

Lesson 3: Dairy and Our Environment: Going Round and Round

Lesson Introduction

For there to be successful dairy farms, there must be clean water. In this lesson, we will learn the importance of connecting farmers, consumers, and the environment through efforts to recycle water on farms and in homes. The lesson will also highlight the career of a milker on dairy farms.

Lesson Objectives

- Students will explain the connection between farmers and consumers to protect the environment.
- Students will list ways that dairy farmers recycle water on the farm.
- Students will list the skills and responsibilities of being a milker on a dairy farm.

Time: 45 – 60 minutes

Standards: See the [Discover Dairy website](#) for complete listing by grade level.

Vocabulary

- Conserve, crops, environment, field, milker, and recycle

Materials Needed

- Computer
- Lesson Presentation: [PowerPoint](#), [PDF](#), [Canva](#)
- Multimedia Projector and Screen
- Activity Sheets
- Writing Prompts
- Internet Access
- [Dairy: Good for You, Good for the Planet](#) Video
- [Milking Cows in an 8 Swing Parlor](#) Video
- [Milker Career Spotlight](#)
- Pencils

Activities

- [Ways to Recycle and Conserve Water Activity](#) ([With](#) and [Without](#) Word Bank)
- [Word Search Puzzle](#)
- [PreK and K Writing Prompt](#)
- [Grades 1 and 2 Writing Prompt](#)
- [Matching Activity](#)
- [Kahoot Game](#)

Procedure

Introduction (8 minutes)

- Introduction
- **Activating Strategy:** Let's discover some of the ways dairy farmers recycle water on the farm by watching the video, [Dairy: Good for You, Good for the Planet](#).
- Go over the essential vocabulary terms and their meanings for this lesson.
- Use PowerPoint with students to show the meaning in pictures.

Recycling and Conserving Water (10 minutes)

- Introduction
- Discuss the ways dairy farmers use water on the farm using PowerPoint slides 14 and 15.
- Go over the ways dairy farmers and consumers recycle and conserve water using PowerPoint slides 16 – 20.
- Closure: We learned about the ways dairy farmers and consumers recycle and conserve water. Share one way that you remember from our exploration of recycling and conserving water.

Career Spotlight: Milker (8 minutes)

- Introduction
- Facilitate the Career Spotlight on Milker using the [Milking Cows in an 8 Swing Parlor](#) video and discussion of responsibilities of milk truck drivers.
- Closure: A milker plays an important part in getting milk and dairy products to your store.
 - Tell us one responsibility of a milker.
 - Are you interested in being a milker when you grow up?

Summative Activity (15–30 minutes, depending on the activities)

- Introduction
- Pass out any of the activities: [Ways to Recycle and Conserve Water Activity \(With and Without Word Bank\)](#), [Word Search Puzzle](#), [Matching Activity](#), [PreK and K Writing Prompt](#), and [Grades 1 and 2 Writing Prompt](#)
- Allow students class time to complete the selected activities.
- Walk around, offering help and answering questions as needed.
- **Lesson Closure:** Today we discussed the important job dairy farmers do every day to take care of our environment. They use and recycle water for their cows, their crops, and their barn. Share one way that dairy farmers recycle water on their farms.

Career Spotlight

Milker

Summative Assessment

Students will complete at least one of the activities with a mastery level of 80% or higher.



Lesson 3 Dairy and Our Environment

Essential Vocabulary & Definitions

Conserve: To use less of something

Crops: What a farmer plants in a field and grows into food for people and feed for the animals

Environment: The surroundings in which a person, plant or animal lives

Field: A piece of land where a farmer plants crops

Milker: A person who guides cows through the milking process on a dairy farm

Recycle: To use something again



Lesson 3: Dairy and Our Environment

Career Spotlight: **Milker**

Description

A milker is a person who guides cows through the milking process on a dairy farm.

Dairy farmers need people called milkers to get milk from the cows to the milk tank two to three times each day. Milkers have an important job on the farm to make sure we get milk and dairy products at the store.



Common Responsibilities

- Getting the cows into the milking parlor.
- Preparing the cows to be milked.
- Making sure each cow is healthy enough to be milked.
- Milking the cows with whatever type of machine is used.
- Cleaning the milking parlor and equipment.



Education/Training Requirements

On the job training.

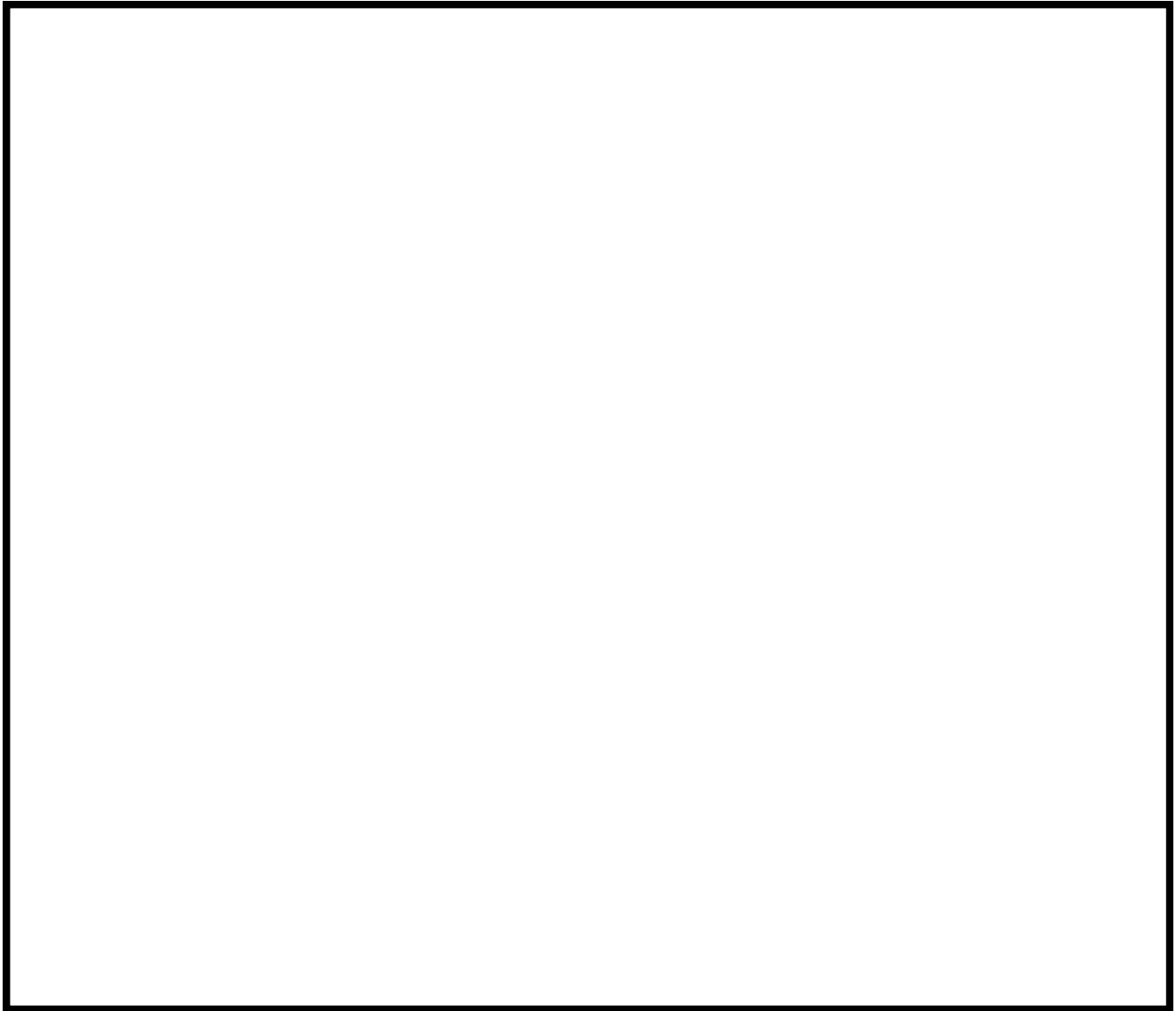
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Lesson 3 Dairy in Our Environment

Writing Prompt

Prompt: Draw a picture showing a way that farmers recycle water. Write a sentence about it.



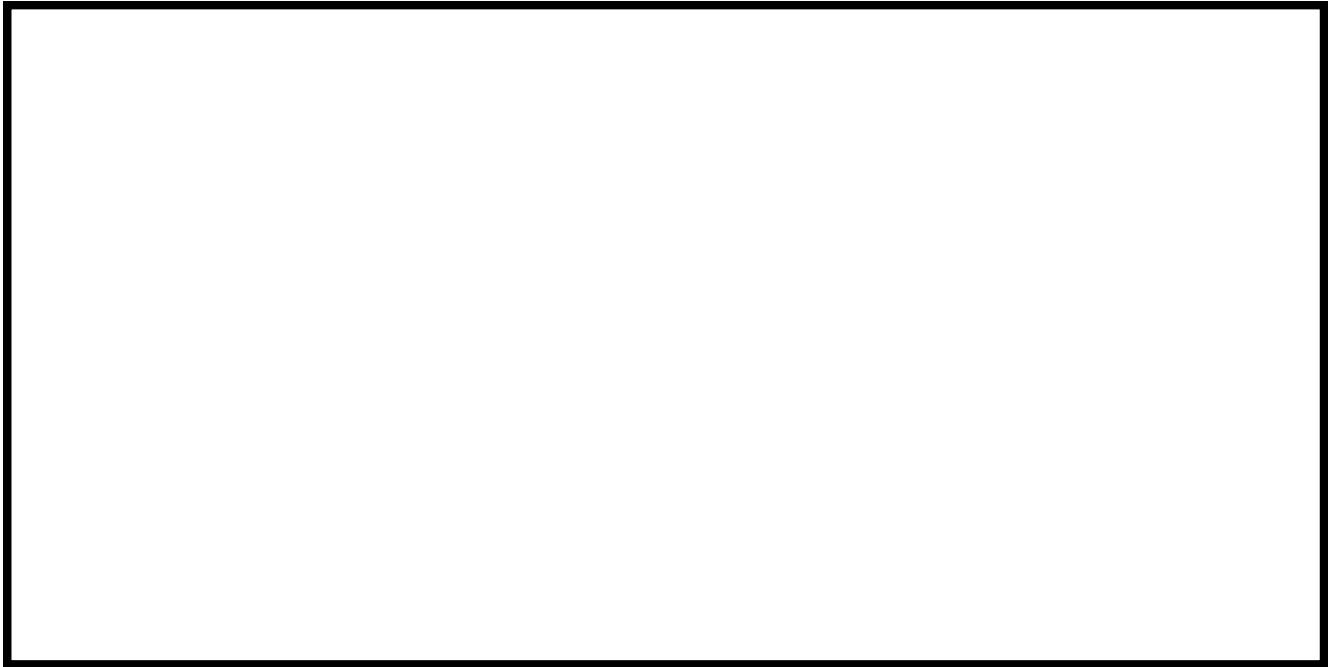
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Lesson 3 Dairy in Our Environment

Writing Prompt

Prompt: Draw a picture showing how dairy farmers recycle water. Connect this with a way you recycle or conserve water in 1 – 2 sentences.



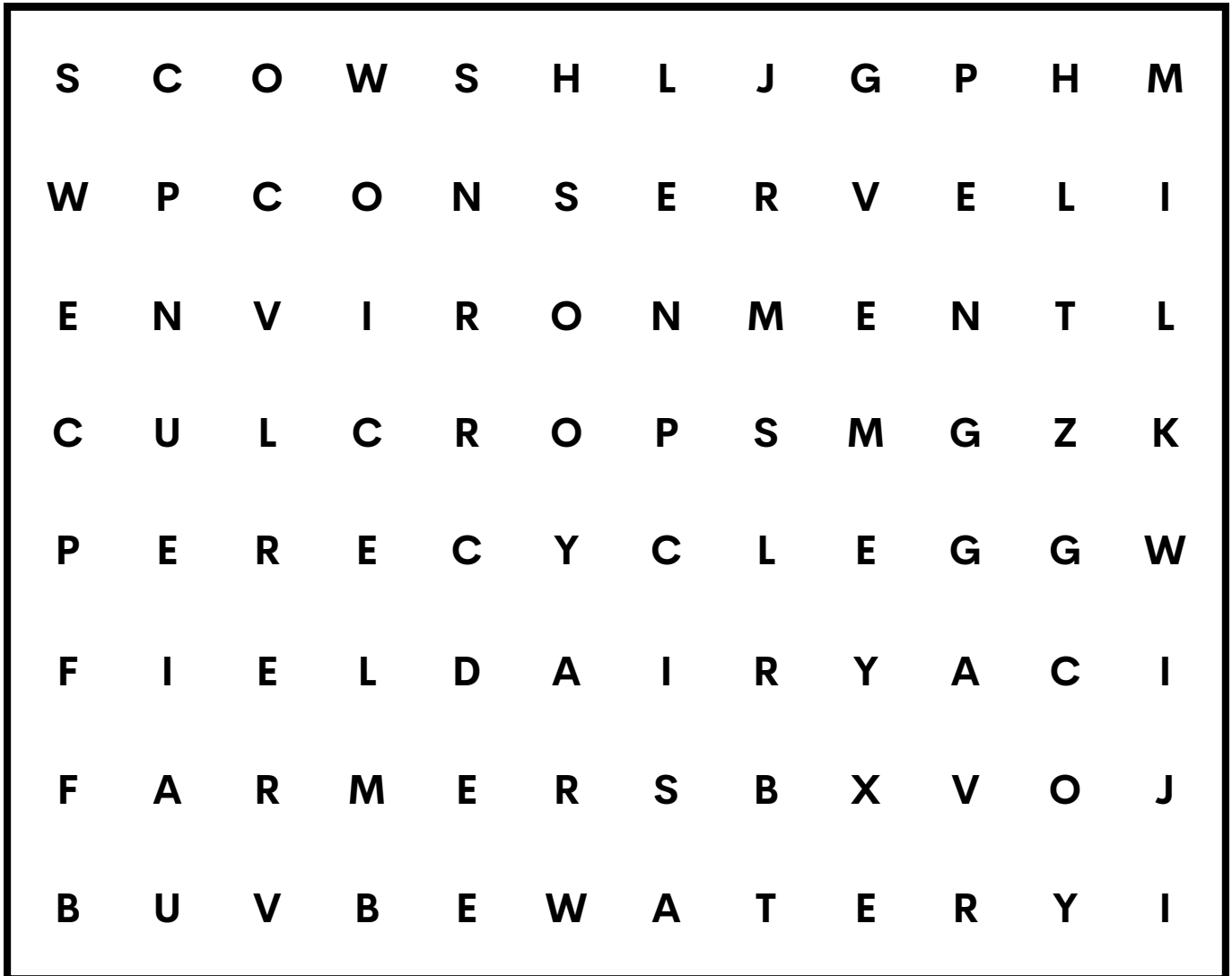
Four sets of primary writing lines, each consisting of a solid top line, a dashed middle line, and a solid bottom line.

Name: _____

Date: _____

Discover Dairy in Our Environment Word Search

Directions: Find the following words in the puzzle. Words are hidden → and ↓.



Word Bank

CONSERVE
COWS
CROPS
DAIRY

ENVIRONMENT
FARMERS
FIELD
MILK

RECYCLE
WATER

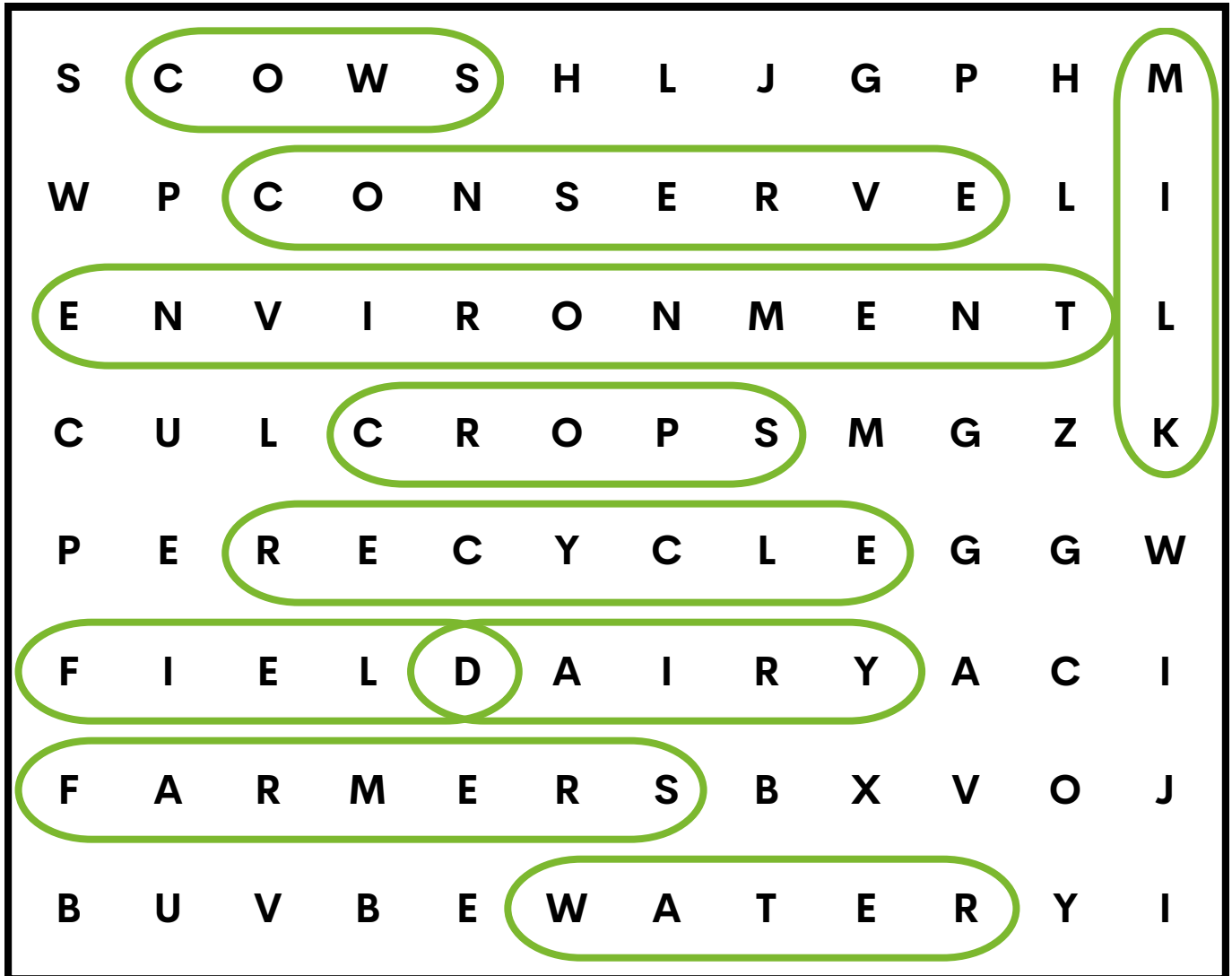


Name: _____ **ANSWER KEY**

Date: _____

Discover Dairy in Our Environment Word Search

Directions: Find the following words in the puzzle. Words are hidden → and ↓.



Word Bank

CONSERVE
COWS
CROPS
DAIRY

ENVIRONMENT
FARMERS
FIELD
MILK

RECYCLE
WATER



Name: _____

Date: _____

Lesson 3 Dairy in Our Environment

Matching Activity

Prompt: Draw a line from the statement to the way that a dairy farmer or a consumer recycles or conserves water.

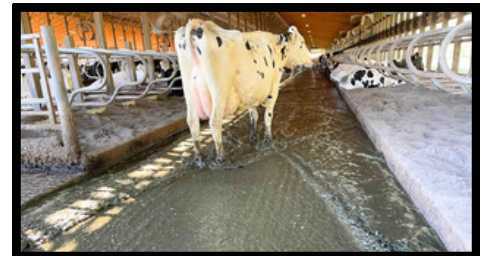
Dairy farmers can recycle rainwater by...



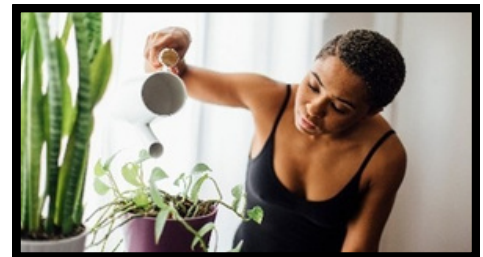
Consumers can recycle rainwater by...



Dairy farmers recycle water used to cool the milk into...



Consumers can conserve water while...



Dairy farmers recycle water used when milking to...



Name: **ANSWER KEY** _____

Date: _____

Lesson 3 Dairy in Our Environment

Matching Activity

Prompt: Draw a line from the statement to the way that a dairy farmer or a consumer recycles or conserves water.

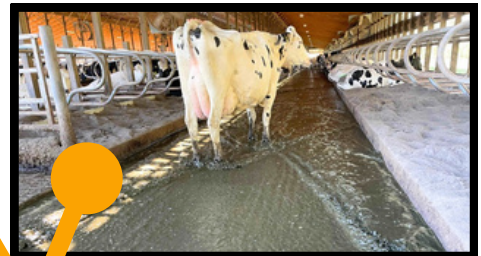
Dairy farmers can recycle rainwater by...



Consumers can recycle rainwater by...



Dairy farmers recycle water used to cool the milk into...



Consumers can conserve water while...



Dairy farmers recycle water used when milking to...



Name: _____

Date: _____

Lesson 3 Dairy in Our Environment

Ways to Recycle and Conserve Water

Prompt: Complete the statement in the correct way that a dairy farmer or a consumer recycles or conserves water.

1. Dairy farmers can recycle rainwater by

_____.

2. Consumers can recycle rainwater by

_____.

3. Dairy farmers recycle water used to cool the milk into

_____.

4. Consumers can conserve water while

_____.

5. Dairy farmers recycle water used when milking to

_____.



Name: **ANSWER KEY** _____

Date: _____

Lesson 3 Dairy in Our Environment

Ways to Recycle and Conserve Water

Prompt: Complete the statement in the correct way that a dairy farmer or a consumer recycles or conserves water.

1. Dairy farmers can recycle rainwater by

watering their crops _____.

2. Consumers can recycle rainwater by

watering their plants _____.

3. Dairy farmers recycle water used to cool the milk into

water for the cows to drink _____.

4. Consumers can conserve water while

brushing their teeth _____.

5. Dairy farmers recycle water used when milking to

clean the barn _____.



Name: _____

Date: _____

Lesson 3 Dairy in Our Environment

Ways to Recycle and Conserve Water

Prompt: Complete the statement in the correct way that a dairy farmer or a consumer recycles or conserves water.

Brushing their teeth
Clean the barn
Water for the cows to drink
Watering their crops
Watering their plants

1. Dairy farmers can recycle rainwater by

_____.

2. Consumers can recycle rainwater by

_____.

3. Dairy farmers recycle water used to cool the milk into

_____.

4. Consumers can conserve water while

_____.

5. Dairy farmers recycle water used when milking to

_____.



LESSON 3

Dairy in Our Environment

Going Round and Round
Grades PreK-2nd

DISCOVER Dairy



»» Introduction

HOW DO FARMERS RECYCLE AND CONSERVE?

We will learn the importance of farmers and consumers recycling and conserving water on farms and in homes to help protect our environment.



»» Activating Strategy

DAIRY: GOOD FOR YOU, GOOD FOR THE PLANET

Let's look at how dairy is good for you and the planet



»» Words to Learn



DAIRY DEFINITIONS

Conserve: To use less of something

Crops: What a farmer plants in a field and grows into food for people and feed for the animals

Environment: The surroundings in which a person, plant or animal lives

Field: A piece of land where a farmer plants crops

Milker: A person who guides cows through the milking process on a dairy farm

Recycle: To use something again

»» Vocabulary



CONSERVE

Definition: to use less of something



Turn off facet when brushing
your teeth



Turn the hose off between
uses

»» Vocabulary

CROPS

Definition: What a farmer plants in a field and grows into food for people and feed for the animals



Wheat



Corn

»» Vocabulary



ENVIRONMENT

Definition: the surroundings in which a person, plant or animal lives



Winter Barn



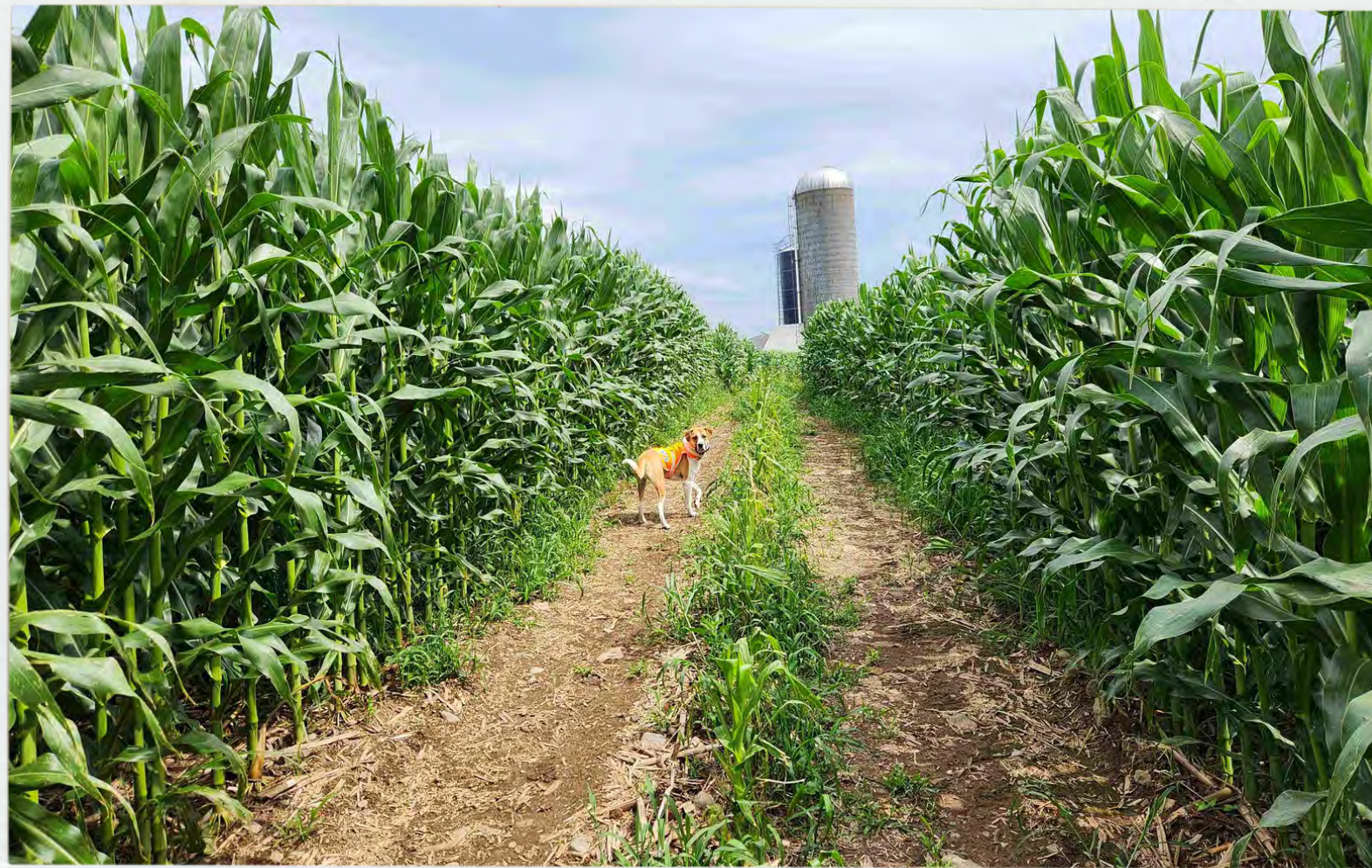
Summer Pasture

»» Vocabulary



FIELD

Definition: a piece of land where a farmer plants crops



Corn Field



Rye Field

»» Vocabulary

MILKER

Definition: a person who guides cows through the milking process on a dairy farm



Full-time Milker



Student Milker

»» Vocabulary

RECYCLE

Definition: to use again



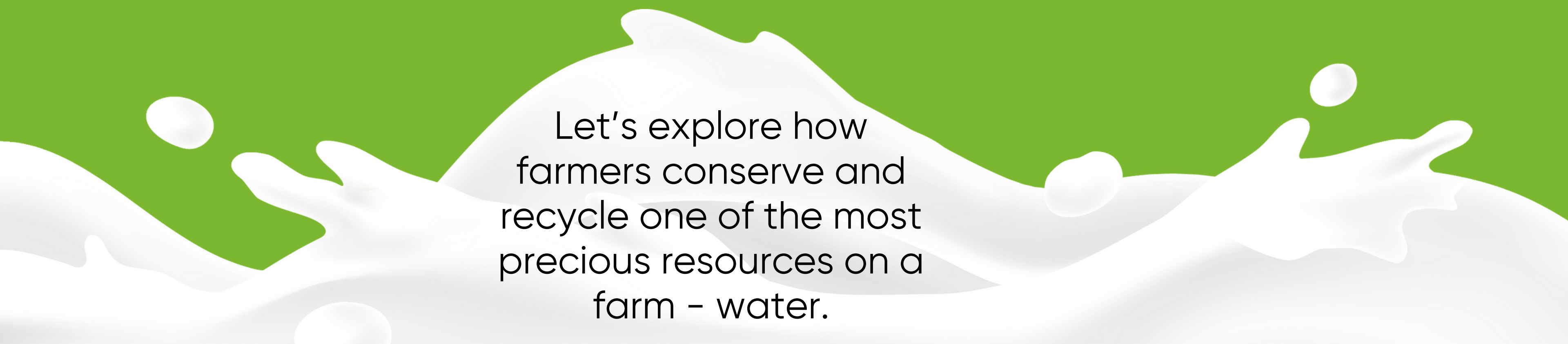
Capturing rain water to fertilize



Water used to cool down milk is then drinking water for the cows

INTRODUCTION

How do dairy farmers recycle water?

A large, stylized white splash of milk or cream is positioned at the bottom of the slide, set against a solid green background. The splash has several peaks and droplets, creating a dynamic, liquid-like effect.

Let's explore how farmers conserve and recycle one of the most precious resources on a farm - water.

»» Farmers Recycle and Conserve Water



CLEAN BARN



Water runs through the milk lines to clean and sanitize.



That water is used again to flush and clean the barn floors.



All clean!

» Farmers Recycle and Conserve Water



COOL DOWN MILK



Milk comes out of the udder at 101.5°F and travels through the pipes.



The plate cooler cools the milk down to about 60°F with cold water.



Now it will take less energy to cool the milk to 34°F for storage.

»» Farmers Recycle and Conserve Water



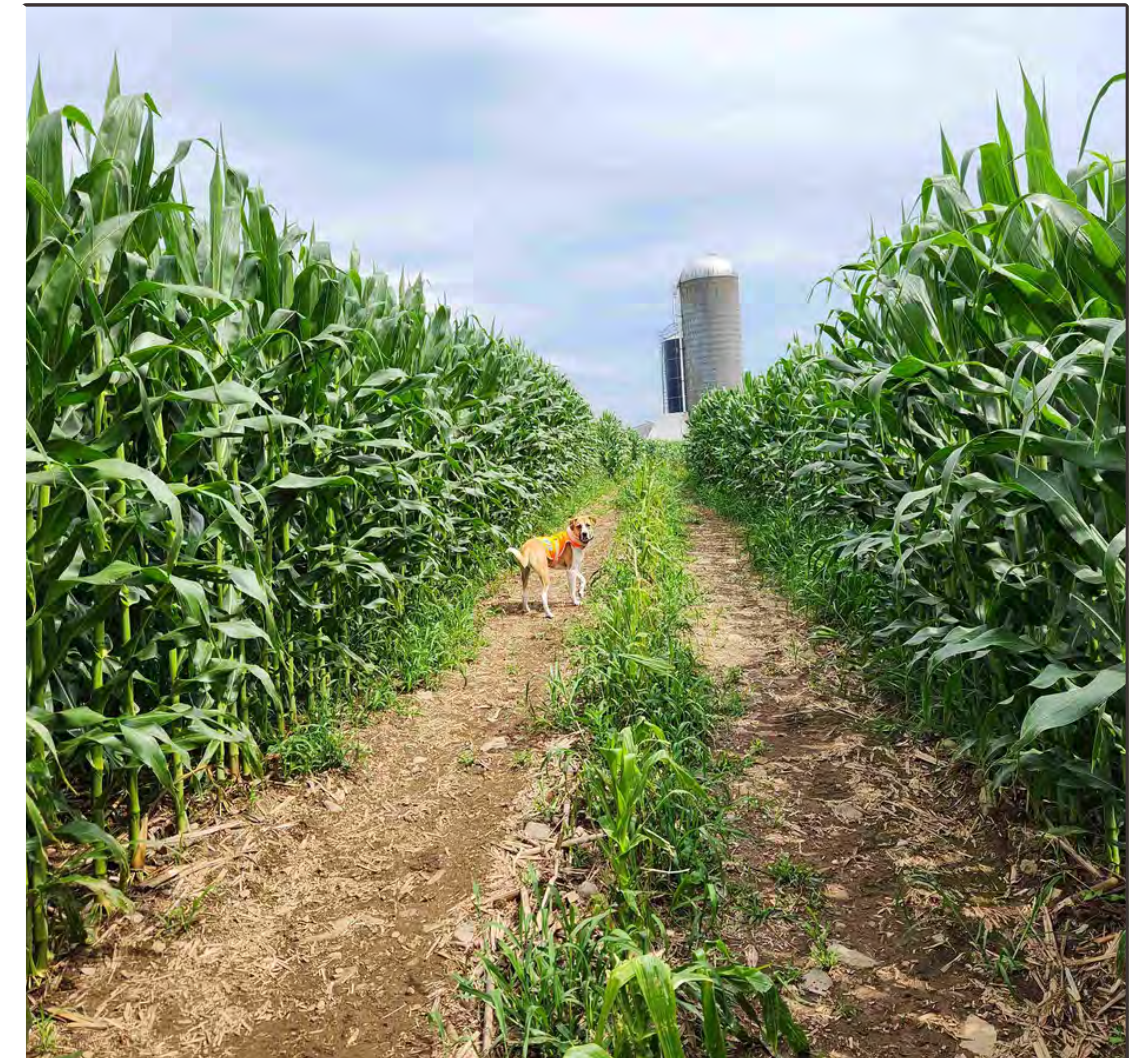
WATER THE CROPS



Recycled water is stored in the water towers and used to wash the barns.



The waste water is stored in a lagoon until it can be spread on a field.



The crops grow thanks to the nutrient-rich, recycled water!

»» Farmers Recycle and Conserve Water



GIVE WATER TO COWS TO DRINK



Water first cools down the milk in the plate cooler.



Then the clean water is used to fill the water tubs.

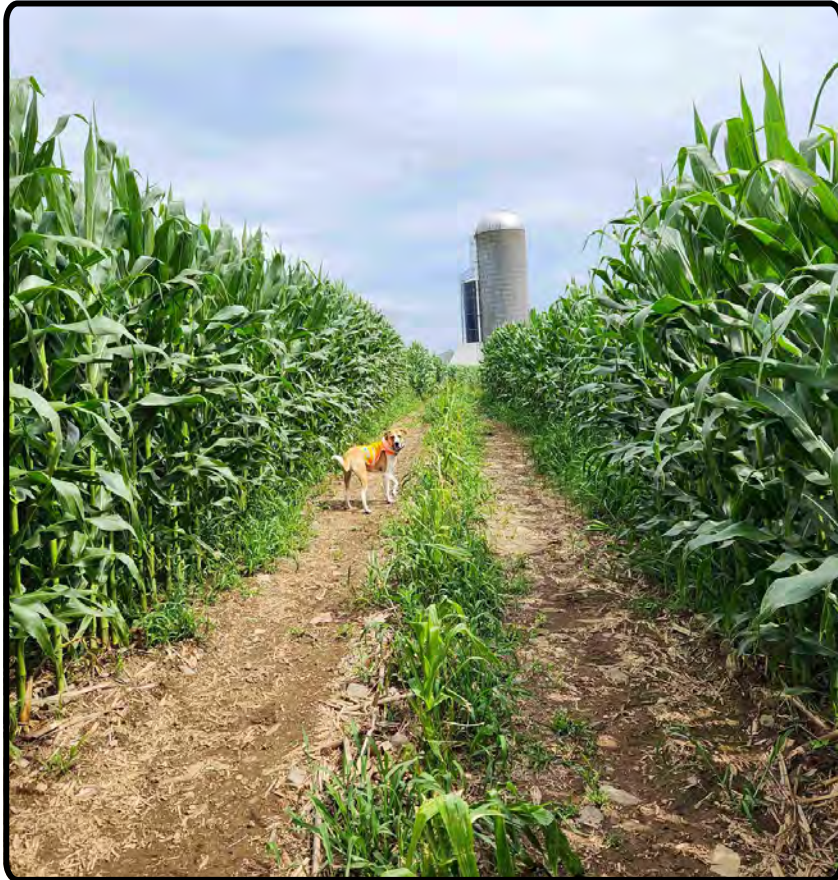


Cows drink 40 gallons of water every day!

»» Farmers Recycle and Conserve Water



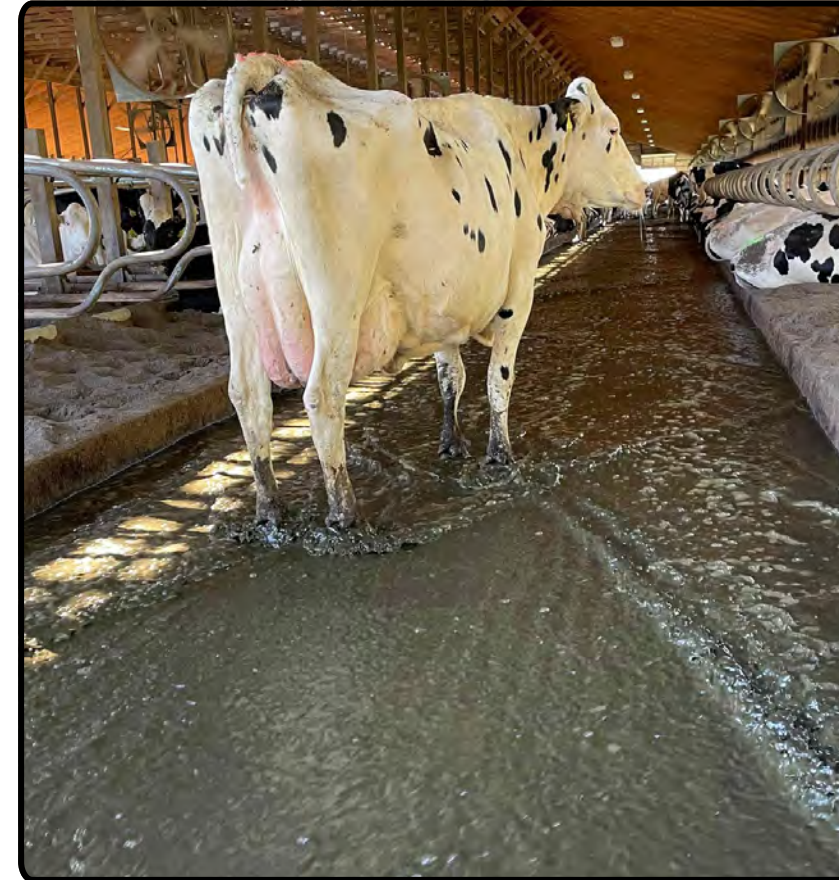
REVIEW



Recycle rainwater to water crops, wash cows, and keep cows cool (sprinklers).



Recycle the cold water that cools down the milk into drinking water for cows.



Recycle the water used when milking the cows to clean the barn and alleys with a flush system.



Recycle the water used to clean the alleys to water the crops with nutrient-rich water.

»» Recycling and Conserving Water



CONSUMERS RECYCLE

How can you recycle and conserve water?

A large, stylized white splash of milk or cream is at the bottom of the slide, set against a solid green background. The splash has several peaks and droplets, creating a sense of movement.

Let's explore how you
can help recycle water
in your home.

»» Consumers Recycle and Conserve Water



RECYCLE RAINWATER



Recycle rainwater by using a drain system connected to the roof.



Collect the water in a barrel.



Use the recycled water to water your flowers and garden.

»» Consumers Recycle and Conserve Water



CONSERVE WATER



Turn off the facet while scrubbing your hands.



Turn off the water while brushing your teeth



Try taking shorter showers.

»» Recycle and Conserve Water



CLOSURE

Share one way you know
how to recycle and conserve
water.



»» Career Spotlight: Milker



INTRODUCTION

Milkers have an important job on the farm to make sure we get milk and dairy products at the store.



»» Career Spotlight: Milker



ACTIVATING STRATEGY

Let's discover the career of a milker



»» Career Spotlight: Milker

WHO IS THE MILKER

The milkers guide the cows through the milking process. They get milk from the cows to the milk tank two to three times each day.



» Career Spotlight: Milker

MILKER RESPONSIBILITIES

1. Move the cows into the milking parlor.
2. Prepare the cows to be milked while checking the cow's health.
3. Milk the cows with a milking unit.
4. Clean the milk parlor and equipment.



CLOSURE

- Tell us one responsibility of the milker.
- Are you interested in being a dairy cow milker when you grow up?



Share one way that dairy farmers recycle water on their farms.

