



Safe Routes  
to School  
**National  
Partnership**

# Roll Bicycle Education Into Your Physical Education Program

When physical education programs include Safe Routes to School, both programs achieve their goals. Like physical education, Safe Routes to School supports increased physical activity, develops healthy habits that can last a lifetime, and decreases the risk of chronic disease and obesity.<sup>1</sup> Because Safe Routes to School aims to get more kids walking and biking to school, it helps to ensure students get the recommended 60 minutes of physical activity each day and arrive at school ready to learn.<sup>2</sup> By including bicycling safety and skills lessons – as well as pedestrian education – in physical education programs, schools can give students invaluable tools to support healthy lifestyles and lifelong habits that bolster physical and emotional wellness. This fact sheet explains the why and the how of integrating bicycle education into physical education programs.

## Why Include Bicycle Education in Your Physical Education Program

Bicycle education helps achieve the goals set out by the National Standards for K-12 Physical Education – *to develop physically literate individuals who have the knowledge, skills and confidence to enjoy a lifetime of healthful physical activity* – while providing larger benefits for students, schools, and communities.<sup>3</sup>

Bicycle education supports:

**Skills for a Variety of Physical Activities:** Through on-bike lessons, students practice and hone balance, control while starting and stopping a bike, scanning the surroundings, and other skills necessary for safe bicycling as well as other types of physical activity.

**Understanding of the Benefits of Physical Activity:** Bicycle education generally includes lessons and activities about the physical, mental, and emotional health benefits of bicycling as well as other benefits related to transportation and the environment.

**Regular Physical Activity, Health, and Fitness:** Bicycling improves overall fitness and teaching students how to ride safely benefits their health both on and off the bicycle. One study showed youth who commuted by bicycle felt they were more in shape for other sports they participated in at school.<sup>4</sup> Bicycling to school is associated with better heart health compared with other means of getting to school.<sup>5</sup>



Photo courtesy of Kendra Bridges

All first grade students at Pagosa Springs Elementary School, Colorado receive bicycle education as part of their physical education program. During a weeklong unit, students learn bicycle safety and skills, including helmet fitting, braking, hand signals, and other rules for riding safely on streets, sidewalks, or paths. This program uses 32 bicycles purchased by Retro Metro Kids, Archuleta School District's Safe Routes to School coalition, and is taught by a physical education teacher who was trained in bicycle education with the help of Bicycle Colorado.

Students who began bicycling were fitter, had better cholesterol, better glucose metabolism, and a lower composite cardiovascular risk factor score.<sup>6</sup>

**Lifetime of Healthy Physical Activity:** Providing bicycling skills can help students incorporate physical activity into their lives when they grow up, becoming active adults who avoid chronic diseases caused by immobility. Bicycle education for teens can encourage students to use bicycling for transportation to school even when they are old enough to drive.

### *Additional Benefits:*

In addition to supporting physical education goals, bicycle education for students also offers a variety of additional benefits.

**Student Safety:** Whether students currently bike or are new to biking, students can benefit from a baseline of bicycle safety knowledge. Few young people receive formal bicycle safety training outside of school, but many are already riding for recreation or transportation. Physical education classes provide dedicated time and space to educate all students on traffic laws, bicycle handling skills, and safety precautions.

Riding for transportation is especially common for low-income students, who are twice as likely to walk or bike to school as more affluent students.<sup>7</sup> However, low-income students are also more likely to experience collisions and injuries due to inadequate street infrastructure. This means that practical lessons on how to minimize risks while bicycling may bring particular assistance to low-income students, while benefiting all students.

**Attendance & Academic Performance:** Providing bicycling safety education during the school day also supports students' academic performance. For students facing transportation barriers that prevent them from getting to school on time or at all, skills and confidence gained in physical education classes can help them to start bicycling to school. The increased physical activity that bicycle education supports has also been shown to help students concentrate and do better in class.<sup>8</sup>

**Independence & Mobility:** Bicycling supports emotional well-being by giving students an opportunity to be self-reliant by transporting themselves independently.<sup>9</sup> Using a bicycle for transportation makes further destinations accessible for students reliant on walking, public transportation, and being driven by friends or family. A student experiences self-growth and independence by being able to independently access neighborhood locations that were previously too far to walk or where public transportation was not available.<sup>10</sup>

## Developing a Bicycle Education Program for your Physical Education Classes

Bicycling among students often begins in elementary school and peaks before high school. This trend makes elementary and middle school physical education programs opportune places for bicycle education. Schools can incorporate bicycle education into physical education programs in several ways.

The structure of your bicycle education program will depend on what monetary and staffing resources, equipment, and space are available. Basic bicycle education programs are typically a week long. Programs that offer more detailed instruction and time to practice skills can be as long as a month and often include classroom activities and on-bike skills practice. Since all students will need bicycles to use during skills practices is important. Schools will also need to consider how bicycles will be purchased or borrowed, maintained, and stored and whether a teacher or an outside instructor will teach the lessons.

### Adaptive Bicycles

Find resources for funding adaptive bicycles with the organizations listed below. [Shriners](#) and [Kiwanis](#) will donate funds to purchase adaptive equipment for youth with disabilities, including adapted bikes and other recreational equipment. [AMBUCS](#) provides Amtryke therapeutic tricycles to individuals unable to operate a traditional bike.

### Bicycle Education Resources

Check with your state departments of transportation or health to see if your state has a tailored curriculum.

- [Bikeology](#) – A middle and high school bicycle curriculum aligned with National Standards for K-12 Education.
- [Walk! Bike! Fun! \(Minnesota\)](#) – A comprehensive curriculum for students ages 5 through 13 that teaches safe traffic behavior through classroom activities and on-the-bike skills practice.
- [Let's Go NC! \(North Carolina\)](#) – A pedestrian and bicycle safety skills program for elementary schools, including lesson plans and videos.
- [California Pedestrian and Bicycle Safety Curriculum for Grades 4 and 5](#) – A program aligned with California education standards specifically for upper elementary school students.
- [Active Transportation Alliance Teacher Resources](#) – A resource kit that includes quick 10-minute lessons for use in PE classes, other sample lessons, and additional resources for elementary, middle, and high school teachers.
- [Safe Routes to School Marin County Curriculum](#) – Bicycle safety unit guidebooks for fourth and sixth grades.



### *Bike Education Content and Curricula*

Bicycle education typically covers the following three areas: bicycle safety, traffic laws, and bicycle handling skills. Some schools expand the curriculum to include bike maintenance. Schools can use a variety of existing materials – videos, handouts, and curricula – developed by government agencies and health organizations. Some curricula include step-by-step lesson plans, and align with national physical education standards (e.g. Bikeology) or with specific state physical education content standards. While most programs include both classroom and on-bike lessons, some programs opt to only include lessons that do not require students to get on bikes because of monetary, space, or other constraints. This can be an easier first step to starting your bicycle education program.

### *Supplies: Bicycles, Helmets, and Other Equipment*

If your program is going to include on-bike lessons, you will need to determine who is providing the bicycles as well as helmets and other equipment. Some programs ask students to bring their own bicycles and helmets from home. These students can also share their bicycles with students who do not have their own or cannot bring it. If the school is going to provide bicycles, account for costs for purchasing, maintaining, and storing a fleet. When a bicycle education curriculum is rolled out at multiple schools in a district, a bicycle trailer can enable the fleet to travel from school to school. Consider applying for grants to create a bicycle fleet. Bicycle manufacturers such as Specialized might donate to or sponsor a program. Also look into borrowing bicycles from a local bicycle organization. For more information on building a bicycle fleet, refer to Funding, Organizing, and Maintaining Bicycle Fleets and Minnesota Bicycle Alliance's Bicycle Fleet Guide.

### *Instructors*

Your bicycle education program will require a trained bicycle education instructor to teach students skills and safety. A bicycle education program can either train physical education teachers to deliver the program or rely on contractors such as local bicycle advocacy organizations.

When physical education teachers serve as the instructors, an initial outlay may be necessary to train staff and provide support for the first year of programming, but after that period, teachers can adjust and replicate the unit for future years. School-facilitated bike education builds the cost of instructors into regular budgeting of teacher time and salary. Meanwhile, investing in bicycle education training for current teachers keeps resources inside the school and provides staff with a personal and professional development opportunity.

There are other benefits to training physical education teachers as well. Having physical education teachers facilitate bicycle education is helpful for building bicycling momentum at your school because teachers:

- Have meaningful relationships with students and can serve as role models championing bicycling;
- Are familiar with their school and students and can tailor program content to fit specific needs.
- Can reinforce bicycle education lessons by incorporating concepts into other units.
- Have the ability to organize competitions or school wide events encouraging bicycling.

Contracting with a bicycle organization specializing in bicycle education or other outside professionals is an alternative to training teachers. Some bicycle organizations are able to provide bicycle education at no cost to schools through grants from government agencies or foundations. As experts in the field, they can offer the most current information and effective activities. Bicycle education contractors often provide bicycles for students through a traveling bicycle fleet. For schools with limited access to bicycles or space, this resource alone can be essential. Reach out to your local bicycle organization to see if they can provide a free or low cost option for your school.

### **Ways to Start Now!**

Jump-start your bicycle education program by incorporating information and activities into your existing school programming. Make bicycling part of your messaging, handouts, and sport days in your physical education program. Create a school wide competition for participation in bicycle education and events. Promote walk or bike to school day. Show school support for bicycling by providing information and safety tips on your school website. Generate staff and family awareness by including bike to school day, bicycle skills courses, and other bicycling events on your school calendar. School wide support for bicycling benefits students and physical education goals.

### **Conclusion**

Bicycle education and physical education are a natural fit because of their intersecting goals. Physical education teachers can affect the health and safety of youth by teaching safe bicycling skills and behaviors around traffic. As a result, youth will get more physical activity, have more fun, be safer when bicycling, and be more likely to use bicycling as a form of activity and transportation for a lifetime.



## References

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