

Saskatchewan's Population Distribution: How do land, vegetation, and climate affect the population distribution of Saskatchewan?
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Overview

This lesson will focus on the connection between landforms, vegetation, climate, and population distribution throughout the province of Saskatchewan. Students will create a relief map of Saskatchewan, create climographs of four cities from different regions of the province, understand the vegetation found in the province, and create a population distribution map of the province. Students will use all of the information gathered about Saskatchewan to understand how land, vegetation, and climate affect the distribution of the population.

Geographic Question

How do land, vegetation, and climate affect the distribution of population in Saskatchewan?

Connection to the Curriculum

Students will be using mapping and graphing skills in order to understand the land, climate, and population of Saskatchewan.

National Geography Standards

- The physical and human characteristics of places. (#4)
- The characteristics, distribution, and migration of human populations on Earth's surface. (#9)

Oregon State Geography Content Standards

- Identify and analyze physical and human characteristics of places and regions, the processes that have shaped them, and their geographic significance.
- Locate places and understand and use geographic information or relationships by reading, interpreting, preparing maps and other geographic representations.

Grade Levels

4 - 6

Objectives

Students will:

- analyze and describe the landforms and vegetation of Saskatchewan.
- read, construct, and analyze a population distribution map.
- read, construct, and analyze climagraphs.
- draw conclusions about the connection between land, climate, vegetation, and the distribution of population.

Materials

(*materials are found at the end of the lesson)

- Computer and projector
- Overhead projector
- Transparencies for student mapmaking
- Overhead (Vis-à-vis) pens
- Climate data for designated cities*
- Copies of all activity sheets for students*
- Copies of climagraph template—4 per student*
- Copies of Saskatchewan map—1 per student (a printable version is found at www.atlas.gc.ca)

Presentation Steps

Introduction

(materials needed: computer, projector)

1. Project the map of Canada from this site:
www.yourchildlearns.com/canada_map.htm. This is an interactive site that allows you to see the name of each province/ territory when you point to it. Use this map as a way to introduce the overall location, shape, and size of Canada. Ask students to locate Saskatchewan.
2. Introduce the geographic question: How do land, climate, and vegetation affect the distribution of population throughout Saskatchewan?
3. Brainstorm with the students the information that is needed to answer this question (i.e., landforms, climate, vegetation, and population information).

Activity #1: Landforms

(materials needed: computer, projector, overhead projector, copy of Saskatchewan map for each student, transparencies, vis-à-vis pens, copies of student activity sheet #1)

1. Project relief map of Saskatchewan found at this site: www.atlas.gc.ca. Discuss the map with students. What do the colors represent? What landforms are there? What do the numbers represent? Basically explore the land of Saskatchewan.
2. Give the students a copy of the map of Saskatchewan, a transparency, and Vis-à-vis pens. Have the students tape the transparency on top of their map and trace the outline of the map onto the transparency.
3. Using the overhead, explain and model how they are going to create their own relief map on the transparency using a color system like the map on the computer.
4. Students create their relief map. All maps must have a title and a key.
5. Once they are finished, students will locate the four cities that will be used for the analysis of population and climate data. They are: Estevan, La Ronge, Saskatoon, and Swift Current.
6. Students will complete Activity Sheet #1.

Activity #2: Climate

(materials needed: overhead projector, transparency of climagraph template, four copies of climagraph template per student, climate data for the four cities, copies of student activity sheet #2)

1. Define climate for this exercise as average temperature and average precipitation.
2. Explain that students will create a climagraph for each of the four focus cities.
3. Using the overhead, walk the students through the first graph together. (Climagraphs chart yearly temperature as a line graph and yearly precipitation as a bar graph. Both are plotted on the same graph.)
4. Have students complete the other 3 graphs comparing with a partner to make sure both sets match.
5. When finished, students work in partners comparing and contrasting the different climates.
6. Students will complete Activity Sheet #2.
7. Discuss class findings.

Activity #3: Vegetation

(materials needed: computer, projector, copies of student activity sheet #3)

1. Brainstorm what vegetation means.

2. Explain that as a class they will discover the different kinds of vegetation found in the different regions of Saskatchewan.
3. Display the interactive ecoregions map found at this site: www.virtualsk.com/maps/index.html.
4. Discuss the different names of the regions and what they might mean.
5. As a class, work through the regions exploring the different kinds of vegetation.
6. Determine which regions the four focus cities are located in and return to their regions to identify the vegetation found there.
7. Students will take notes about this vegetation on Activity Sheet #3.
8. Students complete Activity Sheet #3.
9. Discuss class findings.

Activity #4: Population Distribution

(materials needed: computer, projector, overhead projector, copy of Saskatchewan map for each student, transparencies, vis-à-vis pens, copies of student activity sheet #4)

1. Project the population distribution map of Saskatchewan found at this site: www.atlas.gc.ca. (This map shows the population of Saskatchewan in relation to the entire country.) Discuss students' observations. Explain how the map works and how to use it.
2. Just as they did in Activity #1, students will tape a transparency over the top of the physical map. Using the overhead, explain and model how they are going to create their own population distribution map on the transparency using a color system like the map on the computer.
3. Students will make their own maps. All maps must have a title and a key.
4. Have students compare with a partner to make sure both maps are similar.
5. Students will complete Activity Sheet #4.
6. Discuss class findings.

Activity #5: Compiling and Analyzing Data

(materials needed: copies of student activity sheet #5, class chart, completed copies of all student activity sheets, maps, climographs)

1. As a class, use the data collected to create a chart listing the information. A sample of the chart can be found on student activity sheet #5.

2. Once the chart is created, discuss your observations. Then have the students place their three maps (political, relief, and population distribution) on top of each other. What do they notice?
3. Students complete Activity Sheet #5 which has students answer the original geographic question: How do land, climate, and vegetation affect population distribution in Saskatchewan?

Assessment

Each student will have a booklet that includes:

- Relief Map
- Climographs
- Population Distribution Map
- Activity Sheets Nos. 1 - 5

Each item will be assessed for accuracy and thoughtful responses using the scoring guide found at the end of the lesson outline.

Extensions

- Use as a prereading activity for Owls in the Family, a novel set in Saskatchewan by Farley Mowat.
- Compare and contrast Saskatchewan and your state/ province using a venn diagram.
- Use as a guide to analyze each Canadian province and territory.

Websites

www.gov.sk.ca/bureau.stats/pop/popindex.htm

www.worldclimate.com

www.atlas.gc.ca

www.virtualsk.com/maps/index.html

www.yourchildlearns.com/canada_map.htm

5 Excellent	<p>The student:</p> <ul style="list-style-type: none"> • Completes all activity sheets neatly • Creates 4 readable climographs accurately thst include all parts • Creates a readable relief map accurately with titles and keys • Creates a readable population distribution map accurately with titles and keys • Answers all questions on the activity sheets thoughtfully and uses data to support the answers • Participates regularly in class discussions
4 Very Good	<p>The student:</p> <ul style="list-style-type: none"> • Completes all activity sheets • Creates 4 readable climographs that are almost all accurate and include all parts • Creates a readable relief map accurately with titles and keys • Creates a readable population distribution map accurately with titles and keys • Answers all questions on the activity sheets and uses some data to support the answers • Participates in class discussions
3 Good	<p>The student:</p> <ul style="list-style-type: none"> • Completes almost all activity sheets • Creates 4 climographs with few mistakes • Creates a relief map with few mistakes • Creates a population distribution map with few mistakes • Answers almost all questions on the activity sheets and uses a little data to support the answers • Sometimes participates in class discussions
2 Okay	<p>The student:</p> <ul style="list-style-type: none"> • Completes some of the activity sheets • Creates 4 climographs that may not be easily read or accurate • Creates a relief map that may not be easily read or accurate • Creates a population distribution map that may not be easily read or accurate • Answers some of the questions on the activity sheets and uses very little data to support the answers • Participates very little in class discussions
1 Poor	<p>The student:</p> <ul style="list-style-type: none"> • Completes few activity sheets • Attempts to create climographs • Attempts to create relief map • Attempts to create a population distribution map • Answers few questions on the activity sheets and uses no data to support the answers • Does not participate in class discussions
0	No Attempt

Name _____

Saskatchewan's Population Distribution
Activity #1: Landforms

Directions: Answer the following questions about the land of Saskatchewan.

1. What is the land like around each city? Fill in the table below.

City	Land Description
Estevan	
Swift Current	
Saskatoon	
La Ronge	

2. What is the connection between a city's location and the landforms nearby?

Name _____

Saskatchewan's Population Distribution

Activity #2: Vegetation

Directions: Answer the following questions about the vegetation of Saskatchewan.

1. What is the vegetation around each city like? Fill in the table below.

City	Vegetation Description
Estevan	
Swift Current	
Saskatoon	
La Ronge	

2. What is the connection between a city's location and the vegetation nearby?

Name _____

Saskatchewan's Population Distribution
Activity #3: Climate

Directions: Answer the following questions about the climate of Saskatchewan.

1. What is the climate (temperature and precipitation) like for each city? Fill in the table below.

City	Climate Description
Estevan	
Swift Current	
Saskatoon	
La Ronge	

2. What do you notice about the location of a city within the province and its climate?

Name _____

Saskatchewan's Population Distribution
Activity #4: Population

1. Looking at your population distribution map of Saskatchewan, what do you notice about the location of the most populated areas?

2. Here are the actual population statistics (2001) for the four focus cities:
- Saskatoon—196, 811
 - Swift Current—14, 821
 - Estevan—10, 242
 - La Ronge—2, 727

What do you notice about the relationship between the actual population statistics and your population distribution map?

Name _____

Saskatchewan's Population Distribution
Activity #5: Compiling and Analyzing Data

Directions: Fill in the table below with the important information about each city.

	Estevan	Swift Current	Saskatoon	La Ronge
Landforms				
Climate				
Vegetation				
Population				

1. How do land, vegetation, and climate affect the distribution of population in Saskatchewan?

Swift Current Temperature and Rainfall Data

	J	F	M	A	M	J	J	A	S	O	N	D
Rain-fall (in.)	0.7	0.6	0.7	0.9	1.8	2.9	2.1	1.7	1.3	0.8	0.6	0.7
Temp (°F)	7.0	11.5	22.3	39.0	50.5	58.8	65.1	62.8	52.5	41.4	24.8	14.4

Estevan Temperature and Rainfall Data

	J	F	M	A	M	J	J	A	S	O	N	D
Rain-fall (in.)	0.7	0.6	0.8	1.2	1.9	2.9	2.3	2.0	1.6	0.9	0.7	0.7
Temp (°F)	5.0	10.8	22.8	39.9	52.5	61.7	68.0	65.7	54.3	43.2	25.2	11.3

La Ronge Temperature and Rainfall Data

	J	F	M	A	M	J	J	A	S	O	N	D
Rain-fall (in.)	0.9	0.6	0.9	1.4	1.8	2.6	2.9	2.1	1.9	1.3	1.2	0.9
Temp (°F)	-1.0	3.6	17.4	33.8	47.8	58.1	63.1	60.8	48.9	35.8	14.7	0.3

Saskatoon Temperature and Rainfall Data

	J	F	M	A	M	J	J	A	S	O	N	D
Rain-fall (in.)	0.7	0.6	0.7	0.8	1.5	2.5	2.3	1.7	1.4	0.8	0.6	0.6
Temp (°F)	0.0	6.1	18.3	38.5	51.8	60.3	65.5	63.1	52.2	40.8	21.6	6.4

All climate data taken from www.worldclimate.com.

Climagraph for: _____

3.0													60
2.9													
2.8													
2.7													
2.6													
2.5													50
2.4													
2.3													
2.2													
2.1													
2.0													40
1.9													
1.8													
1.7													
1.6													
1.5													30
1.4													
1.3													
1.2													
1.1													
1.0													20
0.9													
0.8													
0.7													
0.6													
0.5													10
0.4													
0.3													
0.2													
0.1													
0													0
													-4
Rainfall (in.)	J	F	M	A	M	J	J	A	S	O	N	D	Temp. (°F)