



TITLE	GRADE LEVEL	SUBJECT
MILKING MATH	5 <sup>TH</sup> – 6 <sup>TH</sup>	POST-FIELD TRIP

<b>OVERVIEW AND OBJECTIVES</b>	<ul style="list-style-type: none"> <li>Students will be able to identify some of the jobs within the dairy industry and the various responsibilities of a dairy farmer.</li> <li>Students will be able to apply math skills to real world problems having to do with the dairy industry.</li> <li>Students will be able to find the mean, median, and range of a set of numbers.</li> <li>Students will be able to apply multiplication skills.</li> </ul>
<b>VOCABULARY &amp; MATERIALS</b>	<p>Vocabulary: Veterinarian, Nutritionist, Manager, Technician, Calcium, Teaspoons, Milk, Dairy</p> <p>Materials: "A Cow's Night Out" Worksheet "Milking Math" Worksheet</p>
<b>BACKGROUND INFORMATION</b>	Prior to field trip, review safety practices and field trip behavior.
<b>DEVELOPMENT AND ACTIVITIES</b>	<ol style="list-style-type: none"> <li>Have students complete the "A Cow's Night Out" worksheet as "Bell Work". Review answers together, when completed.</li> <li>Pass out the "Milking Math" worksheet. Read aloud the directions on both sides of the worksheet. Allow students to work in pairs to complete the worksheet.</li> <li>When pairs are complete, have students share answers with the class and review together.</li> </ol>
<b>SUMMARY</b>	Students will learn about some jobs within the dairy industry and make connections to both math and science. Students will have the opportunity to apply with math skills to real life situations within the dairy industry.
<b>STANDARDS ADDRESSED</b>	<p>PreK–12 Standard 3 Nutrition Students will gain the knowledge and skills to select a diet that supports health and reduces the risk of illness and future chronic diseases.</p> <p>Nutrition 3.1 Identify the key nutrients in food that support healthy body systems (skeletal, circulatory) and recognize that the amount of food needed changes as the body grows.</p> <p>Statistics and Probability 6.SP</p> <ol style="list-style-type: none"> <li>Develop understanding of statistical variability.</li> <li>Understand that a set of data collected to answer a statistical question</li> </ol>

	has a distribution, which can be described by its center (median, mean, and/or mode), spread (range, interquartile range), and overall shape.
<b>WORKSHEETS (Attach)</b>	"A Cow's Night Out" Worksheet "Milking Math" Worksheet

Kate O'Brien M.Ed.

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

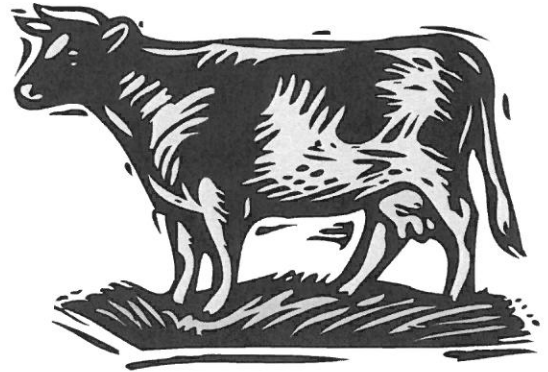
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## A Cow's Night Out

Find the products. Then, solve the riddle by matching the letters to the blank lines below.

S. $\$3.45 \times 3 =$ _____	O. $\$2.26 \times 5 =$ _____	O. $\$6.32 \times 2 =$ _____
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O. $\$2.08 \times 6 =$ _____	T. $\$7.99 \times 2 =$ _____	E. $\$0.02 \times 8 =$ _____
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E. $\$7.63 \times 7 =$ _____	M. $\$4.00 \times 8 =$ _____	O. $\$5.55 \times 7 =$ _____	O. $\$7.34 \times 6 =$ _____
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H. $\$9.18 \times 4 =$ _____	T. $\$3.62 \times 8 =$ _____	O. $\$0.86 \times 7 =$ _____	V. $\$5.63 \times 3 =$ _____	I. $\$6.20 \times 4 =$ _____
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### Where Do Cows Go On A Saturday Night?

\_\_\_\_\_      \_\_\_\_\_  
 $\$15.98$   $\$11.30$        $\$28.96$   $\$36.72$   $\$0.16$

\_\_\_\_\_

$\$32.00$   $\$12.64$   $\$12.48$   $\$38.85$   $\$6.02$   $\$44.04$   $\$16.89$   $\$24.80$   $\$53.41$   $\$10.35$

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

### **Milking Math**

*A dairy farmer is a farmer who specializes in raising dairy cattle, specifically for milk and/or cheese products.*

*It takes 10 minutes to milk one group of 20 cows. Answer the following questions and show your work by completing the number lines below.*

1. How many minutes will it take to milk 120 cows? \_\_\_\_\_

How many hours? \_\_\_\_\_



2. How many minutes will it take to milk 200 cows? \_\_\_\_\_

How many hours? \_\_\_\_\_



3. How many minutes will it take to milk 235 cows? \_\_\_\_\_

How many hours? \_\_\_\_\_



Below is a graph comparing the amount of cheese, butter, and nonfat dry milk exported from the United States, Canada, Germany, and New Zealand.

Total Sales (in 1,000 metric tons)

	<b>Cheese</b>	<b>Butter</b>	<b>Nonfat Dry Milk</b>
<b>United States</b>	99	41	255
<b>Canada</b>	8	16	8
<b>Germany</b>	126	74	84
<b>New Zealand</b>	150	89	275

Determine the following. Round to the nearest tenth. Show all your work.

Mean (average)

Cheese:

Butter:

Nonfat Dry Milk:

Median (middle)

Cheese:

Butter:

Nonfat Dry Milk:

Range (span)

Cheese:

Butter:

Nonfat Dry Milk: