GRADE 6 LEARNING EXPERIENCE

Why is food lost or wasted on farms?

Summary

In this lesson, students will receive an introduction to the problem of food loss and food waste. They will watch a video about how farms and community groups are tackling food loss in Nova Scotia. Following a group discussion, students will complete research about growing a specific fruit or vegetable and the potential issues that may arise from seed to table that could result in food loss. They will present their research as a creative project that can be shared with the class.

Objective

Students gain a deeper understanding of where their food comes from and what causes food loss on farms. They reflect on the food that they consume and the steps required to avoid food waste and loss.

PRE-ACTIVITY

WASTE NOT NEWS EPISODE 1: FOOD WASTE IN PRODUCTION

Directions: Students watch a video about food waste and loss during the production phase. Before the video, students are introduced to the food waste problem in Canada and discuss the difference between food waste and food loss ***(see Appendix 1)***.

Pre-video sample questions

- What is food waste?
- What is food loss?
- Why is food waste and loss a problem?
- How could food waste and loss occur on the farm?

VIDEO

Waste Not News: Rude to Our Food

Ep.1: Food Waste in Production

Link to Video

MATERIALS

Computer, Projector, Speaker
Duration: 7:26 minutes

After the video ends, begin a group discussion with the class.

MAIN LEARNING OUTCOME

SOCIAL STUDIES

Learners will implement age-appropriate actions that demonstrate responsibility as global citizens.

SKILLS

IMPLEMENT

Select: Locate several relevant and dependable details to support an answer.

Plan: Identify steps to solve the problem. Execute the steps, modifying as necessary.

Evaluate: Review steps and results from an investigation or problem solving. Reflect on varying perspectives and alternative solutions or findings. Identify potential new problems and/or issues.

Apply: Carry out or complete a procedure/technique.

ANALYSE

Gather and select appropriate information. Begin to reflect on accuracy, validity and importance, of the information. Communicate findings.

CROSS-CURRICULAR LINKS

ENGLISH LANGUAGE ARTS

LISTENING AND SPEAKING

Learners will communicate effectively and clearly respecting cultural contexts.

Learners will use writing and other representations to explore, clarify and reflect upon thoughts and experiences.

SCIENCE

Learners will analyse diversity of life in nature and significant relationships within the natural world.

WASTE NOT NEWS

Post-video sample questions

- What did you learn from the video that surprised you?
- What new words did you learn from the video?
- Have you ever visited a farm like TapRoot Farms? Can you share your experience?

Both TapRoot and FOUND spoke a lot about changing our relationship to food production—increasing our awareness of the effort put into growing food, the importance of respecting the land that our food is grown on, etc.—and how that new mindset can help us waste less. How did the video change how you think about where food comes from?

To learn more about food waste, visit our lesson plan **Food Waste: The Journey from Mother Earth to Table.** divertns.ca/assets/files/GR-4-Food-Waste.pdf

DURATION
30–40 minutes

MATERIALS
Computers or Tablets
Art supplies
Paper

ACTIVITY

SEED TO TABLE JOURNEY

Directions: Students each choose their favourite fruit or vegetable. They research how their fruit or vegetable grows—the growing conditions required, and the materials needed.

Sample questions

- Can it be grown in Nova Scotia?
- How is it transported?
- How is it stored?

Students then create a timeline that charts the journey from seed to table. For each step, students can brainstorm what challenges might occur that would result in food waste or loss, and what could be done to prevent it. After conducting the research, students share their findings with the class in the form of a creative project: a comic, a story, a play, etc.

The project could be expanded to a larger, more long-term assignment, depending on how much student-driven research is completed.

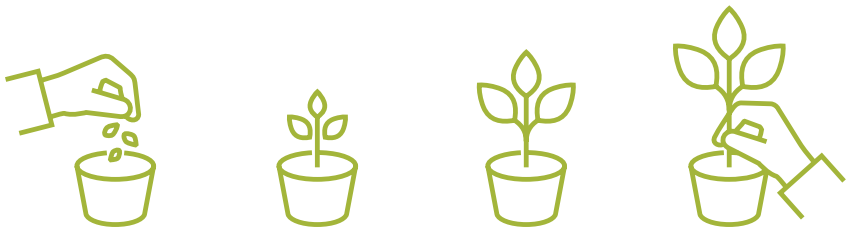
DURATION
10–15 minutes

MATERIALS
Appendix 2
Pens or pencils

POST ACTIVITY

FOOD WASTE MATCHING WORKSHEET

Directions: Students complete a word-to-definition matching worksheet and word search ***(see Appendix 2)*** that include "weird word alert" words from the **Rude to Our Food** video series.



Optional/extended learning activity

CLASSROOM COMMUNITY GARDEN

Note: This is a longer-term activity, meant to take place over several weeks, with options for scaling the activity to make it more or less complex.

Directions: Students plant their own seeds and care for them as they germinate and grow into plants. Students are responsible for labelling different plants and keeping a journal to determine how long it takes each seed to germinate and troubleshooting any growing issues (to replicate the process farmers experience as they troubleshoot growing and climatic conditions). Students could track how much energy (or resources, time, etc.) is used to show the work involved in food production.

In the late spring/early summer, students can plant their seedlings at home or in their school's community garden and continue to care for them as they begin to produce food. Entrepreneurially-minded students could even harvest their crops and set up a school farmers' market at the end of the year.

Additional activities

Students conduct computer research to find additional organizations in Nova Scotia who are fighting food loss or waste. Their findings can be presented to the class.

Assessment

Formative

Evaluate student comprehension of the positive effects of preventing food loss and waste through class discussions and passively monitoring group conversations.

Summative

Option to collect and correct the Food Waste Matching Worksheet.

DURATION

1–2 months
(from seed to harvest)

MATERIALS

Seeds
Soil
Trays for seed-starting
(can be recycled materials, such as egg cartons or toilet paper rolls)
Water
Sunlight
Writing tools
Paper

RESOURCES

Visit Nourish Nova Scotia for great tips on how to start a classroom community garden.

www.nourishns.ca/grow-eat-learn

Divert NS is a not-for-profit organization championing recycling in Nova Scotia. For over 25 years, we've helped build a culture of recycling through environmental stewardship, education, and innovation. We work in collaboration with government, industry, and academia to divert waste-resources from landfill, and we partner with municipalities to deliver education and awareness programs to schools, businesses, and community groups. Divert NS also works to develop stewardship agreements and funds innovative research and development initiatives.

Toll-free 1.877.313.7732 • info@divertns.ca • divertNS.ca

Appendix 1

AN OVERVIEW OF THE FOOD WASTE PROBLEM IN CANADA

Source

wrwcanada.com/en/get-involved/resources/food-waste-themed-resources/food-waste-canada-facts

Food Loss

Happens during production or processing. This can be caused by inadequate refrigeration, lack of resources to harvest food before it spoils or damage from pests or extreme weather.

Food Waste

Happens in stores, restaurants, homes, schools and communities because of our decisions, behaviors and actions.

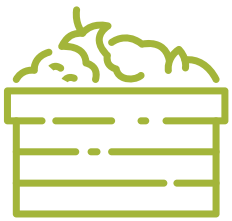
Appendix 2

FOOD WASTE MATCHING WORKSHEET

Match the food waste terms to their definition.
Can you spot all 14 in the word search on the reverse side?

Name: _____

Word	Definition
1. ___Food Security	A. Happens during production or processing. This can be caused by inadequate refrigeration, lack of resources to harvest food before it spoils or damage from pests or extreme weather.
2. ___Upcycle	B. Happens in stores, restaurants, homes, schools and communities because of our decisions, behaviors and actions.
3. ___Microorganisms	C. A type of farming that treats the entire farm as one interconnected natural system, increasing biodiversity, improving soil and water health, and reducing unnecessary waste.
4. ___Methane Gas	D. The act of handpicking totally edible fresh fruits and vegetables left behind after the traditional harvest, including some that may be a little funky-looking.
5. ___Food Bank	E. Making sure that all people can access and afford a constant supply of safe and nutritious food.
6. ___Landfill	F. When you take something unwanted or discarded and turn it into something awesome.
7. ___Compost	G. When customers sign up and buy a share in the farm's harvest at the beginning of the season and generally receive a weekly basket of food from the farm. This helps farmers plan better during production.
8. ___Harvest	H. Type of harmful pollution that can come from food waste that ends up in landfills.
9. ___Regenerative Farming	I. A system of garbage disposal in which waste is buried between layers of earth.
10. ___Food Loss	J. Another word for farming. It includes both growing and harvesting crops and raising animals, or livestock.
11. ___Gleaning	K. The process of gathering a ripe crop from the field. It is usually done by farmers, and in the fall season.
12. ___Agriculture	L. Living things that are too small to be seen by the naked eye that break down food and yard waste into compost.
13. ___Food Waste	M. Decayed organic material, such as plants, food and animal manure. It is often used as plant fertilizer because it is rich in plant nutrients and beneficial organisms and microorganisms.
14. ___Community-Supported Agriculture	N. Provide food and other assistance to those needing help. They often collect donated food to help provide this service.



Appendix 2

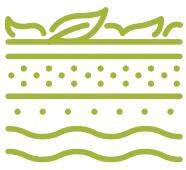
FOOD WASTE MATCHING WORD SEARCH

Name: _____

Find the food waste words from the list below in the word search puzzle.

R B T F I F C Z R E G E N E R A T I V E F A R M I N G C P
K X L O L E M D U R C N A T V O M U G O H G N Z T I S H M
A E R O B A C D B G E S C I O N C O M W O S T I O G O W T
B L E D D S X B R J K X B V E J U Y V L N R S W U S L R R
F S X W D G O K Q E S R N I T B H H Z M O C E W N Y A P I
W E M A W X L F T H Y P H A H A R V E S T G Z L G A N B A
N A W S M H J E H T A T A D E A T T U Q C L I V A U D E P
U F I T Q E Z L A B A A P M R X H B G X P N B S C T F R S
G R L E C M K P H N R C U O O A C O B M B A Y P F P I I R
M C Z P D F W M V V I I N A N B G S E B I Z L I A G L K B
Q I O C C C X W M K T N I E A U G L Q I O C F W S E L L O
X N C V Y Z N S X X N L G Z O N G F O O D S E C U R I T Y
V A X R G Y B I Q T B A S V A E D K J E I K O A L U K H D
U S C J O E U W O R S Y B U R S E A Y M F S D T T T W B H
Y B L D W O A E E F S A T D E J F O E W E F L T L L V M M
M N T U R W R B H F E H M W O U O B D X R M I G M U C M D
V Z E F P L Z G T D J I B L V O M A E U S U T B E C D G P
H C Y O N D J D A H W H L D T T F Y V B P S E O Y I O A A
J O Q E E U J X Y N A E K R U X O K O I T L R J M R N S U
Q M I P O Z S U W U I A S T E D S U P C Y C L E B G P A S
T P N I G A G N A C R S Y B H I E X F G F G C I D A L O K
F O O D L O S S P H J L M T Y L C F H K K F Y R C H E K G
C S R L R Q S O N Q S I I S W N U T K I T I N N I D O C E
H T G E T C K P Q W D O O C I R B E Q K G O T T L N H I T
C O M M U N I T Y S U P P O R T E D A G R I C U L T U R E

FOOD SECURITY
FOOD BANK
REGENERATIVE FARMING
AGRICULTURE
UPCYCLE
LANDFILL
FOOD LOSS
FOOD WASTE
MICROORGANISMS
COMPOST
GLEANING
COMMUNITY-SUPPORTED AGRICULTURE
METHANE GAS
HARVEST



Appendix 2

FOOD WASTE MATCHING ANSWER KEYS

1. **E** Food Security
2. **F** Upcycle
3. **L** Microorganisms
4. **H** Methane Gas
5. **N** Food Bank
6. **I** Landfill
7. **M** Compost
8. **K** Harvest
9. **C** Regenerative Farming
10. **A** Food Loss
11. **D** Gleaning
12. **J** Agriculture
13. **B** Food Waste
14. **G** Community-Supported Agriculture