLAST program is scalable and fits into the time allotted for PE classes or to an all-day safety fair format.

**Other Instructional Content:** None

**Requires Equipment:** Yes. Requires DVD projector, cones, sidewalk chalk, bicycles and helmets for children unable to bring theirs). Optional: traffic signs.

**Cost:** \$25.00 each or \$17.50 for 10 or more.

**Meets State Education Standards:** Yes, California.

**Intended Skill Level:** Beginner/intermediate

**Measures Pre/Post Student Learning Through Testing:** Yes

**Wrap Around Materials:** Yes

**Adaptations for Special Needs Students (or scalable to various skill levels):** Yes, BLAST curriculum is scalable to meet special needs students; in a free addendum with purchase.

## Bucklebear Gets Ready to Go

Weiner/Seaman Productions, (310) 479-0922

Link for Download: [www.bucklebear.com](http://www.bucklebear.com)

**Creator:** Weiner/Seaman Productions

**Program Summary:** Since 1982 Bucklebear traffic safety materials have presented basic concepts of bicycle and pedestrian safety to preschool children and their parent/caregivers, thereby encouraging young children to take some responsibility for their own safety. The Bucklebear Gets Ready to Go curriculum provides preschool teachers with easily presented materials addressing importance of adult supervision, helmet use, wearing bright colors so riders can be seen, safe places to ride and riding practice.

Bucklebear safety concepts are based on the most common crashes for young children and were reviewed and approved by early childhood educators at CSUN preschool lab

These materials have been used across the nation for more than 25 years by Head Start groups, educators, health professionals, fire/police and safety advocates with frequent reorders for additional program materials. Bucklebear's positive approach enables young children to be happy helmet-wearing cyclers and careful pedestrians.

**Example of Success Story:** Bucklebear has served in every state, in thousands of communities, nationwide. Many Bucklebear programs have been formally evaluated and these studies prove Bucklebear's concept to be effective in improving safety habits of children and their families. The best part of these presentations, in any form, is that the materials are simple to use with no need for complicated in-service training.

**Challenges:** Equipment needed for the biking program consists of standard preschool trikes and training wheeled vehicles and the helmets that are mandated to accompany them.

**Contact for Ordering/More Information:**

Weiner/Seaman Productions  
1505 Winchester Avenue Glendale, CA 91201  
(310) 479-0922

**Subject:** Bicycle

**Skill Based Education:** Yes

**Grades:** Pre-school

**Type of Instruction:** Teacher-led

**Program Duration:** 45 minutes to five hours. Can be a community one-time presentation or 10 in classroom lessons. Can be part of a daily routine or material can be presented over a whole semester.

**Other Instructional Content:** None

**Requires Equipment:** Yes. Requires tricycles and helmets.

**Cost:** \$58

**Meets State Education Standards:** Unknown

**Intended Skill Level Trained:** Beginner

**Measures Student Learning Through**

**Pre/Post Testing:** No

**Wrap Around Materials (i.e. materials that are sent home and support in classroom lessons):** Yes

**Adaptations for Special Needs Students (or scalable to various skill levels):** No

 RETURN TO CURRICULA INVENTORY

## Boulder Valley School District BLAST Program (BVSD Bicycle Lesson and Safety Training Program)



Link for download: <http://www.bvsd.org/saferoutes/blast/Pages/default.aspx>

**Creator:** Advisory group of local bicycle advocates under the direction of Boulder Valley School District staff.

**Program Summary:** As a result of the Boulder Bike Summit in June 2008, a BVSD BLAST curriculum advisory group was tasked with studying best practices and creating K-8th grades bicycling education aimed at the 5th-6th grade students. Instructors, trained in standards set by the League of American Bicyclists, visit physical education classes during 180 minutes of class time. The course was tested at two middle schools in spring 2009.

The BVSD BLAST curriculum introduces fundamental bicycling guidelines and practical riding skills. Core components, such as confidence, safety, and skills are taught through in-class presentations and on-bicycle drills. Drills include starting-stopping, straight-line riding, scanning-signaling, and merging.

The curriculum was developed by a team of cycling advocates with support of curriculum development specialists. It is based on the Safe Routes for Kids program with permission of the Bicycle Transportation Alliance.

Since May 2009, BVSD BLAST has been presented at 14 schools of the Boulder Valley School District and completed by more than 1,250 students. In spring of 2011, the Missouri Foundation for Bicycling and Walking will introduce BLAST to ten elementary schools in Kansas City. The state of Missouri is moving to adopt a state bicycle education program with BVSD BLAST as its foundation.

**Example of Success Story:** Demand for the program in the Boulder Valley School District is skyrocketing. Since beginning with two schools in 2009, the program has grown to the extent that by winter 2011, twenty-one elementary and middle schools have requested to host the course over the next two years.

**Challenges:** Excellence of instruction is our highest priority and considerable time, cost, and effort are needed to recruit, hire and train a great team of instructors. In addition, bicycles and helmets are provided to all students in need. The purchase, transport and maintenance of equipment requires oversight and funding. Securing and maintaining funding are ongoing challenges.

**Subject:** Bicycle

**Skill Based Education:** Yes

**Grades:** 5th - 6th

**Type of Instruction:** Trained instructor-led

**Program Duration:** Three hours, typically four periods of physical education class.

**Other Instructional Content:** None

**Requires Equipment:** Yes. Requires bicycles, helmets, traffic cones, tennis ball domes, measuring tape and a whistle.

**Cost:** Free

**Meets State Education Standards:**

Yes, Colorado.

**Intended Skill Level Trained:**

Beginner/intermediate

**Measures Student Learning Through**

**Pre/Post Testing:** Yes

**Wrap Around Materials (i.e. materials that are sent home and support in classroom lessons):** No

**Adaptations for Special Needs Students (or scalable to various skill levels):** No

 RETURN TO CURRICULA INVENTORY

Leah Walton, (202)366-4301, leah.walton@dot.gov  
 Paula Bawer, (202)366-2692, paula.bawer@dot.gov

- **Creator:** National Highway Traffic Safety Administration (NHTSA)
- **Program Summary:** The Child Pedestrian Safety Curriculum teaches and encourages the practice of safe pedestrian behaviors for students grades kindergarten through 5th. It is organized into five lessons that target the main areas of pedestrian safety: walking near traffic, crossing streets, crossing intersections, parking lot safety and school bus stop and school bus safety. Each lesson builds upon each previous set of skills learned.

All grades receive instruction in the five areas of pedestrian safety mentioned above. However, to promote developmentally appropriate teaching, the curriculum includes three divisions: K-1st grades, 2nd-3rd grades and 4th-5th grades. The lessons build in difficulty throughout subsequent years, require greater problem-solving opportunities and encourage peer modeling and discussion.

The overall goal of the Child Pedestrian Safety Curriculum is one of skill development. While children may be aware of ways to stay safe as pedestrians, the purpose of this program is to help children develop that knowledge into an automatic response in behavior.

Students acquire new skills by incorporating all three stages of motor skill development. First in the “cognitive” stage, the student gains knowledge of facts through instruction, videos, workbooks and presentations. To move students past this cognitive stage and impact behavior change, students should then practice those learned skills in the “associative” stage. Last, through further and repeated practice in context, the skills and behaviors will become more automatic, thus the “autonomous” stage. With repeated practice and these higher levels of development, students show increased problem solving and require less cognitive effort to execute the skill.

This curriculum was developed after completing a literature review of existing programs that address pedestrian safety education in young children. Unique to this curriculum, is that it incorporates the most current research applicable to a child’s development abilities to learn and apply traffic safety behavior to walking. This curriculum can be used as a national model for teaching children about pedestrian safety K-5th grades.

**Subject:** Pedestrian  
**Skill Based Education:** Yes, street crossing practice.  
**Grades:** K – 6th  
**Type of Instruction:** Teacher-led  
**Program Duration:** 30 minutes – three hours  
**Other Instructional Content:** Unknown  
**Requires Equipment:** Yes  
**Cost:** Free  
**Meets State Standards:** Unknown  
**Intended Skill Level trained:** Beginner/intermediate/advanced  
**Measures Student Learning Through Pre/Post Testing:** Yes  
**Wrap Around Materials:** Yes, includes parent/caregiver tip sheets to reinforce learning.  
**Adaptations for Special Needs Students (or scalable to various skill levels):** No



- **Example of success story:** N/A
- **Challenges:** New Product
- **Contact for ordering/more information:**  
 Leah Walton  
 National Highway Traffic Safety Administration (NHTSA)  
 1200 New Jersey Ave. SE Washington, DC 20590  
 (202)366-4301  
 leah.walton@dot.gov  
  
 Paula Bawer  
 1200 New Jersey Ave. SE Washington, DC 20590  
 (202)366-2692  
 paula.bawer@dot.gov



Sprockids



Bicycle Transportation Alliance

Paula Bawer, (202)366-2692, paula.bawer@dot.gov

Link for Download: <http://www.nhtsa.gov/Bicycles>

- **Creator:** National Highway Traffic Safety Administration (NHTSA)
- **Program Summary:** This guide is written for those interested in planning a bicycle safety skills event for children either at school or at other community venues. This guide gives the user a step-by-step approach to planning and initiating a bicycle safety skills event, including instructions and resources for setting up a course and conducting it to meet the needs of all the children participating. Consider special audiences in your community, including those who are non-English-speaking, older children and even adults who may want to participate. Finally, this guide is not copyrighted, so you are free to use it without permission, and you can adapt it as necessary based on your community's needs.

This guide draws from a variety of "bike rodeo" guides, as they were once called, and incorporates ideas, activities and suggestions from those who have been organizing bike rodeos for years. It is divided into main sections:

**Overview** - guide purpose, clinic purpose, effective bicycle education and use of skilled instructors.

**Organizing a Cycling Skills Clinic** - steps to organize the clinic, supplies, layout and flow.

**Clinic Organizer's Summary** - volunteer orientation, basic essentials, station setup and intent.

**Cycling Skills Clinic Stations** - check-in, helmet fit bicycle fit and inspection; start and stop, avoid hazards, scan and signal, turn and yield, enter a roadway, intersections, traffic practice and celebrate success.

**Appendices** - explanation of terms, sample checklists, sample letters and news releases, sample parental consent waivers, sample bicycle safety checks, sample bicycle safety quizzes, promise card and helmet pledge, certificates and progress forms, take-home tip sheets, station signs; sample props; clinic station diagrams and dimensions, frequently asked questions, keeping loaner helmets clean; how to fit a bicycle helmet; how to signal your turns and, sample evaluation.

**Teaching Method:** On-bicycle skills

**Subject:** Bicycle

**Skill Based Education:** Yes, on-bicycle skills program in a closed (controlled setting) i.e. a parking lot.

**Grades:** 4th – 8th

**Type of Instruction:** Teacher-led

**Program Duration:** One to 10 hours. The time varies. Allow time for planning, course set-up and basic training of all volunteers so roles and responsibilities are clear and proper educational emphasis is included in the course.

**Other Instructional Materials:** None

**Requires Equipment:** Yes. Requires bicycles, helmets, traffic signs props, cardboard cars/trucks markers, cones, erasers, tennis balls, dots, tape, tables and chairs.

**Cost:** Free

**Meets State Education Standards:** N/A

**Intended Skill Level trained:** Beginner/intermediate

**Measures student learning through pre/post testing:** Yes, optional quizzes for knowledge assessment are included in appendix, on-bike skills are the focus of this product.

**Wrap Around Materials (i.e. materials that are sent home and support in classroom lessons):** No

**Adaptations for Special Needs Students (or scalable to various skill levels):** No

Groups are free to download and customize materials to serve their organization or groups need for publicity and customization.

- **Example of success story:** N/A
- **Challenges:** New product
- **Contact for ordering/more information:**  
Paula Bawer  
1200 New Jersey Ave. SE Washington, DC 20590  
(202)366-2692  
paula.bawer@dot.gov



Bicycle Transportation Alliance



Neighbor NAV



- **Creator:** Cycles of Change
- **Program Summary:** Cycle for Change's six hour curriculum, Drive Your Bike: From the Classroom to the Road was adapted from the Bicycle Transportation Alliance's (BTA) curriculum in 2007 by League Cycling Instructor certified bicycle educators.  
The curriculum is a hands-on train-the-trainer model designed to sustainably teach awareness on-the-road, traffic law, bicycle-handling skills, obstacle avoidance, equipment safety checks and independent decision-making. Since its creation, it has been consistently used with the Alameda County Safe Routes to School program.  
The three-tiered program works the first year with a school site by training their after-school staff or PE teachers by model teaching the Drive Your Bike curriculum with students. The second year, the school site is responsible for teaching the curriculum with assistance from Cycles of Change, recruiting parent volunteers and hauling the bicycle fleet to/from the storage facility. By the third year, the school site is responsible for taking over 70-100% of the teaching and coordination with the help of parent volunteers.
- **Example of Success Story:** 3,500 students have been taught the Drive Your Bike curriculum with the help of 23 teachers and additional parent volunteers. 100 of these students learned how to ride a bicycle for the first time. This work was accomplished in public elementary and middle schools across Alameda County in Albany, Berkeley, Oakland, San Lorenzo, Alameda and Livermore. Students showed a 26% improvement of traffic safety knowledge when comparing pre- and post-tests.
- **Challenges:** This program requires a fleet of bicycles, bicycle storage and repair facilities, professional instructors, mechanics, a program coordinator and school sites that are willing and able to commit to teaching and coordinating the program themselves in future years. The model takes a high level of commitment and teaching ability for which some school providers don't have the time or capacity.
- **Contact for ordering/more information:**  
Tommy Bensko  
Cycles of Change  
Safecycles@gmail.com

**Subject:** Bicycle  
**Skill Based Education:** Yes  
**Grades:** 4th -8th  
**Type of Instruction:** Train-the-trainer/Teacher-led  
**Program Duration:** Six hours  
**Other Instructional Content:** None  
**Requires Equipment:** Yes. Requires bicycles, helmets, maintenance equipment, cones, chalk, and traffic signs.  
**Cost:** Free-\$400.  
**Meets State Education Standards:** Unknown  
**Intended Skill Level trained:** Beginner/intermediate  
**Measures Student Learning Through Pre/Post Testing:** Yes  
**Wrap Around Materials (i.e. materials that are sent home and support in classroom lessons):** Yes  
**Adaptations for Special Needs Students (or scalable to various skill levels):** Yes, tandem for rides and easy drills for on-campus.



- **Creator:** Journeys From Home/Bike Ed America
- **Program Summary:** This program is the current (2011) version of the Montana/Florida program that evolved from the Bike-Ed America project which began in the 1980's.  
The Elementary Traffic Education Program by Journeys from Home is research-based, uses established countermeasures and focuses on attainable behavior changes that can reduce children's risk. It provides repetitive practice under close supervision by taking children outside, on foot, on bicycle, on the playground and in the neighborhood street. This curriculum is designed with lessons that are developmentally appropriate and grow with the children.  
Many regional on-bicycle programs have used this material as a model for their own programs.  
This curriculum is taught in schools by state licensed teachers who know the children and their developmental abilities, and has been integrated into the Montana Health Enhancement school district curriculum, rather than depending on grants and funding each year.
- **Example of Success Story:** Because this curriculum is a school-based comprehensive curriculum that is taught by existing physical education teachers year after year, many of the participating schools have experienced a school wide dynamic shift to independent travel. The K-5th grades program has been in Montana and Florida schools since the mid 90's.
- **Challenges:** Any adult can facilitate the introductory lessons for each grade level. JFH requires classroom and health enhancement teachers to be trained when using the full curriculum. Bicycles and helmets are required to complete the on-bicycle activities and support staff is required for the on-street sessions.
- **Contact for Ordering/More Information:**  
"M.C." Beeby Executive Director  
Journeys From Home Montana  
1620 Townsend Avenue, Helena, Montana 59601  
(406)431-3152  
mc@mcbeeby.com

**Subject:** Bicycle and pedestrian  
**Skill Based Education:** Yes. Includes visual perception skills in the classroom, playground activities, on-street crossing practice and on road riding lessons.  
**Grades:** K - 5th  
**Type of Instruction:** Train-the-trainer. Teachers participate in 20 hours of online and face-to-face instruction. University credit and CEU's available.  
**Program Duration:** 20 hours of training-the-trainer and an additional three hours per classroom. Each grade level has age-specific lessons that stand alone. The teacher may spend 30 minutes to more than three hours as they see fit.  
**Other Instructional Content:** None  
**Requires Equipment:** Yes. Requires a DVD player/screen, inside space, outside play space and neighborhood streets as well as 16 Bicycles and 32 helmets.  
**Cost:** \$200.00 to \$500.00 - one-time fee per school.  
**Meets State Standards:** Yes, Montana.  
**Intended Skill Level Trained:** Intermediate/advanced  
**Measures Student Learning Through Pre/Post Testing:** Yes  
**Wrap Around Materials:** Yes. All essential support materials are available online and include: classroom support, parent pamphlets, afterschool/out of school programs and community awareness.  
**Adaptation for Special Needs Students (or scalable to various skill levels):** No





Dr. Dan Connaughton, (352) 392-4042,x 1370, [safety@hnp.ufl.edu](mailto:safety@hnp.ufl.edu)

Link to Order Online: [http://www.hnp.ufl.edu/safety/html\\_elementary-curriculum.html](http://www.hnp.ufl.edu/safety/html_elementary-curriculum.html)

Alison Contento, (877) 669-7233, ext. 205, [Alison@imsafe.com](mailto:Alison@imsafe.com)

Link for Download: [www.imsafe.com](http://www.imsafe.com)

- **Creator:** Florida Traffic and Bicycle Safety Education Program
- **Program Summary:** The Elementary Traffic Safety Education Guide has served as the root of many other bicycle and pedestrian related curricula. Traffic safety education in Florida schools is mandated, which has allowed time and energy to be put toward this program creating one of the most thorough resources for bicycle and pedestrian safety available.  
While preferably used in conjunction with the train-the-trainer course, the ETSEG can be purchased online. Parties interested in the train-the-trainer model can be trained in Florida and receive the companion teacher's guide that contains a thorough safety curriculum that is research-based and classroom tested. The Elementary Traffic Safety Education Guide includes pedestrian/school bus safety and bicycle safety lessons, designed for 30 and 45 minute increments respectively. These include videos (DVD format), detailed activity sheets to accompany each lesson and suggestions for optional video (DVD selections and ordering information).  
Additional components include a section for student activities, enrichment activities and a guide to adapt the modules for special needs students. The Elementary Traffic Safety Education Guide is an in-depth resource that offers a step-by-step approach to implementing an appropriate and economical pedestrian and bicycle safety education program.
- **Example of Success Story:** The Florida Traffic and Bicycle Safety Education Program has been utilized in schools in Florida and has served as a starting point for bicycle and pedestrian curricula that have been developed across the country.
- **Challenges:** Requires a fleet of bicycles and access to the classroom as well as dedicated funding to ensure ongoing training of teachers.
- **Contact for Ordering/More Information:**  
Dr. Dan Connaughton  
Florida Traffic and Bicycle Safety Education Program  
(352) 392-4042,x 1370  
[safety@hnp.ufl.edu](mailto:safety@hnp.ufl.edu)

**Subject:** Bicycle and pedestrian  
**Skill Based Education:** Yes  
**Grades:** K - 6th (K - 2nd pedestrian, 3rd - 6th bicycle)  
**Type of Instruction:** Train-the-trainer/Teacher-led  
**Program Duration:** Five to 12 hours  
**Other Instructional Content:** English, math, science, social studies, art and health  
**Requires Equipment:** Yes  
**Cost:** \$25  
**Meets State Education Standards:** Yes, Florida.  
**Intended Skill Level Trained:** Beginner/intermediate  
**Measures Student Learning Through Pre/Post Testing:** Yes  
**Wrap Around Materials:** Yes  
**Adaptations for Special Needs Students (or scalable to various skill levels):** Yes, has entire section dedicated to adaptations.



- **Creator:** Child Safety Solutions
- **Program Summary:** I'm Safe! Walk with Me addresses leading child pedestrian safety concerns by teaching students how to stay visible, cross streets safely, observe traffic signs and signals, be safe around a school bus and safely retrieve items that may have fallen into the street.  
The Head Start kit, which has materials for 50 students, includes: the teacher's guide, video, large format storybook, UV coated traffic safety signs with talking points, award certificates and a puppet. Items can be purchased as a kit or separately.  
The curriculum has been written, reviewed and tested by curriculum and safety experts. Research from the Centers for Disease Control and Prevention, Safe Kids Worldwide, information from National Highway Traffic Safety Administration and a wide variety of sources were consulted in the development of the curriculum.  
The Walk with Me video was recognized at the 2010 International Safety Media Awards. The curriculum is currently in use by more than 20 school districts, Head Start programs and health-related organizations.
- **Example of Success Story:** The Chicago Public School system, after carefully evaluating the pedestrian and school bus safety kit, decided to implement the program in approximately 250 Head Start programs Child Safety Solutions is currently working with the administration to monitor program implementation and results to confirm the program's effectiveness in addressing mandated Head Start pedestrian and school bus safety requirements.
- **Challenges:** The challenge is to provide teachers with a low-cost, comprehensive teaching package that uses a growth and developmentally appropriate teaching approach and can be successfully delivered with a minimum level of additional training and preparation. Another challenge is to provide teachers with a flexible teaching approach that can be used to implement the program to address Head Start certification requirements.
- **Contact for Ordering/More Information:**  
Alison Contento, Customer Service Manager  
(877) 669-7233, ext. 205  
[Alison@imsafe.com](mailto:Alison@imsafe.com)  
[www.imsafe.com](http://www.imsafe.com)

**Subject:** Pedestrian  
**Skill Based Education:** Yes. Includes guided pedestrian safety skills practice in real world situations and role plays.  
**Grades:** Preschool – 2nd  
**Type of Instruction:** Teacher-led  
**Program Duration:** Five minutes to four hours. The scalable program can be integrated into existing curricula with themed activities ranging from five minutes to a full lesson. For the full curriculum, allow an average of 45 minutes per day over five days. Follow up activities ranging from five to fifteen minutes can be done throughout the year to reinforce pedestrian safety skills.  
**Other Instructional Content:** None  
**Requires Equipment:** Yes  
**Cost:** \$10-\$150  
**Meets State Education Standards:** No. However, the Head Start kit is written to address Head Start requirements, particularly 1310.21. The Pre-K—K and grades 1—2 kits can be keyed to specific state standards.  
**Intended Skill Level Trained:** Beginner/intermediate  
**Measures Student Learning Through Pre/Post Testing:** Yes  
**Wrap Around Materials:** Yes. Head Start take-home materials are in English and Spanish.  
**Adaptations for Special Needs Students (or scalable to various skill levels):** No





Jayne McGuire, Iowa Bicycle Coalition, Jayne@iowabicyclecoalition.org

Link for Download: <http://tinyurl.com/iowa-bike-coalition>

Jackie Jones, 502) 564-2060, Jackie.Jones@ky.gov

Link for Download: [http://www.saferoutes.ky.gov/Lesson\\_Plans.htm](http://www.saferoutes.ky.gov/Lesson_Plans.htm)



**Creator:** Iowa Bicycle Coalition

**Program Summary:** The Iowa Bicycle Coalition, who has served as the voice of Iowa bicyclists since 2004, created the Iowa Kids on the Move bicycle and pedestrian safety curriculum with funding from the Iowa Department of Transportation's Safe Routes to School program.

The curriculum, which draws from the examples of Portland, Oregon and Fort Collins, Colorado, focuses on including activities that can be done in the classroom but still highlight important safety concepts. An opportunity to apply these concepts is also made possible in several hands on activities. Each module identifies the grade level, subject areas, objectives, materials needed and the amount of time necessary to complete the lesson.

The Iowa Kids on the Move curriculum provides comprehensive materials so that the program can be administered by a classroom teacher or by a trained instructor.

**Contact for ordering/more information:**

Jayne McGuire  
Iowa Bicycle Coalition  
Jayne@iowabicyclecoalition.org

**Subject:** Bicycle and pedestrian

**Skill Based Education:** Yes

**Grades:** K – 6th

**Type of Instruction:** Teacher-led

**Program Duration:** 10 hours

**Other Instructional Content:** English, art, math and social studies.

**Requires Equipment:** Yes

**Cost:** Free

**Meets State Education Standards:** No

**Intended Skill Level trained:** Beginner/intermediate

**Measures Student Learning Through Pre/Post Testing:** No

**Wrap Around Materials (i.e. materials that are sent home and support in classroom lessons):** Yes

**Adaptations for Special Needs Students (or scalable to various skill levels):** No

**Creator:** Kentucky Safe Routes to School Program

**Program Summary:** This Safe Routes to School Curriculum was created by the Kentucky Transportation Cabinet for the purpose of equipping teachers with the tools needed to instruct students about the connections between walking, bicycling, health and environmental quality. A series of lesson plans that range from kindergarten through 8th grades encourage students to think about ways in which they, their families and community can help reduce traffic and air pollution by walking or bicycling. While much of the curriculum includes cross-curricular activities there are also lessons that aim to teach students fundamental pedestrian and bicycle skills.

**Contact for Ordering/More Information:**

Jackie Jones, Kentucky Safe Routes to School Coordinator  
Kentucky Transportation Cabinet, Office of Local Programs  
200 Metro Street, 6th Floor East, Frankfort, KY 40622  
502) 564-2060  
Jackie.Jones@ky.gov  
www.saferoutes.ky.gov

**Subject:** Bicycle and pedestrian

**Skill Based Education:** Yes

**Grades:** K - 8th

**Type of Instruction:** Teacher-led

**Program Duration:** Two hours. Most lessons can be taught in one to two class periods. However, a few are considered "ongoing" or continuing lessons.

**Other Instructional Content:** English, science, social studies and math.

**Requires Equipment:** No

**Cost:** Free

**Meets State Education Standards:** Yes, Kentucky

**Intended Skill Level Trained:** Not applicable

**Measures Student Learning Through Pre/Post Testing:** No

**Wrap Around Materials (i.e. materials that are sent home and support in classroom lessons):** Yes

**Adaptations for Special Needs Students (or scalable to various skill levels):** No



- **Creator:** Marin Safe Routes to Schools
- **Program Summary:** The Marin Safe Routes to Schools program provides basic pedestrian and bicycle skills. The curriculum is scaled for different age groups. For 2nd graders the curriculum focuses on basic street crossing and visibility, while 4th graders begin to learn about helmet safety, rules of the road and participate in a bicycle skills course. Finally, 6th graders practice more advanced street riding skills on the road with instructors.

These classes cover the basics of bicycle and pedestrian safety drawing from curricula from Nevada, Maryland, Texas and Portland. These classes are offered to all of Marin County's schools. This curriculum is currently being revised to create more interactive activities and focus more on broader concepts.

- **Contact for more information:**  
Wendi Kallins  
Program Director  
Safe Routes to Schools Marin County  
wendi@marinbike.org

**Subject:** Bicycle and pedestrian  
**Skill Based Education:** Yes  
**Grades:** 2nd, 4th and 6th  
**Type of Instruction:** Trained instructor-led  
**Program Duration:** Two hours. One in class session and one skill practice over two class periods.  
**Other Instructional Content:** None  
**Requires Equipment:** Yes. Requires traffic signs, cardboard cars/buses/etc., cones, chalk, ramps, some extra bicycles and helmets provided.  
**Cost:** Free  
**Meets State Education Standards:** Unknown  
**Intended Skill Level trained:** Beginner/intermediate  
**Measures Student Learning Through Pre/Post Testing:** No  
**Wrap Around Materials (i.e. materials that are sent home and support in classroom lessons):** Yes. English and Spanish.  
**Adaptations for Special Needs Students (or scalable to various skill levels):** No

- **Creator:** Mississippi used an MDOT Grant to contract with Dr. Jerry Robinson from Delta State University to prepare the lesson plans and then had the plans added to the Health in Action website.
- **Program Summary:** The Mississippi Department of Education's Office of Healthy Schools, The Bower Foundation and the Mississippi Department of Transportation's Safety Division are working together to encourage students and parents to safely walk and bicycle to school by providing resources for educators to teach safe, healthy practices with lifelong benefits. 34 Safe Routes to School lesson plans were developed to address the state curriculum and frameworks for Health Education and Physical Education. They have been used by teachers across the state to introduce students to active transportation choices and the value of being physically active.
- **Example Of Success Story:** A pilot project was conducted with the Oxford School District to emphasize the use of Mississippi's Safe Routes to School Lesson Plans. Lead teachers from all elementary schools participated in the training and then shared information with teachers at their school sites. A post survey indicated that a high percentage of teachers were integrating the lesson plans into the academic subjects that they taught.
- **Challenges:** Getting the word out about the lesson plans.
- **Contact For Ordering/More Information:**  
Christine Philley, M.Ed., CFCS  
School Health Administrator – Office of Healthy Schools  
Mississippi Department of Education  
cphilley@mde.k12.ms.us

**Subject:** Bicycle and pedestrian  
**Skill Based Education:** Yes, bike rodeo, application of survey tools, identification of road signs and mapping projects.  
**Grades:** K – 8th  
**Type of Instruction:** Teacher-led  
**Program Duration:** 30 minutes – 15 hours  
**Other Instructional Content:** English, social studies, math, health, science and geography  
**Requires Equipment:** Yes. Requires usual classroom materials in addition to jump ropes, road signs, scales and the book – The Tortoise and the Hare.  
**Cost:** Free  
**Meets State Standards:** Yes, Mississippi.  
**Intended Skill Level trained:** Beginner/intermediate  
**Measures Student Learning Through Pre/Post Testing:** Yes  
**Wrap Around Materials:** Yes, some lessons include a parent component.  
**Adaptations for Special Needs Students (or scalable to various skill levels):** No

Lynne Mutrie, (503)329-6469, lynnemutrie@zerowaste.org

Link for Download: [http://www.oregon.gov/ODOT/TS/saferoutes.shtml#SRTS\\_Curriculum\\_Now\\_Available](http://www.oregon.gov/ODOT/TS/saferoutes.shtml#SRTS_Curriculum_Now_Available)



Link for Download: <http://www.nrgbalance.org/schools/nrg-walks-education-pack.cfm>

- **Creator:** Oregon Safe Routes to School program
- **Program Summary:** Neighborhood Navigators is a K-8th curriculum package which focuses on safe, efficient and healthy transportation choices, pedestrian safety and community and neighborhood design. It is divided into three grade level sections: K-3rd, 4th-5th and 6th-8th. Each level has five lessons with extension activities and walks to reinforce each lesson give students the opportunity to get out and about and help develop healthy active lifestyles. The curriculum helps students understand the need for safe transportation and emphasizes the need for environmentally friendly transportation. It was developed with examples of existing programs and considers the needs of classroom teachers. After development, Neighborhood Navigators was tested and vetted by school teachers, trained using the Healthy Kids Learn Better best practices model and is supported by research.
- **Success Story:** This curriculum is new and currently being used in Corvallis, Klamath Falls and Oakland. 22 teachers have been trained in this curriculum. Several say it is easy to follow and gives ample opportunity for individual experiences, and location-specific modifications are obvious and encouraged. Corvallis school district has passed a policy to teach Neighborhood Navigators in grades 2-5 and Oakland school district teaches the program in middle school.
- **Challenges:** The biggest challenge is to decide how it fits into a teacher's yearly plan. It is recommend that teachers become trained to experience the scope and sequence of the lessons, but it is designed to be self-contained and easy to follow and/or modify.
- **Contact for Ordering/More Information:** Lynne Mutrie, Oregon Safe Routes to School Program Sustainable Oregon Schools Initiative lynnemutrie@zerowaste.org (503)329-6469

**Subject:** Pedestrian

**Skill Based Education:** Yes, through a series of neighborhood exploration exercises.

**Grades:** K - 8th

**Type of Instruction:** Teacher-led / Train-the-trainer.

**Skill Level Trained:** Beginner/intermediate

**Program Duration:** 45 minutes to four hours. Each grade cluster (K - 3rd, 4th - 5th and 6th - 8th) has five-45 minute lessons. Each lesson has options for further investigation and is intended to be altered to suit the teacher's needs and available resources. Train-the-trainer program is four to six hours and is based on the Healthy Kids Learn Better training model.

**Other Instructional Content:** Environmental education

**Requires Equipment:** No. All materials are included in workbook except the optional pedestrian safety groundsheet, which is supplied with Train-the-trainer.

**Cost:** Free to Oregon schools and nominal printing and/or training costs to others.

**Meets State Education Standards:** Yes. Oregon's standards in several areas including, health, PE and social studies.

**Measures Student Learning Through Pre/Post Testing:** Yes, each lesson has assessment options.

**Wrap Around Materials (i.e. materials that are sent home and support in classroom lessons):** Yes

**Adaptations for Special Needs Students (or scalable to various skill levels):** No

- **Creator:** Center for Nutrition and Activity Promotion at Penn State Hershey Children's Hospital
- **Program Summary:** nrg Walks aims to make it safe for youth to walk and bicycle to and from school. The program is designed for youth, grades K-8th. Designed for classroom teachers and launched during the 2008-2009 school year, nrg Walks offers five days of easy-to-implement activities that promote pedestrian safety and walking as a fun and easy way to be active. Other than the pedestrian safety unit, the other engaging activities range from health-related, to social studies and geography. The curriculum was reviewed by an elementary school teacher in Lancaster County, Pennsylvania to make sure it fulfilled state academic standards and lesson three was developed by injury prevention experts with Safe Kids Pennsylvania. nrg Walks was developed with funding from the Pennsylvania Department of Transportation and the U.S. Department of Transportation, Federal Highway Administration.
- **Example of Success Story:** Claysville Elementary School had a total of 156 students, K-5th, participate in nrg Walks during October of the 2008-2009 school year. They tracked more than 500,000 minutes of walking! The students discussed the benefits of walking and healthy habits in physical education class and parents became involved in the tracking process.
- **Challenges:** The curriculum is scripted for easy use. It does not require much in terms of supplies and resources. It is designed to easily executed.

**Subject:** Pedestrian

**Skill Based Education:** Yes

**Grades:** K - 8th

**Type of Instruction:** Teacher-led

**Program Duration:** One to five hours

**Other Instructional Content:** Health

**Requires Equipment:** No

**Cost:** Free

**Meets State Education Standards:** Yes, Pennsylvania

**Intended Skill Level Trained:** Beginner

**Measures Student Learning Through Pre/Post Testing:** No

**Wrap Around Materials (i.e. materials that are sent home and support in classroom lessons):** No

**Adaptations for Special Needs Students (or scalable to various skill levels):** No



Link for Download: [http://www.bike.cornell.edu/pdfs/Bike\\_Rodeo\\_404.2.pdf](http://www.bike.cornell.edu/pdfs/Bike_Rodeo_404.2.pdf)

Laura Dierenfield, (808)326-7284, [education@pathhawaii.org](mailto:education@pathhawaii.org)

- **Creator:** Lois Chaplin at Cornell University, through a grant from the Governor's Traffic Safety Committee
- **Program Summary:** The Organizer's Guide to Bicycle Rodeos was created as a step-by-step approach to designing a successful bicycle skills event in a community setting. Drawing many of its attributes from the Burden/Williams Guide published through Adventure Cycling, and written by a League of American Bicyclists Certified Instructor and youth development specialist, the Organizer's Guide to Bicycle Rodeos works to address the various developmental stages of youth. It also provides guidance in the form of questions to ask and age appropriate procedures for teaching bicycle handling and traffic skills. Overall, this guide provides an excellent simplified approach to hosting a bicycle skills course.
- **Challenges:** The greatest challenge in implementing this program is ensuring that the adult who is interested in bringing bicycle safety to children is familiar with bicycling. In order to ensure overall success of the program, there must be teachers who are familiar with and can demonstrate the skills outlined throughout the guide.

**Subject:** Bicycle  
**Skill Based Education:** Yes  
**Grades:** K - 5th  
**Type of Instruction:** Teacher-led  
**Program Duration:** One to five hours (including training volunteers)  
**Other Instructional Content:** No  
**Requires Equipment:** Yes  
**Cost:** Free  
**Meets State Education Standards:** No  
**Intended Skill Level Trained:** Beginner  
**Measures Student Learning Through Pre/Post Testing:** No  
**Wrap Around Materials (i.e. materials that are sent home and support in classroom lessons):** No  
**Adaptations for Special Needs Students (or scalable to various skill levels):** No



- **Creator:** Peoples Advocacy for Trails Hawaii (PATH)
- **Program Summary:** A three-day, in-school bicycle safety and education program targeted to 4th grade students, with scalable curriculum for 3rd through 8th grade.  
 PATH-trained instructors schedule three days, 45 minutes per day, per class, scheduled consecutively. Day one consists of classroom-based instruction on bicycle fit, helmet fit, visibility and bicycle laws. Days two and three consist of on-bike drills done in a large paved area such as a parking lot specifically set aside for the Bike Ed program.  
 The curriculum is based on the Smart Cycling content from the League of American Bicyclists and needs to be taught by a League Certified Instructor and trained assistant instructors in a ratio of no more than 1:10.  
 The curriculum focuses on four of the five layers of bicycle safety: control, rules, avoidance and passive safety. Lane positioning is unable to be covered because students are not taken out to the road environment.  
 The program is being offered in Hawaii County with plans to expand to other islands as resources become available.
- **Example of Success Story:** The PATH Bike Ed program has reached more than 1,000 students since restarting in March of 2009. It is part of a broader effort to grow the bicycle movement in Hawaii, and is well-loved by teachers, students and parents.
- **Challenges:** The program requires a lot of equipment and skilled instructors to deliver a high-quality and consistent experience. The biggest challenge is securing funding to pay League Certified Instructors to teach the curriculum.
- **Contact for Ordering/More Information:**  
 Laura Dierenfield, Executive Director  
 PATH  
 PO Box 62 Kailua-Kona, Hawaii 96745  
[education@pathhawaii.org](mailto:education@pathhawaii.org)  
 (808)326-7284

**Subject:** Bicycle  
**Skill Based Education:** Yes  
**Grades:** 3rd - 8th  
**Type of Instruction:** Trained instructor-led  
**Program Duration:** 2.5 hours. Total prep time is 12 hours per class, including equipment mobilization, logistical scheduling and clean up. Often up to four classes will be scheduled per school.  
**Other Instructional Content:** None  
**Requires Equipment:** Yes. Requires, bicycles, helmets, cones, trailer, van, safety vests, traffic signs, bike town, cardboard cars/buses/etc., cones and jump ropes  
**Cost:** Free  
**Meets State Education Standards:** Yes, Hawaii.  
**Intended Skill Level Trained:** Intermediate  
**Measures Student Learning Through Pre/Post testing:** Yes  
**Wrap Around Materials (i.e. materials that are sent home and support in classroom lessons):** Yes  
**Adaptations for Special Needs Students (or scalable to various skill levels):** Yes





- **Creator:** Peoples Advocacy for Trails Hawaii (PATH)
- **Program Summary:** The PATH Pedestrian Education program is one day, one hour, in-school pedestrian safety and education program targeted to 1st - 3rd grades.  
The program delivers basic pedestrian safety taught using rhyme, role playing and interactive dialogue. Based on the Bicycle Transportation Alliance's Pedestrian Safety Program, PATH Ped Ed is divided up into four main sections, starting with vocabulary, safety rhyme, practice crossing the street and bus safety zones.  
The program features a large black, plastic roadway used to practice crossing the street under different circumstances. For 1st grade students, emphasis is made on crossing with an adult.
- **Example of Success Story:** The PATH Ped Ed program has reached more than 3,000 students since restarting in March of 2009, and more than 22 people have been trained on its implementation. 100% of teachers have requested the program's return through satisfaction surveys.
- **Challenges:** The program does require a trained instructor and specifically manufactured equipment to deliver a consistent and accurate message. The biggest challenge is finding funding for the program.
- **Contact for Ordering/More Information:**  
Laura Dierenfield, Executive Director  
PATH  
PO Box 62 Kailua-Kona, Hawaii 96745  
education@pathhawaii.org  
(808)326-7284

**Subject:** Pedestrian  
**Skill Based Education:** Yes  
**Grades:** 1st - 3rd  
**Type of Instruction:** Trained instructor-led  
**Program Duration:** One hour. Additional prep time is three hours per class, including equipment mobilization, logistical scheduling and clean up. Often up to six classes will be scheduled per day, over three to five days to reach all grades.  
**Other Instructional Content:** None  
**Requires Equipment:** Yes. Requires a custom designed "roadway", vocabulary flash cards, safety rhyme poster, coloring handouts and a take home letter to families are all available from PATH.  
**Cost:** Free  
**Meets State Education Standards:** Yes.  
**Intended Skill Level Trained:** Beginner  
**Measures Student Learning Through Pre/Post Testing:** No  
**Wrap Around Materials (i.e. materials that are sent home and support in classroom lessons):** Yes  
**Adaptations for Special Needs Students (or scalable to various skill levels):** Yes



- **Creator:** Bicycle Transportation Alliance (BTA)
- **Program Summary:** The BTA's Pedestrian Safety Education curriculum consists of two 45-minute lessons using on-street and simulated street practice to give the students the knowledge to identify safe and unsafe places to walk as well as demonstrate overall safe pedestrian skills.  
The curriculum covers safely walking on sidewalks, crossing at unmarked crosswalks, crossing at marked crosswalks, using a pedestrian signal and crossing driveways. It was developed by instructors with more than five years of hands-on experience teaching pedestrian safety in the Portland metro area.  
The curriculum is used annually throughout 40 schools in Portland, Oregon.
- **Example of Success Story:** The BTA has been teaching pedestrian safety since 2005. In 2009, the BTA taught 2,400 2nd graders pedestrian safety in Portland and during that time 36.5% of families surveyed by the Portland Safe Routes to School program said they use active transportation on the trip to school.
- **Challenges:** The curriculum requires a simulated street and some visual aides (detailed plans to make a road and visuals included in the curriculum), 20ft x 20ft of space for Lesson one and a near-by route suitable for taking 30 students on a walk.
- **Contact for Ordering/More Information:**  
LeeAnne Ferguson  
Bicycle Transportation Alliance  
233 NW 5th Ave, Portland, OR 97209  
leeanne@bta4bikes.org  
(503)226-0676 x26

**Subject:** Pedestrian  
**Skill based Education:** Yes  
**Grades:** 2nd - 3rd  
**Type of Instruction:** Teacher-led  
**Program Duration:** One to two hours of class time  
**Other Instructional Content:** No  
**Requires Equipment:** Yes. Requires simulated road and visual aids.  
**Cost:** Free  
**Meets State Education Standards:** Yes, Oregon.  
**Intended Skill Level Trained:** Beginner  
**Measures Student Learning Through Pre/Post Testing:** Yes  
**Wrap Around Materials (i.e. materials that are sent home and support in classroom lessons) :** Yes. English, Spanish, Russian, Mandarin, Vietnamese and Somali. Languages other than English are available upon request.  
**Adaptations for Special Needs Students (or scalable to various skill levels):** Yes



LeeAnne Ferguson, (503)226-0676, x26, leeanne@bta4bikes.org

Link for Download: <http://www.walknbike.org/bike-safety>

- **Creator:** Bicycle Transportation Alliance (BTA)
- **Program Summary:** Safe Routes for Kids is a comprehensive ten lesson bicycle safety curriculum including in-class and on-street lessons. This program is most effectively and efficiently taught during the school day by a Physical Education teacher, classroom teacher or trained bicycle safety instructor.

Safe Routes for Kids covers the benefits of using a bicycle for an active and healthy lifestyle, rules of the road and riding predictably, riding position, looking back for traffic, avoiding hazards, properly fitting a helmet, bicycle laws, basic mechanics, communication skills, writing skills and team building skills.

It was developed in 1998 and updated in 2003. The curriculum was vetted by a committee consisting of principals, teachers, Portland/Metro city planners and other youth bicycle safety educators .

Safe Routes for Kids draws on concepts from the Traffic Safety Education Guide (University of Florida, Gainesville, 1998), Effective Cycling Kids II (League of American Bicycles), Basics of Bicycling: Version 1.1 (Bicycle Federation of America), Kids on Bikes in Chicago (City of Chicago), The Alaska Bicycle Driver's Guide (State of Alaska Department of Public Safety), Training Programs for Bicycle Safety (Harborview Injury Prevention and Research Center, 1998) and Effective Cycling (John Forster, MIT Press, 1984).

- **Example of Success Story:** The BTA has taught bicycle safety education using the Safe Routes for Kids curriculum to approximately 40,000 students since 1998. The BTA currently has nine trained Walk+Bike Ambassadors that teach 5,000 students yearly, partnering with local governments, school districts, parents, teachers and students in seven communities. In other communities, teachers and district employees teach the curriculum with training provide by the BTA. The program's effectiveness is closely related to Safe Routes to School and other programs that address the Five E's.

**Subject:** Bicycle  
**Skill Based Education:** Yes  
**Grades:** 4th - 7th  
**Type of Instruction:** Trained instructor-led  
**Program Duration:** 10 hours. A train-the-trainer course takes an additional 10 hours.  
**Other Instructional Content:** None  
**Requires Equipment:** Yes. Requires bicycles, cones, chalk and tools for routine bicycle maintenance.  
**Cost:** Free - \$250. The Safe Routes for Kids pdf is free for use in Oregon. Cost is \$38 for a hard copy and a \$250 fee for copyright for use outside of Oregon.  
**Meets Oregon State Education Standards:** Yes  
**Intended Skill Level Trained:** Beginner/intermediate  
**Measures Student Learning Through Pre/Post Testing:** Yes  
**Wrap Around Materials (i.e. materials that are sent home and support in classroom lessons):** Yes, English and Spanish  
**Adaptations for Special Needs Students (or scalable to various skill levels):** Yes

- **Challenges:** The challenges of the Safe Routes for Kids curriculum focus on the significant amount of time and resources necessary to teach the curriculum with an operational bicycle fleet and locating volunteers for the classes.
- **Contact for Ordering/More Information:**  
 LeeAnne Ferguson  
 Bicycle Transportation Alliance  
 233 NW 5th Ave, Portland, OR 97209  
 leeanne@bta4bikes.org  
 (503)226-0676, x26



Sprockids



Bicycle Transportation Alliance

John Kay, (402) 476-7331, [jkay@sinclairhille.com](mailto:jkay@sinclairhille.com)

Link for Download: <http://www.saferoutesne.com/educators/srintheclassroom.html>

Diana Owens, (215) 399-1598 x 702, [Diana@bicyclecoalition.org](mailto:Diana@bicyclecoalition.org)

Link for Download: <http://saferoutesphilly.org/schools/curriculum>



- Creator:** Safe Routes Nebraska
- Program Summary:** Safe Routes in the Classroom provides in-classroom activities to teachers who wish to integrate walking and bicycling concepts into everyday lessons. The activities are broken out by grade and help students to understand the health benefits of walking and bicycling to school as well as how to do it safely. The lessons also come with a Safe Routes Jeopardy PowerPoint presentation and an eight-page activity guide full of games and facts that can be used to reinforce important concepts.

**Contact for Ordering/More Information:**

John Kay  
Safe Routes Nebraska  
700 Q Street  
Lincoln, NE 68508  
(402) 476-7331  
[jkay@sinclairhille.com](mailto:jkay@sinclairhille.com)

**Subject:** Bicycle and pedestrian  
**Skill Based Education:** No  
**Grades:** K - 8th  
**Type of Instruction:** Teacher-led  
**Other Instructional Content:** Social studies, science, English and math.  
**Program Duration:** 30 minutes – four hours  
**Requires Equipment:** No  
**Cost:** Free  
**Meets State Education Standards:** Yes, Nebraska.  
**Intended Skill Level trained:** Beginner  
**Measures Student Learning Through Pre/Post Testing:** No  
**Wrap Around Materials:** No  
**Adaptations for Special Needs Students (or scalable to various skill levels):** No



- Creator:** Bicycle Coalition of Greater Philadelphia
- Program Summary:** Safe Routes Philly's pedestrian and bicycle safety lessons are geared towards the 2nd and 5th grade audience. The lessons are in modular form, giving teachers the option to teach shorter or longer lessons and all off bicycle tutorials that range from ten minutes to 45 minutes. The primary lessons can be identified on our website and/or below under the heading: Core Lessons. The pedestrian curriculum was adapted from the WalkSafe™ Miami program. The bicycle curriculum is a combination of many different lessons with adaptations from experiences in the Philadelphia setting that includes bicycle safety videos to assist teachers with the Bicycle ABCs and helmet fitting (videos can be found on the website). The curriculum was developed to meet the Pennsylvania state standards and connect with the reality and needs of the Philadelphia teachers and students. In Philadelphia some of the biggest concerns for children include their knowledge to ride with traffic, obeying road rules and making sure their bicycles are safe to ride prior to riding. The core lessons cover these three issues, along with many other important issues that are important for kids in the urban environment to learn. There are a multitude of lessons available that can be taught consecutively or broken out into smaller, less comprehensive lessons based on the available class time.

- Challenges:** Because the Philadelphia School District is as overburdened as it is, it has been a challenge to get the approval of the school district to mandate that their teachers teach these lessons. However, this was also why the lesson plans were developed in a modular format. The focus on PE teachers, by offering credit through professional development trainings, has brought out a lot of the target school teachers. Approximately two-thirds of all public elementary school teachers in the district have received training and teaching materials, and about one-third of that number have taught lessons since November 2010. Because the current core lessons do not require a fleet of bicycles, it allows teachers a realistic option in teaching students off bicycle and pedestrian safety lessons more easily.

**Contact for Ordering/More Information:**

Diana Owens  
Bicycle Coalition of Greater Philadelphia  
1500 Walnut Street, Suite 305, Philadelphia, PA, 19102  
[Diana@bicyclecoalition.org](mailto:Diana@bicyclecoalition.org). (215) 399-1598 x 702

**Subject:** Bicycle and pedestrian  
**Skill Based Education:** Yes  
**Grades:** 1st - 6th (Pedestrian: 1st - 3rd / Bicycle: 4th - 6th )  
**Type of Instruction:** Train-the-trainer/teacher-led  
**Program Duration:** 45 minutes – 4 hours. Lessons are in modular form; ideally taught during 45 minute increments.  
**Other Instructional Content:** Social studies, math, science, English.  
**Requires Equipment:** Yes. Simulations require props to create a mock intersection; bicycle rodeos require helmets and bicycles, etc. Materials needed are listed in the introduction to each lesson  
**Cost:** Free  
**Meets State Education Standards:** Yes, Pennsylvania.  
**Intended Skill Level Trained:** Beginner  
**Measures Student Learning Through Pre/Post Testing:** No  
**Wrap Around Materials (i.e. materials that are sent home and support in classroom lessons):** Yes  
**Adaptations for Special Needs Students (or scalable to various skill levels):** Yes – scalable to various skill levels.



Preston Tyree, (512) 238-4075, preston@bikeleague.org

Link for Download: <http://tinyurl.com/traffic-safety-program>

- **Creator:** League of American Bicyclists
- **Program Summary:** The League of American Bicyclists' newest curriculum, Safe Routes to School Traffic Safety Program, is comprised of ten modules to teach in the classroom, parking lot and on the road. Developed in cooperation with elementary school teachers and experienced traffic safety instructors, the curriculum addresses everything from helmet fit to riding on a multi-use path while focusing on its main learning outcomes. The curriculum divides ten modules up between basic (four modules), intermediate (three modules) and advanced (three modules), which allows the instructor scale the class length based on the available time and the individual level of the class. The lesson plans are flexible and the sequence of the lessons can be altered. Instructors should make sure to teach all key concepts. Each individual lesson plan is formatted like a chapter. The lesson plan provides an overview of the lesson, the health and physical education goals achieved by the lesson, description of the activities, details of and how to administer the activities, required materials and copies of handouts for each activity. Based on previously successful curricula, Safe Routes to School Traffic Safety Program builds on tried and true modules to include a well-rounded program that will get more kids walking and riding safely.
- **Challenges:** Parts of the curriculum brings students on the road. Time and training commitment level is higher than other curricula.
- **Contact for Ordering/More Information:** Preston Tyree  
League of American Bicyclists  
(512)238-4075  
preston@bikeleague.org

**Subject:** Bicycle and pedestrian  
**Skill Based Education:** Yes, parking lot exercises and community rides.  
**Grades:** 4th - 8th  
**Type of Instruction:** Teacher-led  
**Program Duration:** Eight hours  
**Other Instructional Content:** None.  
**Requires Equipment:** Yes. Intermediate and advanced levels require bicycles and helmets.  
**Cost:** Curriculum document costs \$25 per classroom or \$10 per PDF.  
**Meets State Education Standards:** Unknown  
**Intended Skill Level Trained:** Intermediate  
**Measures Student Learning Through Pre/Post Testing:** Yes  
**Wrap Around Materials (i.e. materials that are sent home and support in classroom lessons):** Yes  
**Adaptations for Special Needs Students (or scalable to various skill levels):** Yes, scalable.

Rachel Davidman, (510) 740-3150, Ext. 332, Rachel@transformca.org

Link for Download: <http://www.transformca.org/sr2s/lesson-plans>



- **Creator:** Safe Routes to Schools Alameda County
- **Program Summary:** The Safe Routes to Schools Walk and Roll K-5 Educator Guide: Activities for Creating Safe and Healthy Communities is designed as a supplemental resource for classroom teachers and afterschool program providers to easily integrate and support Safe Routes to School messages throughout the school year. The Walk and Roll K-5 Educator Guide includes grade level appropriate activities, California State Content Standards correlations, teaching materials (a book and DVD) and the option to participate in an educator workshop. This guide addresses pedestrian safety issues more than bicycle safety issues, although bicycle safety information is integrated into several of the safety activities. The Alameda County program relies on their partnership with Cycles of Change to implement the bicycle safety education. This guide includes adaptations from The Nebraska Department of Roads Safe Routes to Schools, Marin County Safe Routes to Schools and Portland Department of Transportation. It will be disseminated through Alameda County's Safe Routes to School program.
- **Example of Success Story:** The curriculum has just been released so there are no stories at this time.
- **Contact for Ordering/More Information:** Rachel Davidman  
Transform  
436 14th St. Suite 600, Oakland, Ca 94612  
Rachel@transformca.org  
(510) 740-3150, Ext. 332

**Subject:** Bicycle and pedestrian  
**Skill Based Education:** Yes, includes hands-on practice such as street crossing, traffic signal and pedestrian sign identifications and how to identify the safest route possible.  
**Grades:** K - 5th  
**Type of Instruction:** Teacher-led /Train- the-trainer. Educators will have the option to participate in a Walk and Roll K-5 Educator Guide workshop, and will then engage their students in a teacher to student format.  
**Program Duration:** 20 minutes to eight hours. These activities are designed to be user-friendly and can be collapsed or expanded and adapted up or down a grade level as needed. Most activities require approximately 20 minutes.  
**Other Instructional Content:** Community, health and environment.  
**Requires Equipment:** Yes. Some activities require cones, internet, art supplies and other materials. All necessary supplies are listed at the beginning of each activity.  
**Cost:** Free to Alameda County schools and afterschool programs.  
**Meets State Education Standards:** Yes, California  
**Intended Skill Level Trained:** Beginner/intermediate  
**Measures Student Learning Through Pre/Post Testing:** No  
**Wrap Around Materials (i.e. materials that are sent home and support in classroom lessons):** Yes  
**Adaptations for Special Needs Students (or scalable to various skill levels):** Yes, scalable to various skill levels.



# Safe Routes to Schools Middle School Educator Guide: Activities for Creating Safe and Healthy Communities

Rachel Davidman, (510) 740-3150, Ext. 332, Rachel@transformca.org

# Safe Street Crossing Tips: A Pedestrian Safety Training Program for Elementary and Middle School Students

Tim Gates, (313) 577-2086, tjgates@wayne.edu  
Peter Savolainen, (313) 577-9950, savolainen@wayne.edu



- Creator:** Safe Routes to Schools Alameda County
- Program Summary:** The Safe Routes to Schools Middle School Educator Guide: Activities for Creating Safe and Healthy Communities is designed as a supplemental resource for classroom teachers, club sponsors and after-school program providers to easily integrate and support Safe Routes to School messages throughout the school year. It is project-based and allows students to go in-depth on a particular topic.  
  
The guide includes grade level appropriate activities, California State Content Standards correlations and engaging projects for students to participate in that help them learn about their community and environment and leads them to create changes in their community. The curriculum was produced by Safe Routes to School Alameda County and a former teacher with a Masters in Education.  
  
Including adaptations from the Livable Streets Middle School Curriculum, this guide has been designed to encourage middle school youth to take ownership and participate in their community, work with their peers and affect change in their neighborhoods and school environment.  
  
While the guide is in the initial stages of release, it is based on activities that have been tested and are being used in the New York City public schools.
- Example of success story:** The guide is not yet in circulation.
- Contact for Ordering/More Information:**  
Rachel Davidman  
Transform  
436 14th St. Suite 600, Oakland, Ca 94612  
Rachel@transformca.org  
(510) 740-3150, Ext. 332

**Subject:** Bicycle and pedestrian  
**Skill Based Education:** No  
**Grades:** 6th - 8th  
**Type of Instruction:** Train-the-trainer/Teacher-led. Educators will have the option to participate in an Educator Guide workshop.  
**Program Duration:** 30 minutes and up. These activities are designed to be user-friendly and can be collapsed or expanded or adapted up a grade level or down as needed.  
**Other Instructional Content:** Community, health and environment.  
**Requires Equipment:** Yes. Some activities require cones, Internet, art supplies, a speed radar device (that can be checked out from their office) and other materials. All necessary supplies are listed at the beginning of each activity.  
**Cost:** Free  
**Meets State Education Standards:** Yes, California.  
**Intended Skill Level trained:** Intermediate  
**Measures Student Learning Through Pre/Post Testing:** No  
**Wrap Around Materials (i.e. materials that are sent home and support in classroom lessons):** No  
**Adaptations for Special Needs Students (or scalable to various skill levels):** Yes, scalable to various skill levels.



- Creator:** Wayne State University – Transportation Research Group
- Program Summary:** The Safe Street Crossing Trips curriculum was developed by the Wayne State University Transportation Research Group to target pedestrian safety issues specific to Detroit, but also covers universal safety messages. Designed as a PowerPoint presentation with photos, animations and videos, the Safe Street Crossing Trips presentation is intended to be taught to small or large groups inside of one class period.  
  
The presentation itself works to provide critical information to students about various pedestrian safety scenarios but also allows time for students to practice skills in a simulated environment and includes a question and answer format. Evaluation of the program showed beneficial impacts on child pedestrian behavior and test scores resulting from both the initial training and a retraining 12 months later. The findings of the program evaluation have been published in the Journal of the Transportation Research Board.
- Example of Success Story:** More than 10,000 K-8th grade students have been trained at 44 schools (public and charter) within the City of Detroit. The violation rates of child pedestrians traveling to/from school decreased by approximately 7% after receiving the program and pre/post test scores improved by approximate 23%. Retraining 1 year later at selected schools provided incremental improvement in both violation rates and test scores.
- Challenges:** Poor or aging facilities within many of the schools in Detroit made it challenging to present the content effectively. While it can be done, crowd control is difficult with larger assemblies, and this should be closely considered when choosing the size of the group presentation.
- Contact for Ordering/More Information:**  
Tim Gates and Peter Savolainen  
Wayne State University – Transportation Research Group  
tjgates@wayne.edu, savolainen@wayne.edu  
(313)577-2086, (313)577-9950

**Subject:** Pedestrian  
**Skill Based Education:** No  
**Grades:** K - 8th (most effective for 2nd - 6th)  
**Type of Instruction:** Teacher-led  
**Program Duration:** 50 minutes  
**Other Instructional Content:** None  
**Requires Equipment:** Yes. Requires a laptop, projector, screen (or light colored wall) and microphone (if possible)  
**Cost:** Free  
**Meets State Education Standards:** No  
**Intended Skill Level Trained:** Beginner  
**Measures Student Learning Through Pre/Post Testing:** Yes  
**Wrap Around Materials (i.e. materials that are sent home and support in classroom lessons):** Yes  
**Adaptations for Special Needs Students (or scalable to various skill levels):** No





- **Creator:** BikeTexas
- **Program Summary:** The BikeTexas Education Fund has guided development of the SafeCyclist (formerly SuperCyclist) Curriculum since 1991. The curriculum was developed by a team of experts including curriculum specialist and cycling education experts. Principals, administrators and teachers partnered with BikeTexas to evaluate and test the curriculum.  
  
The 15 lesson curriculum can serve as an education component of a Safe Routes to School program. Lessons focus on rules of the road, safe cycling skills and practices and how to improve walking and bicycling within their school vicinity. Also included are master pages in English and Spanish. The Cycling Across the Curriculum section enables math, science, English and arts teachers to introduce bicycle education into their educational activities.  
  
Since 1998, the curriculum has been only available as a part of a certification process. More than 3,700 Texas teachers and youth community workers have been trained. In addition, trained college faculty has presented the material to more than 3,000 students studying to be physical education teachers.  
  
Based on past surveys of trained teachers, we estimate more than 200,000 Texas students a year receive part of the SafeCyclist bicycle safety lessons.
- **Example of Success Story:** When taught by Travis County officers trained in the SuperCyclist Program (original name of program), helmet usage in targeted under-served neighborhood of Travis County increased from 27% to 42%.
- **Challenges:** Even though PE teachers are trained to teach the program, a few are not familiar with cycling and continue to be uncomfortable teaching bicycle skills and safety.
- **Contact for Ordering/More Information:**  
BikeTexas  
Robin Stallings, Executive Director  
robin@biketexas.org  
education@biketexas.org  
(512)476-7433

**Subject:** Bicycle and pedestrian  
**Skill Based Education:** Yes, in the form of several riding skills courses.  
**Grades:** 4th - 5th  
**Type of Instruction:** Train-the-trainer  
**Other Instructional Content:** Math, science, English and arts.  
**Program Duration:** Four to 12 hours. The curriculum is scaleable from an optional quick one week course that focuses on five primary lessons to a three week, fifteen lesson course.  
**Requires Equipment:** Yes. Since bicycles are usually not available to schools, the basics of the course can be taught using “virtual bicycles” (handlebars made from pvc pipe or even paper towel tubes). In addition cones, poly spots, sponges and sidewalk chalk are useful. Activity cards and traffic signs are part of the course and need to be copied and laminated ahead of time.  
**Cost:** \$100. SafeCyclist curricula are \$100 each plus train the trainer fees.  
**Meets Texas and National Education Standards:** Yes  
**Intended Skill Level Trained:** Beginner  
**Measures Student Learning Through Pre/Post Testing:** Yes  
**Wrap Around Materials:** Yes, in English and Spanish.  
**Adaptations for Special Needs Students (or scalable to various skill levels):**  
 No adaptations, but is scaleable to various skill levels.



- **Creator:** New York City (NYC) DOT Safety Education
- **Program Summary:** The Safety City curriculum was developed specifically for third grade students because they are at an age where they are both receptive and able to retain safety information. The curriculum covers a variety of traffic safety topics with emphasis on pedestrian and bike safety. It has been cited by the NYC Department of Education as meeting NYC school day performance standards.  
  
The curriculum covers all issues of concern for pedestrians and bicyclists including: traffic signs and signals, how to see and be seen by drivers, staying alert, and the importance of wearing properly fitted helmets. The curriculum provides hands-on lessons where children practice crossing the street and driving bicycles on a realistic intersection with real signs, signals and markings.  
  
The Safety City curriculum has been consistently used in the borough of Manhattan since 1989. Its use was expanded in 1993 and it is now being used throughout New York City. Since the inception of the first Safety City in Central Harlem in 1989, the Harlem Hospital Pediatric Trauma Unit has reported 50% fewer admissions resulting from traffic crashes.  
  
Safety City has won awards from AAA and Allstate for its unique and effective teaching methods and is considered to be a model curriculum which has been used in the development of hands-on traffic safety instruction programs in other cities and countries.
- **Example Of Success Story:** Six facilities across the five boroughs serve approximately 20,000 children and New Yorkers of all ages with special needs on-site each year. In addition, 20,000 children receive traffic safety training from Safety City staff at their own schools.
- **Challenges:** The curriculum requires a classroom and an outdoor space with a simulated streetscape for hands-on practice as well as two professional instructors, bikes and other equipment and requires several funding sources.
- **Contact For Ordering/More Information:**  
Ilona Lubman, Executive Director, Safety Education,  
NYC Department of Transportation  
59 Maiden Lane, 35th Floor,  
New York, NY 10038  
(212) 839-4750, ilubman@dot.nyc.gov

**Subject:** Bicycle and pedestrian  
**Skill Based Education:** Yes  
**Grades:** 3rd  
**Type of Instruction:** Trained instructor-led  
**Program Duration:** One day plus pre and post visits.  
**Other Instructional Content:** None  
**Requires Equipment:** Yes. Requires classroom space, streetscape space, bikes, helmets, traffic signs, real vehicles, and cones.  
**Cost:** Free  
**Meets State Education Standards:** Yes, New York.  
**Intended Skill Level trained:** Beginner  
**Measures Student Learning Through Pre/Post Testing:** Yes  
**Wrap Around Materials (i.e. materials that are sent home and support in classroom lessons):** Yes, materials available in Spanish, Chinese, and other languages for students and their parents; students are encouraged to do follow-up assignments in class and become “Safety Deputies” by sharing what they’ve learned with others.  
**Adaptations for Special Needs Students (or scalable to various skill levels):**  
 Yes, adapted curricula for visually impaired and autistic students.





Doug Detwiller, (604)886-0772 , ddetwiller@dccnet.com

Contact for Ordering/More Information: [www.sprockids.com](http://www.sprockids.com)

Bevin Maynard, (813) 615-0589 x226, Bevin.Maynard@baycare.org

○ **Creator:** Sprockids Technical Team

○ **Program Summary:** While different from many of the other bicycle safety programs represented in this report, Sprockids was originally developed as a Self Esteem /Anger Management Program to help students succeed in school. Since then, Sprockids has evolved into a multi-faceted program engaging thousands of young people in the life long activity of mountain biking while teaching them the skills, values and strategies to succeed in life.

The Sprockids introduction to bicycling program teaches four skills areas of cycling: safety and etiquette, riding skills (1st and 2nd gear) and bicycle maintenance. The program allows participants to progress in all areas at their own pace and promotes values, respect for others, empathy, appreciation and responsibility for the environment.

As participants gain the skills demonstrated in the class they record their personal progress in their "Passport".

This program is intended to be led by trained individuals so that they can adequately pass on the program's life skills while helping students develop a healthy, positive philosophy toward bicycling and learning as lifelong activities.

○ **Example of Success Story:** Sprockids is now used in 19 countries by teachers, coaches, cycling clubs, youth organizations, law enforcement agencies and parents.

○ **Challenges:** The Sprockids program was designed to allow the organization delivering the program to be able to utilize the instructional material in a manner to best suit the needs of their clientele.

○ **Contact for Ordering/More Information:**

Doug Detwiller, Program Director  
P.O. Box 1456  
Gibsons, B.C. V0N1V0 Canada  
ddetwiller@dccnet.com  
(604)886-0772  
[www.sprockids.com](http://www.sprockids.com)

**Subject:** Bicycle

**Skill Based Education:** Yes

**Grades:** 4th - 12th

**Type of Instruction:** Train-the-trainer (two Sprockids instructional manuals); Teacher-led (participant "Passport")

**Program Duration:** 20 plus hours. Train-the-trainer (optional one day, on-site course)

**Other Instructional Content:** Language arts, social studies, math, science, and art.

**Requires Equipment:** Yes

**Cost:** \$225 per leader for instructional manuals and training

**Intended Skill Level Trained:** Beginner/intermediate

**Meets State Education Standards:** No

**Measures Student Learning Through**

**Pre/Post Testing:** No, however as each participant masters the 55 skills covered in the program their results are recorded in their individual "Passport."

**Wrap Around Materials (i.e. materials that are sent home and support in classroom lessons):** No

**Adaptations for Special Needs Students (or scalable to various skill levels):** No

○ **Creator:** St. Joseph's Children's Hospital of Tampa

○ **Program Summary:** The Tampa Walk & Roll to School Program is implemented by St. Joseph's Children's Hospital. The program is offered to elementary physical education teachers. Instructors must complete a youth traffic skills certification course to be qualified to teach the program. The Tampa Walk and Roll to School Program is a comprehensive bicycle and pedestrian safety program that meets the new Next Generation Sunshine State Standard. The program consists of three separate components which can be scheduled throughout the year: an educational assembly, bicycle and pedestrian skills course and a Walk and Roll Your Child to School Day.

The bicycle and pedestrian skills course is scheduled at a time for approximately 30 minutes concentrating on 4th and 5th grade students. All outside course equipment, bikes, scooters, and helmets are provided however, the school is responsible for a minimum of four and maximum of six additional staff/volunteers to help with stations.

○ **Example of Success Story:** St. Joseph's Children's Hospital of Tampa was recognized by the school board of Hillsborough County as an "outstanding program" after reaching 17,000 students.

○ **Challenges:** Transportation and maintenance of equipment, communication with school staff on the requirements of the programming, quality and training of instructors.

○ **Contact for Ordering/More Information:**

Bevin Maynard, Safe Routes to School Coordinator  
St. Joseph's Children's Advocacy Center  
(813) 615-0589 x226  
[Bevin.Maynard@baycare.org](mailto:Bevin.Maynard@baycare.org)

**Subject:** Bicycle and pedestrian

**Skill Based Education:** Yes, in the form of bike and pedestrian clinic with street crossing practice and road skills.

**Grades:** preschool – 6th

**Type of Instruction:** Train-the-trainer

**Program Duration:** Six hour train-the-trainer and an additional 30 minutes per class.

**Other Instructional Content:** None

**Requires Equipment:** Yes. Requires bikes, scooters, traffic signs, vehicle signs, house sign, road hazards, rubber spots, mini cones and hazard activity sheets.

**Cost:** Free

**Meets State Education Standards:** Yes, Florida.

**Intended Skill Level trained:** Beginner/Intermediate

**Measures Student Learning Through**

**Pre/Post Testing:** Yes

**Wrap Around Materials (i.e. materials that are sent home and support in classroom lessons):**

Yes. A parent letter about helmet law and a free helmet is available if in need.

**Adaptations for Special Needs Students (or scalable to various skill levels):** Yes

- **Creator:** Cascade Bicycle Club
- **Program Summary:** The Urban Riders curriculum is a four-hour class adapted from the League of American Bicyclists' Traffic Skills 101 Course for an audience of pre-teens or early adolescents. The course is designed for groups of six to 12 students with two League Certified Instructors.

The course, which is currently used in King County, Washington (the Greater Seattle Area) with a variety of public and private groups, consists of four parts: in-class instruction, in-class hands-on, on bike skills/drills and extended road ride.

At the end of the course, students will be able to be safely ride on the road with other vehicular traffic. Students will have improved handling of their bicycles and will be able to make independent decisions about when and how to enter traffic. Students will be made aware of some common hazards in riding on the road and how to avoid those hazards. Finally, attendees will be able to properly fit their own helmets and to check their bicycles to make sure they are mechanically sound.

This program addresses common concerns of new cyclists: in particular, dealing with car traffic. The program emphasizes good decision-making as a means to gaining the respect of parents, other adults and peers.

Example of Success Story: This program has reached 200 youth in the past two years.

- **Challenges:** The program requires a pair of instructors who are comfortable with and have the temperament for working with children. The suggested age range covers a potentially large disparity in physical and emotional maturity, as well as bicycle handling skills. The course works best if students are roughly homogenous in their skill level and age (within three years of one another).
- **Contact for Ordering/More Information:**  
Kat Sweet  
Cascade Bicycle Club  
7400 Sand Point Way NE, Suite 101, Seattle, WA 98115  
kat.sweet@cascadebicycleclub.org  
(206) 522-3222

**Subject:** Bicycle

**Skill Based Education:** Yes. Parking lot drills and on-road riding including street crossing practice.

**Grades:** 5th-9th

**Type of Instruction:** Trained instructor-led

**Program Duration:** Four hours.

**Other Instructional Content:** None

**Required Equipment:** Yes (see below)

**Cost:** Free

**Meets State Education Standards:** No

**Intended Skill Level Trained:** Intermediate

**Measures Student Learning Through Pre/Post Testing:** Yes

**Wrap Around Materials (i.e. materials that are sent home and support in classroom lessons):** Yes

**Adaptations for Special Needs Students (or scalable to various skill levels):** Yes. Curriculum is scalable to various skill levels but will not work well for groups containing widely divergent skill levels.

- **Required Equipment:** working bicycles and helmets for each student and instructor, waivers, class roster, clipboard, pens, display intersection on portable magnetic whiteboard with magnetic cars and bicycles; dry erase markers, permanent marker, honeydew melon, crash helmet for melon drop, sidewalk chalk, small cones (half tennis balls), red licorice (or other suitable, non-allergen treat), route maps (for intersections), "Safe Routes for Kids: City Biking Handbook" (or similar bicycle safety handouts), swag (slap bracelets, reflective stickers, patch kits, water bottles etc.), floor pump, basic repair tools (specifically 15mm box wrench or adjustable crescent wrench for non-quick release wheels), a variety of spare tubes in common sizes (20", 24", 26"), first aid kit, instructor backpack or panniers to carry gear, an empty, paved parking lot or playground where students can practice skills.



Bicycle Transportation Alliance



Sprockids

Dan Persky, (312) 427-3325, education@activetrans.org

○ **Creator:** Active Transportation Alliance

○ **Program Summary:** Walk Across Illinois Afterschool Challenge empowers supplemental learning providers with a standards-based, engaging and free curriculum to encourage physical activity and literacy growth for elementary school children. The program introduces students to athletes and other inspiring individuals who set goals to overcome their personal challenges, and then provides the experience of the sports of those athletes.

In the body challenge activities, the students build their physical skills with a special emphasis on walking, bicycling and other forms of active transportation. Students in the program use a full range of sports to help students exceed national standards for physical activity.

The brain challenge sessions focus on literacy development. Students read about the inspiring individuals and make text-to-life connections. They engage in small group and full-class activities that promote team building and problem solving.

Walk Across Illinois Afterschool Challenge is designed for implementation in schools, recreation centers and other afterschool settings. The curriculum is easy-to-understand, and was created by a team of classroom and physical education curriculum writers and consultants.

○ **Example of Success Story:** In the first fall semester of its release in 2010, the Afterschool Challenge was used by 660 children in Chicago. One afterschool program provider had the following to say about the program:

“The children have enjoyed the activities so far. They have asked us when our next lesson plan is going to happen or what our next activity will be on. I’ve enjoyed using the Afterschool Challenge because it has made it easier to introduce activities to the children and be able to have their cooperation as well as their participation!” - One Hope United

○ **Challenges:** One challenge that teachers have faced when using this curriculum has been learning how to fit this program into their schedules. Often after-school care providers only have an hour or two with the children, so they may have difficulty implementing an 80-hour program.

**Subject:** Bicycle and pedestrian

**Skill Based Education:** Yes. In terms of bicycle and pedestrian safety, skill based education is included in the form of simulated street crossing practice, simulated street bicycling skills and in-class bicycle and pedestrian safety role play.

**Grades:** 3rd - 4th (can be adapted for other grades)

**Type of Instruction:** Teacher-led. This scripted curriculum is designed to guide teachers or afterschool providers through the lessons as they teach their students.

**Program Duration:** 1-80 hours. There are 40 literacy based lessons and 40 physical activity based lessons to be used in whole over the course of a school year, or to be broken down into smaller units.

**Other Instructional Content:** English and physical development.

**Requires Equipment:** Yes. All equipment required for the Afterschool Challenge program can already typically be found in a classroom or PE class setting. A master list of required materials is provided within the program, and every lesson has a required materials section in order to help the educator prepare in advanced.

**Cost:** Free

**Meets Illinois State Education Standards:** Yes, the correlating Early and Late Elementary Illinois Learning Standards have been listed at the beginning of each lesson.

**Intended Skill Level Trained:** Beginner

**Measures Student Learning Through Pre/Post Testing:** Yes

**Wrap Around Materials:** Yes

**Adaptations for Special Needs Students (or scalable to various skill levels):** Yes. Walk Across Illinois Afterschool Challenge is an inclusive curriculum that has been designed to be accessible to learners of varying ability levels in classroom and physical activity settings.

However, the Afterschool Challenge is flexible enough to be used in most situations. Lessons use a spiraling approach but they also can be implemented as stand-alone activities or as a unit (seven units total in the program). Program staff members are also available to help instructors make necessary adaptations.

○ **Contact for Ordering/More Information:**

Dan Persky  
Active Transportation Alliance  
9 W. Hubbard, Suite 402, Chicago, Illinois 60654  
education@activetrans.org  
(312) 427-3325



Sprockids



Bicycle Transportation Alliance



Link for Download: <http://www.walkboston.org/documents/srtsCurricAll.pdf>

(414) 431-1761, [mkeinfo@bfw.org](mailto:mkeinfo@bfw.org)

Link for Download: <http://tinyurl.com/wisdom-walking-biking>

- **Creator:** WalkBoston and ERG
- **Program Summary:** The Walking for Health and the Environment Curriculum was created for Massachusetts teachers who want to help children learn about the connections between walking, health and environmental quality. The curriculum consists of 15 hands-on, easy-to-implement lesson plans for kindergarten through 5th grades. Each lesson meets Massachusetts curriculum frameworks standards. The lessons typically meet several curriculum frameworks standards concurrently, such as science, math, social science and comprehensive health. The lessons encourage students to think about ways in which they, their families and their communities can help reduce traffic and associated air pollution through walking, bicycling and using public transportation. The lessons help students see that walking is a fun and easy form of daily exercise that is good for their overall health. The curriculum includes both in classroom and out-of-class field activities, such as mapping routes from students' homes to their schools, creating a simple air pollution tester and measuring breathing and heart rates before and after physical activity. Many of the lessons are ideal for collaborative efforts among classroom teachers, physical education teachers and computer lab instructors. The curriculum includes ten lessons for 3rd-5th grades and five lessons for kindergarten-2nd grades. The lessons have been reviewed by Massachusetts teachers and tested in classrooms with outstanding results.
- **Example of Success Story:** Teachers have reported that the "lesson plans are age appropriate, very resourceful, easy to implement, and the students loved the lessons!", and that the activities have led children to have great discussions about walking and the environment.
- **Challenges:** The lesson plans are ready to use "off the shelf" and do not require outside assistance or special equipment.

**Subject:** Pedestrian  
**Skill Based Education:** No  
**Grades:** K-5th  
**Program Duration:** 30 minutes to two hours variable in-class and outdoor time.  
**Type of Instruction:** Teacher-led  
**Other Instructional Content:** Health, math, social studies, and science.  
**Requires Equipment:** Yes. Primarily standard classroom materials, internet access for some lessons, pedometers for others.  
**Cost:** Free  
**Meets State Education Standards:** Yes, Massachusetts.  
**Intended Skill Level Trained:** Beginner/intermediate  
**Measures Student Learning Through Pre/Post Testing:** No  
**Wrap Around Materials (i.e. materials that are sent home and support in classroom lessons):** No  
**Adaptations for Special Needs Students (or scalable to various skill levels):** No



- **Creator:** Bicycle Federation of Wisconsin
- **Program Summary:** Walking Wisdom and Bike Driver's Ed were developed as a Safe Routes to School specific curriculum by the Bicycle Federation of Wisconsin. This step-by-step curriculum draws from several leading bicycle and pedestrian curricula from throughout the country. Bike Driver's Ed was developed for 5th and 6th graders as a 10 hour program while the multilevel Walking Wisdom program is geared towards the individual abilities of 1st, 2nd, and 3rd graders. Bike Driver's Ed can be condensed and slightly altered to be appropriate for students in 7th through 9th grade. Bike Driver's Ed consists of nine hours of lessons plans so that there is one extra hour to devote to the skills and concepts that are difficult for each particular class. Most often, this "extra day" is an additional session of on bike practice devoted to turning and yielding to each other in intersections. Alternately, if the school and parents are supportive, the last day of the program can be a neighborhood ride during class, rather than on Saturday morning. All programs are multi-day and combine in-class teaching with on-bike or on-foot activities. The lesson plans are intended to be one hour each, thus the 10 hour bicycle education program is 10 school days or two weeks long while Walking Wisdom is two or three days.
- **Challenges:** The curriculum is time intensive and requires equipment such as bicycles and helmets.
- **Contact for ordering/more information:** Bicycle Federation of Wisconsin  
 1845 N. Farewell Ave. Suite #100 Milwaukee, WI 53202  
 (414) 431-1761  
[mkeinfo@bfw.org](mailto:mkeinfo@bfw.org)

**Subject:** Bicycle and pedestrian  
**Skill Based Education:** Yes  
**Grades:** 1st – 6th (1st - 3rd pedestrian, 5th and 6th bicycle)  
**Type of Instruction:** Teacher-led  
**Program Duration:** 10 hours  
**Other Instructional Content:** None  
**Requires Equipment:** Yes  
**Cost:** Free  
**Meets State Education Standards:** Unknown  
**Intended Skill Level trained:** Beginner  
**Measures Student Learning Through Pre/Post Testing:** Yes  
**Wrap Around Materials (i.e. materials that are sent home and support in classroom lessons):** No  
**Adaptations for Special Needs Students (or scalable to various skill levels):** No



Weiner/Seaman Productions, (310) 479-0922

Link for Download: <http://www.bucklebear.com/catalog/kits.html> (scroll to bottom)

- **Creator:** Weiner/Seaman Productions
- **Program Summary:** Since 1982 Bucklebear traffic safety materials have presented basic concepts of bicycle and pedestrian safety to preschool children and their parent/caregivers, thereby encouraging young children to take some responsibility for their own safety. The Walking with Bucklebear curriculum provide teachers with easily presented materials addressing importance of adult supervision, wearing bright colors so walkers can be seen, safe places to walk and walking practice.

The original presented concepts were reviewed and approved by early childhood educators at CSUN preschool lab and addresses the critical traffic safety issues that preschoolers face. The Bucklebear materials have been used across the nation for more than 25 years by Head Start groups, educators, health pros, fire/police and safety advocates with frequent reorders for additional program materials. Its' positive approach enables young children to be happy and careful pedestrians.

- **Example of Success Story:** Many successful safety programs are outlined at Bucklebear's website [www.bucklebear.com](http://www.bucklebear.com).
- **Contact for Ordering/More Information:**  
Weiner/Seaman Productions  
1505 Winchester Avenue Glendale, CA 91201  
(310) 479-0922

**Subject:** Pedestrian  
**Skill Based Education:** Yes  
**Grades:** Preschool  
**Type of Instruction:** Teacher-led  
**Program Duration:** 45 minutes – four hours. Can be a community one-time presentation or spread out over ten lessons in a classroom.  
**Other Instructional Content:** None  
**Requires Equipment:** No  
**Cost:** \$63.00 (some free activities on web site)  
**Meets State Education Standards:** Unknown  
**Intended Skill Level Trained:** Beginner  
**Measures Student Learning Through Pre/Post Testing:** No  
**Wrap Around Materials (i.e. materials that are sent home and support in classroom lessons):** Yes  
**Adaptations for Special Needs Students (or scalable to various skill levels):** No



Sprackids

Christine Stinson, (305)243-8115, CStinson@med.miami.edu

Link for Download: <http://walksafe.us/material.html>

(Note: Website users must login and agree to report use of the WalkSafe™ curriculum before accessing materials.)

- **Creator:** University of Miami WalkSafe™ Program
- **Program Summary:** The WalkSafe™ educational curriculum is designed to guide educators in teaching important pedestrian safety and health lessons to elementary school-aged children in the school setting. The curriculum is intended to be taught over a three-day period (30 minutes per day), with implementation typically coinciding with International Walk to School Day in October.

It is available in three versions – one for kindergarten-1st grades, one for 2nd-3rd grades, and one for 4th-5th grades – ensuring that program recipients receive age- and grade-appropriate education.

In addition to the core lessons, the WalkSafe™ educational curriculum also contains optional and supplemental activities that support key reading and mathematics benchmarks while reiterating important concepts. The curriculum also includes materials and strategies developed by curriculum specialists that can be used with students of varying learning and linguistic abilities.

The curriculum was developed in 2001 to serve as the educational component of the WalkSafe™ program's Five-E's model (Education, Engineering, Enforcement, Encouragement and Evaluation). It was developed by a multi-disciplinary team of experts, and has since been evaluated and shown to improve K-5th grade students' pedestrian safety knowledge and skills. Its' content and teaching strategies are research-based and evaluated on an ongoing basis through teacher surveys and educational testing. The curriculum is disseminated using a train-the-trainer model, and a web-based curriculum training for teachers/school personnel is available on the WalkSafe™ website ([www.walksafe.us](http://www.walksafe.us)).

- **Example of Success Story:** The WalkSafe™ educational curriculum was mandated to be taught annually in all public elementary schools by the Miami-Dade County Public School Board in 2003, and consistently reaches more than 140,000 kindergarten through 5th grade students in Miami-Dade each year. Since the curriculum was developed and disseminated in 2001, Miami-Dade County Level One Trauma Centers have observed a 62% decrease in child pedestrian-hit-by-car admissions, and WalkSafe™ has been identified as

**Subject:** Pedestrian

**Includes Skill Based Education:** Yes

**Grades:** K - 5th

**Teaching Method:** Teacher-led/Train-the-trainer. (curriculum training for teachers is available through a web-based training video on the WalkSafe™ website [www.walksafe.us](http://www.walksafe.us))

**Program Duration:** 1.5 hours of instructional time (three days, 30 minutes per day); 15-30 minutes for train-the-trainer web-based training

**Other Instructional Content:** None

**Requires Equipment:** Yes. Requires cones, chalk or rope (any material that can be used to create a simulated road); paper and drawing materials.

**Cost:** Free

**Meets State Education Standards:** Yes, Florida.

Intended Skill Level Trained: Beginner/intermediate/advanced

**Measures Student Learning Through Pre/Post Testing:** Yes (assessment is available, but not required.)

**Wrap Around Materials (i.e. materials that are sent home and support in classroom lessons):** Yes, English, Spanish and Haitian-Creole.

**Adaptations for Special Needs Students (or scalable to various skill levels):** Yes (additionally, modified curriculum for children with special needs will be available in summer 2011).

a significant countermeasure for juvenile pedestrian-struck crashes by outside agencies.

- **Challenges:** Since the program is designed to be taught in a school setting, it requires instructional class time. This has presented an obstacle for some schools and teachers due to the increased focus on academic standards and time needed to prepare for standardized testing. However, many schools have overcome this obstacle by distributing the load of implementation among classroom teachers (who typically teach lesson one), physical education teachers (who teach lesson two), and art teachers (who teach lesson three).

- **Contact for Ordering/More Information:**  
Christine Stinson  
University of Miami WalkSafe™ Program Lois Pope LIFE Center (1-40)  
1095 NW 14th Terrace, Miami, FL 33136  
(305)243-8115  
CStinson@med.miami.edu



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Bicycle Transportation Alliance





- **Creator:** Oregon Center for Applied Science
- **Program Summary:** Walk Smart is an interactive CD-ROM program for children in kindergarten through 3rd grades. Using animation and video demonstrations is an engaging self-paced program. It teaches children the basic knowledge and skills they need to be safe as pedestrians.  
What differentiates the Walk Smart program from traditional safety curricula is the emphasis on breaking down complex skills such as street crossing into component parts: responding to signals, discriminating dangerous vehicles and understanding traffic distance. The program then teaches each of these skills to mastery before integrating them into the more complex task of walking safely across a busy street.
- **Example of Success Story:** The program was evaluated in a study involving 36 students. The study found that students identified hazardous vehicles significantly better in both video simulations and simulated outdoor intersections after using the program than they had prior to using the program. The study also found that even children with no computer or reading skills were able to use the program.
- **Challenges:** The Walk Smart program incorporates several interactive tools. The use of animations to present traffic situations provides a means for removing irrelevant stimuli. The abstracted situations permit children to focus on critical details and respond to specific elements in the environment. By gradually replacing the animations with semi-abstracted examples (e.g., actual photographs of streets and intersections with animated cars, 3-D models with photographic backgrounds), generalizations from the abstracted scenes to the complex and dynamic situations are induced. The video materials used in the programs enable the effective teaching of pedestrian skills by presenting real-life examples of traffic related scenarios, which can greatly reinforce classroom lectures and printed material. The interactivity requires the learner to pay careful attention and respond overtly and frequently. Students get immediate corrective feedback as needed.
- **Contact for Ordering/More Information:**  
Jay Thompson  
Oregon Center for Applied Science  
(866) 346-4880, info@hcimarketplace.com

- Subject:** Pedestrian
- Skill Based Education:** Yes. Virtual skill practice in animated and photographic traffic situations.
- Grades:** K - 3rd, most effective in 2nd - 3rd grades
- Type of Instruction:** Computer-Aided Instruction. Multimedia, self-paced CD-ROM designed for use at home or in the classroom. This program uses video, animation and interactive exercises to teach pedestrian safety skills.
- Program Duration:** 40 minutes
- Other Instructional Content:** None
- Requires Equipment:** Yes. PC: Microsoft Windows 98SE, 2000, or XP, Intel Pentium III 700MHz or higher. Mac: OS X version 10.2 or later, G4 processor. PC and Mac: 64 MB of free available system RAM (128 MB recommended), 16X or faster CD-ROM drive, video card with 16 bit ('high') color or better, 800x600 monitor with 32-bit color, mouse, sound card and speaker or headphones.
- Cost:** \$19.95; call for bulk pricing.
- Meets State Education Standards:** No
- Intended Skill Level Trained:** Beginner
- Measures Student Learning Through Pre/Post Testing:** Yes
- Wrap Around Materials (i.e. materials that are sent home and support in classroom lessons):** Yes
- Adaptations for Special Needs Students (or scalable to various skill levels):** No



- **Creator:** Center for Health and Learning
- **Program Summary:** The WalkSmart/BikeSmart Vermont! curriculum is a walking and bicycling safety skills program that has been vetted by curriculum experts and addresses the most significant concerns for child bicyclists and pedestrians. The lessons are designed to keep children actively engaged, integrate their experience and skills into the activities and help them practice decision-making skills for healthy and safe choices.  
Complete with pre and post tests, handouts, overheads and step-by-step instructions, the WalkSmart/BikeSmart Vermont! curriculum is a complete resource for groups looking to implement bicycle and pedestrian safety.
- **Example of Success Story:** The WalkSmart evaluation showed significant change in knowledge and attitudes among 175 students kindergarten through 4th grades in Vermont and BikeSmart showed the same among 245 students in 2nd-6th grades. More than 3,000 children received this instruction in 2008 alone. The WalkSmart/BikeSmart program is taught in dozens of schools throughout Vermont. Through performance evaluation both students and instructors see student accomplishment and learn to tweak instruction to ensure better learner outcomes in future programs. Students, staff and parents continue to support the WalkSmart/BikeSmart program feeling that it is beneficial to the children.
- **Challenges:** There is nothing inherent in the program that is a challenge; the delivery is straight-forward and easy-to-comprehend with a good amount of hands-on activity for the children. There are a lot of demands on schools for instructional time.
- **Contact for Ordering/More Information:**  
Project Manager  
Center for Health and Learning  
28 Vernon St. Suite 319, Brattleboro, VT 05301  
(802) 254-6590  
Amelia@healthandlearning.org

- Subject:** Bicycle and pedestrian
- Skill Based Education:** Yes
- Grades:** K - 6th
- Type of Instruction:** Teacher-led
- Program Duration:** One hour
- Other Instructional Content:** None
- Requires Equipment:** Yes. One bicycle for teacher, traffic signs, cardboard cars/buses and helmet for teacher.
- Cost:** Free
- Meets State Education Standards:** Yes, Vermont.
- Intended Skill Level Trained:** Beginner
- Measures Student Learning Through Pre/Post Testing:** Yes
- Wrap Around Materials:** Yes
- Adaptations for Special Needs Students (or scalable to various skill levels):** No



## Wheels in Motion: Fun Activities for Youth Cyclists

## Wise Rides—Coming Fall 2011



Jay Thompson, (866) 346-4880, info@hcimarketplace.com

Link for Ordering: <http://www.4-hmall.org/Category/4-hcurriculum-bicycle.aspx>

**Creator:** National 4-H Curriculum

**Program Summary:** The Wheels in Motion curriculum, the follow up to Bicycling for Fun, builds upon previously learned skills to further develop the abilities of the participant. Designed for use in small groups of students grade 6th-8th, the activities again focus on experiential education as the key to transferring skills to the student. All activities include a description of the skills to be practiced, discussion questions, suggestions for additional activities and basic information to get started. The success indicator listed for each activity is an excellent way to evaluate the youth's progress.

Each lesson is broken out to indicate required materials, necessary preparations, skills and the "do" part of each activity, a question and answer section, a section on interesting additional information and finally, a section dedicated to taking the activity a little further for eager participants. The curriculum includes several modules on bicycle maintenance, advanced road skills and bicycling for life.

National 4-H suggests that this curriculum be used in tandem with 4-H's Bicycle Helper's Guide, which includes "learning by doing" activities that incorporate preparing to ride, riding, skill activities, and games to play with the group.

**Example of Success Story:** The National 4-H has been distributing this curriculum since 1988 but recently redesigned it in 2006. It did not report on the success or challenges of its product.

**Subject:** Bicycle

**Skill Based Education:** Yes

**Grades:** 6th - 8th

**Type of Instruction:** Teacher-led

**Program Duration:** Six hours (program is scalable)

**Other Instruction Content:** English, science and social studies.

**Requires Equipment:** Yes

**Cost:** \$3.95 per booklet

**Meets State Education Standards:** Unknown

**Intended Skill Level Trained:** Intermediate/  
Advanced

**Measures Student Learning Through**

**Pre/Post Testing:** No, but does use a success indicator to gauge student's comprehension.

**Wrap Around Materials (i.e. materials that are sent home and support in classroom lessons):**

Yes, the workbook is intended to go with the student on an ongoing basis.

**Adaptations for Special Needs Students (or scalable to various skill levels):** No

**Creator:** Oregon Center for Applied Science

**Program Summary:** Although pedestrian and bicycle collisions are leading causes of death and severe injury in children, there are few evidence-based, easily implemented prevention programs targeting pedestrian and bicycle safety skills for children ages 9 to 14. Data shows that multi-component interventions targeting peers, school staff, child and family are necessary to effect change in pre-teen safety behaviors.

Wise Rides will be an interactive online program to reinforce active transport safety skills for children in 4th- 8th grades. The centerpiece of the program will be student-focused, with additional brief content targeting parents and school staff. The program will cover: teen brain development, rules of the road, hazard identification and avoidance and use of helmets and other protective gear. Unique features include: a school-wide approach involving students, educators and parents; use of interactive media tailored for this audience; incorporation of instructional design features that have been shown to maximize learning; application of safety skills in video-based examples of real-life traffic situations and decision making and problem solving in simulated traffic situations.

The program will be grounded in behavior change theory and will incorporate computer-based assessment with remediation to ensure content mastery. The program will include a comprehensive set of active transport safety skills; a peer-led training activity; school-wide implementation guidelines; lesson plans for teachers; and expansion materials for parents.

**Contact for Ordering/More Information:**

Jay Thompson  
Oregon Center for Applied Science  
(866) 346-4880  
info@hcimarketplace.com

**Subject:** Bicycle and pedestrian

**Skill Based Education:** Yes. Virtual skill practice in animated/video simulations.

**Grades:** 4th - 8th

**Type of Instruction:** Computer-Aided Instruction. Multimedia, self-paced website. This program will use video, animation and interactive exercises to teach active transport safety skills.

**Program Duration:** Less than 60 minutes.

**Other Instructional Content:** None

**Requires Equipment:** Yes. PC or Mac with broadband internet access.

**Cost:** Unknown at this time

**Meets State Education Standards:** No

**Intended Skill Level Trained:** Intermediate

**Measures Student Learning Through**

**Pre/Post Testing:** Yes  
**Wrap Around Materials (i.e. materials that are sent home and support in classroom lessons):** Yes

**Adaptations for Special Needs Students (or scalable to various skill levels):** Unknown at this time

Ben Caldwell, (415) 447-9643

Link for download: [www.ybike.org/resources/curriculum](http://www.ybike.org/resources/curriculum)

**Creator:** Presidio Community YMCA Bicycle Program (YBike)

**Program Summary:** YBike's After School Bicycle Program Curriculum is a comprehensive course on bicycle and traffic safety designed for upper-elementary, middle, and high-school youth. The course is designed as a 16-lesson afterschool "bicycle club," which the YBike Program runs at numerous schools in San Francisco, but is adaptable for other programs and course lengths and objectives. YBike also uses an adapted version for its 10-day physical education program. The curriculum focuses on the teaching of bicycle handling skills, the safe negotiation of complex traffic situations, addressing key youth bicyclists' concerns such as driveway hazards, safe city riding practices, and practicing right-of-way and intersection negotiation without driver safety training. There are also lessons devoted to healthy nutrition, environmental awareness, mapping and bicycle advocacy. Student leadership is encouraged throughout.

The YBike curriculum was developed in 2004 and went through a major update and redesign in 2008 with support from the San Francisco Bicycle Coalition. It draws on the experience of YBike's many youth bicycle safety educators, as well as from leading youth bicycle safety curricula such as that from Portland's BTA, as well as Safe Routes to School programs in Marin County, California and Pima County, Arizona.

**Example of Success Story:** More than 1,250 students have successfully completed this curriculum since 2004, roughly 250 who had never been on a bicycle before taking this course. The program has helped develop a culture of bicycling at all San Francisco schools, and has encouraged and trained some students to bicycle to school. Students completing the program significantly improve their traffic safety knowledge, as shown by pre-post-test scores.

**Challenges:** This program is specifically designed to train students in the skills needed to ride their bicycles safely on urban streets, i.e., to be vehicular cyclists – often without any prior driver education training. Significant risk management concerns are involved in running a program with this design, requiring highly skilled, trained and certified instructors to run the program. Liability and insurance should be fully

**Subject:** Bicycle

**Skill Based Education (in the form of bike rodeo, street crossing practice, on road skills, etc.):** Yes

**Grades:** 4th - 12th

**Type of Instruction:** Trained instructor-led

**Program Duration:** Eight-24 hours. Eight-16 lessons, 1.5 -2.5 hours each lesson.

**Other Instructional Content:** Nutrition, environment, social sciences and advocacy.

**Requires Equipment:** Yes. Traffic signs, chalk, cones, halved tennis balls and other traffic safety course materials. Bicycles & helmets are needed, if participants do not already have them.

**Cost:** Varies

Meets State Education Standards: **No. Some lessons** do meet state standards, but not all lessons have been directly tied to state standards.

**Intended Skill Level Trained:** Beginner/intermediate

**Measures Student Learning Through Pre/Post Testing:** Yes

**Wrap Around Materials (i.e. materials that are sent home and support in classroom lessons):** Yes. English, Spanish and Chinese.

**Adaptations for Special Needs Students (or scalable to various skill levels):** No

considered. Prospective users of this curriculum are strongly advised to gain the necessary experience, training and certifications before attempting to teach this curriculum and take out groups of inexperienced youth riding on city streets. A maximum ratio of two instructors to 12 students should be observed at all times, and all instructors should have extensive risk management, emergency response and first aid training. The curriculum cannot be accomplished without a bicycle and helmet for each student. Running a professional program using this curriculum, and adhering to the guidelines and recommendations outlined above, can be expensive relative to the number of students served.

**Contact for Ordering/More Information:**

Ben Caldwell, Director of Bicycle Programs  
YBike Program, Presidio Community YMCA  
63 Funston Avenue, San Francisco, CA 94129  
(415) 447-9643



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WalkSafe™ Miami



**Safe Routes to School National Partnership**  
**[www.saferoutespartnership.org](http://www.saferoutespartnership.org)**

Design by Melanie Scheuermann, [www.melcreative.com](http://www.melcreative.com)

February 2011