This is a great lesson which integrates American Sign Language (ASL) while teaching students about dairy cows. Get ready to “Udder Signs!”

Presentation
In order to get started “Uddering Signs,” you should begin by using the Teacher’s Vocabulary Guide and introduce the four vocabulary words (eat, milk, water, and more) by signing each word and having the students follow along while filling in their SVW. When you have finished reviewing the signs, have your students get into small groups or with a partner and review briefly.

Guided Practice... Inform your students they are going to be learning about dairy cows. Ask your students questions like:
- “Where does milk come from?”
- “Do we use milk to make other foods?”
- Brainstorm additional foods that are made with milk.
- Remind students that any time they use
one of the ASL vocabulary words during this activity, they need to sign that word using ASL!

• Prior to reading the book *Milk: From Cow to Carton* as a class, fill out the Signing Time K and W parts of the KWL chart on page 5:
  - **K** – What students **Know** about cows,
  - **W** – What they **Want to know** about cows,
  - **L** – What they **Learned** about cows.

The “L” portion of the KWL chart should be completed at the conclusion of the activity.

• Then read *Milk: From Cow to Carton* by Aliki. This is a wonderful book that explains the process of how cows produce milk, and the process milk undergoes so we can have a cold glass of it at home any time we would like.

It also lists additional foods that are made from milk. (Compare with the class brainstorm). Ask students about the title of the book. What do they think the book will be about? Have them make predictions.

**Additional Discussion Ideas**… Different dairy cow breeds, life of a dairy cow (newborn, 6 month, yearling…)

“Where Milk Comes From” Booklet Instructions:

(one for each student)

• Make one copy of the ”Where Milk Comes From” COVER template (page D).

Copy the back side of the cover with the INSIDES template (page E).

• Using the INSIDES template, make two additional copies front and back.

• Take the three pages and trim exactly in half. You should now have 6 half sheets of paper. Place all pages together with the cover on the outside and fold in half to create the booklet. Staple twice in the center fold. (See steps 1–5 pictured on page 3).

**Booklet Activity**… Hand out a “Where Milk Comes From” blank booklet to every student. Each student should write his/her name on the cover. Also hand out pages A, B, and C to each student. These pages contain the pictures for their booklet. There are 11 pictures that tell the story of where milk comes from.

• On the left half of the page, students will glue the pictures in the correct order. The cover picture goes on the front of the booklet below their name.

• Students should cut out picture “a” and glue on the first page marked “glue picture here.”

Turn to the next page and continue gluing in order, pictures b through j.
On the right side of the pages, students will write what the picture is about.

Example… For picture “a,” students may write that a baby cow is called a “calf.”
- For picture “b,” a student may write that a baby calf first eats from its mommy.

Teacher Helps… Here are a list of ideas for teachers to help students write the text in their booklets:
- A baby cow is called a “calf.”
- A calf first eats from its mommy, called a “cow” (female cattle).
- As the calf grows older, it is called a heifer. It can now drink water (students can color this picture).
- Label the signs for “water” and “eat.”
- Cows graze in pastures and eat grass.
- Cows are different colors and are usually spotted (color this picture).
- We get milk from the cow’s udder (this woman is milking the cow by hand).
- Milk can also be taken from the cow’s udder with a machine (color this picture).
- A dairy barn “milks” a group of cows at the same time and the milk is sent to a large machine to be pasteurized and cleaned.
- Once pasteurized, the milk is put into bottles for us to drink! “More” milk please!
Classroom Activity... Once the students are familiar with dairy cows, have your students make butter! You will need:
- A clean jar (suitable for shaking).
- A pint of heavy whipping cream.
- Crackers or bread.
- A plastic knife for spreading the butter.

- Pour the whipping cream into the jar. Make sure the lid is on tight.
- Have students take turns shaking the jar of whipping cream until it begins to thicken.
- Continue shaking the jar. After a while, you will notice a thick portion of butter has formed. When a good amount of butter has formed, pour out the excess liquid from the jar. Continue shaking to remove the excess liquid. Put the lump of butter onto a plate and have students taste the milk product they made...butter! Spread the fresh butter on crackers or bread and share.
- While the students are snacking, have them complete the L portion of the KWL chart (page 5).
- To wrap up this lesson, teach your students how to “Udder Signs” by singing and signing this song about dairy cows:
  
  Sing to the tune of “London Bridges”

  Cows drink water and eat grass,
  Dairy cows make lots of milk
  Milk provides us lots of foods
  More, more milk please.
Before you begin your research, list details in the first two columns. Fill in the last column after completing your research.

<table>
<thead>
<tr>
<th>Topic</th>
<th>What I Know</th>
<th>What I Want to Know</th>
<th>What I Learned</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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Where milk comes from!
Glue cover picture here with the title: “where milk comes from”
Glue picture here.