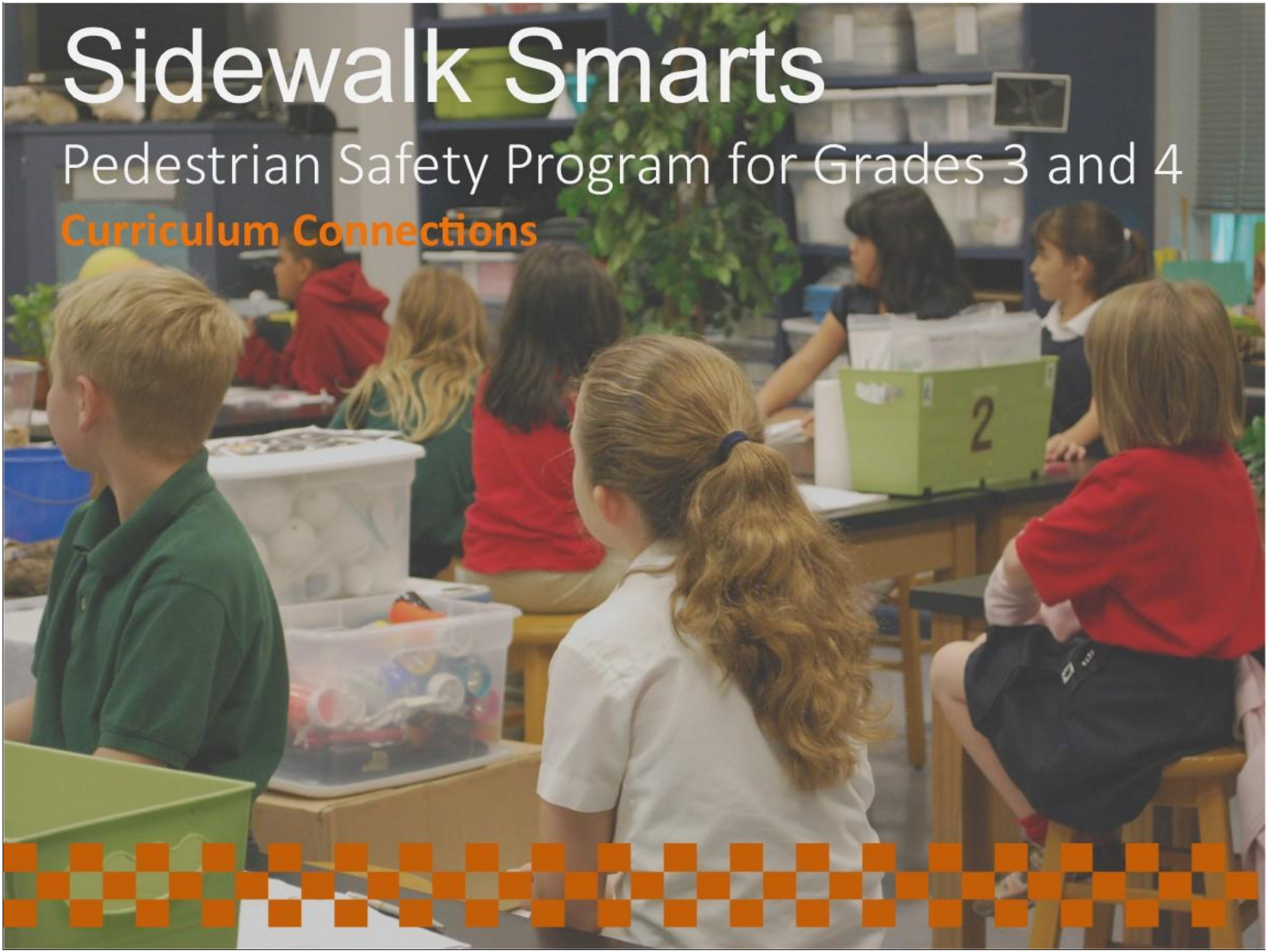
Sidewalk Smarts

Pedestrian Safety Program for Grades 3 and 4

Curriculum Connections



Sidewalk Smarts: Pedestrian Safety Program for Grades 3 and 4

This experiential learning program is designed to increase knowledge and skills of students in grades 3 and 4 related to being safe pedestrians. For the purposes of this program, pedestrians are described as being people who are on sidewalks and multi-use trails walking, using small-wheeled devices (like scooters, roller blades, skateboards, tricycles) and using wheelchairs and other mobility devices. It does not include people on bicycles.

The need for additional pedestrian safety education was identified by representatives from a number of children's safety and road education organizations/programs in Waterloo Region to address concerns related to traffic safety for elementary school children. It was through a collaborative effort that this program was developed. Contributors included representatives from:

- Cycling Into the Future
- Region of Waterloo Public Health and Emergency Services
- Region of Waterloo Transportation Division
- Student Transportation Services of Waterloo Region – School Travel Planning
- Waterloo Region Walking School Bus Program (a program of the Canadian Cancer Society, Ontario Division)
- Waterloo Region Children's Safety Village
- Waterloo Regional Block Parent Program

This program is not intended to create experts in navigating streets as pedestrians. Parents and caregivers need to determine when their child is ready to walk safely to school. In addition to the training modules, students are provided materials to bring home, so parents can continue to practice and reinforce these skills with their child.

For more information about the program, please contact the School Travel Planning Supervisor at Student Transportation Services of Waterloo Region (519-744-7575)

Curriculum Connections

The purpose of this document is to provide ideas of how the topic of pedestrian safety can be worked into other subject areas following the implementation of the Sidewalk Smarts program in a school. Doing so reinforces the key messages and learnings from the instructor-facilitated components and allows students to communicate what they learned with others.

Important key messages for all pedestrians to help stay safe include:

- Stop, Look, Listen, Think
- Keep looking and listening as your cross the road. Walk, don't run.
- Make your decisions for yourself; don't just follow someone else
- No pushing or shoving
- Be visible to others, especially motorists and cyclists; wear appropriate clothing
- Minimize distractions when walking
- Make your intentions known to others and make sure motorists and cyclists see you before you start to cross

Sidewalk Smarts: Pedestrian Safety Program for Grades 3 and 4

Summary of Connections of Pedestrian Safety to Subject Areas

Subject	Relevant Grade 3 Curriculum Expectations	Relevant Grade 4 Curriculum Expectations
Health and Physical Education	**Healthy Living: Making Healthy Choices** • Develop safety guidelines for a variety of places and situations outside the classroom	**Healthy Living: Making Health Choices** • Apply a decision-making process to assess risks and make safe decisions in a variety of situations
Science and Technology	**Understanding Matter and Energy: Forces that Move** • Assess the impact of safety devices that minimize the effects of forces in various human activities • Investigate forces that cause an object to start moving, stop moving, or change direction • Identify ways in which forces are used in their daily lives	**Understanding Matter and Energy: Light and Sound** • Assess the impacts on personal safety of devices that apply the properties of light and/or sound, and propose ways of using these devices to make our daily activities safer • Assess the impacts on society and the environment of light and/or sound energy produced by different technologies from different perspectives • Investigate the basic properties of light • Describe how different objects and materials interact with light and sound energy
Language	**Writing** • Generate, gather, and organize ideas and information to write for an intended purpose and audience • Draft and revise their writing, using a variety of informational, literary, and graphic forms and stylistic elements appropriate for the purpose and audience **Media Literacy** • Create a variety of media texts for different purposes and audiences	**Writing** • Generate, gather, and organize ideas and information to write for an intended purpose and audience • Draft and revise their writing, using a variety of informational, literary, and graphic forms and stylistic elements appropriate for the purpose and audience **Media Literacy** • Create a variety of media texts for different purposes and audiences,
Mathematics	**Measurement** • Estimate, measure, and record length, perimeter, area, mass, capacity, time, and temperature, using standard units	**Measurement** • Estimate, measure, and record length, perimeter, area, mass, capacity, volume, and elapsed time, using a variety of strategies

Subject	Relevant Grade 3 Curriculum Expectations	Relevant Grade 4 Curriculum Expectations
	Data Management and Probability • Collect and organize primary data and display the data using charts and graphs, including vertical and horizontal bar graphs • Read, describe, and interpret primary data presented in charts and graphs, including vertical and horizontal bar graphs	**Data management and probability** • Collect and organize discrete primary data and display the data using charts and graphs including stem-and-leaf plots and double bar graphs • Read, describe, and interpret primary data and secondary data presented in charts and graphs, including stem-and-leaf plots and double bar graphs
Social Studies	**Heritage and Identity: Communities in Canada, 1780–1850: Life in Canada – Then and Now** • Compare ways of life around the beginning of the nineteenth century, and describe some of the changes between that era and the present day **Map, Globe and Graphing Skills** • Extract information from bar and line graphs • Construct bar and/or line graphs for a specific purpose • Extract information from and construct maps, including thematic maps • Use elements of maps to extract information and/or construct maps	**Heritage and Identity: Early Societies to 1500 CE: Past and Present Societies** • Compare key aspects of life in a few early societies (to 1500), including at least one First Nation and one Inuit society, and describe some key similarities and differences between these early societies and present-day Canadian society **Map, Globe and Graphing Skills** • Extract information from climate graphs • Construct double bar graphs to show comparisons within a region • Analyse and construct thematic maps for specific purposes
The Arts	**Drama** • Use the elements and conventions of drama to communicate feelings, ideas, and stories **Music** • Create and perform music for a variety of purposes, using the elements and techniques of music **Visual Arts** • Produce a variety of two- and three-dimensional art works to communicate feelings, ideas, and understandings	**Drama** • Use the elements and conventions of drama to communicate feelings, ideas, and stories **Music** • Create and perform music for a variety of purposes, using the elements and techniques of music **Visual Arts** • Produce a variety of two- and three-dimensional art works to communicate feelings, ideas, and understandings

Learning Activity: Be Visible for Safety

Main Curriculum Connection:

- Grade 4 Science

Learning Objectives

- To investigate how various light conditions affect the ability to see people wearing different types of clothing
- To apply learnings to decide appropriate clothing to wear when being a pedestrian or cyclist

Resources Needed

- A room where light levels can be controlled
- Different colours of objects (e.g., clothing, backpack, etc.):
    - Dark coloured
    - Light coloured
    - Fluorescent
    - Shiny
    - Reflective
- Flashlights to simulate headlights of a vehicle
- Recording sheet (Sample on next page)

Instructions

1. Lower the light level in the room and ask students to record what they can and cannot see
2. Ask students to use these observations to develop a hypothesis of which colour will increase visibility of a pedestrian
    a. Will one colour be more visible from far way than another colour?
3. Place the different coloured objects around the room. Try to make sure they are as far from each other as possible.
4. Divide students into small groups (enough small groups as there are coloured items)
5. Assign each group to stand 10 metres (or as far as possible) from one of the items. Note: In three-quarters of a second a vehicle traveling at 50 km/h will go 10 metres (33 feet) or about two vehicle lengths before the driver can start to apply the brakes.
6. With full light conditions, ask students in each group to rate their coloured object on a scale of 0 (not visible) to 5 (highly visible) and record their answer. Ask students to think about each object in relation to others they have rated…is it more visible or less visible than the others? What can they see - nothing, an outline, shades of grey, or colour?
7. Repeat Step 5 adjusting the lighting each time:
    a. Lowest room light possible, flashlight turned off
    b. Lowest room light possible, flashlight turned on
8. Ask groups to move to the next object and repeat Steps 6 and 7 and continue moving to next object until all groups have investigated
9. Once all groups have observed each object in the different light conditions, ask students to work as a group to review their results and assess whether their hypothesis was true. What conclusions can they make?

Cross-curricular and Integrated Learning

Students can:

- Graph their results
- Apply what they have learned by designing a piece of something to improve the visibility of pedestrians in lower light conditions
- Develop art works to educate others about what they learned
- Write and deliver PA announcements to educate other students about what to wear to be a safe pedestrian.

Sample Recording Sheet for "Be Visible for Safety"

Item	Light Condition	Visibility Rating 0 (not visible)	1	2	3	4	5 (highly visible)
	Full room light						
	Low room light, no flashlight						
	Low room light with flashlight						
	Full room light						
	Low room light, no flashlight						
	Low room light with flashlight						
	Full room light						
	Low room light, no flashlight						
	Low room light with flashlight						
	Full room light						
	Low room light, no flashlight						
	Low room light with flashlight						
	Full room light						
	Low room light, no flashlight						
	Low room light with flashlight						
	Full room light						
	Low room light, no flashlight						
	Low room light with flashlight						
	Full room light						
	Low room light, no flashlight						
	Low room light with flashlight						
	Full room light						
	Low room light, no flashlight						
	Low room light with flashlight						

Learning Activity: Stay Alert

Main Curriculum Connection:

- Grade 4 Science

Learning Objectives

- To investigate different sounds in school neighbourhood
- To apply learnings to understand how neighbourhood sounds could impact pedestrian safety

Resources Needed

- Location outside the school where students can listen for various sounds including traffic noises

Instructions

1. Divide students into small groups
2. Outside the school, ask students to close their eyes and observe what they hear in the school neighbourhood and list as many sounds as they can in five minutes
3. Back in the classroom, ask students to:
   a. Identify which sounds came from traffic and which sounds came from other sources
   b. Discuss in their small groups if any of the sounds could make it harder to listen for sounds of approaching vehicles
   c. Discuss how different pedestrians might be impacted by the neighbourhood sounds (e.g., someone who is hearing impaired, someone wearing headphones/ earbuds, groups of people, etc.)
   d. Ask students to brainstorm any extra precautions these people should take to stay safe as pedestrians

Cross-curricular and Integrated Learning

Students can:

- Use mixed media to tell others about what they learned
- Write and deliver PA announcements to educate other students about what to wear to be a safe pedestrian

Learning Activity: Past, Present, Future

Main Curriculum Connection

- Grade 3 and Grade 4 Social Studies

Learning Objectives

- To investigate how people from earlier communities travelled and the risks they faced
- To compare travel in earlier communities to travel today

Resources Needed

- Existing curriculum resources related to earlier communities (e.g., textbooks, websites, etc.)

Instructions

1. Divide students into small groups
2. Ask students to research how people from an earlier community travelled from place to place.
   a. What did they use to travel?
   b. How did the environment influence how they travelled?
   c. What dangers or risks did each type of travel pose?
3. Ask students to compare these modes of travel and risks with what people face today as pedestrians, cyclists and motorists.
4. Ask students to brainstorm what modes of travel people may use in 10 years and possible risks.
5. As a group, have students present their comparisons to their classmates (or other classes). Each group can be encouraged to present their work in different ways (e.g., PowerPoint, diorama, posters, mixed media, etc.)

Cross-curricular and Integrated Learning

Students can:

- Create maps showing how people from an earlier community got from home to school compared to their own travel to school

Learning Activity: Remember When?

Main Curriculum Connection

- Language / The Arts

Learning Objectives

- To gather information about how others travelled to and from school
- To use a variety of mediums to report school travel stories

Resource Needed

- Varies depending on how students choose present the stories

Instructions

1. As a class, brainstorm questions that could be asked when interviewing someone about how they travelled to and from school when they were in Grade 3 or 4.
2. Invite the school principal or another adult from within the school to come for a class interview. (Alternative: invite 4-5 staff, parents, volunteers.)
3. As a class, interview the adult (or divide the class into small groups to interview one of the invited guests) using the questions brainstormed.
4. Ask students to compare these modes of travel with how students travel today.
5. As a group, have students present their comparisons to their classmates (or other classes). Each group can be encouraged to present their work in different ways (e.g., PowerPoint, diorama, posters, mixed media, etc.)

Other Ideas to Connect Pedestrian Safety to Curriculum

Math

1. **Create math problems using scenarios and language related to pedestrian safety**

   For example:

   If you wake up at 7:30 a.m., and it takes you 10 minutes to eat your breakfast, 5 minutes to brush your teeth, 25 minutes to wash and get dressed, 5 minutes to get your backpack ready, and 20 minutes to walk to school, will you be at school by 9:00 a.m.?

   Part B: If cycling takes half the time as compared to walking, what time will you get to school?

2. **Travel Survey**

   Students can design a survey to count how different people travel. They can graph and interpret the data they collect.

   Alternatively, the classroom teacher or a select student each day can use BikeWalkRoll.org to survey the class on how they travelled to school on one or more days. Students can then graph and interpret the class data, comparing directions (to vs from school), days of week, and potentially how weather affects the mode.

Language

Words and phrases associated with pedestrian safety can be incorporated into classroom word wall activities.

The Arts

Students can be encouraged to create skits, songs, posters, etc. to express emotions, feelings, etc. they experience when they are pedestrians.