

# The Trouble with Valley Slopes: Landslides

**Subject/Grade:** Grade 7 Science, Earth Science 30, English Language Arts Grade 6, 7, 8

**Lesson Title:** The Trouble with Valley Slopes: Landslides- Reading Non-fiction

## Stage 1: Identify Desired Results

### Outcome(s)/Indicator(s)

**EC 7.3 Investigate the characteristics and formation of the surface geology of Saskatchewan, including soil, and identify correlations between surface geology and past, present, and possible future land uses. [DM, SI]**

f) Differentiate between weathering and erosion, and explain the role of water in each process.

g) Document the natural surface geological features of the local environment and provide explanations for the origin of those features.

**ES30- LS3 Analyze surface geography as a product of weathering, erosion and mass wasting.**

b) Explain how specific landforms are a consequence of depositional and denudation processes (e.g., weathering, erosion, river processes, mass wasting, transport, and deposition.) (K)

d) Describe the effects of mechanical weathering and erosion, including glaciation, on the surface of the geography of Saskatchewan. (K)

**CR6.1, CR7.1, CR8.1: View, listen to, read, comprehend, and respond to a variety of texts that address identity, social responsibility, and efficacy.**

**CR6.2, CR7.2, CR8.2: Select and use appropriate strategies to construct meaning before, during, and after viewing, listening, and reading.**

**CR6.3, CR7.3, CR8.3: Use pragmatic, textual, syntactic, semantic/lexical/morphological, graphophonic, and other cues to construct and confirm meaning when viewing, listening, and reading.**

**CR6.4, CR7.4, CR8.4: View and demonstrate comprehension and interpretation of visual and multimedia texts with specific features and complex ideas including the visual components of media such as magazines, newspapers, websites, reference books, graphic novels, broadcast media, videos, and promotional materials.**

**CR6.7, CR7.7, CR8.7: Read independently and demonstrate comprehension of a variety of specialized information texts including non-fiction books, grade-level instructional materials, articles, reports, reference materials, instructions, advertising and promotional materials, and websites.**

**CR6.8, CR7.8, CR8.8: Read Grade 6/ 7/ 8 appropriate texts to increase fluency and expression.**

<p><b>Key Understandings: ('I Can' statements)</b></p> <p><b>I can</b> explore and explain the surface geology of Saskatchewan</p> <p><b>I can</b> identify how weathering, erosion and mass wasting impact surface geography.</p> <p><b>I can</b> identify information from non-fiction texts.</p> <p><b>I can</b> use nonfiction text features to help me understand the content of the text.</p>	<p><b>Essential Questions:</b></p> <p>How has the surface geology of Saskatchewan changed between the past and present?</p> <p>How might the surface geology change in the future, based on current patterns and interactions?</p>
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**Teacher Background**

**Background Information:**

Reading non-fiction text is an important skill that many students, even so-called “good” readers, find difficult. Identifying features of nonfiction text that alert the reader to important information, separating out important ideas from interesting details, and interpreting information from diagrams or illustrations are all essential to getting the most out of nonfiction reading.

**Distilling Important Ideas from Interesting Details**

Textbooks are arranged in a predictable format. Information is presented in a logical and sequential fashion; important concepts are stressed. Paragraphs begin with a topic sentence, continue with a group of supporting sentences, and end with a sentence that restates the topic and captures the main idea. Each paragraph elaborates one main idea. Teachers can make copies of textbook reading on the overhead.

Ironically, identifying important information in exciting, well-written expository text can be troublesome, because compelling details may grab the imagination and lead readers astray. The most important ideas in well-written nonfiction are often deeply embedded in rich detail.

Distinguishing what’s important from what’s interesting can mean walking a pretty thin line. Sometimes the interesting ideas are the most important but not always.

Practicing sifting, sorting and separating out important ideas from interesting details helps readers determine the essence of an authentic nonfiction piece.

**Interpreting Information from Illustrations**

In nonfiction material, illustrations represent information not always included in the text. In fiction, illustrations usually support the text rather than add new information. Students need to learn how to read and interpret illustrations found in nonfiction in order to access new information.

**Helping students read illustrations**

Choose an illustration. Cover up the print on the page and ask the students to look carefully at the page and tell what they saw. Chart these findings. Draw students’ attention to specific aspects of the illustrations and tell what else they see. Review the statements and eliminate anything that is not a fact. After confirming and deleting specific statements uncover the print and read it to them. Did the students notice anything about what they learned from the illustrations and what they learned from the printed information?

### Stage 3: Build Learning Plan

**Set (Warm-up, Focusing the Learning): Time: 5 min**

Review nonfiction features with students:

The features of nonfiction reading alert the reader to important information. Students need to be taught to pay attention to these signposts:

- Fonts and special effects. Titles, headings, boldface print, colour print, italics, bullets, captions, labels and the like signal importance in text.
- Textual cues. Nonfiction writing often includes verbal cues that signal importance: for example, for instance, in fact, in conclusion, most important, but, therefore, on the other hand, and such as.
- Illustrations and photographs. Illustrations play a prominent role in enhancing reader comprehension. Colourful pictures and photographs capture attention.
- Graphics. Diagrams, cutaways, cross sections, overlays, distribution maps, word bubbles, tables, charts, graphs, and framed text graphically inform nonfiction readers of important information.

**Development:****Time: 15 min**

1. Have students look at the panel and identify the fonts and special effects that they see. They should indicate these on the paper using sticky notes, highlighters, underlining, or some other form of identification. Encourage students to make marginal notes as to what the special effects are highlighting.
2. Have students use a different method than in step 1 to identify verbal cues that signal importance in the text. Make notes on the sheet using stickies or the margin to identify what the important information is that the cues point to.
3. Have students identify the purpose of any illustrations, photographs and graphics on the panel. This information should also be written on the panel sheet.
4. Using the notes from their panel sheets, students should re-read the panel and complete the student record sheets. In pairs or small groups, students can compare their responses and their questions.

**Learning Closure:****Time: 7-10 min**

1. Groups can report to the whole class to generate a master sheet on the chart paper, summarizing the important and interesting information and the questions that were generated.

**Materials/Equipment:**

- Copies of poster panel
- Copies of Student record sheet
- Chart paper
- Highlighters, Rulers, Sticky notes

**Key Vocabulary:**

- Nonfiction
- Text features
- Landslides
- Valley slopes

**Possible Adaptations/  
Differentiation**

- Can be organized as partner work, in groups, or individual
- Can be expanded to include other relevant Geoscape panels

### Stage 4: Determine Evidence for Assessing Learning

- Use a checklist or rating scale to record observations of student reading behaviour during the first part of activity.
- Use a group participation assessment tool during the small group portion of the activity.
- Make anecdotal observations of student participation and understanding during small group and reporting activities.
- Respond to students' written work on panel and on record sheet.

### Extensions

Students could use the questions generated to explore the Landslides topic further and then create their own "panel" that would answer one of those questions. Students could also create models or animations of landslides to demonstrate what happens and the effect on anything constructed where landslides are prone to occur.

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Look at the Digital Geological Highway Map of Saskatchewan (*GeoExplore Saskatchewan*) website for further information and a deeper understanding of the local context:

Main Website

<https://skgeolhighwaymap.maps.arcgis.com/apps/MapSeries/index.html?appid=a845cbb370f7401597806887318e2676>

For more background information related to this lesson check out

- Main tab "Landforms"

Title of Panel:

What's Interesting?

What's Important?

What did I find out from the diagrams, illustrations and/or photographs?

What other questions do I have about this topic after reading the panel?