



DAIRY ACTIVITY SHEET

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Life skill: Decision making

SET Ability: Interpret/Analyze/Reason

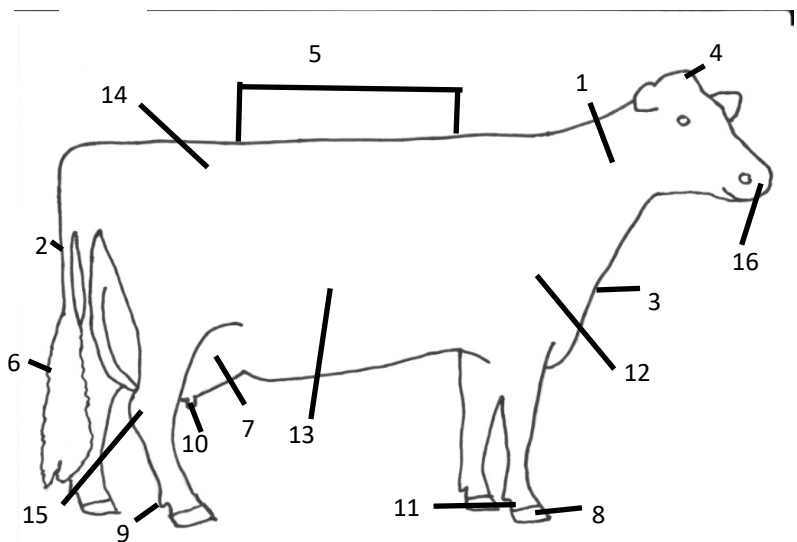
To Make the Best Better

Learning By Doing

Dairy Anatomy:

Match parts to numbers

- | | |
|-----------------------------|------------------|
| <u>1</u> Neck | <u>14</u> Hips |
| <u>4</u> Poll | <u>2</u> Tail |
| <u>5</u> Back | <u>15</u> Hock |
| <u>3</u> Dewlap | <u>10</u> Teat |
| <u>6</u> Switch | <u>8</u> Hoof |
| <u>12</u> Point of shoulder | <u>7</u> Udder |
| <u>11</u> Pastern | <u>16</u> Muzzle |
| <u>13</u> Barrel | <u>9</u> Dewclaw |



Breeds of Cows—Bovine

There are 6 major breeds of dairy cows in America. Dairy cattle first appeared in America in 1492 with the arrival of Christopher Columbus. They were used as multi purpose; milk, meat & draft. It was in the late 1800s with more people moving into cities & towns that farmers found larger markets for their milk and this was when the six breeds were imported in their greatest numbers.

- | | |
|-------------------|----------|
| Ayrshire | <u>C</u> |
| Brown Swiss | <u>F</u> |
| Guernsey | <u>D</u> |
| Holstein | <u>A</u> |
| Jersey | <u>B</u> |
| Milking Shorthorn | <u>E</u> |

- | | |
|---|------------------|
| A | Netherlands |
| B | Isle of Jersey |
| C | Scotland |
| D | Isle of Guernsey |
| E | England |
| F | Switzerland |



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Diagnosis Matching

Ringworm	<u>F</u>	A	Examine and determine what is wrong
Pinkeye	<u>C</u>	B	An instrument for measuring temperatures
Warts	<u>G</u>	C	Redness and inflammation of the lining of the eye
Lice	<u>K</u>	D	A device used to give cattle boluses
Scours	<u>J</u>	E	Blood surging thru an artery causes a
Thermometer	<u>B</u>	F	Infectious skin disease caused by a fungi
Pulse	<u>E</u>	G	A small growth on the skin
Foot rot	<u>H</u>	H	Causes lameness in an animal
Balling gun	<u>D</u>	I	An individual who visits a farm for animal health
Veterinarian	<u>I</u>	J	Manure that is of watery consistence
Diagnose	<u>A</u>	K	A parasite

- A cow's respiration (breathing) rate should be 10-30 breaths per minute. It is subject to body size, age, exercise, excitement and fullness of digestive tract.
- Her pulse should be 60-70 beats per minute. You can feel this on her jaw or the underside of her tail.
- The temperature of a cow is 101.4. You should always carry a digital thermometer in your show box and use it if you feel your animal is not feeling good.

Health True and False

A proper diet helps to keep an animal healthy	T	F
Hair coat is a very important sign of health	T	F
Wet bedding is healthy for cows	T	F
Animal comfort aids in animal health	T	F
Hot weather means a lower body temperature	T	F
Disinfecting will kill germs	T	F
Colostrum is the first milk from a cow	T	F

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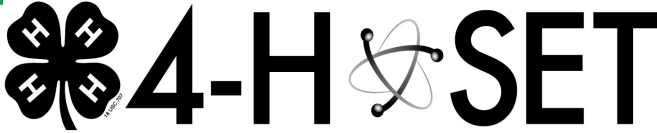


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Science, Engineering & Technology

Bulk Tank	<u>L</u>
Pasteurization	<u>H</u>
Ice Cream	<u>I</u>
Butter	<u>B</u>
Cud	<u>K</u>
Swiss cheese	<u>E</u>
Cottage cheese	<u>D</u>
Sour cream	<u>O</u>
Mozzarella	<u>N</u>
Pipeline	<u>F</u>
Processing plant	<u>M</u>
Whey	<u>C</u>
Colostrum	<u>A</u>
Calcium	<u>J</u>
Homogenization	<u>G</u>

- Milk contains more nutrients than any other food.
- After hay and grain are eaten it takes twelve hours to convert the energy from the feed into milk.
- It takes 10 pounds of milk to make 1 pound of cheese.

Life skill: Decision making

Science Skill: Interpret/Analyze/Reason

- A. Something new born calves drink
- B. Churned from milk
- C. A by-product of cheese
- D. A lumpy dairy product
- E. A hard cheese with holes
- F. Located in a tie stall or milk plant
- G. Breaking up of fat particles
- H. Heated to 145° for 30 minutes
- I. A delicious frozen dairy treat
- J. An important nutrient in milk
- K. Regurgitated from the first stomach
- L. Made from stainless steel
- M. Takes milk from the truck to packaging
- N. Stringy cheese for pizza
- O. Used in dips or on potatoes

- | | | |
|--------------------------------------|----------|----------|
| Cows are milked 2 or 3 times a day | T | F |
| Milk is cooled to 45° after milking | T | F |
| Calcium builds strong bones | T | F |
| A cow's diet will flavor the milk | T | F |
| Brown cows give chocolate milk | T | F |
| Holsteins have the highest butterfat | T | F |
| Most milk comes in plastic jugs | T | F |
| Ice cream is made from cream or milk | T | F |
| Cheeses can be hard or soft | T | F |
| Frozen yogurt is ice cream | T | F |



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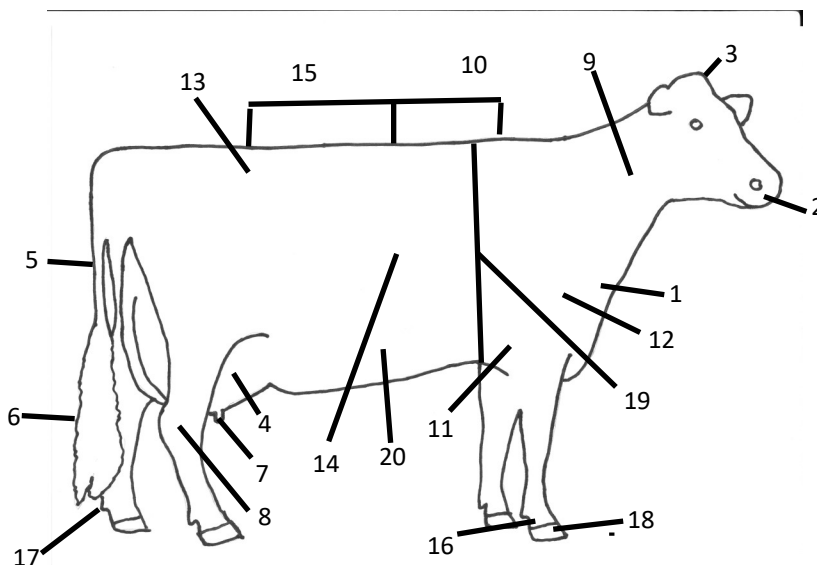
Life skill: Reasoning

Science Skill: Interpret/Analyze/Reason

Dairy Anatomy:

Match parts to numbers

- | | |
|-------------------------------|---------------------|
| <u> 9 </u> Neck | <u> 13 </u> Hips |
| <u> 3 </u> Poll | <u> 5 </u> Tail |
| <u> 10 </u> Chine | <u> 8 </u> Hock |
| <u> 1 </u> Dewlap | <u> 7 </u> Teat |
| <u> 11 </u> Elbow | <u> 6 </u> Switch |
| <u> 12 </u> Point of shoulder | <u> 4 </u> Udder |
| <u> 19 </u> Heart girth | <u> 16 </u> Pastern |
| <u> 20 </u> Barrel | <u> 17 </u> Dewclaw |
| <u> 14 </u> Ribs | <u> 18 </u> Hoof |
| <u> 15 </u> Loin | <u> 2 </u> Muzzle |



Breeds of Cows—Bovine

There are 6 major breeds of dairy cows in America. Dairy cattle first appeared in America in 1492 with the arrival of Christopher Columbus. They were used as multi purpose; milk, meat & draft. It was in the late 1800s with more people moving into cities & towns that farmers found larger markets for their milk and this was when the six breeds were imported in their greatest numbers.

Can you figure which ones fit the following descriptions:

Rugged with feminine qualities with outstanding milk production

Rich milk, small stature

Hardy, superior udder quality

High beta-carotene content makes golden milk

Excellent feet & legs from a mountainous region

Made great strides in the past 15 years to develop more dairyness

 Holstein

 Jersey

 Ayrshire

 Guernsey

 Brown Swiss

 Milking Shorthorn



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Life skill: Decision making

Science Skill: Interpret/Analyze/Reason

"Feed Me" Matching

Oats	<u>B</u>
Alfalfa	<u>G</u>
Cotton seed	<u>J</u>
Beet pulp	<u>H</u>
Timothy	<u>E</u>
Trace minerals	<u>A</u>
Clover	<u>I</u>
Brewers grain	<u>F</u>
Citrus pulp	<u>L</u>
Cornmeal	<u>C</u>
Soybean meal	<u>D</u>
Corn	<u>K</u>

- A. Looks like tiny, uniform crystals
- B. Common cereal grain fed for its fiber
- C. Whole corn ground up
- D. By-product after removing oil, 44%CP
- E. A grass with dense spikes
- F. By-product from making beer
- G. A legume with a small purple flower
- H. By-product of sugar beets
- I. A legume with flowers of white, red
- J. A by-product of cotton
- K. An energy source used for silage
- L. Made up of orange & grapefruit peels

Cow Wellness

- The most common calf nutritional disease is diarrhea. Over feeding of milk or milk replacer can result in this.
- Generally you could say you are dealing with a respiratory disease if the animal has a cough, wheeze or runny nose along with rapid breathing.
- Parasites cause stress, reduce animal comfort, lower production, increase feed costs and decrease profit.

Mastitis is a infection of the jaw	T	<u>F</u>
Ringworm is a fungus	<u>T</u>	F
Ketosis results in loss of milk production	<u>I</u>	F
Hairy Heel Warts is called digital dermatitis	<u>I</u>	F
A good place to calve a cow is on pasture	<u>T</u>	F
Milk Fever is a metabolic disease	<u>I</u>	F
IM,IV & SQ all mean subcutaneous	T	<u>F</u>
Calving is the least stressful time for a cow	T	<u>F</u>
Oxytocin causes milk let down	<u>T</u>	F



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Science, Engineering & Technology
"Milking It, Yummy"

Life skill: Reasoning

Science Skill: Interpret/Analyze/Reason

Milk	<u>F</u>
Swiss cheese	<u>J</u>
Pasteurization	<u>L</u>
Processing plant	<u>C</u>
Homogenization	<u>B</u>
Whey	<u>K</u>
UHT	<u>A</u>
Calcium	<u>H</u>
Rennet	<u>E</u>
Mozzarella	<u>N</u>
Yogurt	<u>G</u>
Water	<u>I</u>
Buttermilk	<u>D</u>
Separation	<u>M</u>

- A. Ultra high temperature pasteurization
- B. The process of breaking up the fat particles
- C. From truck to packaging
- D. Liquid leftover from churning milk
- E. Used in making cheese
- F. Has a pH value ranging from 6.5 to 6.7
- G. Contains the active culture lactobacillus
- H. An important nutrient in milk
- I. Is milk's largest ingredient
- J. A hard cheese with holes
- K. Watery part of milk that separates from the curds
- L. Heated to 160° for 30 minutes
- M. Resulting in cream and skim milk
- N. Pizza

- Milk contains more nutrients than any other food.
- Milk gives you calcium, riboflavin & protein needed for healthy skin & good vision.
- A teenager needs three cups per day of dairy products.

Milk is stored at 45°	T	<u>F</u>
Farmers are paid for components	<u>I</u>	F
SCC is the number of white blood cells	<u>I</u>	F
Bulk tanks are made of aluminum	T	<u>F</u>
Butter is made from yogurt	T	<u>I</u>
Jersey's have the highest butterfat	<u>I</u>	F
Cheddar cheese is a soft cheese	T	<u>F</u>
Vitamin D helps skin	<u>I</u>	F
Casein is the milk protein	<u>I</u>	F
Milk can absorb other food flavors	<u>I</u>	F



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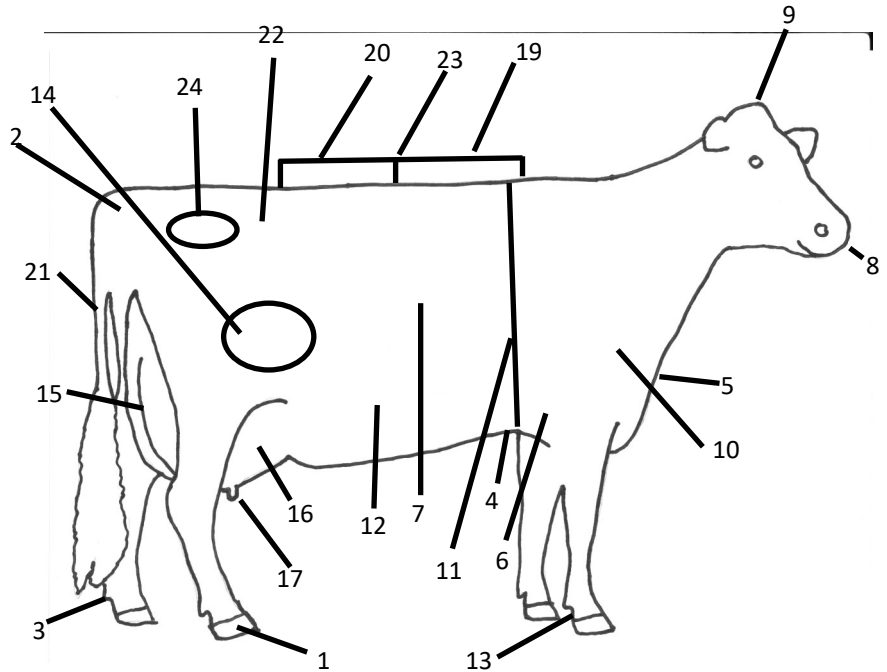
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Dairy Anatomy:

Match parts to numbers

- | | |
|-----------------------------|----------------------|
| <u>4</u> chest floor | <u>24</u> thurls |
| <u>2</u> pins | <u>23</u> back |
| <u>18</u> neck | <u>22</u> hips |
| <u>9</u> poll | <u>21</u> tail |
| <u>19</u> chine | <u>5</u> dewlap |
| <u>17</u> teat | <u>14</u> stifle |
| <u>6</u> elbow | <u>16</u> fore udder |
| <u>10</u> point of shoulder | <u>15</u> rear udder |
| <u>11</u> heart girth | <u>13</u> pastern |
| <u>12</u> barrel | <u>3</u> dewclaw |
| <u>7</u> ribs | <u>1</u> hoof |
| <u>20</u> loin | <u>8</u> muzzle |



Breeds of Cows—Bovine

There are 6 major breeds of dairy cows in America. Dairy cattle first appeared in America in 1492 with the arrival of Christopher Columbus. They were used as multi purpose; milk, meat & draft. It was in the late 1800s with more people moving into cities & towns that farmers found larger markets for their milk and this was when the six breeds were imported in their greatest numbers.

UNIFIED SORECARD: Fill in the blanks with name & score.

Skeletal parts of the cow, with the exception of the rear feet & legs

Frame 15%

Major consideration is given to the traits that contribute to high milk

Dairy Character 20%

Volumetric measurement of capacity

Body Capacity 10%

Evidence of mobility, rear view, side view, thurl position

Feet & legs 15%

General openness & angularity while maintaining strength

Udder 40%

Resource PDCA Scorecard

Total 100%



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MIX IT UP

Uterus	<u>F</u>	A. An estimate of an animals ability to transmit
Flight zone	<u>M</u>	B. 305 day mature equivalent
Buffers	<u>G</u>	C. For heifers 750# (large breeds)
Breeding weight	<u>C</u>	D. White blood cells
Edema	<u>L</u>	E. 160°F for 15 seconds
Mastitis	<u>I</u>	F. Site of development of calf
DM	<u>K</u>	G. Feed additive such as sodium bicarbonate
ME	<u>B</u>	H. Drained from curds, milk protein
SCC	<u>D</u>	I. Inflammation or infection of
HSUS	<u>N</u>	J. By-product of sugar beets
Flash pasteurization	<u>E</u>	K. Dry matter
Whey	<u>H</u>	L. Accumulation of fluids in the cells
Beet pulp	<u>J</u>	M. Comfort zone
TPI	<u>A</u>	N. Wants to abolish all animal agriculture

• A cow's respiration (breathing) rate should be 10 to 30 per minute. It is subject to body size, age, exercise, excitement and fullness of digestive tract.	CMT means micro or parts per million	T	<u>F</u>
• Her pulse should be 60-70 beats per minute. You can feel this on her jaw or the muscle of her tail.	Diarrhea can be caused by coocidian	<u>I</u>	F
• The temperature of a cow is 101.4. You should always carry a digital thermometer in your show box and use it if you feel your animal is not feeling good.	Carbohydrates are length of milking	T	<u>F</u>
	Rumen is a main source of energy	T	<u>F</u>
	Forages are roughage	<u>I</u>	F
	Concentrates are a primary source of antibodies	T	<u>F</u>
	Colostrum is cereal, protein and vitamins	<u>I</u>	F
	Body condition tells nutritional needs	<u>I</u>	F
	Lactation is scours	T	<u>F</u>
	TMR is different feeds mixed together	<u>I</u>	F

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“Dairy Foods”

Cottage cheese	<u>K</u>	A. Enzyme used in cheese making
Yogurt	<u>I</u>	B. A milk protein
Casein	<u>B</u>	C. By-product of cheese making
Rennet	<u>A</u>	D. Made from goats milk
Pasteurization	<u>M</u>	E. Gives the milk a sour taste
Homogenization	<u>O</u>	F. Milk is churned into this
Feta cheese	<u>D</u>	G. Sheep’s milk cheese
Low-fat milk	<u>N</u>	H. Mixture of milk & eggs that has been coagulated
Roquefort	<u>G</u>	I. Cultured milk product
Butter	<u>F</u>	J. Soft cheese made with a surface mold
Blue cheese	<u>J</u>	K. Curds of milk proteins
Lactic acid	<u>E</u>	L. Unpasteurized milk
Raw milk	<u>L</u>	M. Heated to 160° for 30 minutes
Custard	<u>H</u>	N. Milk that is 1-2% butterfat
Whey	<u>C</u>	O. Process of breaking up fat particles

- Milk is one of the most highly regulated products on the market.
- There are 19 major categories that are considered when a milk inspector completes a dairy farm inspection.
- The wash up system has to be maintained so fat and calcium doesn’t build up.

Feeding silage causes off flavor milk	T	<u>F</u>
Exposing milk to light causes oxidation	<u>I</u>	F
Buttermilk is formed when making yogurt	T	<u>F</u>
Ayrshires have the highest butterfat	T	<u>F</u>
The dairy industry is regulated by the CIA	T	<u>F</u>
Bulk tanks are made of aluminum	T	<u>F</u>
Milk was used for food 5,000 years ago	<u>I</u>	F
Mozzarella is the most consumed cheese	<u>I</u>	F
UTH milk is mainly used for creamers	<u>I</u>	F