

MASSACHUSETTS
Safe Routes to School
Mass.gov/MassDOT/SafeRoutes

MIDDLE SCHOOL RESOURCE GUIDE



INTRODUCTION

The Massachusetts Safe Routes to School (SRTS) Program is sponsored by the Massachusetts Department of Transportation (MassDOT) with funds from the Federal Highway Administration. SRTS works with schools, communities, students, and families to increase biking and walking among elementary and middle school students in the Commonwealth. School partners receive year-round pedestrian and bicyclist safety education instruction, as well as engagement initiatives tailored to meet each school's health, safety, and environmental priorities.

This guide offers ways in which we, as members of the SRTS community, can provide opportunities for middle school students to get excited about safe walking and biking activities through increasing their individual knowledge and practice of safe transportation behaviors. This guide also connects teachers, administrators, and community leaders with resources to develop a thriving middle school SRTS program.

Building on the lessons taught in elementary school, middle school programs reinforce safety and equip students with the knowledge they need to make informed commuting decisions. As middle schoolers transition into high school, they will have new transportation choices.

In this guide, you will find strategies and best practices to further engage middle school students in SRTS activities. Some of these strategies are designed to be led by teachers or administrators, while others are student-led strategies.

Please note that some of the strategies include existing components of the SRTS program while others are ideas that can be further built out within your school community.



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TEACHER/ADMINISTRATION-LED STRATEGIES

Providing guidance and supervision, while cultivating self-expression and responsibility, is a balancing act. Below are strategies by which some programs have achieved this balance.

TIP

Design SRTS initiatives with student interests and motivations in mind. This will cultivate project ownership while providing opportunities for self-expression.

This guide includes suggestions that are designed to appeal to a wide variety of student interests including art, science, physical activity, and community engagement.

ARTISTIC AND CREATIVE MARKETING CONTESTS

The Massachusetts Safe Routes to School's **Yard Sign Design Contest** is a way for students to use their creativity to help promote safe roads for cyclists and pedestrians in their communities. In February and March schools will receive instruction on how to create and submit designs for yard signs that focus on messages of pedestrian and bicyclist safety, particularly while traveling to and from school. Signs may be hand drawn or created digitally. Four winning submissions become official yard signs and are made available for distribution to partner schools all around the Commonwealth.

SAFE STREETS SMART TRIPS HIGH SCHOOL VIDEO CONTEST

The Safe Streets Smart Trips High School Video Contest is designed to promote safe walking, bicycling, and driving behaviors on a peer-to-peer level. While the contest is open only to high school students, winning videos can be showcased in eighth grade classrooms in order to pique student interest in active transportation as well as to serve as a reminder of safe commuting habits.



CITIZEN SCIENTIST EXPERIMENT

Students as "Citizen Scientists" learn to apply the scientific method through the process of exploring creative yet practical ways to increase their physical activity levels. Specifically, they:

- Select an activity;
- Create a testable hypothesis to find out whether or not the activity will lead to an increase in physical activity;
- Test the hypothesis; and
- Analyze the outcomes.

The goal of this experiment is to encourage students to think about transportation options as healthy ways to increase physical activity.

Examples may include:

- The effect of physical activity on mood
- Effects of physical movement breaks on arithmetic accuracy/speed
- Physical activity and readiness to learn
- Physical activity and obesity/health impacts

ADVANCED BICYCLE SAFETY AND MECHANICS CURRICULUM

SRTS offers bicyclist safety education through classroom sessions and school assemblies. The bike safety curriculum can be customized for middle schoolers with the goal of providing a deeper exploration into the laws and safety procedures of bicycling. Bicyclist safety education is thoughtfully designed to match the skill sets and confidence levels of fourth through eighth graders, with a special focus on the following:

- Advanced biking tip sheets
- Advanced pedestrian safety mentorship
- Healthy active transportation information

Additionally, SRTS outreach coordinators offer "Train-the-Trainer" bicyclist safety education sessions for administrators and other adult volunteers who want to teach sessions in the future.



Bike Curriculum

- **HELMETS -** why and how to properly wear a bicycle helmet
- **CLOTHING -** proper bicycling attire ("Bright & Tight")
- **SIMPLE BICYCLE MAINTENANCE** and rules of the road
- **BENEFITS OF BICYCLING:**
  - **physical fitness**
  - **protecting the environment**
  - **improved academic performance**
  - **personal enjoyment**

TRANSPORTATION AND THE ENVIRONMENT DISCUSSION

This dialogue encourages students to explore the effects of transportation choices on the environment through a series of modules that culminate in a final presentation or writing project. Students not only review the basic knowledge and skills needed to be safe pedestrians, but discover ways in which travel affects the environment, health, and overall quality of life.

What is Transportation: How does mobility affect our everyday lives? How does travel affect the environment? What are the various travel mode options and their related pros and cons?

Resource Consumption: What kind of renewable and non-renewable resources are used in different modes of transportation?

Community Design: How can safe and unsafe areas around the school be evaluated and improved?

Habits and Environmental Impacts: How do our daily habits impact the environment?



Prioritize the development of a genuine connection with students. This process should not be rushed and may continue throughout the duration of the initiatives. Adult facilitators who do not have previous experience with the students involved in SRTS should include another adult who is more familiar with the students, at least during initial stages of the initiative.

Final Project: Prepare an oral presentation, written paper, or other media summary that captures a major takeaway from this class.

ENGLISH, MATH, AND SOCIAL STUDIES SRTS LESSONS

Utilize the SRTS English, Math, and Social Studies lessons designed for sixth grade students. Lessons meet Massachusetts Curriculum Frameworks while highlighting active transportation as a safe, healthy, viable, and fun way for students to travel to school as well as within the community. English lessons explore persuasive versus expository writing and teach the difference between plot and theme. Math lessons cover gear ratios and the formulation of mathematical expressions. Social Studies lessons encourage students to compare U.S. and European school transportation modes along with corresponding health outcomes. Lesson plans are available through your outreach coordinator or on the SRTS website.

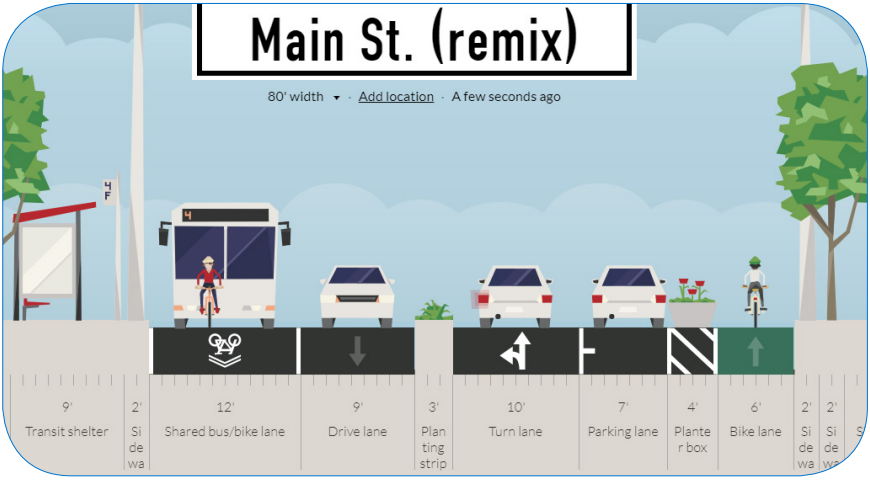
SRTS COMPUTER ACTIVITIES

Incorporate SRTS initiatives into computer projects by guiding students through the development of a web page, blog, or online portfolio that explores topics related to bicycling or walking as a form of exercise or transportation. For example, a student might use Google Maps to plan a walking or biking route to/from school, a local park, or a friend's house. The local Regional Transit Authority (RTA) website can be explored to see bus or transit lines in the area as well as to compare travel modes to a chosen destination.

TIP

Consider different learning styles. Provide a variety of activity types to engage students. Be flexible with approaches to the subject matter.

Finally, students can experience transportation planning through street design. Streetmix.net allows users to drag and drop different types of lanes to recreate local streets or reimagine them for different uses. Students can measure the width of an existing street and change it as desired, or design one from scratch.



STUDENT-LED STRATEGIES

The following SRTS programs and activities are structured around student-led initiatives, designed to build ownership and investment among the student population.

TIP

Facilitate peer relationship development. Students' middle school years are an important time of peer relationship building. Allow time and space for appropriate and productive peer collaborations to grow.

THE STUDENT MENTOR MODEL FOR PEDESTRIAN SAFETY

SRTS offers a Student Mentor Model that trains responsible, mature middle school students to be pedestrian safety mentors and trainers to younger students. The middle schoolers first receive appropriate training via "Train-the-Trainer" pedestrian safety sessions and then apply the learned skills to their assigned groups of younger students. In addition to developing the middle schoolers' leadership abilities, the Student Mentor Model is designed to shape an active and healthy transportation mindset in all involved students.

GREEN TEAM

A Green Team is a school-based committee that evaluates any chosen aspect of the school's ecological footprint and then aims to implement a sustainable program to reduce related effects. A Green Team's success is intrinsically tied to specialized SRTS classroom curriculum implementation and other activities that raise students' awareness, thereby inspiring results-oriented actions that lead to long-term policy changes.



Sample initiatives and potential outcomes:

- Recycling programs
- Energy audits
- Goal setting and progress measurement guides
- Planting a school garden
- Communicating positive effects to the school population via newsletter, etc.
- Conducting student travel tallies and analyzing related data to understand travel choices

ACTIVE TRANSPORTATION AUDIT KIT

An Active Transportation Audit is a way of assessing the existing environment to determine if it is appropriate for walking, biking, and wheelchair use. Active Transportation Audits are routinely performed by the SRTS staff as well as planners and engineers; however students can also perform them in order to learn about their built environment.

The process of creating Active Transportation Audit Kits develops students' analytical thinking skills while building their research experience through resource gathering, observation of surroundings, and consideration of potential improvements to walking and biking environments.

WALKING/BIKING CLUB STARTER KIT

The Walking/Biking Club Starter Kit shifts parent-led walking school buses and bike trains into student-driven activities that are supported by staff and parents as needed, with a greater emphasis on student decision-making, goal-setting, and individualized interest. The starter kit includes:

- A sample checklist that students can follow to start a walking or biking club at school
- Tips on how to develop a meeting calendar
- Goal-setting techniques and ideas
- Metrics for tracking progress

RESOURCES:

All lessons are available on mass.gov/massdot/saferoutes or from our outreach team.

- Video Contest: https://www.youtube.com/youmovemass
- Video Contest: https://www.mass.gov/roadway-safety-video
- RTAs: http://www.commute.com/commuter/#regional-resources
- https://www.google.com/maps
- www.streetmix.net

WE'RE HERE TO HELP!

Massachusetts Safe Routes to School offers resources, tips, and training for students, parents, educators, and administrators. Our outreach team offers technical assistance, program implementation, marketing materials, and evaluation programs to measure your program's success.



FOR QUESTIONS OR MORE INFORMATION CONTACT:

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