



Build Competencies in **smart** AGRICULTURE

PROJECT

Agriculture

food production technologies



MAKE IT PERSONAL

How do you think the continued development of new technologies will change the food you eat or have available in the next 10 years? In the next 20 years?

How do you think an increasing world population could affect the food you eat or have available in the next 10 years? In the next 20 years?



INVESTIGATE

1. Intersecting Ideas

Research and identify examples of the different technologies that apply to agriculture. How do you think advancing technologies reflect social, environmental and scientific questions or issues?



Create a **Triple Venn** to identify these examples and how they are connected to each other. Label one circle with "Social," the second with "Environmental" and the third with "Scientific."

Place examples in each of the three circles. In the intersection, write a sentence that describes the impact of agricultural technologies to our food system.



Use **IS FOOD PRODUCTION SUSTAINABLE IN THE 21ST CENTURY?** for these learning tasks. Use the Learning Source and the information for this guiding question in the **smart AGRICULTURE** carousel on **www.projectagriculture.ca**. Check out these weblinks for additional information.

Read the article *Can Your Diet Affect the Planet?* on the Best Food Facts website at www.bestfoodfacts.org/can-your-diet-affect-the-planet/.

Explore the "true or not" perspective from an agricultural expert about the statement "*Enhanced technology and innovation is necessary to feed the expanding global population.*" on the Best Food Facts website at www.bestfoodfacts.org/true-or-not-technology-necessary-to-meet-food-demand/.

What can you learn about smart farming from this article about the Smart Farm at Olds College? Go to *Students will find tomorrow's technology today at 'smart farm'* on the Alberta Farmer Express website at www.albertafarmexpress.ca/2018/07/20/students-will-find-tomorrows-technology-today-at-smart-farm/.

2. What Matters

Do you base your food choices on science, research and fact? Or are you influenced by “buzz words” you hear? Do you think about how you make your decisions about what to eat? Make a list of the food choices you might typically make in a week. How many of these food choices involve eggs, poultry and dairy?



Use a **T-Chart** labelled like the example below to research food production facts of one of these foods. Then, decide what matters to you in the food choices you make.

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What other food “buzz words” have you heard or seen? Add any to your chart.

What I Know about Food Buzz Words	Food Production Facts I Learned
Organics	
Antibiotics	
Hormones	
Free run	
Selective breeding	
Genetic engineering	
Sustainably produced	
Genetic modification	
Humane	
Ethically raised	



Consult **IS FOOD PRODUCTION SUSTAINABLE IN THE 21ST CENTURY?** for these learning tasks. Find additional information in these weblinks.

Find information on “food buzz words” in the **Smart Agriculture** carousel for this guiding question.

Investigate requirements for organic food production on the Canadian Food Inspection Agency website at www.inspection.gc.ca/food/general-food-requirements-and-guidance/organic-products/regulating/eng/132808271777/1328082783032.

Find out the story and practices of an Alberta organic farm family at Sunworks Farm website at www.sunworksfarm.com.

Find information on organic production on Organic Alberta at <http://organicalberta.org/eat-organics/products/>.

Compare information on livestock production from sources such as the following:

Chicken & Antibiotics: Let’s Discuss the Facts at www.chickenfarmers.ca/wp-content/uploads/2015/11/AMU-Infographic.pdf

Dairy Nutrition Canada’s *Product Quality: Nutrition and organics, antibiotics, hormones and more* at www.dairynutrition.ca/facts-fallacies/product-quality

Find egg production FAQs at <https://eggs.ab.ca/farming/farming-faq/>.

What factors matter most to you when making food choices?

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3. World Without Food Science

Use a **Think-Pair-Share** to reflect on one of the following statements to answer the question, **Can you imagine what a world without food science would look like?**

- No way to keep food fresh
- Limited understanding of the nutritional value of food
- The look and taste of food could be different
- Food could cost a lot more
- Time consuming preparation of meals and snacks
- Problems with food safety
- Limits on the availability and amount of local food

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