



# Lesson 1: Animal Health

Available at [www.discoverdairy.com](http://www.discoverdairy.com) • Copy written © 2008, Revisions 2011, 2014

## Standards:

*These lesson tools meet the following Common CORE and PA educational standards.*

### Grade 3:

*Common Core — CCS.MATH.-CONTENT.3.OA.A.1, CCSS.-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, CCS.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 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.E.1), 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), 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)*

### 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, CCSS.ELA-LITERACY.SL.5.1*

## “MAKING 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:

- A copy of the “**Makin’ Cows Smile**” worksheets for each student
- A copy of the “**Makin’ Cows Smile**” guided reading pamphlet for each student
- “**Discover Dairy . . . and Animal Care**” video (available for download or streaming on [www.marketplaceforthemind.com](http://www.marketplaceforthemind.com)) and projection device for showing it to the class
- Overhead of “**Makin’ Cows Smile**” ( page 5)
- Overhead projector or White Board for Ipad App
- 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. *(The video length is approximately 4 1/2 minutes.)*

Write the following questions on the chalkboard or overhead. 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.

- ◆ How does a cow’s diet compare to ours? *(Cows eat much more than us — 90 pounds of food a day! They eat plants that humans can’t and produce a 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.)*

### Video:

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



# Lesson 1: Animal Health

Available at [www.discoverdairy.com](http://www.discoverdairy.com) • Copy written © 2008, Revisions 2011, 2014

## Enrichment:

Choose a selection from the children's literature book list online at [www.discoverdairy.com](http://www.discoverdairy.com) or visit [www.operation-dairy.com](http://www.operation-dairy.com) to play an interactive game about the dairy farm. Adopt A Cow for a year-long dairy discovery!

## 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:

- ◆ Providing their animals with a nutritious diet
- ◆ Keeping their animals healthy
- ◆ Providing their animals with a place to live
- ◆ Providing safe, wholesome dairy products for us

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

## Classroom Activity:

Create an overhead or access Ipad page of the *illustration graphic found on page 5* of this lesson, titled "Makin' Cows Smile." This overhead illustrates the four basic areas of responsibilities dairy farmers have in caring for their animals. Use the graphic to lead them through discussion. The guided reading pamphlet could also 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 *ration*, is customized to the age and activity of the 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 "herdspersons." Herdspersons take care of cows on a daily basis. Their role is to make sure the cows are healthy and active, and watch them for any signs of sickness or abnormalities.



1. Providing a Nutritious Diet



2. Keeping the Animals Healthy

# Lesson 1: Animal Health

Available at [www.discoverdairy.com](http://www.discoverdairy.com) • Copy written © 2008, Revisions 2011, 2014



3. Providing a Place to Live



4. Providing Safe, Quality Milk

## Teaching Tip:

Using the Worksheets and Reading Guides enables you to reinforce lesson content while teaching to specific math and reading standards. Options for writing assessment are also included within the worksheet.

**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, some use saw dust or dried, ground up corn stalks. Some farmers recycle old newspapers and use them for 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 be able to buy food 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 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.
- ◆ 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.

## Evaluation:

If desired, use Worksheet 1.1 and 1.2 that accompanies this lesson to assess whether the students comprehended the lessons and achieved the stated objectives. (*An answer key can be found online at [www.discoverdairy.com](http://www.discoverdairy.com)*)

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 ration; that they have special doctors and people who look after them called a veterinarian and herdsman, respectively; that milking doesn't hurt the cow; and that cows can live in different places, just like people.

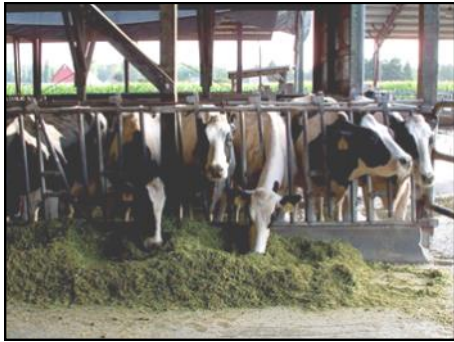
Ask questions to review the lesson. See examples below.

- ◆ 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 ration? (*A balanced mixture of feeds fed to cows.*)
- ◆ Does a cow like to be milked? (*Yes.*)

## Additional Activities:

- Read one of the books listed under "Enrichment" on [www.discoverdairy.com](http://www.discoverdairy.com).
- Have students write a letter to a local farmer (with prior permission) asking any questions they may have and thanking the farmer for all he/she does to take care of cows and provide wholesome food.
- Have a local farmer visit for show-and-tell, possibly bringing in samples of feed, pictures of his/her farm and a sample milker.

# Four Areas of Animal Health



**1. Providing a Nutritious Diet**



**2. Keeping the Animals Healthy**



**3. Providing a Place to Live**



**4. Providing Safe, Quality Milk**





NAME: \_\_\_\_\_

## Worksheet 1.1: Discover Dairy & Animal Health

### WORD SEARCH

Find these words in the puzzle to the right. 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

- ◆ Describe three ways dairy farmers care for their cows:

1. \_\_\_\_\_

2. \_\_\_\_\_

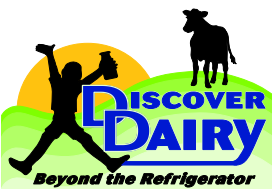
3. \_\_\_\_\_

- ◆ What is the cow's doctor called? \_\_\_\_\_

- ◆ What is the name of the farm employee who takes care of the cows? \_\_\_\_\_

- ◆ What is the name of the special mix of feed cows eat? \_\_\_\_\_





NAME: \_\_\_\_\_

## Worksheet 1.2: Discover Dairy & Animal Health

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:

BESSIE (Number 5)

Born: Jan. 22, 2009

Had Baby Calf: Jan. 23, 2014

Vaccinated: June 20, 2014

Milks: 100 pounds/day

CARLIE (Number 18)

Born: Sept. 18, 2010

Had Baby Calf: Aug. 1, 2014

Vaccinated: June 20, 2014

Milks: 82 pounds/day

DEBBIE (Number 12)

Born: July 24, 2011

Had Baby Calf: Aug. 5, 2014

Vaccinated: June 20, 2014

Milks: 94 pounds/day

SUZIE (Number 21)

Born: Dec. 20, 2007

Had Baby Calf: Nov. 5, 2014

Vaccinated: June 20, 2014

Milks: 75 pounds/day

Name	Number	Date of Birth	Date Calf Born	Vaccination Date	Pounds of Milk
Alice (example)	2	April 29, 2009	May 30, 2014	June 20, 2014	110 pounds/day

**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 Milk 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).

**Writing Enrichment:** On a separate piece of paper, write a paragraph comparing and contrasting how farmers care for their dairy cows and how your parents take care of you. Use three supporting statements to show similarities and differences.

