America's dairy farmers work hard to reduce the amount of water needed to produce a glass of milk. They have many ways to conserve the water used on a dairy farm.

Part 1: Look at this water flow diagram and read the poster. Then put on your dairy farmer's thinking cap to answer the questions below.

Water Flow on the Dairy Farm

Fresh water is utilized for cows to drink and to sanitize and clean equipment like milk storage tanks.

Wastewater is used to flush manure and excess sand bedding.

Wastewater is separated into solids and nutrient-rich water.

Sand is washed and recycled to be used as bedding again.

Nutrient-rich water is used to fertilize and irrigate crops.

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	Dairy farmers use self-refilling bowl and trough systems so their cows
(9)	always have
BR	fresh water whenever they want
	they want, minimizing
	waste!
	13372

Part 2: A watershed is the area where fresh water flows from higher elevations into a common body of water, such as a river, stream, lake, or aquifer. When water and soil are contaminated, pollutants travel throughout the entire watershed. Unscramble these words to learn how dairy farmers help protect the watershed for all of us.



1. arfquie ___q____r

A body of permeable rock which can contain or transmit groundwater.

2. riparian fsfrbue ____f___s

Created by planting trees, shrubs, and other plants in areas next to water sources, these protect the water from pollution run-off while providing habitat for wildlife. The word riparian means "relating to river banks."

3. owl/on-litl farming

___ w/ ___o-___l ___l

A method of planting crops that does not require digging deeply into the soil, if at all. Crops are planted in between remains of past plantings. This practice helps increase the amount of water that enters the soil.







Reproducible Master

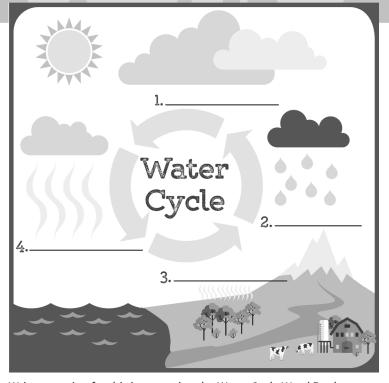
the Flow

Part 1: Recycling water is an important part of the dairy farmer's water management strategy. Dairy farmers — and all of us — have help from Earth's water cycle, a natural recycling process you saw demonstrated in class.

Use the word bank below to label each stage of the water cycle. Then write definitions for each word on the lines provided. You can use a dictionary or the Internet to find definitions.

Water Cycle Word Bank

Condensation: _		
Precipitation: _		
Transpiration:		
Evaporation:		



Write a caption for this image using the Water Cycle Word Bank terms:



Part 2: Everyone has a role to play in protecting the watershed and conserving water. Dairy farmers are doing their part. Are you doing yours? Look at the poster to find ways that dairy farmers manage water use. Then use this space to list some ways that you and your family can practice water conservation at home.

How My Family Can Conserve Water





Now work with a classmate to create a poster that illustrates one of the water conservation actions you listed.

Get water wise!

Visit www.watercalculator.org with your parents to help your family calculate your average monthly water usage and create a family plan for saving water!





Local milk is available 365 days a year.







Activity 3 er: Supporting Dairy Nutrition

Part 1: Cows need fresh water every day to produce nutritious milk for you to enjoy. Fill in the correct number below to complete each sentence and learn more.

C. 87

A. 10 B 65

1. Cow's milk is _____ percent water.

2. Dairy cows in Florida can produce up to _____ gallons of milk per day.

3. Over the past 60 years dairy farmers have reduced the amount of water used to produce each gallon of milk by _____ percent.



Did you know that milk contains a unique combination of 9 essential nutrients that your body requires for good health? Milk is a top choice for great nutrition as part of an overall healthy diet!

Part 2: Milk is full of amazing nutrients your body needs to grow strong and healthy. Just compare the nutrients in fatfree milk with the nutrients in fruit punch. In this chart, the "% Daily Value" columns tell you what percentage of your daily requirement for each nutrient is provided by an 8-oz. serving of that beverage. For example, an 8-oz. serving of fat-free milk provides 16 percent of the total amount of protein you need each day. Use your math skills to calculate the difference in "% Daily Value" for each nutrient listed in the chart, and write your answers in the blank spaces.

Do you know what milk's nutrients do for you? Review the benefits listed next to each nutrient. Two are correct. Cross out the incorrect one.

Use evidence from the chart to make a claim about which drink is healthier and why.

For more resources, refer to the Milk...More Than a Mustache poster at www.floridamilk.com/_resources/pdf/educationalmaterials/milk-more-than-mustache.pdf.

	% Daily	Value	Difference			
Nutrients	Fat-Free Milk	Fruit Punch	Daily Value	Benefits for Your Body		
Calcium	25%	2%		A. strong bones	B. more energy	C. strong teeth
Vitamin D	15%	0%		A. strong teeth	B. strong bones	C. better digestion
Phosphorus	20%	0%		A. improves hearing	B. strong bones and teeth	C. supports tissue growth
Riboflavin	35%	4%		A. helps turn fats into fuel	B. helps turn protein into fuel	C. improves hearing
Protein	16%	0%		A. builds muscle tissue	B. repairs muscle tissue	C. improves sleep
Vitamin B-12	50%	0%		A. sharper vision	B. healthy nervous system	C. helps blood function
Pantothenic Acid	20%	1%		A. helps turn carbohydrates into fuel	B. helps turn minerals into fuel	C. helps turn fats into fuel
Vitamin A	15%	0%		A. healthy eyes	B. healthy skin	C. reduces stomach aches
Niacin	10%	0%		A. used for energy metabolism	B. builds strong muscles	C. helps keep body energized



