

### Makin' Cows Smile

#### Objectives:

- Students will describe dairy farming as a way of life.
- Students will list three ways farmers care for their cows.
- Students will list three to four dairy-related careers.

Approximate Lesson Length: 55 Minutes

#### Materials Needed:

- “**Makin’ Cows Smile**” worksheets for each student
- “**Makin’ Cows Smile**” guided reading pamphlets (or eBook) for each student
- “**Discover Dairy . . . and Animal Care**” video and projector
- “**Keepin’ Cows Healthy**” worksheet on Page 5
- Pencil or pen for each student

#### Lesson Components:

Component	Time	Component	Time
Video Motivator & Discussion	10 min	Classroom Lesson & Instruction	15 min.
Guided Reading & Relevant Vocabulary	15 min.	Classroom Worksheet & Writing Assessment	15 min.

#### Motivator:

Introduce the “**Discover Dairy . . . and Animal Care**” video by telling students that the health and care of dairy cows is very important to the farmer. The choices the farmer makes—choices like housing and food—are made with the comfort of the cow in mind.

Write the following questions on the board. Ask students to listen for answers while watching the video, and encourage them to write down the answers on a piece of paper as they hear them. The Video Notes Worksheet 1.1 could also be used to take notes during the video.

- **How does a cow’s diet compare to ours?** (*Cows eat much more than us, 90 pounds of food a day. They eat plant that humans can’t and produce food from it that humans can eat. Cows are fed special meals made from plants to correspond with their age.*)
- **What is the name of a cow’s doctor?** (*Veterinarian*)
- **Where do cows sleep?** (*In special buildings and beds created just for them; there are many different types, all created for the animals’ comfort. Sawdust, waterbeds, sand and much more can be used for bedding.*)

#### Video:

Show the “**Discover Dairy . . . and Animal Care**” video and then summarize it with the class. Review the questions above.

## Lesson:

Explain that dairy farmers have a very important job to do. They work with many other individuals to take good care of their animals, and we depend on those animals to produce milk to keep us healthy.

Just like our parents do many things to take care of us, dairy farmers do many things to take good care of their animals. The animals on a dairy farm are called cows. Baby cows are called calves, and a female calf is called a heifer.

The dairy farmer's main areas of responsibility are:

**1. Providing their animals with a nutritious diet**

**2. Keeping their animals healthy**

**3. Providing their animals with a place to live**

**4. Providing safe, wholesome dairy products for us**

Some of the people helping the dairy farmer care for their animals are the herdsman, the nutritionist and the veterinarian. They all have different responsibilities on the farm.

## Classroom Activity:

Project page 5, titled, **Keepin' Cows Healthy**. This page illustrates the four basic areas of responsibilities dairy farmers have when caring for their cows. Use it to lead your class discussion. The guided reading pamphlet can be used with this activity.

*As you review each section with the students, draw a line comparing how a cow's care requirements compare and contrast to our own.*

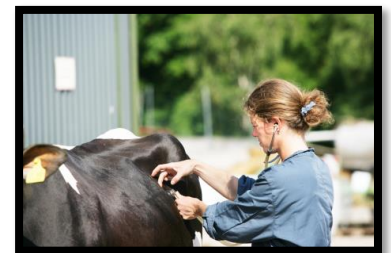
**Providing the animals with a nutritious diet:** the farmer uses sun, water and soil to grow food for his animals to eat. He takes special care of his land to make sure his animals are eating the best possible food.

- Cows eat 90 pounds of food a day — that's like 360 1/4-pound hamburgers!
- Cows eat a special mix of plants, such as corn, wheat and grass/hay, mixed with grain. This mix, called a **total mixed ration**, is customized for each cow.
- The farmer works with a **nutritionist**, someone who has specialized training in balancing feed rations, to prepare a ration with a carefully formulated mix of nutrients and minerals to keep the cows healthy.



**Keep the animals healthy:** The farmer's top priority is to make sure his animals are healthy. He does this by providing plenty of balanced food, fresh water and vaccinations.

- Cows drink 50 gallons of water a day — that's a bathtub full!
- Cows are vaccinated to protect them from diseases. Just like your parents make sure you receive your vaccinations to keep you healthy, the farmer does the same for his cows.
- Cows receive regular check-ups from an animal doctor, called a **veterinarian**. Vets visit the farm to help farmers vaccinate their cows at different life stages, as well as make sure they have proper medication when the cows are sick.



Some farm employees have specialized training in cow health care — these people are called "herdpersons." Herdpersons take care of cows on a daily basis. Their role is to make sure the cows

**Provide a place for his animals to live:** The farmer makes sure his animals have a comfortable place to sleep and rest each day.

- Each farmer may choose a different style of home for his animals, but each style has the cow's comfort as the top priority. Do you live in a ranch-style house or a two-story or an apartment? Is one better than the other?
- Most cows can live in barns together, with separate beds called "stalls." These stalls are kept dry and warm for the cow to rest on.
- The stalls that cows lay down on can be bedded with different types of materials, too. Some stalls have sand bedding, saw dust or dried, ground up corn stalks. Some farmers recycle old newspapers or cow's manure with a manure digester to use the dry components as bedding! Some stalls even have water mattresses on them.



**Provide healthy, wholesome, safe food for your family:** Every day the farmer is providing food for your family and his. Without his careful care and attention to his responsibilities in the circle of life, you wouldn't have food to buy at the grocery store!

- Two or three times a day on the farm, the cows are milked.
- The farmer has special equipment that gently pulls the milk from the cow's body and sends it into a cooling area called a bulk tank.
- Cows like to be milked; it doesn't hurt them. This daily routine is an important part of keeping the cows healthy and happy.
- On average, cows produce 60 pounds of milk a day — that's 120 glasses of milk!



### Guided Reading Lesson:

Hand out the reading pamphlets to review the lesson or provide the link to the eBook.

### Evaluation:

Use Worksheet 1.2 and 1.3 that accompanies this lesson to assess whether the students comprehended the lessons and achieved the stated objectives.

Tell students that farmers take good care of their animals so they can produce milk for us. Reinforce the message that cows are fed a balanced, special mixture of feeds called a total mixed ration; that they have special doctors and people who look after them called a veterinarian and herds person, respectively; that milking doesn't hurt the cow; and that cows can live indifferent places, just like people.

### Review Questions:

Ask questions to review lesson. See examples below.

- **What is the farmer's role on a dairy farm?** To take care of the cows and provide milk.
- **What is the role of the veterinarian?** To serve as doctor for cows.
- **What is a total mixed ration?** A balanced mixture of feeds fed to cows.
- **Does a cow like to be milked?** Yes! She loves being milked.

For a writing assessment opportunity, encourage the students to complete the writing assignment. You can use the writing enrichment page, Worksheet 1.4, to complete this writing prompt.





# Keepin' Cows Healthy

## 1. Providing a Nutritious Diet



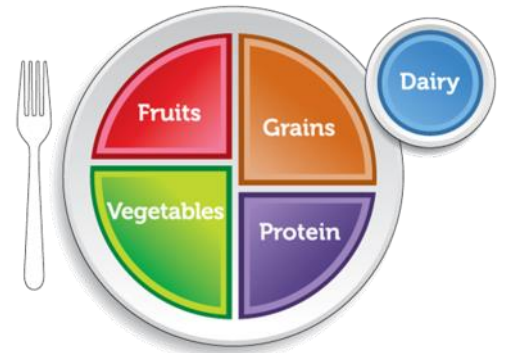
## 2. Keeping the Animals Healthy



## 3. Providing a Place to Live



## 4. Providing Safe, Quality Milk



# Worksheet 1.2

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## WORD SEARCH

Find these words in the puzzle.  
Words can be written up, down,  
forward, backward and diagonally.

- COW
- HEIFER
- CALF
- FARMER
- VETERINARIAN
- NUTRITIONIST
- HERDSMAN
- STALL
- BARN
- HOOF
- RATION
- WATER

y	q	i	o	i	h	e	r	d	s	m	a	n	t	k
e	m	d	m	a	e	d	w	m	t	d	k	s	z	n
k	v	a	p	y	c	a	k	o	w	e	i	d	b	v
e	t	d	s	b	t	n	w	q	c	n	s	l	s	y
r	q	e	r	e	t	o	s	i	o	a	b	o	h	k
q	a	o	r	n	a	n	t	i	g	i	o	o	e	k
j	t	t	e	k	i	c	t	a	a	r	n	s	i	y
f	x	r	i	a	n	i	j	j	o	a	z	v	f	f
f	o	r	f	o	r	i	h	b	d	n	p	r	e	o
r	z	l	e	t	n	a	k	f	m	i	s	i	r	o
p	a	u	u	m	x	j	u	d	g	r	l	d	w	h
c	x	n	o	k	r	w	k	r	m	e	u	b	p	y
q	i	b	a	r	n	a	r	s	i	t	c	x	x	w
f	m	t	f	v	p	i	f	e	d	e	n	a	a	c
m	y	l	l	a	t	s	m	g	l	v	g	j	c	e

1. Describe three ways dairy farmers care for their cows:

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2. What is the cow's doctor called?

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3. What is the name of the farm employee who takes care of the cows?

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4. What is the name of the special mix of feed cows eat?

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# Worksheet 1.3

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**1. Dairy farmers track each individual cow's health history from the day she is born. Record each cow's health history in the chart below by calf birth date.**

### Cow 1

**BESSIE (Number 11)**  
**Born:** Jan. 22, 2015  
**Had Baby Calf:** Jan. 23, 2020  
**Vaccinated:** June 20, 2020  
**lbs. of Milk:** 100 pounds/day

### Cow 2

**CARLIE (Number 18)**  
**Born:** Sept. 18, 2016  
**Had Baby Calf:** May 1, 2020  
**Vaccinated:** June 20, 2020  
**lbs. of Milk:** 82 pounds/ day

### Cow 3

**DEBBIE (Number 21)**  
**Born:** July 24, 2017  
**Had Baby Calf:** Mar. 9, 2020  
**Vaccinated:** June 20, 2020  
**lbs. of Milk:** 94 pounds/ day

### Cow 4

**SUZIE (Number 5)**  
**Born:** Dec. 20, 2013  
**Had Baby Calf:** Feb. 6, 2020  
**Vaccinated:** June 20, 2020  
**lbs. of Milk:** 75 pounds/ day

Name	Number	Date of Birth	Date Calf Born	Vaccination Date	Pounds of Milk
Alice (example)	2	April 29, 2017	May 30, 2020	June 20, 2020	110 pounds/day

**2. Calculator Math Exercise: If one cow eats 90 pounds of feed a day, drinks 50 gallons of water and produces 60 pounds of milk, calculate how much the dairy farms below produce.**

Dairy Farm Name	Number Cows	Total Amount of Feed per Day	Total Amount of Water per Day	Total Amount of Milk per Day	Challenge: Total Gallons per Day
One Cow Dairy	1 cow	90 pounds	50 gallons	60 pounds	7 gallons
Smith Dairy Farm	50 cows				
Sunshine Dairy	77 cows				
Mountain View Farm	230 cows				
Lotta Milk Farms	880 cows				

*Note for Teachers: Answer Key to Worksheets found online at [www.discoverdairy.com](http://www.discoverdairy.com)*





# Lesson 1 Standards

This lesson meets the following Common CORE and PA educational standards.

## Grade 3:

### Common Core:

CCS.MATH.-CONTENT.3.0A.A.1  
CCSS.ELA-LITERACY.-RI.3.1  
CCSS.ELA-LITERACY.-RF.3.1.A-C  
CCSS.ELA-LITERACY.-RF.4.1.A  
CCSS.ELA-LITERACY.-L.3.4  
CCSS.ELA-LITERACY.-SL.3.1  
CCSS.ELA-LITERACY.-SL.3.6  
CCAA.ELA-LITERACY.-L.3.6  
CCSS.ELA-LITERACY.-W.3.1  
CSS.MATH.-CONTENT.-3MD.A.2

### PA Standards:

Math: 2.1.3, 2.2.3, 2.3.3, 2.4.3, 2.6.3  
Reading: 1.1.3, 1.2.3, 1.3.3, 1.6.3  
Careers - 13.1.3

## Grade 5:

### Common Core:

CCSS.MATH.-CONTENT.5.NBT.B.5  
CCSS.-MATH.CONTENT.5.MD.A.1  
CCSS.MATH.CONTENT.5.-MD.C.5  
CCSS.ELS-LITERACY.-RI.5.1  
CCSS.ELA-LITERACY.-RI.5.2  
CCSS.ELA-LITERACY.-RI.5.4  
CCSS.ELS-LITERACY.-RI.5.10  
CCSS.ELS-LITERACY.-RF.5.3  
CCS.ELS-LITERACY.L.5.4  
CCSS.ELS-LITERACY.W.5.9  
CCSS.-ELA-LITERACY.SL.5.1  
5-ESS3-1

## Grade 4:

### Common Core:

CCS.MATH.-CONTENT.4.MD.A.1  
CCSS.ELA-LITERACY.RI.4.4  
CCSS.ELA-LITERACY.RF.4.3  
CCSS-ELA-LITERACY.RF.4.4.A  
CCSS.ELA-LITERACY.L.4.4  
CCAA.ELA-LITERACY.RI.4.1  
CCSS.ELA-LITERACY.W.4.1

### PA Standards:

Math Anchors: M4.A.3, M4.E1

Reading Assessment Anchors:

R4.A.1.1, R4.A.1.2., R4.A.1.3,  
R4.A.1.4, R4.A.1.6, R4.A.2.1,  
R4.A.2.2, R4.A.2.3, R4.A.2.4,  
R4.A.2.5, R4.A.2.6, R4.B.3

Science: 3.2.4, 3.3.4, 3.8.4, 4.2.4,  
4.3.4, 4.4.4, 4.5.4, 4.6.4

Anchors: S4.A.1, S4.B.1, S4.B.2,  
S4.B.3



This lesson covers concepts about how dairy is responsibly produced.