**NAME\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_The Dairy Industry – Mrs. Weimer**

**Procedure**

 **Part One—Dairy Industry Scavenger Hunt**

To become more familiar with the dairy industry, you will be completing a scavenger hunt utilizing the *US Dairy Industry Factsheet* and the *2013 Dairy Industry Statistics* as well as any reliable internet resources.

When instructed by your teacher, you may work with a partner to complete the following 15 questions:

1. There are approximately \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ dairy farms in the United States.
2. About \_\_\_\_\_\_\_ percent of all dairy farms are family-owned.
3. On dairy farms throughout the US, the average herd size is \_\_\_\_\_\_ cows.
4. The average U.S. cow produces nearly \_\_\_\_\_ gallons of milk per day.
5. United States dairy farms produce almost \_\_\_\_\_\_\_\_\_ billion pounds of milk annually.
6. Dairy is the number one agriculture business in eleven states in the United States, name 5 of them.
7. Dairy farming creates a ripple effect in our economy. When a dairy farmer sells $1 of milk, it generates $\_\_\_\_\_ of economic activity.
8. For every \_\_\_\_\_\_\_\_\_\_ cows, one job is supported in the dairy industry.
9. There are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ dairy farms in my state.
10. The average number of cows per farm is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cows in my state.
11. Write down 2 surprising facts that you learned after reviewing the factsheets provided to you.

**Part Two—Economic Impact in the Community**

A dairy farm is a business, just like a restaurant, garage, or grocery store. All of these businesses contribute to the local economy by purchasing local products, employing residents, and utilizing renewable energy.

Take 5 minutes and brainstorm individually about items that are needed to run a dairy farm. Remember to include equipment, feed, animal supplies, and repairs. Write down as many items as possible that you can in 5 minutes in the space below.

When you have finished, your teacher will divide the class into 4 groups (East Coast, Midwest, Northwest, and Southwest). Utilizing the *Dairy Regions Factsheet,* your group will have 5 minutes to find the following information about your assigned region.

|  |  |
| --- | --- |
| Region Name: |   |
| Total Milk Production (lbs): |   |
| Total Number of Cows: |   |
| Number of Herds: |   |
| % of Milk Production: |   |

Record information from each group as they present their information to the class.

|  |  |
| --- | --- |
| Region Name: |   |
| Total Milk Production (lbs): |   |
| Total Number of Cows: |   |
| Number of Herds: |   |
| % of Milk Production: |   |

|  |  |
| --- | --- |
| Region Name: |   |
| Total Milk Production (lbs): |   |
| Total Number of Cows: |   |
| Number of Herds: |   |
| % of Milk Production: |   |

|  |  |
| --- | --- |
| Region Name: |   |
| Total Milk Production (lbs): |   |
| Total Number of Cows: |   |
| Number of Herds: |   |
| % of Milk Production: |   |

PART 3- FACILITIES:

***WORD BANK***

**Free-Stall Barn Robotic Milking Unit Rotational Grazing**

**Pack Barn Stanchion Barn Tie-Stall Barn**

Photo #1: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Description:

Photo #2: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Description:

Photo #3: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Description:

Photo #4: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Description:

Photo #5: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Description:

Photo #6: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Description:

TASK:

Imagine you work for Dairy Construction Specialists , a company that specializes in building dairy facilities. You have just had a consult with a young farmer that can’t decide between what type of facility he wants to build.

As part of your consulting business, you must consider all of the benefits and consequences of any decision you offer to a customer. Using your knowledge of the 6 types of systems, your supervisor asks you to complete the following:

1. Prepare a document that lists 3 “Pros” and 3 “Cons” for each type of facility (Tie-Stall barn, Free-Stall Barn, Stanchion Barn, Robotic Milker, Pack Barn, and Grazing systems.)

2. Create a one-page advertisement for the system that you and your partner would recommend to the young farmer. Be sure to include estimated costs of the project, 3 reasons to build this system, and an overview of the contents of the design (i.e. milking parlor needs, gates, labor)

3. Your group will be presenting your one-page advertisement to the class as directed by your instructor.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Breed** | **Country of Origin** | **Imported to the US?** | **Description of the Breed (Include Color)** | **Breed Strength and Characteristics** |
| **Ayrshire** |   |   |   |   |
| **Brown Swiss** |   |   |  |   |
| **Guernsey** |   |   |   |   |
| **Holstein** |   |   |   |   |
| **Jersey** |   |   |   |   |
| **Milking Shorthorn** |   |   |   |   |
| **Red and White** |   |   |   |   |

 **Part Two—Which Breed is Best?**

As you have discovered, each breed has their strengths and weaknesses. Utilizing your work above (and referencing the OSU website as needed), rank the breeds according to the respective characteristics by placing 1-7 on the line to indicate the rank of each breed.

1. Milk Production 2. % Fat in Milk

\_\_\_\_\_\_Ayrshire \_\_\_\_\_\_Ayrshire

\_\_\_\_\_\_Brown Swiss \_\_\_\_\_\_Brown Swiss

\_\_\_\_\_\_Guernsey \_\_\_\_\_\_Guernsey

\_\_\_\_\_\_Holstein \_\_\_\_\_\_Holstein

\_\_\_\_\_\_ Jersey \_\_\_\_\_\_ Jersey

\_\_\_\_\_\_Milking Shorthorn \_\_\_\_\_\_Milking Shorthorn

\_\_\_\_\_\_Red & White \_\_\_\_\_\_Red & White

3. % Protein in Milk

\_\_\_\_\_\_Ayrshire

\_\_\_\_\_\_Brown Swiss

\_\_\_\_\_\_Guernsey

\_\_\_\_\_\_Holstein

\_\_\_\_\_\_ Jersey

\_\_\_\_\_\_Milking Shorthorn

\_\_\_\_\_\_Red & White

PART 5-DAIRY CAREERS

1. Your teacher will place you in groups of 3 and provide the group with a copy of the *Careers in Dairy* presentation.
2. Take 5-10 minutes to look through the presentation to “meet” individuals working in the dairy industry and learn about their various jobs.
3. Choose 4 jobs that match your interests. Complete the following information for each of these jobs

Job Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Employee: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Job Tasks:

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Education/Skills Needed:

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Why did this occupation appeal to you?

Job Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Employee: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Job Tasks:

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Education/Skills Needed:

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Why did this occupation appeal to you?

Job Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Employee: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Job Tasks:

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Education/Skills Needed:

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Why did this occupation appeal to you?

Job Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Employee: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Job Tasks:

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Education/Skills Needed:

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Why did this occupation appeal to you?

**“From Moo to You: The Story of Milk”**

1. What is the name of milk given to calves directly after birth?
2. What age is a cow when she gives birth for the first time?
3. How much water does a cow drink each day?
4. True or False: A cow does not produce milk until she gives birth to a calf.
5. How many glasses of milk does a cow produce each day?
6. Where are the cows milked?
7. When milking cows by hand, one man could milk \_\_\_\_\_\_ cows per hour.
8. Using current milking machines, one man can milk \_\_\_\_\_\_ cows per hour.
9. After the raw milk leaves the cow, it is pumped through a pipe that cools the milk from \_\_\_\_\_\_\_ degrees to \_\_\_\_\_\_ degrees.
10. How many gallons of milk does a tanker truck hold? What piece of equipment separates the cream from the skim milk?
11. When milk is pasteurized, it is heated to \_\_\_\_\_\_\_ degrees for \_\_\_\_\_\_\_ seconds.
12. What is homogenization?
13. When making ice cream, the containers are placed in a blast freezer. How cold is this freezer?