



Guiding Questions:

- What are the social, economic and environmental impacts of feeding the world?
- How does innovation in agriculture lead to improved sustainability?
- How do my consumer choices affect sustainability?

G GET READY

Watch the Video: Sustainability -Farming for the Next Generation

https://youtu.be/DoV_ymt2IYI

What are the greatest challenges facing farmers today?

What is this farmer doing to make his farm more sustainable?

R REVIEW LEARNING RESOURCES

Brainstorm!

In a word/doodle splash, brainstorm a list of all of the agriculture innovations you can think of that help farmers improve environmental sustainability.

Innovations in
Agriculture

Watch the Video: Sustainable Crop Production in Alberta

<https://youtu.be/nzuQouUlseA>

As you watch, add to your word/doodle splash with innovations you see in the video. Use a different colour to identify which concepts were added during viewing.

Why do producers continue to invest in new innovations?

Explore the Website:

<https://www.nationalgeographic.com/foodfeatures/feeding-9-billion/>

Read the article "A Five Step Plan to Feed the World"

List and explain the 5 steps identified in the article to sustainably feed the world.

- 1.
- 2.
- 3.
- 4.
- 5.

0 OBSERVE RESULTS OF YOUR LEARNING

Soil conservation is a big issue in sustainability!

Construct this demonstration to see how water erosion affects loose soil.

https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/edu/kthru6/?cid=nrcs142p2_054299

Challenge:

Compare erosion from loose soil to erosion in planted soil or sod.

Observations: What did you notice?

How do farmers prevent soil erosion?

W WHAT DID YOU LEARN?

Explore the interactive timeline below.

<https://www.fcc-fac.ca/en/ag-knowledge/agrisuccess/timeline-of-canadian-agriculture.html>

Select one innovation from the timeline and identify its social, economic and environmental impacts. Does it relate to the 5 solutions outlined in the article?

Innovation (What, when, why?):

Social Impacts:

Economic Impacts:

Environmental Impacts:

Connect to "5 Solutions":

Reflect: How does innovation in agriculture affect the environment? Provide an example to support your ideas.