



Dairy cow veterinarians team up with dairy farmers to keep milk cows happy and healthy. Everyone works together to make sure our milk, ice cream, and other dairy foods are safe and healthy to eat. In this game, your brain and body will stay healthy too as you mooove and do milk math to complete cow puzzles. Play by yourself or with a herd of friends!

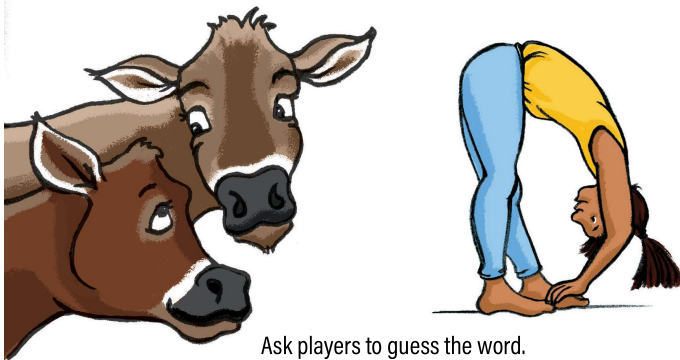
### How to Play: Herd Play

Master Moooo Vet Challenges as a herd to win puzzle pieces. Complete a challenge to win a puzzle piece. Collect 16 different puzzle pieces to complete the puzzle.

#### How to Play

1. Shuffle the challenge cards and place them face down in a pile.
2. Take turns picking a card.
3. Ask the herd to answer a question or complete the challenge together.
4. If they answer right or complete the challenge, pick a puzzle piece to complete the Brown Swiss Cow Herd puzzle.
5. If the herd needs more practice, put the card in a pile and pick another challenge.

### Word Parlor Challenge



Ask players to guess the word.

Use your body to make the letters C-O-W.

If they say "Cow", tell them female cattle are called cows after they have a baby.

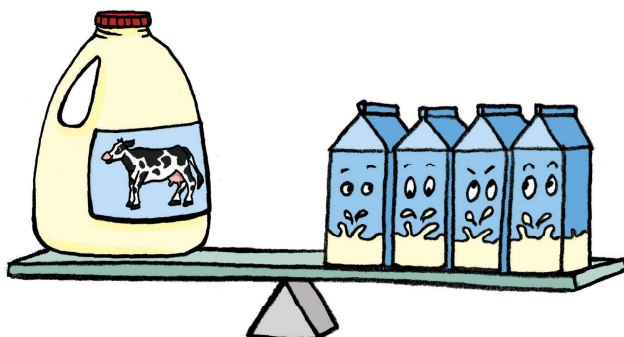
### Milk Math Challenge

Cows drink 40 gallons of water every day. Help the other players count to 40 by fives [5, 10, 15, 20, 25, 30, 35, 40]. Then ask, how many 5 gallon buckets of water would you need to give your cow 40 gallons of water? When they say 8 (5 gallons x 8 = 40 gallons), use the card to complete the puzzle.



### Milk Math Challenge

Ask the herd "How many quarts of milk are in a gallon?"  
When they say "4", you can use the card to complete the puzzle.



### Word Parlor Challenge



Ask players to guess the word.

Use your body to make the letters M-I-L-K.

If they say "Milk", tell them we get milk from dairy cows.

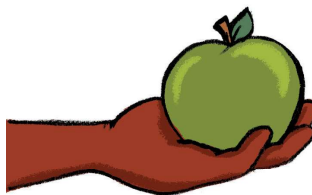


### Moove Challenge



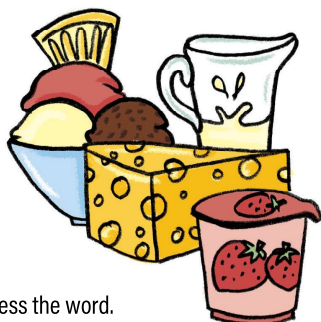
Cows eat 100 pounds of feed every day. They eat plants like corn, oats, and hay. Everyone pretend they are breaking apart feed in their mouth like a cow.

### Forage Challenge



Cows and people can get a kind of high blood sugar called Type 2 diabetes. Sometimes this can be controlled with diet and exercise. Everyone exercise by walking around and looking for one high sugar food or drink (like candy or soda) that would not be a healthy choice or one low sugar food or drink (like a vegetable and water) that would be a healthy choice. Say, "Healthy" or "Unhealthy" when you find your food or drink.

### Word Parlor Challenge

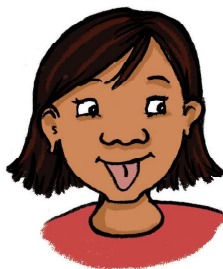


Ask players to guess the word.

Use your body to make the letters D-A-I-R-Y.

If they say "Dairy" (dare-ee), tell them cow veterinarians who specialize in dairy cattle are called dairy veterinarians.

### Moove Challenge



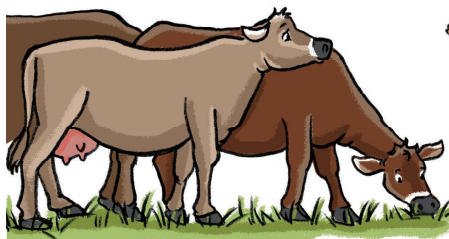
Cows need vitamins and minerals just like kids. Everyone pretend they are swallowing a big vitamin.

### Moove Challenge



Did you know that cows can kick in all directions? Have everyone spread out and stand on their Right leg with their knees slightly bent. Everyone Kick to the front, Kick to the side, Kick to the back, without putting your leg down in between kicks. If everyone can do it without touching anyone else, use the card to complete the puzzle. Remember- don't kick anyone or anything!

### Word Parlor Challenge



Ask players to guess the word.

Use your body to make the letters C-A-T-T-L-E.

If they say "Cattle" (cat-ell), tell them cattle means more than one cow or bull.

### Moove Challenge



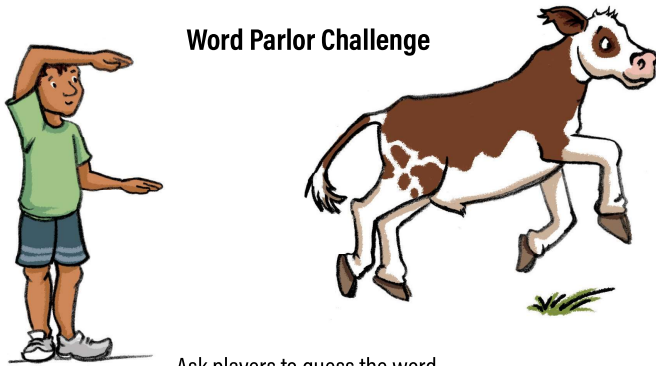
Before each cow is milked, the udder must be cleaned-like washing your hands before you eat. Everyone squat down and reach forward, palms up. Move your hands in small circles to clean the udder.

### Moove Challenge



Did you know that cows can kick in all directions? Have everyone spread out and stand on their Left leg with their knees slightly bent. Everyone Kick to the front, Kick to the side, Kick to the back, without putting their leg down in between kicks. If everyone can do it without touching anyone else, use the card to complete the puzzle. Remember- don't kick anyone or anything!

### Word Parlor Challenge

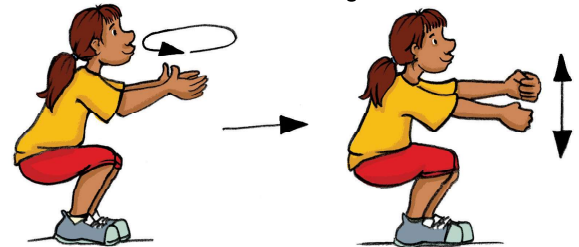


Ask players to guess the word.

Use your body to make the letters H-E-I-F-E-R.

If they say "Heifer" (heff-er), tell them female cattle are called heifers before they have their first baby.

### Moove Challenge



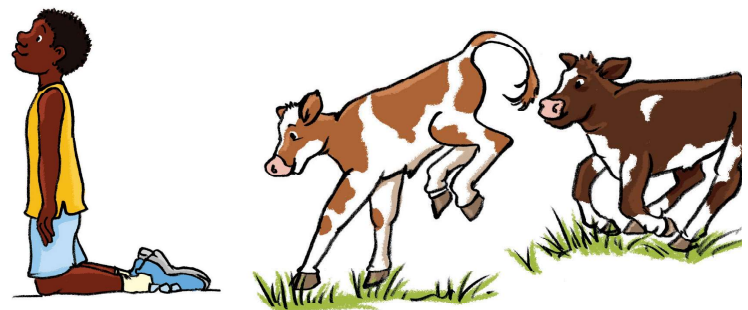
You can milk cows by hand or use a machine attached to the cow's udder. Some farms have robots that milk cows. Everyone squat down and reach forward, palms up. Move your hands in small circles to clean the udder. Then, move your hands up and down 4 times to practice milking the cow. Do this 2 more times because cows get milked 2-3 times a day.

### Moove Challenge



Vets have to be careful so they don't get kicked by cows. Pretend you are the cow and the other players are veterinarians. Spread out so you don't touch each other. When you kick, the other players will jump on 2 feet to move away. If you kick forward- they jump back. If you kick to the right-they jump to the right. If you kick to the left- they jump to the left. If you kick back, they jump forward. Play for 2 minutes. Remember- don't kick anyone or anything!

### Word Parlor Challenge

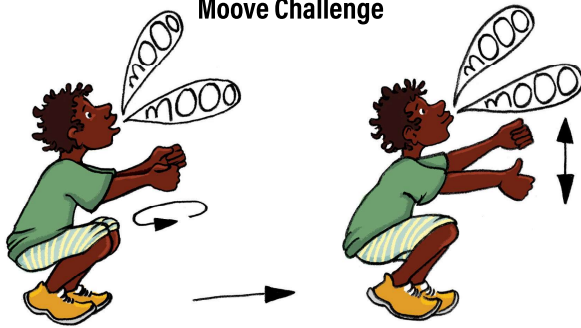


Ask players to guess the word.

Use your body to make the letters C-A-L-V-E-S

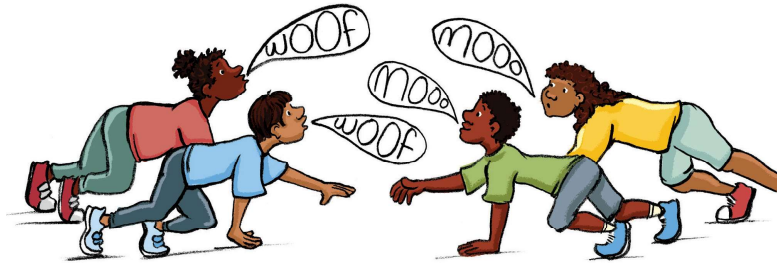
If they say "Calves," tell them baby cattle are called calves.

### Moove Challenge



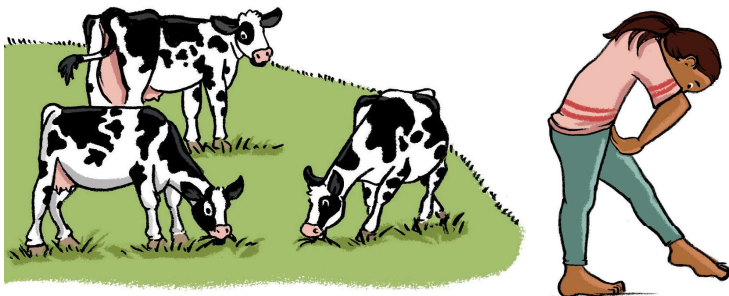
We need 4 cups of milk to make a quart. Everyone squat down and reach forward. Rotate your hands to clean the udder. Then, move your hands up and down 4 times each and moo 4 times to remember.

### Moove Challenge



Oh no the fence broke! Good thing there are farm dogs. Pretend half the players are farm dogs and half the players are cattle. Have everyone get on all fours with knees a tiny bit off the floor, with the farm dogs and the cattle facing each other. The cattle will crawl to try to get past the dogs. The dogs will prevent the cattle from passing. Play for 3 minutes.

### Word Parlor Challenge



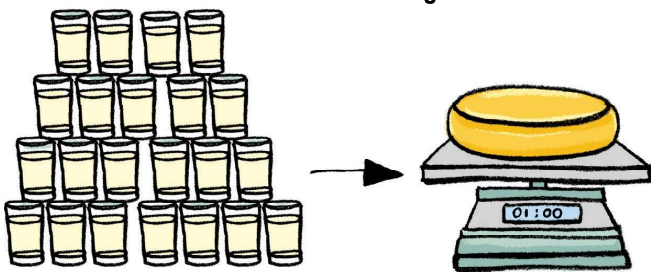
Ask players to guess the word.  
Use your body to make the letters H-E-R-D.  
If they say "Herd", tell them a group of cattle is called a herd.

### Milk Math Challenge



We need 16 cups of milk to make a gallon of milk. Everyone squat down and reach forward, palms up. Move your hands in small circles to clean the udder. Then, while counting out loud ("One Cup, Two Cups, Three Cups, Four Cups..."), move your hands up and down 16 times to remember.

### Milk Math Challenge



Ask the other players, "If 2 cups of milk weigh 1 pound, and it takes 10 pounds of milk to make 1 pound of cheese, how many cups of milk do you need to make 3 pounds of cheese?"  
Answer: If they say 60 cups of milk, use the card to complete the puzzle.

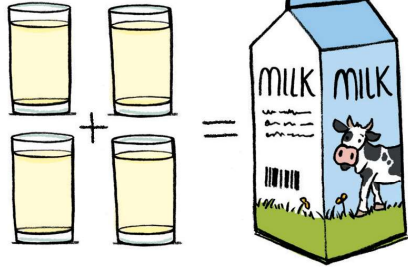
### Word Parlor Challenge



Ask players to guess the word.  
Use your body to make the letters U-D-D-E-R.  
If they say "Udder", tell them the udder is the part of the cow where the milk comes out.

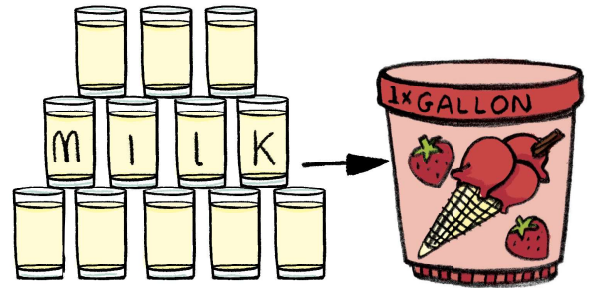


### Moove Challenge



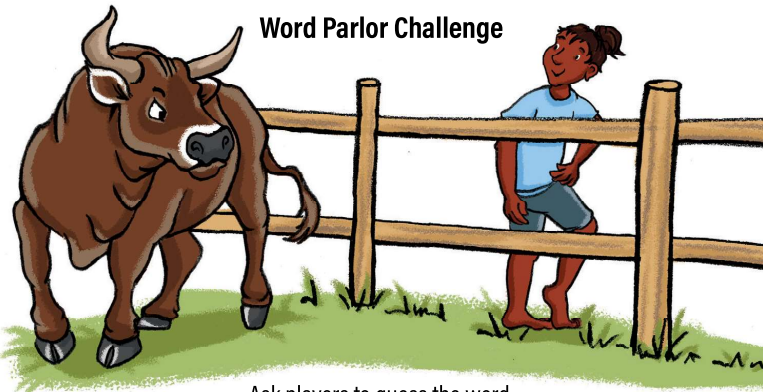
Four cups of milk makes a quart of milk. Everyone count to 4 cups out loud while touching elbows to knees. "1 Cup"- Touch Left elbow to Right knee, "2 Cups"-Touch Right elbow to Left knee, "3 Cups"- Touch Left elbow to Right knee, "4 Cups" Touch Right elbow to Left knee. Then everyone, whisper, "Four cups makes a quart."

### Milk Math Challenge



Ask the other players, if 2 cups of milk weigh 1 pound, and it takes 12 pounds of milk to make 1 gallon of ice cream, how many cups of milk do you need to make a  $\frac{1}{2}$  gallon of ice cream?

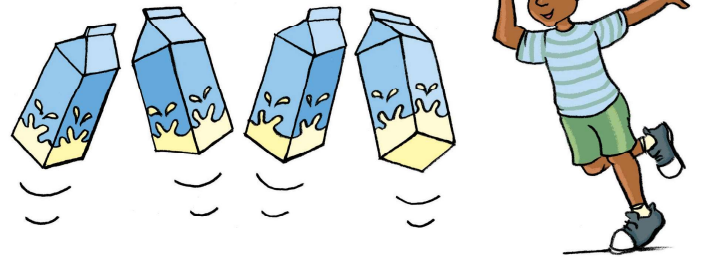
Answer: If they say 12 cups of milk, use the card to complete the puzzle.



### Word Parlor Challenge

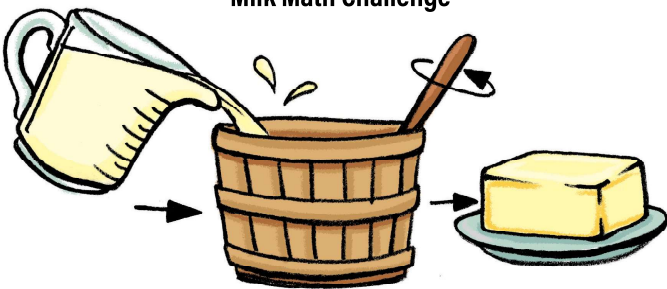
Ask players to guess the word.  
Use your body to make the letters B-U-L-L  
If they say "Bull," tell them male cattle are called bulls.

### Milk Math Challenge



We need 4 quarts of milk to make a gallon of milk. Quarter means one fourth. Everyone count to four quarts out loud ("One Quart, Two Quarts, Three Quarts, Four Quarts") as you hop on one foot 4 times. Then say, "Four quarts makes a gallon" in a funny voice.

### Milk Math Challenge



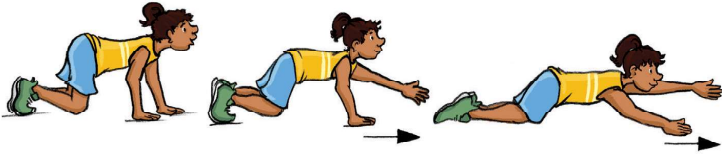
Ask the other players, "If 2 cups of milk weigh 1 pound, and it takes 21 pounds of milk to make 1 pound of butter. How many cups of milk do you need to make 2 pounds of butter?" Answer: If they say 84 cups of milk, use the card to complete the puzzle.

### Moove Challenge



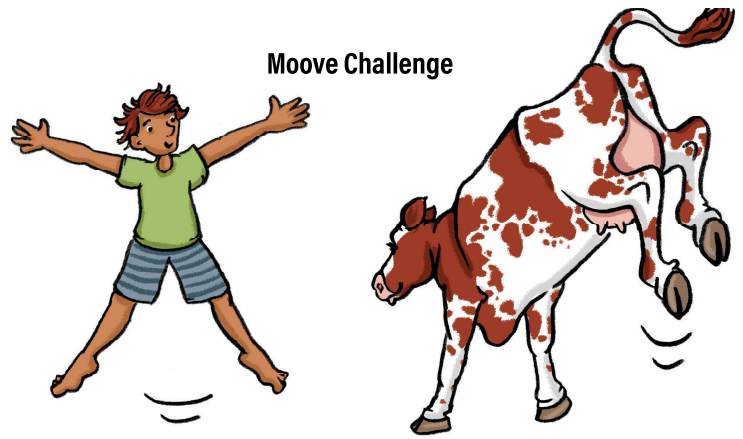
Dairy cows need fresh air. They can live inside or outside.  
Move the herd to a spot inside or outside and have everyone take 10 big breaths.

### Moove Challenge



People have 1 part to their stomach and cows have 4 parts to their stomach. Everyone get down on all fours with knees touching the ground. Then, without moving your knees, step out with your right arm. Next, take a step with your left arm. Step with your right arm again, One more step with your left arm. Count to four parts out loud ("One Part, Two Parts, Three Parts, Four Parts") as you take each step. After 4 steps walk back and say, "Cows have 4 parts to their stomach" in a deep voice.

### Moove Challenge



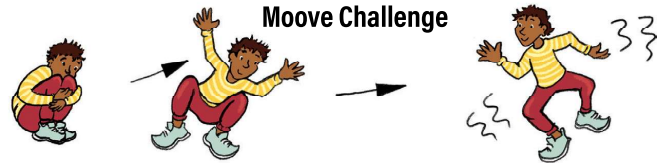
A dairy cow produces 8-9 gallons of milk a day! Everyone do 9 Jumping Jacks to remember.

### Moove Challenge



Cows like to have a soft place to lie down. Farmers give cows straw, sand, mattresses, or waterbeds, to lie on. Have everyone tuck their knees and elbows under themselves and take 5 big breaths.

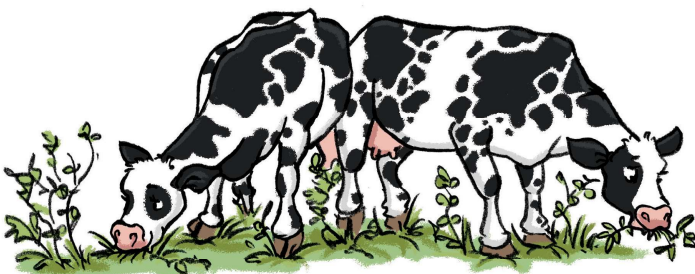
### Moove Challenge



The reticulum (rih-tic-you-lum) is the part of the cow stomach that traps big things that the cow swallows. If it's too big the food gets sent back into the cow's mouth so she can chew it up into smaller pieces and then swallow it again. This is called "chewing her cud." Pretend you are cow food that got swallowed.

1. Everyone drop to the floor and make yourselves as small as possible.
2. Oh no you are all too big! You all got stuck in the reticulum.
3. Everyone yell "Reticulum" as loud as you can.
4. Pop back up to the mouth.
5. Wiggle around to get chewed into smaller pieces.

### Forage Challenge



Black and white Holstein (hole-steen) cows are the most common dairy cows in the United States. Everyone look around and find something different that is black and white. Say, "Holstein" when you find your thing. If everyone can find a different black and white thing, use the card to complete the puzzle.

### Moove Challenge



Milk is measured in pounds. 2 cups of milk weigh one pound. Everyone clap twice to remember.



**Moove Challenge**

The rumen (roo-men) is the biggest part of the cow stomach. Tiny living things called microbes (bacteria, fungi, protozoa) live in the rumen and help digest the plants the cows eats. You just got swallowed!

1. Drop down to the floor.
2. You all made it to the rumen!
3. Everyone yell, "Rumen" as loud as you can.
4. Everyone log roll 4 times to the left as you roll around the rumen.



**Forage Challenge**

Jersey (jurr-zee) cows are dairy cows that are tan or light brown. Everyone look around and find something different that is tan or light brown. Say "Jersey" when you find your thing. If everyone can find a different tan or light brown thing, use the card to complete the puzzle.



**Moove Challenge**

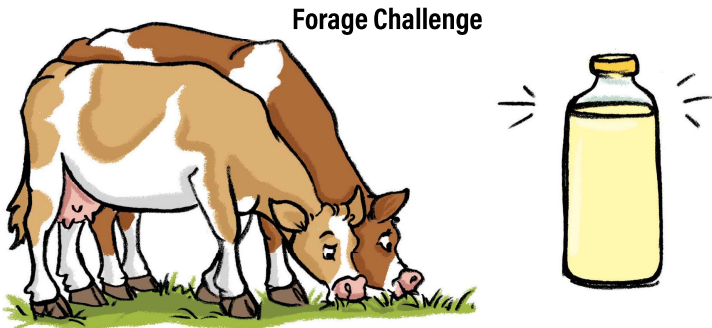
Cows come into a barn to be milked. Cows need to be milked 2 or 3 times a day. Everyone crawl across the room as fast as they can on all fours (knees a tiny bit off the ground) and moo 3 times to remember.



**Moove Challenge**

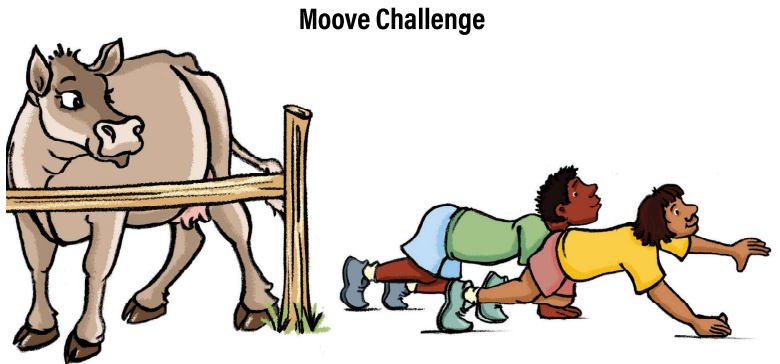
The omasum (oh-may-sum) is the part of the cow stomach that looks like a basketball. It squeezes out the water so the cow can keep the water in its body and the feed can move to the next part of the stomach.

1. Everyone give yourself a big hug to squeeze the water out.
2. Everyone yell, "Omasum" as loud as you can while squeezing.



**Forage Challenge**

Guernsey (grrrn-zee) cows are dairy cows that produce golden yellow milk. Everyone look around and find something that is yellow. Say "Guernsey" when you find your thing. If everyone can find a different yellow thing, use the card to complete the puzzle.



**Moove Challenge**

Cows walk on 4 legs. Everyone crawl like a cow on all fours slowly around the room. Keep your knees a tiny bit off the ground when you crawl.

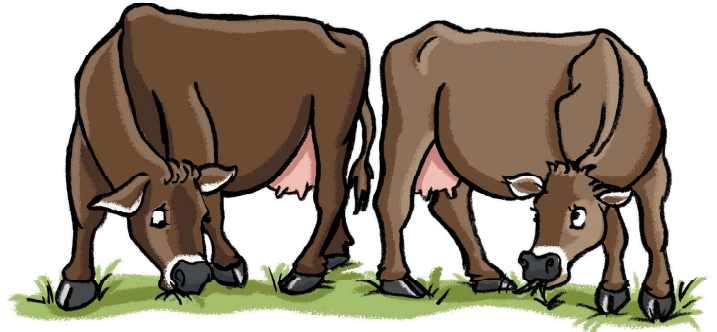
### Moove Challenge



The abomasum (ab-oh-may-sum) is the part of the cow stomach that is like a person's stomach.

1. Everyone roll back and forth on the floor on your back 10 times to get mashed up.
2. Everyone yell, "Abomasum" as loud as you can.

### Forage Challenge



Brown Swiss cows are dairy cows that are brown. Everyone look around and find something that is brown. Say "Brown Swiss" when you find your thing. If everyone can find a different brown thing, use the card to complete the puzzle.

### Moove Challenge



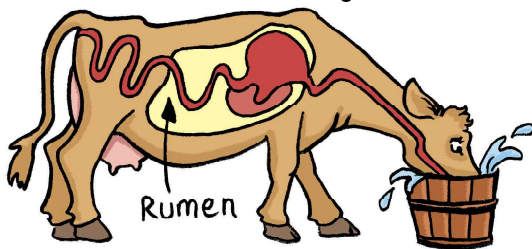
You are all superhero dairy veterinarians and there is an emergency. Fly to the farm! Lie on your stomach. Lift your arms to fly up. Lift your legs to fly down.

### Moove Challenge



Food leaves the cow's stomach and travels inside curvy intestines or guts. The guts squeeze to push the food forward. Tell everyone to squat and take a step forward in that position every time you say squeeze. Say "squeeze" 10 times. The intestines curve around so make sure they don't walk in straight line.

### Milk Math Challenge



A cow's rumen can hold 50 gallons of feed and water! Help the other players count to 50 by fives [5, 10, 15, 20, 25, 30, 35, 40, 45, 50]. Then ask, "How many 5 gallon buckets of feed and water would you need to fill a cow's rumen?" If they say you need 10 full 5-gallon buckets (5 gallons times 10 equals 50 gallons) to fill the rumen with 50 gallons of feed and water, use the card to complete the puzzle.

### Word Parlor Challenge



Ask each player to name one food we get from dairy cows that no one else has said yet. If they say milk, butter, ice cream, or cheese, or another dairy product, use the card to complete the puzzle.





### Milk Math Challenge



Cows can make 40 to 60 gallons of saliva or spit every day! Help the other players count from 40 to 60 by fives [40, 45, 50, 55, 60]. Then ask, "How many 5 gallon buckets would you need to hold 25 gallons of spit?" If they say 5 (5 gallons times 5 equals 25 gallons), use the card to complete the puzzle.



### Forage Challenge



Cows aren't particular about what they eat so it's important to clean up any wires or other metal that gets left outside. If a cow eats something metal, she can get very sick. We call this sickness hardware disease. Everyone look around and find something that is metal. Say, "Metal" when you find your thing. If everyone can find a different metal thing, use the card to complete the puzzle.

### Credits

Moooo Vet was developed by a veterinarian, Dr. Sandy San Miguel. Drs. Rafael Neves and Jon Townsend, dairy veterinarians, provided dairy facts. Erin Will, a veterinary student, had the idea for puzzles. Coach Mike Robertson recommended exercises.

Illustrations and Design by: Vicky Fieldhouse

We hope that you enjoy playing!

More fun can be found at:  
[www.VetaHumanz.org](http://www.VetaHumanz.org)

### Brown Swiss Cow Herd Puzzle

