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Make Trax Curriculum and How to Use It

Make Trax is a set of eight lessons and supplemental materials. This curriculum can be used in a variety of settings including school, after-school, clubs, and camps. It can be used based on the timeframe and resources available. The curriculum engages students in the Safe Routes to School (SRTS) planning process to increase the safety and number of students walking, biking, and rolling to school.

Many factors influence student travel to and from school. In Make Trax students undertake a research project to investigate some of these factors. Along the way they learn problem-solving skills, develop recommendations for changes, and present their ideas.

Field Guide for Students

The student field guide parallels the Make Trax curriculum lessons. In the field guide the activities are designed to enable students to work independently. Students can also use the field guide as part of the classroom instruction.

Multiple copies of the field guide and field guide handouts can be printed by going to

www.saferoutesmichigan.org/maketrax

A note about the lessons: these lessons are meant to be a guide, and can be tailored to meet the needs of the students.

The Purpose of Safe Routes to School

Michigan's Safe Routes to School program is managed by the Michigan Department of Transportation (MDOT), with training, logistical, administrative, and technical support from the Michigan Fitness Foundation.

The purposes of Safe Routes to School programs are:

- To enable and encourage children in grades K-8, including those with disabilities, to walk and bicycle to school;
- To make bicycling and walking to school a safer and more appealing transportation choice, thereby encouraging a healthy and active lifestyle from an early age;
- To facilitate the planning, development, and implementation of projects and activities that will improve safety and reduce traffic, fuel consumption, and air pollution in the vicinity of elementary schools.

Include All Students

The Make Trax project is focused on walking to school. You are encouraged to use the same process, with relevant modifications, to collect information about rolling to school. Please refer to the Michigan publication "Safe Routes for Students with Special Needs" or the National Center on Health, Physical Activity and Disability publication, The Discover Inclusive Safe Routes to School Guidebook, to learn more about including more students in Safe Routes to School.

The 5 E's

One of the cornerstones of Safe Routes to School is the acknowledgement that safer walking and biking routes can best be accomplished through a combination of infrastructure and non-infrastructure projects and programs. These are known collectively as the "5 Es": Education, Encouragement, Engineering, Enforcement, and Evaluation. Infrastructure refers to engineering and non-infrastructure refers to education, encouragement, enforcement, and evaluation.

Education programs are for both children and motorists to learn safety skills while walking, bicycling and driving.

Encouragement through activities, programs, and contests, provides incentives for children to walk and ride to school.

Enforcement increases awareness and reduces the frequency of crime and traffic safety problems.

Engineering includes improvements to the built environment that improve the safety of pedestrians and bicyclists.

Evaluation refers primarily to collecting data from students and parents to assess their behavior, beliefs, and attitudes towards non-motorized travel.

Adult-Student Partnership

While Make Trax is a student-led research project, some adult involvement is necessary.

Adults will:

- Facilitate the activities and provide guidance as needed.
- Assist students so they can print and copy materials from the website.
- Facilitate the students in scheduling the community presenter.
- Provide assistance in recruiting adult volunteers for the field activity.
- Provide guidance for the student-led presentation to community leaders.

When Make Trax is a part of the school curriculum, teachers and other community members involved in the project provide adult partnership. If Make Trax occurs outside of the classroom, adult partners may be members of the Safe Routes to School planning team or adults working with student or youth groups. Adult partners should have experience working with student-initiated projects and programs, where the decision-making is shared between both the adults and the students while still being student-led. Adults must be practiced at encouraging discussion and the sharing of opinions, along with modeling and then handing off meeting facilitation strategies to the students.

Module Lessons

Lesson 1	About Make Trax
Lesson 2	Maps
Lesson 3	Technology and Field Work
Lesson 4	Field Activity
Lesson 5	Research Information
Lesson 6	Project Priorities
Lesson 7	Recommendations
Lesson 8	Presentation

Curriculum Standards

This curriculum does its best to align with certain social studies and technology standards. It also does its best to align with State of Michigan educational standards, including Common Core State Standards. For more information on these educational standards, please visit our website www.saferoutesmichigan.org.

Make Trax Equipment and Materials

The Make Trax research project requires gathering various types of information, analyzing that information, and forming recommendations that consider local priorities. Attitude, belief, and behavior information is collected using surveys; priority information is collected via discussion and surveys; and environmental information is collected with digital photography.

Make Trax Materials

The Make Trax Curriculum, Student Field Guide, handouts, student surveys, and resources are available on the Safe Routes to School website at www.saferoutesmichigan.org/maketrax, or on a CD by request. If you need an updated CD, please contact the Michigan Safe Routes to School staff at 1-800-434-8642.

Computer Access & Software

While Make Trax activities were designed to be flexible and can be accomplished in more ways than one, there are a few essential pieces of technology students will need; feel free to get creative and use what is easiest to accomplish the results. Students will need access to computers with an internet connection for most class sessions. Field data that is collected must be stored between class sessions to the computer, the cloud, or external storage device.

- Excel or other spreadsheet software.
- PowerPoint, Prezi, or other presentation software.
- Digital camera (cell phones can be used if permitted by the school).

A Note on Mapping Software

An easy way to create a map that can be embedded with photos is to use the website **www.communitywalk.com**: it gives complete instructions and is user-friendly.

A Note on the Development of Make Trax

Make Trax was developed as a project of the Michigan Department of Transportation Safe Routes to School program in cooperation with the Michigan Fitness Foundation and Dr. David Martin of the Wayne State University Center for Urban Studies. Make Trax takes the work of Dr. Martin and his team into the realm of the safe routes to school movement and action planning process.

Instructional design principals were followed in the adaptation of Dr. Martin's youth engagement program to Safe Route to School. Student learning objectives, lesson equipment and materials, resources, and teaching/learning activities are provided for each lesson.

Revisions were made in 2015.

Icons Key



Web Access



Discussion



Activity



Differentiating Lesson

A Note on Technology:

With the ever-changing pace of technology, the Make Trax curriculum works to remain as up-to-date with resources as possible. In the curriculum you will notice resources-websites and software-that are meant to be used for the project. To stay current on changes to those resources, please visit our website **www.saferoutesmichigan.org/maketrax**.

Lesson 1: About Make Trax

Timeframe: 45 Minutes

Students will:

- Learn about Make Trax and Safe Routes to School.
- Gain an understanding of local government and planning.
- Learn about the benefits of walking and rolling to school.
- Complete the Safe Routes to School student survey.

Equipment and Materials:

- Computers with Internet access
- Safe Routes to School Make Trax student survey
– 1 per student 📄
- *Make Trax Walking and Rolling to School*
– 1 per student 📄
- *Community Information Worksheet*
– 1 per student 📄

Resources:

www.census.gov/schools/facts/

For student-centered facts about their state

www.saferoutesmichigan.org

Michigan Safe Routes to School website

www.saferoutesinfo.org

National Center for Safe Routes to School website

www.saferoutespartnership.org

Safe Routes to School National Partnership website

Preparation:

1. Assess how simple or intricate you want to make the lessons depending on the age and learning styles of the students.
2. Now is a good time to think about contacting a planner, engineer, or other municipal official to come and present in lesson three. See page (10) for more information.



Is your school or community already working on a Safe Routes program?

Check out the Safe Routes Michigan website to see if your school is registered. If so, additional student surveys may have been completed, and you could get the results from the Safe Routes to School Team. Go to www.saferoutesmichigan.org for more information.

Include All Students...

The Make Trax project described on the following pages is focused on walking to school. You are encouraged to use the same process, with relevant modifications, to collect information about rolling to school.

Please refer to the Michigan publication **Safe Routes to School for Students with Disabilities** or the **Resources** page on our website or the National Center on Health, Physical Activity and Disability publication the *Discover Inclusive Safe Routes to School Guidebook*¹ to learn about including even more students in Safe Routes to School.

¹ National Center on Health, Physical Activity and Disability. (2011). *The Discover Inclusive Safe Routes to School Guidebook*. Chicago, IL



Activity 1

1. Discuss:
 - Make Trax and Safe Routes to School with the students.
 - What a Planner does.
 - What they will learn throughout the program and how their participation contributes to a healthier, active, and green community.
2. Have the students complete the Safe Routes to School student surveys.
3. Divide the class into small groups. Distribute the *Make Trax Walking and Rolling to School* handout to all, and have each group discuss and complete the handout.
4. After 10 minutes ask the students:
 - What are the benefits of walking and bicycling to destinations?
 - Allow students time to come up with their view of benefits.
 - Contribute at the end any of the following that have not been addressed:
 - health
 - reduced traffic
 - improved air quality due to less traffic around school
 - improved academic performance
 - improved ability to focus
 - By show of hands how many students walk or roll to school now?
 - What do you think about people who walk or bicycle to school?
 - What are some other methods of transportation aside from driving a car?
 - What would your community or neighborhood be like if more people walked, bicycled, or rolled to get around?

5. Explain Make Trax as a student-led research project that will answer these questions:
 - Are students walking to school and what are their thoughts and beliefs about doing so?
 - Where do students live and what routes are most often used to walk to school?
 - What barriers prevent walking to school or make it unsafe?
 - What recommendations do students have to increase walking to school and/or to increase safety along routes?

Activity 2

1. Distribute the *Community Information Worksheet* and complete as a group. (See the Safe Routes website for answers and discussion)
2. Ask Students:
 - Which local government officials and other community leaders should be involved with their process.
 - Should they include planning officials? Why?
 - Who would they like to invite to their presentation at the end?
3. Ask Students
 - Who would like to contact the identified officials to invite them to the end?
 - Who would like to contact or help the Planner or other guest speaker for Lesson 3?

Discussion

1. Review the different modes of travel and the costs and benefits of each.
2. Remind students of the community benefits of walking.
3. Let students know what they will be learning in the next lesson.

Lesson 2: Maps

Timeframe: 45 Minutes

Students will:

- Review attitudes and beliefs about walking to school.
- Gain a better understanding of how geography plays an important role in everyday life.
- Create maps and locate 1) 1-mile radius around school; 2) clusters of students' residences; 3) 3-4 walking routes to and from school.

Equipment and Materials:

- Computers with Internet access – 1 computer per 3-5 students
- Map of school enrollment area, with approximate locations of student residences plotted. School district transportation officials may have this information or students can create a map by obtaining nameless addresses from the school and input them into mapping software such as www.batchgeo.com. – 1 per 3-5 students.

Resources:

www.maps.google.com

Google Earth

www.google.com/earth/learn

Google Earth guide

www.communitywalk.com

A quick guide on how to create student walking routes

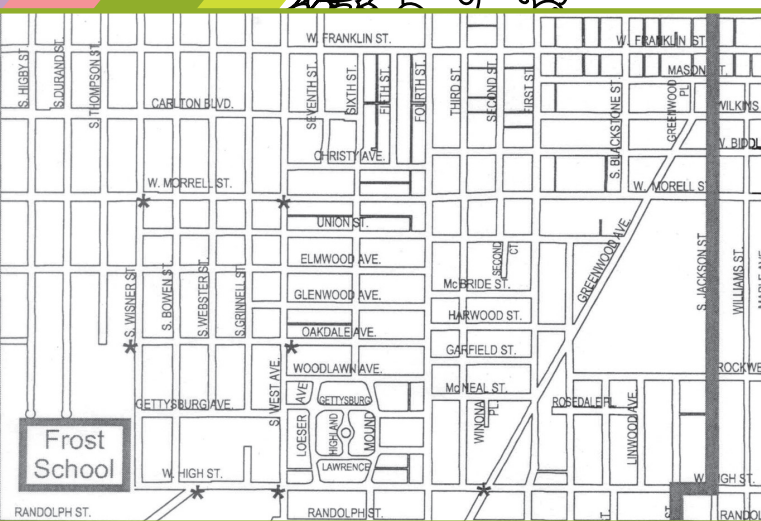
www.freemaptools.com

For help to create a radius around a point on a map

www.batchgeo.com

Mapping address batching software

For up-to-date resources, technology, and directions go to www.saferoutesmichigan.org



What is Pictometry?

Pictometry is detailed aerial photography. Photographs are taken from a source off the ground like an airplane or drone. The photographs show buildings, infrastructure, and land from all sides. In general, this

approach results in much more visual map detail because photographs are taken from multiple perspectives and result in as many as 12 to 30 images of the same location. Go to Google Earth or Google Maps to see more images of your neighborhood in pictometry.



Activity 1

1. Review what you discussed last session and the sequence of Make Trax activities with students. They will:
 - Continue to learn how students travel to school and what students think about walking to school.
 - Conduct field work (i.e., walk routes used to get to school) and collect evidence of barriers in the environment by taking photographs and mapping locations.
 - Analyze their findings and determine the most significant barriers to walking to school.
 - Recommend activities and projects to increase walking to school.
 - Present their recommendations to community leaders using a presentation medium of their choosing.
2. Explain Geographic Information Systems (GIS). Give examples of GIS applications in daily life.

Activity 2

1. Go to **www.google.com/earth** and Download Google Earth
 - If students cannot download Google Earth, an alternative is Google Maps.
2. Instruct students to:
 - Locate the school in Google Earth, using address information. If time permits, students can practice using Google Earth to find other landmarks.
 - Create a 1-mile radius circle around the school using **www.freemaptools.com**, and define this as the school walk zone.
 - Divide this map into several sections, using streets as section boundaries.
 - **Note:** decide how many sections to create by considering where students live. Don't create more than 4 or 5 sections; however, you may wish to create fewer sections if some areas of the walk zone do not have student homes.

3. Have students compare the map of student homes to the school radius map.

- Discuss how many students live within one mile of school.

4. Assign each student group a section of the walk zone and ask students to name their section. Multiple groups can be assigned to the same section if the size of the class warrants.

5. Have students:

- Identify the most used walking route to get to school in their section, based on student homes or most direct path.
- Map and view the route they identify using **www.communitywalk.com** to learn about the route they will walk.

6. Ask groups to tell the class which route they identified and what they have begun to learn about the route. What are the features of the area? Can they see pedestrian crossings, sidewalks, lights?

Discussion

1. Challenge students to identify reasons all students should use the same route if travelling in the same direction.
2. Identify reasons students may not choose to use similar routes.

Differentiating Instruction

For younger students: For the simplest way to create components of a map, use **www.freemaptools.com**. If available, create and show a map of student homes on a projector, walking the students through the steps.

For older students: Some students may be savvy on GIS and may like to learn more about the software. Showing them the ESRI GIS website, can give them more information on mapping: **www.gis.com/whatisgis/index.html** **ESRI – GIS.com – What is GIS? similar routes.**

Lesson 3: Technology and Field Work

Timeframe: 50 Minutes

Students will:

- Identify types of barriers to walking in the environment.
- Identify qualities of good digital photographs and learn to take photographs.
- Learn to collaborate with their teams.

Equipment and Materials:

- Computers with Internet access and Google Earth installed (optional) – 1 per 3-5 students.
- Digital cameras, smart phones, or other devices with the capacity to download photos to computers – 1 per 3-5 students.
- *What to Look For* handout – 1 per student 📄
- *Guide for Taking Photos* handout – examples of good and poor photographs – 1 per 3-5 students 📄
- *Example of Route Map with Photos* – 1 per 3-5 students 📄

Resources:

www.maps.google.com

Google Maps to help view your walking route

www.saferoutesmichigan.org

Michigan Safe Routes to School website and Michigan Safe Routes to School Handbook

www.saferoutesinfo.org

National Center for Safe Routes to School website

For up-to-date resources, technology, and directions to use the technology go to www.saferoutesmichigan.org

Preparation:

Prior to this session, facilitate the students in inviting a guest speaker a planner, zoning official, city engineer, or someone else knowledgeable in planning and engineering, to explain what barriers to look for on the walking routes and possible solutions. This visiting expert can also explain the importance of what the students are accomplishing and discuss the profession.



Potential Guest Speaker Agenda:

1. Introduction
2. Good guidance for a safe and walkable community
3. Barriers that they should look for
4. Elements that cannot be easily changed and why
5. Sample recommendations based on barriers

Activity 1

1. Explain to the students:
 - Solutions to the problems they identify may not be simple. Specialists in pedestrian safety can help identify solutions.
 - Citizen input is important, and can bring attention to problems. Experts can then be asked to help solve the problem.
2. Welcome guest speaker. Give ample time for guest speaker to complete their agenda.
3. Give an overview of next lesson's field activity, telling the students that they will:
 - Walk the route they have identified.
 - Be accompanied by an adult.
 - Take photos of pedestrian barriers along the route.
 - Write field notes to describe the hazard.

Activity 2

1. Distribute the *What to Look For* handout to students and discuss:
 - Potential walking obstacles mentioned by any guest speaker(s).
 - Types of problems they might see during the field activity.
 - What conditions are most dangerous in their area?
 - Examples of barriers they have observed while walking or biking.
2. Explain how to use the *What to Look For* handout:
 - They should capture address information for each photo (or cross streets).
 - Students will write a field note about each photo to explain the hazard they have photographed. Provide an example of field notes (e.g., if a photo is taken of an unsafe street crossing, describe why it is unsafe in the note).

Activity 3

1. Taking photographs:
 - Share examples of good and bad photographs.
 - Use this as an opportunity to show the resolution of a good digital photograph, zooming in on an address sign on a house, etc.
 - Point out that a good picture provides as much information as possible including the object of interest and its surroundings.
2. Form the teams and distribute the identified routes from the previous class period.
3. Have students decide on field work roles:
 - Map holder and note-taker
 - Photographer
 - Timekeeper

Discussion

1. Review field activity roles (ask students to raise their hand as you call out the roles) and the plan for the next 1-2 classes of field work.

Differentiating Instruction

For younger students: more help may be needed to explain the activity, or adult partners may need to give more guidance during the field activity itself, while it is still important to have the students decide upon roles, the adult partners should give them more assistance on the route as needed.

Lesson 4: Field Activity

Timeframe: 120 Minutes

Students will:

- Collect field data while walking their identified school routes, document observations using digital photography and field notes.
- Calculate sidewalk area.

Equipment and Materials:

- Digital cameras, with identifying number, or smart phones – 1 per 3-5 students
- Clipboards – 1 per 3-5 students
- Maps of routes – 1 per student
- *What to Look For* Handout – 1 per student
- Extra maps and handouts for adults
- Pencils
- Watch or other time device
- Measuring wheel or measuring smart phone application (optional)
- Adult volunteers

Preparation:

Decide in advance how much time is needed to walk the routes, take field notes and photos, and discuss findings. Adjust the estimated times provided in this lesson, given the length of the routes and types of barriers.



Learn How To Calculate Area

Using a measuring wheel (can be found at your local planning department or online), or a distance measuring smart phone application, measure the width of a section of sidewalk

in feet and the length of one block of sidewalk also in feet. Multiply the width by the length to calculate the area of that block of sidewalk in square feet.



Activity

1. Have students break into teams from previous class sessions.
2. Introduce adult partners and assign to teams.
3. Review with student teams:
 - The walking routes.
 - The *What to Look For* handout.
 - The length of time they will spend in the field. They should take photos and collect location information on the most troublesome conditions they see along the route. Be sure to make a note for every photo taken.
 - Return time.
4. Distribute cameras, clipboards, note paper, and pencils. Make sure to note what camera each group took.
5. Dispatch teams.
6. Upon return of teams to classroom:
 - Collect cameras.
 - Collect field notes noting the route the team walked.



Discussion

1. Tell students they will link address information with the digital photos during the next class period.
2. Ask students to share some of what they saw in the field.



Differentiating Lessons

For younger students: This activity may take extra guidance from the adult partners. Assist them in pointing out obstacles, taking photos, and writing about the barriers.



Lesson 5: Research Information

Timeframe: 50 Minutes

Students will:

- Input addresses and photos, and download photos to their route-specific file.
- Generate a map showing location of photos.
- Create a spreadsheet of photos.

Equipment and Materials:

- Computers with Internet access – 2 per team (one for mapping and one for spreadsheet construction)
- Field notes
- Route maps

Resources:

www.communitywalk.com
Route mapping software

To input photos and addresses, we recommend using www.communitywalk.com, but you can use any available source. For tutorials on Community Walk go to www.communitywalk.com/about/tutorials

Note on Information Storage and Synchronization:

Photos should be downloaded to a computer or a cloud and also backed-up using www.Google.com or some other website.

For up-to-date resources, technology, and directions go to www.saferoutesmichigan.org





Activity

1. Ask students to gather back into their groups.
2. Distribute the field notes and cameras or ask students to use the smart phones they took pictures with during the field activity.
3. Explain and demonstrate the steps to link photos and location data, using **www.communitywalk.com** or another resource. Your demonstration will be based on the method used to link the data. Have teams upload and save their photos to the computer.
4. Once on the website either have the students re-create or open their walking route. Have them link the addresses of hazardous conditions they found. Remind them to save their work.
5. Have students upload the corresponding photo to each condition.
 - On **www.communitywalk.com**, click “add a marker” and add a marker to the corresponding address. Make sure to title and save the marker.
 - Click on the marker and select “add a photo”, upload a photo to the address of the barrier. Save.
6. Have students upload the corresponding photo to each condition.
 - Click on the previously added markers on the map.
 - Click “add a comment”. Save when complete.
7. Save map to hard drive or cloud.



Discussion

1. Ask each team to describe the greatest barriers along their route.
2. Discuss other reasons students do or do not walk to school such as attitudes about walking versus arriving by car, the distance from a student’s home to school, and other local factors that influence walking.
3. Ask students how the community can benefit from their Make Trax project.
4. Thank students for their community service!



Differentiating Lessons

Depending on the age ranges, students may need more help uploading and inputting addresses onto the resource sites. It might be easier for younger students to use an application such as PowerPoint and add a photograph with the address and barrier directly into their slides.



Lesson 6: Project Priorities

Timeframe: 50 Minutes

Students will:

- Create a spreadsheet of conditions observed on their route.
- Use spreadsheet functions to generate descriptive statistics and a bar graph of the frequency of barriers on their route.
- Identify the highest priority barriers along routes.

Equipment and Materials:

- Computers with Internet access and Excel – 2 per team (one for mapping and one for photo spreadsheet construction)
- Field notes
- Route maps with photo locations (output of synchronization in Lesson 5) – 1 per team
- *Excel Spreadsheet Template* – 1 per team
- *Instructions for Entering Chart Data* – 1 per team
- *What to Look For* handout completed during Lesson 4 – 1 per team

For up-to-date resources, technology, and directions go to www.saferoutesmichigan.org



Explain...

what a bar graph is used for and how you can determine frequency. Frequency: the rate at which something occurs or is repeated over a particular period of time or in a given sample.



Activity

1. Explain the purpose of the *Excel Spreadsheet Template* and today's activity. Students will:
 - Create a spreadsheet of their observations during the field activity.
 - Use the *Excel Spreadsheet Template* to enter barriers they identified along the route.
 - Compute how often certain barriers took place.
 - Produce a bar graph showing the frequency of barriers on their route.
2. Explain and demonstrate the steps to complete the spreadsheet and compute the frequency of the types of barriers.
3. Using the *Instructions for Entering Chart Data*, tell students to:
 - Open the *Excel Spreadsheet Template* on the computer.
 - Look at the column headings and decide if all of the conditions they observed are included.
 - If needed, add other conditions as column headings.
 - Save the spreadsheet.
 - Decide which team members will work at this computer.
 - Reference the group's *What to Look For* handout.
4. Using the *Instructions for Entering Data* handout tell students:
 - To compute the frequency of each type of condition they observed on their route.
 - To create a bar graph of the frequency of the types of barriers using the instructions as given. Save the work.

5. Ask teams to:

- Identify the two or three most frequently occurring problems on their route.
- Prioritize the most hazardous conditions along their routes.
- Discuss potential solutions to the problems they have identified. Refer back to the guest speaker's comments and suggestions.

Discussion

1. Remind students of the *Community Information Worksheet* they completed in Lesson 1.
2. Identify community leaders and city/township/village departments to help with the problems they are discovering.

Differentiating Instruction

Determine the skill level of the students and assign the tasks based on skill level. Some students will be able to help number the photos, while others will be more familiar with the computer software. Give students as much assistance as they may need.



Lesson 7: Recommendations

Timeframe: 45 Minutes

Students will:

- Identify student attitudes that influence decisions about walking to school.
- Develop strategies to increase positive attitudes toward walking and biking to school
- Complete the *Make Trax Recommendations Worksheet*.
- Identify community partners who can help implement recommendations.
- Plan the Make Trax public presentation.

Equipment and Materials:

- Computers with Internet access – 1 per team
- Student survey data from first class (include other student survey data if available).
- Maps with photos and notes complete *Make Trax Recommendation Worksheets* 🌟

Resources:

www.saferoutesmichigan.org

Michigan's Safe Routes to School Handbook planning process and materials

www.saferoutesinfo.org

National Center for Safe Routes to School

www.saferoutespartnership.org

Safe Routes to School National Partnership





Activity

1. Review with students:
 - They have examined field work data and started to think about solutions to remove barriers in the environment.
 - Before they complete the environment section of the *Make Trax Recommendations Worksheet* they will review the student survey results and consider what students report as barriers.
2. Review the student survey findings and discuss:
 - What attitudes influence a student's decisions to walk, or not walk, to school?
 - Are students likely to walk to school if the route is safe? Is it enough to solve safety problems? What other barriers to walking will still remain?
 - What types of non-infrastructure activities and projects do they want to recommend to educate and encourage students to walk to school on safer routes?
3. As a class, complete the *Make Trax Recommendations Worksheet*:
 - Decide on 1-3 preferred walking routes to school.
 - Identify the highest priority barriers on the preferred routes. For example, an unsafe street crossing is a higher priority problem than a slightly cracked sidewalk.
 - What student activities and projects do they recommend to change the attitudes and behaviors of their peers?
 - Who else should they involve in their project and invite to their presentation? Who will help projects get completed?
 - Is there anything else they think is needed?

Discussion

1. List the activities students have completed during their project: student surveys, map making, field work, data entry and analysis, synthesis of project information into recommendations, and the future public presentation of the project.
2. Remind students that these are skills that will help them in the future.
3. Discuss the location of the public presentation. They will put the presentation together in the next class.

Differentiating Instruction

Much like previous lessons, the guidance on this lesson will depend upon the age and abilities of the students. Some students may need more help to come up with answers for the questions presented during the discussion of the surveys and when completing the worksheet. Make sure that each student has a chance to voice his or her opinion.

Note on Public Presentation

1. You will discuss the public presentation with the students at the end of this lesson. Determine the presentation venue options before class. For example, students might present their findings at a local public meeting attended by decision makers (e.g. city council meeting, school board meeting, or planning meeting). Students can also present project findings at a student assembly as both a practice opportunity and to involve other students.
2. Students have reviewed the barriers and want to get started on making walking and rolling to school safe right away: now what? One of the first things they can do is educate themselves. Learn about bike safety, pedestrian safety, and how they can pass that information on! Check out www.saferoutesmichigan.org/resources for great educational guides and materials on pedestrian and bicycle safety.

Lesson 8: Presentation

Timeframe: 50 Minutes

Students will:

- Decide which findings and recommendations to present in their public presentation.
- Identify class priority recommendations.
- Select maps, graphs, photographs, student survey data, and community information to include in the presentation.
- Create a presentation to summarize the Make Trax research project and conclusions.
- Identify presenters and presentation plans.

Equipment and Materials:

- Computers with Internet access and PowerPoint or Prezi – 1 per team
- Access to Make Trax electronic research files (maps, spreadsheet, photos, notes, bar graphs, and survey findings if available) – 1 per team
- CD or flash drive to transport files to presentation site
- Completed *Make Trax Recommendations Worksheets* 📄
- LCD Projector
- Projection Screen
- Presentation Skills Handout – 1 per student 📄
- Slide template for PowerPoint presentation. (optional) – 1 per team 📄

Resources:

www.wikihow.com/Use-Microsoft-Office-PowerPoint

How to Use PowerPoint

www.prezi.com

Presentation Software Website



Moving Forward

Now that the project is complete, encourage your school, city, and community leaders to continue on with a Safe Routes to School Project. Communities can work together to

make the routes you have identified safe and walkable. If you would like to learn more about funding opportunities contact your Regional Coordinator, contact information can be found on the Safe Routes to School website www.saferoutesmichigan.org/contact.



Activity 1

1. Decide as a class:
 - Which recommendations to include in the presentation
 - Which slide template to use for the presentation or if they want to use a Prezi template. Any PowerPoint template provided could be used or they can make their own.
2. Demonstrate:
 - Inserting maps, graphics, photos, and other sources of information into slides.
 - Notes function in PowerPoint.
3. Ask small groups of students to create slides and notes for:
 - Title slide.
 - Slide describing the goal of Make Trax and SRTS (see intro and prologue).
 - Slide listing Make Trax project activities.
 - Slide showing student survey results.
 - Several slides showing walking routes, maps, and spreadsheets or bar graphs that were created.
 - Several slides of field activity photos.
 - Slide of recommendations.
 - Slide of essential community partners for next steps.
4. Ask for volunteers to:
 - Present slides.
 - Help with the presentation in other ways (invite guests, greet guests, create a flyer, and send a press release to the media).
5. Ask students to write a few words in the “notes” section, to remind them of what to say during the presentation.
6. Compile the slides into a single presentation.
7. Practice the presentation.



Discussion

1. Finalize the presentation date, time, location, and handouts.
2. Remind them of the valuable skills they are developing.
3. Thank students for their hard work and their service to their community.
4. Give examples of other ways they can be involved with their community.



Differentiating Lessons

Again, depending on the age of the students, assistance will be needed to complete the presentation. Giving extra guidance when creating the slides, and inputting the content may be needed.

Homework

To be better prepared for the presentation, students should practice the presentation at home or as a group. They should each review their notes for the presentation to prepare for questions.

Option

Students may want to videotape their presentation and make it available via the school's website.

Safe Routes to School

Safe Routes to School is an international movement to make it safe, convenient, and fun for children to bicycle and walk to school. Safe Routes to School initiatives are undertaken to encourage and enable students to walk and bicycle to school on safe routes and in safe ways. When routes are safe, walking or biking to and from school is an easy way for youth to get the regular physical activity they need by encouraging healthy and active living from an early age. Safe Routes to School initiatives also help by reducing traffic and fuel consumption, and improving air quality in the vicinity of schools.

The Safe Routes to School program was established by the transportation bill known as the Safe, Accountable, Flexible, Efficient, Transportation Equity Act – A Legacy for Users (SAFETEA-LU) in 2005, and continued under the subsequent transportation bill, Moving Ahead for Progress in the 21st Century (MAP-21), in 2012. Under MAP-21 SRTS is now included under the new Transportation Alternatives Program. The Federal Safe Routes to School Program is administered by the Federal Highway Administration (FHWA). Full program as well as information on the continuation of the federal SRTS program guidance is available on the FHWA website www.fhwa.dot.gov/environment/safe_routes_to_school.

Michigan's Safe Routes to School Handbook and Program

In 2003, the Michigan Department of Transportation (MDOT), through the Federal Highway Administration Transportation Enhancement Program, funded a two-year Michigan Safe Routes to School pilot project which was administered by the Michigan Fitness Foundation. *Michigan's SRTS Handbook* is an outcome of the pilot project. The easy-to-use Handbook describes the SRTS planning activities that lead to a completed Safe Routes to School action plan.

Strong partnerships with state agencies, universities and non-profits are a cornerstone of Michigan's Safe Routes to School movement. In 2007, MDOT and their partner the Michigan Fitness Foundation received the James L. Oberstar Safe Routes to School Congressional Award for the exemplary Michigan Safe Routes to School Program.

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SAFE ROUTES TO SCHOOL FUNDING PARTNERS

Michigan Fitness Foundation

Michigan Department of Transportation

U.S. Department of Transportation Federal Highway Administration

MAKE TRAX SAFE ROUTES TO SCHOOL STAFF

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PILOT MIDDLE SCHOOLS

Christa McAuliffe Middle School, Bay City

J.F. Nichols Elementary and Middle School, Detroit

Traverse City West Middle School, Traverse City

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