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| **Lesson – Mapping active routes to school (GRADE 5)**This lesson plan encourages discussion about safe and active routes to school. It supports work being done by Niagara Region with Niagara Student Transportation Services to encourage students to walk and bike to school. Email lisa.gallant@niagararegion to arrange for large copies of maps for you to use as part of this lesson plan. For clarification about this project email rob.berketo@nsts.ca |
| **Task:**Analyzing map of school neighbourhood to identify barriers and supports for active travel | **Material:** Large map of school neighbourhoodCopies of map for small groupsHighlighters for studentsChart paper  |
| **Big ideas:*** Maps are used to communicate the features found in an area
* Our neighborhood has features that help us travel from place to place
* Neighborhoods can be designed to improve safety and encourage active, efficient travel
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| **Duration:*** Two instructional blocks of approximately 90 minutes.
	+ Lesson 1: Teacher directed/full class. Students & teacher will work together on a map and identify key features.
	+ Lesson 2: Small group. Students will work together to identify routes to favourite destinations.
* An optional 90 minute block could be added for students to create their own map and a letter or presentation.
* Can be scaled down and used as a filler for one instructional block or scaled up into a two week unit
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| **Prior knowledge:*** How to read a legend
* What is active transportation and why is it important
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| **Assessment:*** During the group activity, observe how the student’s work together. Talk with individual students focusing on their ability to answer questions about the map, such as direction, routes and features.
* Observe students as they contribute to the whole class discussion to list reasons that encourage and discouraging active travel
* After the group activity, ask each student to draw the route they would take to get to school from their house, their friend’s house or another landmark such as a library or store
 | **Success criteria:*** I can locate and analyze information on a map
* I can ask questions about maps
* I can use directional terms to explain a route
* I can create a map showing my route to school that includes a legend containing a compass rose, symbols for important items, a title
* I can work cooperatively with my group members
* I can identify features that would improve the safety of a walking or biking route and encourage active travel
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| **Minds on:**If your neighborhood was closed to traffic for a day and the streets were opened up to people:* How you would want to actively get around e.g. cycle, walk, skateboard…? (have students draw a picture of this active mode and ask them to explain why they chose this active mode)
* What places would you want to go to using that form of active transportation e.g., park, friends home, place to eat, library?
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| **Action -- Map Activity:*** Form small groups ensuring that there is at least one student in each group who walks or cycles to school (identify using a hands-up survey). If many of your students walk or bike to school, you may be able to group children from similar areas together.

Session 1:* Show the class the large map of the school area.
* As a large group, describe the legend and ask students to find items on the legend e.g. crossing guard, traffic lights.
* Have them circle these items on the map at their table
* Ask all students if they are aware of any features that are not on the map e.g., stop signs
* Have them add those items to their map
* Ask all students if they can find any favourite places near the school that they like to visit e.g. a store, place to eat or library
* Have them mark those places on their group map
* If any students live near the school they can mark where their home is on their group map.

Session 2:In the same small groups, have the students:* Draw routes they could walk or cycle from school to one or more of the destinations they identified.
* Estimate distance and expected travel time
* Note nearby features that make the route safer for walking or cycling such as crossing guards
* Identify obvious barriers to walking or cycling such as highways, missing sidewalks or busy intersections
* Identify less obvious barriers such as overgrown shrubs or cracks in sidewalks
* Ask students what is keeping them from walking or biking to school or for those who do, what motivates them to choose active travel?
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| **Consolidation:*** Discuss the findings as a whole class and make a chart of the features that encourage and discourage safe, active travel. Add to the chart personal reasons that encourage and discouraging active travel.
* List recommendations to improve walkability and bikeability of school area and ways to increase active school travel
* Post the map and chart to show other students how fast and easy it can be to walk or bike to school.
* When your map and list of recommendations to improve your walk and bike routes and increase active school travel is done, email lisa.gallant@niagararegion.ca . We will look into having the student findings transposed onto a master map for your school to continue to use.
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| **Extensions / Enrichment:**If you have access to IPads, access an online mapping system and have students identify an active route to a favourite location from their home such as a park or friends home. They can print out this map and provide you with a copy to assess.Have students write a letter to their mayor asking for any features that would improve the safety of their neighborhood and encourage active travel or thanking them for features that are already in place.Have students create a presentation for parent council identifying any concerns about the safety of the walking or cycling routes to school or enhancements needed to encourage active travel such as bike racks.Have students develop identify routes to school from many neighborhoods. They could visit younger grades and present the possible routes to them. The map could then be posted in the hallway for other students to see.Explore the environmental and health benefits of active school travel and have students create posters or announcements to feature these benefits and encourage active school travel <http://www.saferoutestoschool.ca/benefits-of-active-school-travel/> .Encourage your school to promote active school travel through walk to school days and school travel planning. <http://www.saferoutestoschool.ca/> |
| **Grade 5 Curriculum Links:****Social Studies**B2.3 analyse and construct maps in various formats, including digital formats, as part of their investigations into social and/or environmental issues (e.g., a thematic map showing the extent of the areas affected by climate change or how air pollution generated in one jurisdiction affects another; a demographic map showing levels of poverty or homelessness in different provinces).**Physical Activity**1.2 use adaptive, management, and coping skills to help them respond to the various challenges they encounter as they participate in physical activities, develop movement competence, and acquire knowledge and skills related to healthy living1.5 use a range of critical and creative thinking skills and processes to assist them in making connections, planning and setting goals, analyzing and solving problems, making decisions, and evaluating their choices in connection with learning in health and physical educationA1.3 identify factors that can either motivate or make it difficult for people to be physically active every day (e.g., enjoyment; level of peer support; availability of transportation, equipment, time, and financial resources; availability of community resources; gender barriers or expectations; personal abilities; accessibility of facilities; personal organizational skills; family responsibilities or curfews), and describe ways of overcoming obstacles to staying active. |
| **Resources:**[Niagara Navigator](https://maps-beta.niagararegion.ca/Navigator/) (a free mapping tool featuring landmarks in Niagara Region such as schools, Regional roads, parks and community centres) <https://maps-beta.niagararegion.ca/Navigator/>[Neptis Geoweb](http://www.neptisgeoweb.org/) (a free online mapping platform with data about the Greater Golden Horseshoe). <http://www.neptisgeoweb.org/>**Video about government roles and responsibilities -- “Who Does What?”** TVO, 4:24 min https://www.youtube.com/watch?v=AVE3OsR5W-0 Shows responsibilities of federal, provincial and municipal governments. Keep in mind that in Niagara our municipal responsibilities are further divided by Regional municipality vs 12 local municipalities. For example there are regional roads and municipal roads**Video describing active transportation how we can design a community to encourage it -- “Active Transportation- Planning 101”** Ontario Professional Planners Institute, 2:14 min https://www.youtube.com/watch?v=dT93bnZk7U8 Active transportation is non-motorized travel - on foot, by bicycle, using a wheelchair, rollerblading or even skateboarding. Active transportation forms a vital part of healthy and sustainable communities.  |
| **Glossary:****Active Transportation** refers to any mode of human-powered transportation such as:* Walking/running
* Cycling
* Scootering
* Skateboarding
* In-line skating
* Travel with the use of mobility aids, including motorized wheelchairs and other power assisted devices moving at comparable speed

**Sustainable Transportation** refers to modes of transportation of people or goods that meet the needs of the present without compromising the ability of future generations to meet their needs. All modes of active transportation are sustainable. Sustainable transportation also includes mechanized modes of transportation which use energy efficiently such as:* School bus
* Carpooling

**Other terms:** School boards, public health departments and community advocates have long promoted active transportation through various programs. Terms and phrases commonly associated with such programs include:* Active School Travel
* School Travel Planning
* Active and Safe Routes to School
* Active Sustainable School Transportation
* Walk to School, Bike to School, iWALK
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| **Background: Benefits of walking and biking to school:****Less traffic in front of our school**More students and parents choosing to walk, ride or roll means less traffic in front of our school. This helps keep all students safe no matter how they travel**Increased physical activity**When you are active, you can build healthy muscles and bones, experience better self-esteem and less stress, perform better at school, and form lifelong positive associations with healthy living**Improved air quality** Vehicle emissions are one of the largest causes of poor air quality. Every car trip replaced by active modes reduces our contribution to climate change |
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