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## GRADE 4: PEOPLE AND ENVIRONMENTS: POLITICAL AND PHYSICAL REGIONS OF CANADA—UNDERSTANDING OUR CONNECTION TO THE ENVIRONMENTS IN WHICH WE LIVE

### ABSTRACT:

This series of lessons will provide Grade 4 students with opportunities to better understand the challenges and solutions to balancing human and environmental relationships by using the infographic found here:

[http://www.rockies.ca/files/HW\\_InfographicPrintVersion.pdf](http://www.rockies.ca/files/HW_InfographicPrintVersion.pdf)

Source: Highway Wilding. "Highways and Wildlife". Rockies.ca. Miistakis Institute, retrieved April, 3, 2014.

**Language Literacy Focus:** Reading, Writing, Oral Language, and Media

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### SOCIAL STUDIES STRAND / RELEVANT GUIDING QUESTION(S):

- What impact can the natural environment of different regions have on human activities?
- What impact can human activities have on the natural environment?
- How do we find a balance between environmental stewardship and human needs/wants?

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### LEARNING GOALS

In Social Studies, students will:

**LG1** identify how human interaction has changed the natural landscape and the positive and negative aspects of those interactions (**Cause and Consequence; Interrelationships**)

**LG2** use a variety of perspectives to successfully analyze the challenges associated with balancing human needs and wants with environmental stewardship (**Perspective**)

In Language, students will:

**LG3** engage in meaningful discussion

**LG4** make inferences and connections to text

**LG5** express opinions about the ideas and information they have read

**LG6** gather information to support ideas for writing using a variety of strategies and sources

**LG7** learn how to select a writing form to match a particular purpose, and to use the conventions of that form

**LG 8** explain how text features help communicate meaning



## Prior Knowledge and Concepts

- Students should have a general understanding of the concepts cause and effect
- Students should have experience working in small groups
- Students should have experience conducting online searches
- Students should have experience creating and using graphic organizers
- Students should have experience reading graphic texts, charts and diagrams
- Students should understand what a stakeholder is
- Students should be familiar with strategies authors use to persuade readers

### A. Instructional Strategies:

#### Shared Reading

Pose the following question to students: What happens when humans start building structures like roads and houses on land that is part of an animal's habitat? Record any statements that are offered. Next, ask: Is there a way that both animals and humans can share the same habitat in a way that could be 'fair' for both? Once again record any suggestions for future reference. Then, provide students access to the following infographic: [http://www.rockies.ca/files/HW\\_InfographicPrintVersion.pdf](http://www.rockies.ca/files/HW_InfographicPrintVersion.pdf) and indicate to them that you will be taking a closer look at some ways that animals and humans can co-exist in shared spaces.

### B. Student Activities:

#### Shared Reading

1. Have students read all sections of the infographic. Once students have had a chance to read the information in the text, ask them: If the goal of building the wildlife crossing was to help balance the needs of humans and animals, how successful is this solution? Who benefits the most? Organize students into small groups and have them create a graphic organizer to help them focus their discussion (*e.g. t-chart, pro and con, animal and human*) and track their thinking. Have a representative from each group orally share their thinking with the group. As teacher moderator, help to highlight the challenges of getting the balance 'just right'. **(Interpret and Analyze; Gather and Organize)**

#### Assessment suggestions:

Circulate the room as students generate their arguments. Provide scaffolding and descriptive feedback for students who require support to make sense of the graphics or who require support figuring out how to translate the data from the graphics into an argument. **(LG1, LG3, LG4, LG5, LG7, LG8)**

2. Review a variety of strategies authors use to persuade their readers (statistics, use of experts, emotionally charged examples, testimony, demonstrations of cause and effect) and record them on the board.

Share the following statement with your students: This infographic uses graphs and charts to present persuasive information about the need for wildlife crossings.

Which graphic do you feel is the most persuasive? Why? If sections 3-5 were not included in the infographic, would it affect your understanding of the issue?

Allow students some time to discuss their thinking with peers sitting at their table groups, and then have them record their answers in writing. When students have completed their work, have them organize themselves into two groups: Those who believed sections 3-5 would affect their understanding, and those who did not.

Have one representative from each side share their thinking/rationale for their response and then invite students to re-sort themselves if their thinking has changed since the sharing.

**(Evaluate and Draw conclusions)**

Assessment suggestions:

Co-construct success criteria for what an effective response might entail (rationale for choice of which graphic most effective, evidence from text used, argument connects to core concept behind crossings) and use it to provide descriptive feedback as you confer with students while they work and to evaluate work once it has been completed. **(LG1, LG5, LG6, LG8)**

3. Part 2 of the infographic gives three examples of types of crossing structures. Organize students in small groups and challenge them to think of ways to create a new type of crossing structure or to improve on an existing structure by either adding new features or replacing materials.

Step one: Encourage them to explore websites to get a better picture in their mind of what these crossings look like in real life. (see links in resource section)

Step two: Have students sketch out a labeled diagram of their model and its features.

Step three: Have students build their models from found objects in the school or at home.

Once models have been developed, encourage students to develop and share an oral presentation which will describe their model's features and explain their rationale for their choices. **(Gather and Organize; Evaluate and Draw Conclusions; Communicate)**

Assessment suggestions:

Co-construct criteria for an effective draft, and completed model of a crossing (features reflect needs of humans and animals, rationale given for choices, choices connected to concepts in mentor texts, diagram titled and labeled) and use it for formative and summative assessment. **(LG1, LG4, LG5, LG7)**



4. Part 4 of the infographic shows four different ways of collecting information about the use of wildlife crossings: direct observation, photography, track observation and DNA analysis. Provide the students with the following scenario: *An environmental activist is trying to determine how well students are using the recycling bins that have been provided to them in their classrooms. She needs some researchers to help her determine how often and how accurately they are being used.* Divide students into groups of 4. Have students add to the existing list of data collection options by brainstorming some other data collection tools that they might use to help address the research question. Next, have students devise a plan of what, when and how they will attempt to collect their data. (Encourage students to use at least two different sources of data collection.) Provide time for students to collect their data and have them record their findings in a report of their own design that they will submit to the 'activist'. **(Gather and Organize; Interpret and Analyze; Communicate)**

Assessment suggestions:

Circulate among groups during their planning phase to provide feedback about data collection choices and inquiry design so that they align with inquiry goals. Co-construct success criteria of what kinds of information need to be in the report in order to help the researcher answer her question. **(LG1, LG6, LG7)**

5. In urban centres, many cats and dogs are also hit by cars when they run into the street but there are no examples of wildlife crossings for them on city streets. Engage students in a discussion of why they think this might be so. *If the students themselves do not address population density as playing a role, help to guide the scenario to big ideas in challenges to human/environmental balance by posing the following questions: Does population density and/or physical landscape influence the decision to create wildlife crossings? Does the fact that city streets are used by cyclists and pedestrians, not just cars, affect this choice? If crossings are not built, what impact does that have on wildlife survival in urban settings?* Next, introduce the following scenario to your students: *A flyer has been posted in an urban neighbourhood announcing that some people would like to have a wildlife crossing constructed and that a meeting will be held for community members who would like to discuss the issue.* Brainstorm a list of people from the community who might have something to say about the issue (stakeholders). Once stakeholders are defined, divide students into groups and have students select which stakeholder's point of view they would like to represent at the meeting. Provide students time to do some online investigation to support their thinking and to develop some arguments about why they think it should, or should not, be built. In role as mediator, invite members from the stakeholder groups to share their opinions with the whole group in an imaginary community meeting. **(Gather and Organize; Evaluate and Draw Conclusions; Communicate)**

Assessment suggestions:

Circulate among groups as they devise arguments about what their stakeholder may have to say to provide descriptive feedback about their understanding of the challenges of balancing human and wildlife needs in an urban setting. Co-create success criteria for role play (choice of vocabulary/cares/concerns match character, stay in role, honor rules of the imagined environment) and use it to provide feedback after the community meeting session. **(LG2, LG3, LG6, LG9)**

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## OVERALL EXPECTATIONS

Social Studies:

Application: B1

Inquiry: B2

Understanding and Context:

Language:

Oral Communication: 2

Reading: 1,2

Writing: 1,2

Media Literacy: 1,2

## SPECIFIC EXPECTATIONS

Social Studies:

Application: B1.3

Inquiry: B2.2, B2.4, B2.5, B2.6

Understanding Context:

Language:

Oral Communication: 2.3, 2.7

Reading: 1.1, 1.5, 1.6, 1.8, 2.1

Writing: 1.3, 1.4, 1.6., 2.1, 2,8

Media Literacy: 1.2, 1.3, 2.2

Drama: B1.2, B1.3

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## OTHER RESOURCES

Sites featuring photos of different types of wildlife crossings

[http://en.wikipedia.org/wiki/Wildlife\\_crossing](http://en.wikipedia.org/wiki/Wildlife_crossing)

<http://www.theworldgeography.com/2012/06/unusual-bridges-for-animals-wildlife.html>

<http://www.peopleswaywildlifecrossings.org/photogallery/photo-gallery.html>

Sites to support stakeholder views in urban crossings

<http://www.ontariospca.ca/> -animal protection organization

<http://www.ontario.ca/driving-and-roads/driving-and-roads> -provincial road planners