



## Energy Lesson Plan Community Mapping

---

### Background and Concepts

---

Create or enhance a map of your neighbourhood, identifying services and community assets that support you to live in more sustainable ways. Choose one or all of the focus areas described on page 3 to allow you to identify and practice using these services; and add visual information to a common classroom map to create a sense of how you can live in your neighbourhood in an environmentally friendly way.

- Mapping skills
- Sustainability issues: active transportation, waste reduction, water protection, access to green spaces, access to healthy food
- Identify community, environmental and cultural assets that support sustainable living

---

### Time

---

Create the map over a period of a month:

- Become familiar with your local map(s)
- Take time as a class to tour the area around the school and in the neighbourhood
- Do some of the actions you identify
- Make additions to the small group map or the common classroom maps
- Share small group map results with the class

---

### Materials

---

City, town or community maps, or printed aerial photos, such as Google Maps. (Enough for students to work in small groups)

- Aerial photos of the area that allow for easy differentiation of natural and developed spaces and can be enlarged as needed.
- City maps enlarged to show a neighbourhood and allow identification of familiar streets and landmarks.

---

### Procedure

---

1. Look at the map of your neighbourhood. Figure out where you are on the map: for example, where you live, the location of the school, or familiar landmarks.
2. Using the chart on page 3, and discussion questions in each area (pages 4-8) to focus your work, identify environmental assets in the community. Based on the focus area(s), use the map to find bus stops, bike/walking paths, recycling centres, wetlands, parks and natural areas, plant and animal species identified, etc. If it connects to your learning, include the location of storm sewers and storm water collection ponds, or



areas of concern such as landfills. If the focus area is small enough to walk around, tour it, or parts of it with the class or group, noting significant spots as you go.

3. Take photos using the services at the places you tour. For example, putting compost in the community garden composter, picking up garbage in the park, waiting for a bus, or walking on a path. Use the photos to enhance your maps and document service use in the community.
4. Discuss and decide on symbols for the points being marked on the map. For example, the bus stops could be marked with a small bus or a bus stop sign. The location of a community garden could be marked with a plant. Include the symbol key on the map. The additional resources on page 9 include a “green mapping” site that uses common symbols. Here are a few of the symbols you could use from [GreenMap](#).

<b>Sustainable Living</b>	 Solar energy site	 Bicycle site	 Pedestrian friendly	 Wheelchair accessible
<b>Nature</b>	 Wetlands	 Bird and wildlife watching	 Public forest/natural area	 Wildlife habitat
<b>Culture and Society</b>	 Child friendly site	 Public library	 Eco information	 Food bank

5. Choose a few points on the map, and write a description of the service it provides, including how it helps people to save energy, or water, or reduce waste.
6. Place information from small group maps onto one large common map. Include some of the photos taken on tours of the area. Or share information from your individual maps with other groups.



**Community Mapping Focus Areas**

Service or Asset	What to Look For	What could we do to improve this?
<b>Active or Green Transportation</b> – How can we get safely around our community?	Bike paths, bike lanes, bike racks	
	Bus routes, bus stops, bus shelters	
	Walking paths, sidewalks, crosswalks, streetlights	
	Other:	
<b>Waste Reduction</b> – What can we do with our waste?	Recycling bins, garbage bins	
	Donation drop boxes	
	Compost bins	
	Other:	
<b>Water Protection</b> – How can we protect our water and watershed?	Storm sewers, storm water retention ponds	
	Wetlands, riparian areas or buffer zones	
	Rain barrels, permeable vs non-permeable surfaces	
	Other:	
<b>Access to Green Spaces</b> – Do we have parks and natural spaces in our community? – Do those spaces improve habitat for insects, birds, etc?	Parks, playgrounds	
	Habitat for animals and insects – bird houses, water features, etc.	
	Native bush, grasslands, forests, riverbank, natural areas	
	Other:	
<b>Access to Healthy Food</b> – Where can we find healthy food in our neighbourhood?	Farmer's market, grocery stores, food bank	
	Community or school garden, family garden	
	Other:	



## Discussion and focusing our learning

- 1. Active Transportation:** How do we get safely and actively around our community? How do active transportation and bus services help us to be healthier, and have a healthier environment? How can we assess the walkability and bike-ability of our neighbourhood? What stops us from being active in our community, and how could our community be improved to make active or bus transportation safer and more convenient? **Choose one action you can take to include more active transportation everyday. Practice it and include the results on the common map.**





- 2. Waste Reduction:** How do services in our community help us to reduce our waste? What are we able to reduce, reuse, recycle and compost in our community? How can we reduce waste at school and at home? Where are our bins, drop off donation centres, and our recycling centres? How could these services be improved to make it more likely that people would reduce waste and recycle more? **Choose one action that you can take to reduce waste every day. Practice it and include the results on the common map.**

Composting fruit and vegetable waste from school lunches.



Compost, recycling and garbage bins in Saskatoon (Courtney Markewich/CBC)



- 3. Water Protection:** How does the design of our community help us to conserve and protect our water sources? Where does water from our streets and lawns drain? How can we reduce water runoff from our homes or our school building? What can we do to protect our local watershed from harmful chemicals? How do wetlands and collection ponds help to keep our houses from flooding during a heavy rain, or spring melt? **Choose one action that you can take to protect or conserve water in your community. Practice it and include your results on the common map.**

## YELLOW FISH ROAD™ PROGRAM

- 1. Wash your car at a carwash** to prevent soap from entering storm drains.
- 2. Scoop your dog's poop** and put it in the garbage.
- Take chemicals and hazardous materials to a **Household Hazardous Waste Day drop-off event**.
- Maintain a healthy lawn and garden by using **compost and mulch** instead of pesticides and fertilizers
- 5. Invite biodiversity** into your yard by using bird houses, leaf litter, bat boxes, and insect hotels.
- Pick up **debris and litter** in your yard and neighbourhood to keep these materials out of our waterways.
- 7. Sweep dirt and sediment onto the lawn** not the street.
- 8. Fix car leaks** so fluids don't get washed down the storm drains.
- Build a rain garden and/or install a rain barrel to **manage storm water** in your yard.

Take these 9 actions to help protect your beautiful watershed from pollutants and harmful chemicals in stormwater!

Partners for the Saskatchewan River Basin



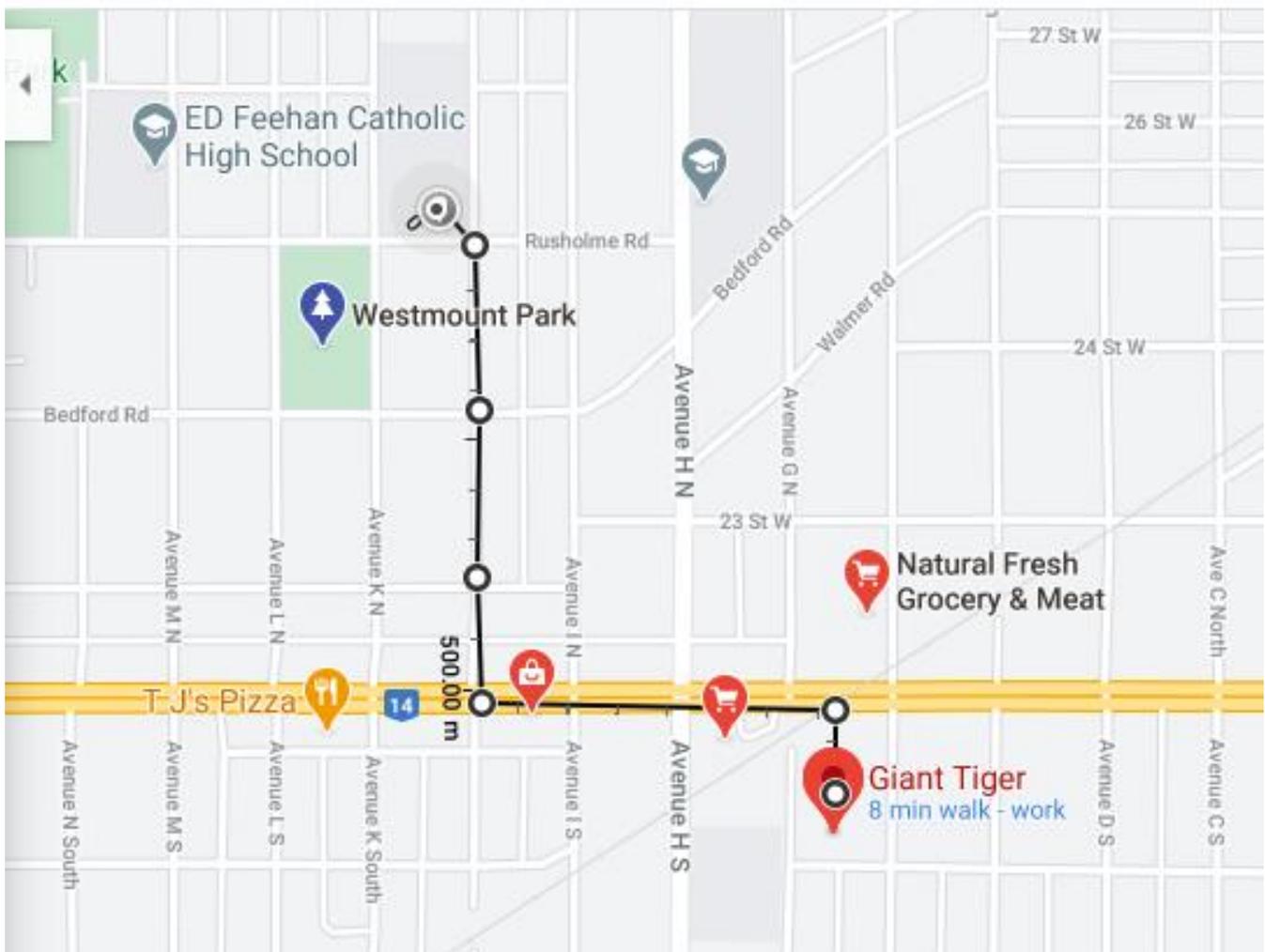
**4. Access to Green Spaces:** Where are the parks and natural spaces in our community? How do they help to keep us healthy? Who benefits from natural spaces – think of plants and animals as well as people? How could we make better use of our local parks and natural spaces? What natural features, plants or animals are missing from our schoolyard green spaces, and what could we add back to make them more natural? **Choose one action that you can take to make better use of or improve green spaces near the school. Practice it and include your results on the common map.**



Ecosystem services as categorized in the Millennium Ecosystem Assessment. Page 11, Saskatoon's Green Infrastructure Strategy



5. **Access to Healthy Food:** Do we have access to healthy food in our neighbourhood? Where do we find healthy food in our community? Can we walk or bus to those places? Can we grow food near our homes? Can we grow food near our school? Why is it important to have healthy food available near where we live? **Choose one action that you can take to get healthy food. Practice it and include your results on the common map.**



Westmount Community School to Giant Tiger – distance measured at 954m, or just less than 1 kilometer



### Additional Resources

#### Create a Community Green Map

- [www.greenmap.org](http://www.greenmap.org)
- [Craik Green Map and icons](#)

#### Active Transportation

- [Transportation 1-Pager](#)
- [Increasing Active Transportation – Case Study](#)
- [Move to Grow](#)
- [Saskatchewan in Motion](#)
- [Ontario Active School Travel](#)

#### Waste Reduction

- [SARCAN](#)
- [Saskatchewan Waste Reduction Council](#)
- [Waste 1 pager](#)

#### Water Protection

- [Yellow Fish Road](#)
- [Water 1 pager](#)
- [Partners for the Saskatchewan River Basin](#)

#### Access to Green Spaces

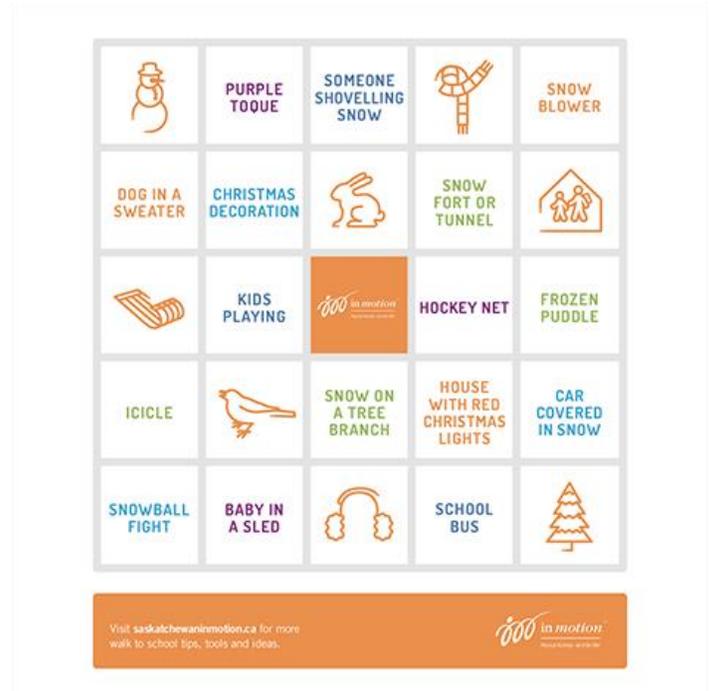
- [Biodiversity 1 pager](#)
- [EcoFriendlySask](#)



Hyde Park Wetland, City of Saskatoon Website (Kevin Lee)

#### Access to Healthy Food

- [Food 1 Pager](#)
- [Access to Food](#)
- [Chep Good Food](#)
- [Agriculture in the Classroom](#)



Saskatchewan In Motion Winter Walking Bingo Card



## Curriculum Connections

**Grade 1 Health Education** [USC1.4](#) Determine and practise safe pedestrian/street behaviours and examine related safety challenges in the community. [USC1.5](#) Explore the association between a healthy sense of "self" and one's positive connection with others and the environment. [DM1.1](#) Examine initial steps (i.e., Stop, Think, Do) for making basic choices regarding healthy behaviours; healthy brain, heart, and lungs; healthy relationships; pedestrian/street safety; and a healthy sense of self. [AP1.1](#) Apply the steps of Stop, Think, and Do (with guidance) to develop healthy behaviours related to a healthy brain, heart, and lungs; healthy relationships; pedestrian/street safety; and a healthy sense of self.

**Physical Education** [PE1.2](#) Active Living Examine and express what it means to live actively each day and the personal benefits of being active.

**Social Studies** [DR1.3](#) Demonstrate awareness of humans' reliance on the natural environment to meet needs, and how location affects families in meeting needs and wants. [DR1.4](#) Recognize globes and maps as representations of the surface of the Earth, and distinguish land and water masses on globes and maps.

[RW1.1](#) Describe the influence of physical, spiritual, emotional, and intellectual needs and wants on personal well-being. [RW1.2](#) Discuss ways in which work may be managed and distributed in families, schools, and groups.

**Grade 2 Health Education** [USC2.5](#) Recognize potential safety risks in community "play areas" and determine safe practices/behaviours to identify, assess, and reduce the risks. [AP2.1](#) Act upon health-related understandings, skills, and confidences to make healthy connections related to personal thoughts-feelings-actions, healthy snacking, affects of illness/disease, respect, safety, and diversity.

**Physical Education** [PE2.2](#) Analyze daily habits and actions that demonstrate personal engagement in, and taking personal responsibility for, leading a physically active life.

**Science** [AW2.1](#) Investigate properties of air and water (in all three states of matter) within their environment.

[AW2.2](#) Assess the importance of air and water for the health and survival of living things, including self, and the environment.

**Social Studies** [IN2.1](#) Determine characteristics of a community. [DR2.2](#) Analyze the influence of the natural environment on the local community. [DR2.3](#) Identify physical representations as constructed models of real things. [PA2.1](#) Analyze how decisions are made within the local community. [PA2.2](#) Assess and practise various approaches to resolving conflicting interests within the community. [RW2.1](#) Describe ways in which the local community meets needs and wants of its members. [RW2.2](#) Analyze various worldviews regarding the natural environment. [RW2.3](#) Contribute to initiating and guiding change in local and global communities regarding environmental, social, and economic sustainability.

**Grade 3 Health Education** [USC3.1](#) Determine the role of a variety of healthy foods and physical activity on the health and development of the mind, body, and immune system. [DM3.1](#) Demonstrate the importance of investigating information for making informed decisions related to healthy foods and physical activity, one's "inner self", helpful and harmful substances, healthy family and home, safety at home, and impact of violence. [AP3.1](#) Use the understandings, skills, and confidences related to healthy foods and physical activity, one's "inner self", helpful and harmful substances, healthy family and home, safety at home, and impact of violence.

**Physical Education** [PE3.1](#) Apply a repertoire of strategies for developing components of health-related fitness, (cardiovascular endurance, flexibility, muscular endurance, and muscular strength), through movement activities during scheduled times in school, at home, and in the community. [PE3.2](#) Evaluate the role of participation in movement activities in providing opportunities for enjoyment, challenge, self-expression, social interaction, increased skill competency, stress reduction, active work life, use of leisure time, contact with nature, and involvement in communities.

[PE3.9](#) Evaluate personal commitment to assessing risk factors and applying safe practices while participating in a variety of movement activities.

**Social Studies** [IN3.1](#) Analyze daily life in a diversity of communities. [DR3.1](#) Use various model representations of the Earth.

[DR3.2](#) Assess the degree to which the geography and related environmental and climatic factors influence ways of living on and with the land. [PA3.1](#) Compare how decisions are made in the local community and communities studied. [RW3.1](#)

Appraise the ways communities meet their members' needs and wants.



**Grade 4 English Language Arts [CR4.2](#)** View and respond to visual and multimedia texts (including graphs, charts, diagrams, maps, multimedia DVD, websites, television programs, advertisements, posters), explaining the creator's technique and the impact on viewers. **[CC4.1](#)** Compose and create a range of visual, multimedia, oral, and written texts that explore: identity (e.g., Expressing Myself), community (e.g., Celebrating and Honouring Others), social responsibility (e.g., Within My Circle) through personal experiences and inquiry. **[CC4.2](#)** Create a variety of clear representations that communicate straightforward ideas and information relevant to the topic and purpose, including short, illustrated reports, dramatizations, posters, and other visuals such as displays and drawings.

**Health Education [USC4.1](#)** Assess what healthy eating and physical activity mean for pre/adolescence. **[AP4.1](#)** Design and apply, with guidance, two four-day action plans that require communication related to healthy eating and physical activity, prevention/ management of health challenges, negotiating disagreements, safety and protection, personal identity, and stressors.

**Physical Education [PE4.9](#)** and refine selected movement skills, tactics, and strategies while participating in: low-organizational, inventive, and cooperative games (e.g., tag games, relay race, prisoner's base), small-sided and lead-up target games (e.g., bowling, curling, golf, bocce ball), small-sided and lead-up striking/fielding games (e.g., long ball, kick ball, softball), small-sided and lead-up invasion/territorial games (e.g., two-on-two, three-on-three games using skills from games such as soccer, basketball, and soft lacrosse), alternate environment activities (e.g., hiking, aquatics, skating, snowshoeing, orienteering, cross-country skiing, tobogganing, cycling, tracking).

**Social Studies [RW4.1](#)** Analyze the strategies Saskatchewan people have developed to meet the challenges presented by the natural environment.

**Grade 5 English Language Arts: [CC5.1](#)** Compose and create a range of visual, multimedia, oral, and written texts that explore: identity (e.g., What Should I Do), community (e.g., This is Our Planet), social responsibility (e.g. Teamwork) and express personal thoughts shaped through inquiry. **[CC5.2](#)** Demonstrate a variety of ways to communicate understanding and response including illustrated reports, dramatizations, posters, timelines, multimedia presentations, and summary charts. **[CC5.3](#)** Speak to express and support a range of ideas and information in formal and informal speaking situations (e.g., giving oral presentations and reports, retelling a narrative, explaining a display to others, working in groups) for particular audiences and purposes.

**Health Education [USC5.1](#)** Analyze personal eating practices.

**Physical Education [PE5.7](#)** Refine, alone and with others, selected movement skills, tactics, and strategies while participating in: small-sided and lead-up net/wall games (e.g., badminton, tennis, table tennis, one bounce, three-on-three volleyball, pickleball, paddle ball, and critically reflect on chosen movement skills, tactics, and strategies used in: small-sided and lead-up target games (e.g., bowling, curling, golf, bocce ball, archery), small sided and lead-up striking/fielding games (e.g., long ball, softball, kickball, cricket), small-sided and lead-up invasion/territorial games (e.g., two-on-two, three-on-three games using skills from games such as soccer, basketball, and soft lacrosse), small-sided and lead-up alternate environment activities and games (e.g., hiking, aquatics, orienteering, skating, roping, tobogganing, cross-country skiing, downhill skiing, tracking, cycling, wall climbing, paddling). **[PE5.11](#)** Examine, evaluate, and communicate the influence of Canadians, both historically and currently, on the development of the numerous options for participation in movement activities in this country.

**Social Studies [RW5.1](#)** Explain the importance of sustainable management of the environment to Canada's future.

**Grade 6 Physical Education [PE6.10](#)** Apply controlled use of selected movement skills and variations (i.e., locomotor, non-locomotor, and manipulative skills) as well as safe and environmentally friendly behaviours while participating in a variety of: alternate environment activities (e.g., skating, cross-country skiing, downhill skiing, snowshoeing, roping, cycling, hiking, kayaking, aquatics, tobogganing, orienteering), body management activities including dance and educational gymnastics, as well as others (e.g., pilates, wrestling, skipping, track and field, yoga, aerobics).

**Science [DL6.1](#)** Recognize, describe, and appreciate the diversity of living things in local and other ecosystems, and explore related careers.

**Social Studies [RW6.2](#)** Contribute to initiating and guiding change in local and global communities regarding environmental, social, and economic sustainability.



**Grade 7 Health Education [USC7.5](#)** Evaluate personal food choices and needs by applying accurate and current nutritional knowledge (e.g., content labels). **[DM7.8](#)** Examine and demonstrate personal commitment in making health decisions related to blood-borne pathogen information, safety practices, harmonious relationships, food choices, interpersonal skills, and morality.

**[DM7.9](#)** Examine health opportunities and challenges to establish personal commitment goal statements related to blood-borne pathogen information, safety practices, harmonious relationships, food choices, interpersonal skills, and morality.

**[AP7.10](#)** Design, implement, and evaluate three six-day action plans that demonstrate personal commitment to responsible health action related to blood-borne pathogen information, safety practices, harmonious relationships, food choices, interpersonal skills, and morality.

**Physical Education [PE7.9](#)** Utilize selected movement skills and combinations of skills (i.e., locomotor, non-locomotor, and manipulative) to participate in a variety of: alternate environment activities (e.g., skating, cross-country skiing, swimming, snowshoeing, cycling, hiking, tracking, skateboarding, roping, canoeing, downhill skiing, orienteering), body management activities including dance and educational gymnastics, as well as others (e.g., wrestling, track and field, pilates, yoga, aerobics).

**Science [IE7.2](#)** Observe, illustrate, and analyze living organisms within local ecosystems as part of interconnected food webs, populations, and communities. (SI) **[IE7.3](#)** Evaluate biogeochemical cycles (water, carbon, and nitrogen) as representations of energy flow and the cycling of matter through ecosystems. (CP, SI) **[IE7.4](#)** Analyze how ecosystems change in response to natural and human influences, and propose actions to reduce the impact of human behaviour on a specific ecosystem. **[MS7.2](#)** Investigate methods of separating the components of mechanical mixtures and solutions, and analyze the impact of industrial and agricultural applications of those methods.

**Social Studies** Analyze and use various types of maps (that provide differing perspectives and information for differing purposes) in order to situate current issues in Canada, and in a selection of Pacific Rim and northern circumpolar countries. **[RW7.3](#)** Assess the ecological stewardship of economies of Canada and the circumpolar and Pacific Rim countries.

**Grade 8 Health Education [USC8.6](#)** Examine and assess the concept of sustainability from many perspectives, and develop an understanding of its implications for the well-being of self, others, and the environment.

**Physical Education [PE8.8](#)** Apply and adapt selected activity-related skills (e.g., carrying, paddling, gripping, hanging, wheeling, digging, fire building, snow ploughing, compass reading) and strategies required for participation in alternate environment activities (e.g., backpacking, hiking, cycling, overnight camping, canoeing, snowshoeing, wall climbing, in-line skating, skateboarding, cross-country skiing, tracking, roping, dog sledding, skating, orienteering, downhill skiing, tobogganing, Quincy building). **[PE8.14](#)** Analyze the influences of past and present social, cultural, and environmental perspectives on the need for recent physical movement initiatives (e.g., in motion, ParticipAction, Indigenous Games, walking paths) that support personal, family, and community active living and well-being.

**Science [WS8.1](#)** Analyze the impact of natural and human-induced changes to the characteristics and distribution of water in local, regional, and national ecosystems. **[WS8.2](#)** Examine how wind, water, and ice have shaped and continue to shape the Canadian landscape. **[WS8.3](#)** Analyze natural factors and human practices that affect productivity and species distribution in marine and fresh water environments.

**Social Studies [DR8.1](#)** Develop an understanding of the significance of land on the evolution of Canadian identity. **[RW8.1](#)**

Analyze the social and environmental consequences of living in the Canadian mixed market economy based on consumerism. **[RW8.2](#)** Assess the implications of personal consumer choices. **[RW8.3](#)** Critique the approaches of Canada and Canadians to environmental stewardship and sustainability.