Morris Sherman

Walkin’ and Wheelin’ to School for Every Child

Safe Routes to School
National Conference 2019
Since children are not born with the knowledge and skills needed to interact with traffic ... it is essential to teach them ... how to be safer while walking and biking.
ALMOST ¼ OF CYCLISTS INJURED OR KILLED ARE CHILDREN
Florida Safe Routes to School Trailers
Bicycle Racks

Infrastructure Grants

Sidewalk Grants
Using Evidenced Based Practices

Exercise

Exercise shown to increase desired behaviors and decrease undesired behaviors.

Time on task vs. Aggression

(Wong et al. 2015)
Using Evidenced Based Practices

Two weeks until bicycle safety! We will be wearing helmets on our heads.
Using Evidenced Based Practices

Social Narratives / Stories

(Gray, 1995).
Using Evidenced Based Practices

Peer-Mediated Instruction

(Wong et al. 2015)
Using Evidenced Based Practices

Visual Cues

1. Look left
2. Look right
3. Look left
Using Evidenced Based Practices

Task Analysis
Using Evidenced Based Practices

Adaptations and Scaffolding
Using Evidenced Based Practices

Modeling / Video Modeling
Modeling Video Modeling Using Evidenced Based Practices
Wheelin’ & Walkin’ to School for Every Child

Presenters: Michelle Kiefer and Caito Bowles-Roth
**BikeMN Vision:** Minnesota is a place where bicycling is easy, safe, and fun for everyone.
Twin Cities Adaptive Cycling

Community based adaptive cycling program for youth & adults with disabilities in Minneapolis, MN

www.bikemn.org • info@bikemn.org • /bikemn
Twin Cities Adaptive Cycling

www.bikemn.org • info@bikemn.org • t/f/bikemn
PHYSICAL ACTIVITY AND ACADEMIC PERFORMANCE

1 mile of walking each way = \frac{2}{3} of the daily recommended 60 minutes of physical activity.
Why Pedestrian and Bicycle Safety Education?

• Growing understanding of more people likely to use walking or biking for active transportation
• Fewer crashes with an awareness of safe pedestrians and bicyclists
• Improve the physical and mental health of children
• Creates life-long healthy habits

www.bikemn.org • info@bikemn.org • t/f/bikemn
Our Goal
Curriculum trainings
Objectives

• Be able to explain Safe Routes to School.
• Be able to use WBF in area of expertise.
• Increase confidence and knowledge of safe walking and biking skills.
• Increase knowledge of mobility limitations in children and adaptive equipment.
• Be able to evaluate students’ knowledge of safe walking and biking skills.
Numbers, numbers, numbers!

MINNESOTA

WALK! BIKE! FUN!

FIVE YEAR EVALUATION SUMMARY

Our goal is to prepare educators to teach children the skills for pedestrian and bicycle safety, and build confidence to be active and healthy.

435 Teachers
Physical Ed., Health, DAPE, Science, Classroom Teachers

+ 304 Educators
Public Health, Law Enforcement, Community Education, Park and Recreation Departments

739 Participants

102 Trainings have been requested.
53 Trainings have been held.

ANNUAL REACH
71,683
based on precedent of 97 students taught per teacher per school year.

FROM WINTER '13 - SPRING '19

Overall Rating
4.7 of 5
Participants rated the training a 4.7 on a scale of 1-5, "5" being excellent.

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MINNESOTA

WALK! BIKE! FUN!

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WALK FUN!
Bike Fun!
Tips to Differentiated Learning

Focus Point: Students will be able to define vocabulary words such as pedestrian, traffic, and edge and how they relate to being a safe, responsible walker.

Materials and Equipment
- Vocabulary cards with appropriate pictures: pedestrian, traffic, vehicle, and edge
  (RESOURCE GUIDE PAGES 135-39)
- Whiteboard and markers or Smartboard
- Open space (gym, playground, field)
- Computer, speakers, and projector with Internet connection or Smartboard
- “Willie the Whistle” video: www.bikemn.org/education/walk-bike-fun/supplemental-resources

Tips to Differentiated Learning
- It will be important to use the vocabulary cards with pictures for students who are non-verbal, unable to read or English as a second language students.
- Some students may not be able to walk and use wheelchairs or walkers. When speaking about walking – use the term “walkers and rollers.” Students who use a mobility device to ambulate are still considered “walkers.”
- For students with visual impairments consider using clock space references such as 9 o’clock when referring to directions or number of steps when referring to distance i.e. “You are 20 steps away from the curb out.”

Discussion
1. Introduce the unit to the students by expressing that walking is very cool—it’s free, it’s great exercise, and you can do it to get almost

VOCABULARY

pedestrian: a person traveling on foot, whether walking or running; those traveling using tiny wheels such as roller skates,
**Activity Modifications**

**BIKE FUN! LESSON 5: Getting Started and Getting Stopped**

**POWER PEDAL**  
(CONT.)

**Discussion**

1. Ask students:
   - Do you ever have trouble getting your bicycle moving from a stop?

2. Demonstrate to the class the “power pedal” position with the following explanation:
   - The “power pedal” position helps you start to pedal in the most powerful way by giving you the most leverage on your first push of the pedal.
   - To get to this position, backpedal slightly until right pedal is at the two o’clock position or the left pedal is at ten o’clock. This will be the push-off pedal. Starting from this position allows us to push down on the pedal as we lift our body on to the seat and move forward.

**Activity Modification:**

- To get to the “power pedal” position on a handcycle, pedal backwards until both pedals are at the 8 and 4 position. Starting with the pedals in this position allows you to use the strength of your upper body and torso to push the bike away from you.
Adaptive Toolkit

• Supplemental resource guide

• Provides info about adaptive biking, along with tools and resources to use the Walk Bike Fun! curriculum with students with disabilities

• Authored by professionals from various backgrounds

www.bikemn.org • info@bikemn.org • /bikeMN
Common Disabilities & Bike Adaptations

• Defines 13 Common Disabilities
• Adaptive Bike & Equipment Recs.
• Activity Adaptations
Common Disabilities & Bike Adaptations

Visual Impairment (VI)

**Common Definition:** Uncorrectable vision loss that interferes with daily activities. A term used to describe a wide range of visual function from low vision to total blindness.

**Bike Recommendation:** Tandem with a “sighted” adult tandem pilot

**Equipment Recommendations:** Adaptive pedals

**Adaptations for Student:** Encourage a student with a VI to tactiley explore the bike before they get on to ride. This helps them to develop a better understanding of the activity and increase their confidence.
Adaptive Bikes & Equipment

**Recumbent Tandems** are designed for two people to ride together and can be configured either with one rider in front of the other, or side-by-side, as shown here.

**Handcycles** can come in two styles, recumbent and upright. Recumbent styles are sporty and low to the ground, whereas upright models are similar to the height of a wheelchair. “Clip-on” attachments are also an option for riders in a manual wheelchair who may have trouble transferring or simply prefers to be in their chair.

**Wheelchair Tandems** ensure cycling opportunities are available to absolutely everyone, including those who may not have the required strength or control to move a cycle themselves.
Resources
Technical Assistance
Michelle Kiefer
Safe Routes to School
Program Manager
507.430.2280
michelle@bikemn.org

Caito Bowles-Roth
Co-Founder & Executive Director
Twin Cities Adaptive Cycling
612.454.0831
tcacycling@gmail.com

www.bikemn.org  •  info@bikemn.org  •  t f /bikemn
Wheelin’ & Walkin’ to School for Every Child: 
Transformative and Inclusive Bike Field Trips

Nancy Nichols, SRTS Program Manager, City of Fort Collins, Colorado
Quick Look at Fort Collins

Population: 160,000

Race: 83% White, 10% Hispanic, 7% Other

Median household income: $54,000

College educated: 52%

Under poverty level: 19%

Distinctions: Platinum Bicycle Friendly Community and Business (City of FC), most Bicycle Friendly Businesses in nation, first public high school and middle school designated as Bicycle Friendly Businesses, Silver Walk Friendly Community, home of Colorado State University

City area: 57 square miles

Miles of streets: 570

Miles of streets with bike lanes: 200 (35%)

Miles of multi-use trails: 50

Number of K-12 schools: 43

Notable businesses: New Belgium, Odell & other micro-breweries; OtterBox; WaterPik; Woodward; Niner Bikes
Fort Collins SRTS Vital Statistics

K-12 students attending local public schools: 24,000

Estimated biking/walking rate (K-8 students): 25%
(40% to 50% at some schools, some times of year)

Total residents reached annually (education and encouragement): 13,000 kids, 2,000 adults

Students receiving bike-ped safety education annually: 7,000+

Staffing: 1.5 FTE City staff, 20 contracted instructors and mechanics, 13 crossing guards
Youth statistics:

- Youth population (0–17 years) = 20%
- Crashes involving youth = 7.4% of all reported crashes
- Vast majority of youth crashes (92%) are teen drivers crashing cars
- Low number of youth ped crashes to/from school (nine in past five years)
- Youth bike crashes dropped from 24 in 2017 to 9 in 2018
Priorities:

- Bike-ped safety education per School Rotation Schedule (7,000 students annually)
- Community-wide celebrations of National Bike to School Day/Bike Week and International Walk to School Day
- After-school biking and walking clubs
- Summer bike camps
- School bike field trips!

Interesting annual statistics:

- 4,000 kids’ bikes checked by mechanics for safety
- 35,000 aggregate miles biked by kids (more than once around the world!)
# School Rotation Schedule

**Fort Collins School Rotation Schedule: SRTS Bike-Ped Safety Education**

Rotation focuses on K-12 public schools in Fort Collins; assistance also provided (by request) to private K-12 schools and public/private preschools as well as youth organizations.

<table>
<thead>
<tr>
<th>2020/2023/2026</th>
<th>2021/2024/2027</th>
<th>2022/2025/2028</th>
</tr>
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<tbody>
<tr>
<td><strong>PSD K-5</strong> (11 schools, 5,200 students)</td>
<td><strong>PSD K-5</strong> (11 schools, 4,800 students)</td>
<td><strong>PSD K-5</strong> (11 schools, 4,900 students)</td>
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<td><strong>Spring</strong></td>
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<td>Dunn</td>
<td>Irish</td>
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<td>Shepardson</td>
<td>Putnam</td>
<td>McGraw</td>
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<td><em>Fall</em></td>
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<td>Bacon</td>
<td>Johnson</td>
<td>Beattie</td>
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<td>Laurel</td>
<td>Linton</td>
</tr>
<tr>
<td>Harris</td>
<td>Tavelli</td>
<td>Zach</td>
</tr>
</tbody>
</table>

*KRUSE, OLANDER, POLARIS, TRAUT and WERNER* are not on regular rotation due to scheduling issues or because school staff lead bike-ped activities outside normal curriculum, such as bike field trips (included in student totals above).

### Every Year

**PSD Middle School** (7 schools, 1,700 students)

- Blevins
- Boltz
- Kinard
- Lincoln
- Preston
- Webber

**Middle School Program** focuses on one grade level, normally sixth (seventh at Kinard). **Lesher** receives ongoing bicycle programming every year.

**PSD High School** (4 schools, 2,500 students)

- Fort Collins
- Fossil Ridge
- Poudre
- Rocky Mountain

**High School Program** focuses on “Bike PE” curriculum during Adventure PE classes and incorporates “Bicycle Friendly Driver” certification.

**Total:** 7,400

**Total:** 7,000

**Total:** 7,100

**NOTE:** Goal is to hit every elementary school once every three years with in-depth SRTS bike-ped program. This gives K-5 students one to two years’ exposure to in-depth program. In middle school, the program focuses on one grade level only (normally sixth), giving virtually all public-school students three years of program exposure before high school. Individual students may participate in additional bike-ped activities, such as International Walk to School Day, National Bike to School Day, Bike Week, school walkathons/triathlons, biking/walking clubs and camps, bike-ped assemblies, Family Bike Rodeos, biking/walking field trips, BaseCamp bike-ped clubs, and other SRTS-related activities in the community. High-school program includes traditional “Bike PE” curriculum as well as “Bicycle Friendly Driver” certification.

**Charter schools, private schools, and youth organizations also receive SRTS programming by request.**

**Contact**

saferroutes@fcgov.com

fcgov.com/saferroutes
Why do bike field trips?

Benefits:

- **Save $$ and reduce emissions** by not using buses
- **Empower kids** to travel by bike
- **Show safe routes** to great destinations
- **Engage teachers, parents, community volunteers**
- **Include all students** by using adaptive equipment, which builds empathy, camaraderie

- *It’s fun!!!
Why do bike field trips?

A momentous trip and huge bonding experience!
Planning for success

Key tips:

• Focus on **fourth- and fifth-graders** (old enough and strong enough to participate)
• Have **backup plan** for bad weather
• Choose **route that avoids major hills**
• **Check students’ bikes for safety** in advance
• Have **extra bikes and helmets** for kids who can’t bring them
• **Conduct pre-ride training** to get kids ready
Key tips:

- Have kids **bring lunch and water in backpacks** (or provide lunch at destination)
- Bring along “**ride leader bags**” with essentials for fixing flats and other repairs, first-aid kits, etc.
- Arrange for “**sag wagon**” for hauling kids/bikes who cannot complete whole ride
- **Invite local police** to ride along and/or provide traffic control to get across busy streets safely
- Find **partner organization like Athletes in Tandem** to help with adaptive equipment
Adaptive PE in middle school

SAFE ROUTES TO SCHOOL
WITH
ATHLETES IN TANDEM
Adaptive equipment

Equipment trailer for bike field trips
Adaptive equipment

Conventional tagalongs

Various brands

Burley Piccolo
Adaptive equipment

Recumbent trike

Weehoo iGo Turbo Trailer
Adaptive equipment

Conventional kid trailers
Adaptive equipment

Recumbent tagalong

CycleTote special-needs bike trailer
Adaptive equipment

WIKE special-needs
bike trailer
Adaptive equipment

DaVinci Designs independent-coasting tandem
Adaptive equipment

The Duet wheelchair bicycle tandem
Adaptive equipment

Kid-sized handcycle:
Invacare Top End
Li’l Excelerator
Help individual students create their own adaptive devices

Fourth-grade bike field trip

Fifth-grade bike field trip
Dream big.

It can happen!
If we can do it in Fort Collins…

…You can too!