



FARMERS CELEBRATE EARTH DAY, EVERY DAY

LESSON 2: A YEAR IN THE LIFE OF A FARM

OVERVIEW

In this lesson, students will learn about seasonality in farming, including how dairy farmers work with the land to ensure they have enough feed for their cows. They will create diagrams showing how nutrients cycle through life on the farm, create a calendar highlighting the various farming activities to be done year-round and create calendars reflecting their own personal goals.

TIME

One to two 45-minute classes

OBJECTIVES

In this lesson, students will:

- Brainstorm activities farmers need to do throughout the year to keep their farms running smoothly;
- Describe the process dairy farmers in colder climates follow to care for cows during winter months;
- Demonstrate understanding of the seasonal activities of farmers by updating a popular game; and
- Create a year-long calendar highlighting the various tasks farmers in their area will be doing in different seasons of the year.

STANDARDS

NGSS

MS-ESS3-3 Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.

CASEL FRAMEWORK

SELF-MANAGEMENT: The abilities to manage one's emotions, thoughts, and behaviors effectively in different situations and to achieve goals and aspirations. This includes the capacities to delay gratification, manage stress, and feel motivation & agency to accomplish personal/collective goals. Such as:

- Setting personal and collective goals
- Using planning and organizational skills

MATERIALS

In addition to common classroom materials and an Internet connection, students will need:

- A Day in the Life handout
- A Year on the Farm/A Year in My Life handout

PREPARATION

1. Print or prepare sufficient Day in the Life and A Year on the Farm handouts for each student.

KEY TERMS

- **Silage:** grass or other green fodder compacted and stored in airtight conditions, without first being dried, and used as animal feed in the winter.
- **Harvest:** the gathering of crops
- **Cover Crop:** a crop planted to keep nutrients from leaching, soil from eroding, and land from weeding over, especially during winter
- **Calving:** giving birth to a calf



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INTRODUCTION

Ask students to search their handheld device's App store to see how many planning and calendar tools are available for download. Ask them why they think these types of apps are so popular. Explain that as our lives get busier, it is important for them to have a plan for the day, week, and school year.

Ask students:

How far ahead do you plan your activities? What kinds of schedules do you follow?

Spend a few minutes brainstorming all the things students have to keep track of in their lives (day to day activities, extracurricular activities, doctor's visits, meals, summer plans, goal setting, etc.)

Tell students:

In this lesson, we're going to look at all the activities farmers need to do to plan for success—from daily activities like planting fields, feeding and milking cows, to annual activities like making and keeping track of a budget – and how those plans follow cycles, usually based on seasons. Then you'll use that experience and learning to recreate board games to highlight planning in farming and a farmer's daily experiences.

LESSON PROCEDURE

Step 1

Distribute the Day in the Life handout and have students complete the A Day in My Life column to list all the things they have to accomplish during a given day. Then, have students read [A Glimpse Into a Day on the Farm](#) to understand a dairy farmer's day and complete the A Day on the Farm column by listing all the tasks that farmers need to accomplish.

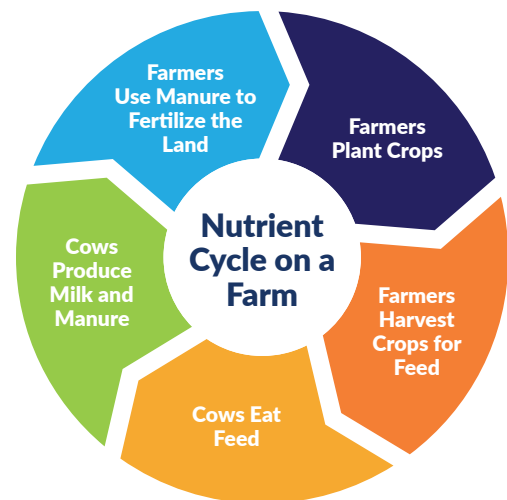
Step 2

Arrange students into groups of four to brainstorm how farmers' tasks might change, or increase, throughout the course of a year. Ask students: *Based on the climate we live in, what types of seasonal challenges might a farmer face?*

Step 3

Based on their work understanding a farmer's day, and what they have already learned in other activities about the demands of farming, lead a class discussion about the tasks that farmers have to accomplish

throughout a full year. Have students watch this [Working the Land video](#) and read the accompanying text that describes how dairy farmers use a cyclical process to keep both their land and their cows healthy. Have students create diagrams showing how farmers cycle nutrients from planting to feeding to replenishing the soil throughout their farming year to help maintain a healthy environment. Circulate as students work on their diagrams and ask questions to help them think through the cycle. Diagrams should look something like this:





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Step 4

Then, have students select one or two of the following resources to learn more about how farmers structure their days, and all the tasks they need to plan during the winter months:

- [Four Seasons of Farming](#)
- [Winter on the Dairy Farm Q&A](#)
- [This is What Winter Farming Looks Like in New England](#)
- [What Do Farmers Do in Winter?](#)
- [Four Seasons of Comfy Cows](#)

Step 5

Give students time to work in pairs or small groups to list farmers' tasks by season and brainstorm additional tasks that may not have been mentioned. Monitor students' work and provide prompts such as *During what seasons do farmers have the most time to plan their crop rotations and other long-term projects? What might those projects be? During which season are most dairy calves born?*

Have students complete the **top** of the A Year on a Farm handout where they sequence different activities done by farmers at different times of the year.

REFLECTION

How do changing seasons or times of year affect the way farmers do their work and planning? How do your own goals and planning change throughout the year? Students should then complete the bottom of the A Year on a Farm handout (A Year in My Life) where they define and sequence their own goals.

ASSESSMENT

Provide students with four index cards and have them use colored markers to write each of the four seasons

on a card. As you list tasks that have to be done on a farm, have them hold up the card for the season in which that task is most likely done. Note that they can hold up more than one card if the task is common across multiple seasons. Use the following tasks or add some of your own from the work students have done:

- Planting major crops
- Calving
- Repairing or doing maintenance on farm equipment
- Planning for crop rotation
- Harvesting crops
- Feeding cows
- Milking cows
- Planting cover crops

EXTENSIONS

- Challenge students to create a board game that reflects their own lives throughout the course of a year. Encourage them to include major and day-to-day events as well as interactions they have with their classmates as well as the adults in their lives. Be sure to have them include extracurricular activities they or friends of theirs participate in. Have them work together in groups to create their games and then play them.
- Have students reflect on the hard work and planning that goes into a successful year of farming. Have them think about what a successful year looks like for them. What tasks do they accomplish from day to day and month to month? Have students create a year-long calendar for themselves to list their goals and the steps they need to take to reach those goals.