

Research Project – How Climate Change Affects Farming

Climate change is causing changes in the weather — like more heat, droughts, or floods. These changes affect how farmers grow our food. This project explores how climate change impacts:

- 🌱 Crop Selection
- 🌾 Crop Production & Yields
- 📅 Harvesting Periods
- 💧 Irrigation (Watering)
- 🐛 Pest Management

What You'll Learn

- What climate change is and how it works
- How it affects the food we grow
- What people are doing to adapt
- How to share your findings in a fun way!

Research Questions

All questions need to be answered for your project:

Crop Selection

- Which crops grow best in hot vs. cold weather?
- Are farmers switching crops in different areas?
- Which crops grow best in Alberta? Why?

Useful Links: [Crops - Hot Weather](#) / [Crops - Cold Weather](#) / [Canada Yield](#)

Crop Production & Yields

- Does extreme weather reduce how much food is grown? Why?
- Can drought or floods destroy crops? Why?
- What crops have shown a decrease in yield due to climate change? Have any had an increase in yield?
- What is the impact of forest fires on Alberta crops?

Useful Links: [Extreme Weather and Crops](#) / [Climate Change Canada](#) / [Decrease Yields](#) / [NASA Climate](#)

Harvesting Periods

- Are crops ripening earlier or later than before in Alberta?
- How have the growing seasons been impacted by climate change?

Useful Links: [Climate Change Canada](#) / [Growing Season Canada](#)

Irrigation

- Do crops need more water?
- Is there enough water for all the farms?

Useful links: [Climate Change - Water](#)

Pest Management

- Are new bugs or plant diseases appearing in new places?
- How do warmer temperatures affect pests?

Useful Links: [Climate Change Pests](#) / [Pests](#)

Adapting to the situation

- What are some ways we can adapt to these new situations?
- How would growing your own personal garden help this situation?

Useful Links: [Farmers Adapting](#) / [Climate Smart Agriculture](#)

Choose Your Activity

- ☒ Poster or Slide Show – Make a poster or slide show to explain what you learned, using pictures, facts, and drawings.
- ☒ Before & After Comparison – Show farming “Then” vs. “Now” using visuals and examples.
- ☒ Map Report – Pick 2–3 countries and show how climate change is affecting farms in those places.
- ☒ Video Report – Make a fun 2–3 minute video explaining your findings in your own words.



 **Project Rubric (How You'll Be Graded)**

Category	4 - Exemplary	3 - Proficient	2 - Adequate	1 - Limited
Information and Understanding	All questions are answered and ideas are explained clearly and deeply.	All questions are answered and ideas have a good explanation.	Most questions are answered and a basic understanding is demonstrated.	Some questions are answered but very little understanding is demonstrated. Needs more research.
Organization	Neat, clear and well organized.	Mostly clear and organized.	Some organization but messy.	Very hard to understand and follow.
Visuals	Pictures, graphs and other visuals are used to support the information that is being presented.	There are a couple of visuals to support the information being presented.	There are a couple visuals but they don't support the information being presented.	There are no visuals that provide support to the information being presented.
Effort	Went above and beyond and was creative in their project	Put in a solid effort and showed a little creativity.	Minimal effort and creativity.	No effort being shown and no creativity.