



PUTTING DOWN ROOTS

FARM TO SCHOOL PROGRAM

— Stark County Schools —

JANUARY
**HARVEST
OF THE
MONTH**

LEARN ABOUT MILK & GRAINS

ELEMENTARY

- **It's a MOO-stery!** - Students (Grades k-2) will be introduced to the dairy industry and make observations about how historic tools such as a butter paddle, cheese press, and milk tester can be used to process milk on a dairy farm.
- **Milk or Meat? Beef or Dairy?** - Students will identify the differences between beef and dairy cattle and determine the commodities produced by each type of cattle.
- **A Day Without Dairy** - Students will create, read, and interpret graphs relating to the economic importance of the dairy industry and be challenged to understand the economic consequences of a day without dairy.
- **Cowabunga! All About Dairy Breeds** - Students will understand breed characteristics and countries of origin for five different breeds of dairy cattle. Students will discover why dairy farmers choose individual breeds for specific purposes.

MIDDLE SCHOOL

- **FoodMASTER Middle: Yogurt** - Students will learn the role of bacterial fermentation and evaluate the effect of fat content, sugar content (lactose), and temperature in bacterial fermentation as they make yogurt.
- **Blue's the Clue: Souring Milk for Science** - This lab introduces students to the effect temperature has on reducing and controlling the growth of bacteria. Students will use conventionally pasteurized and ultra-high-temperature (UHT) milk to observe how different temperatures affect the growth of spoilage bacteria. They will also learn about the importance of pasteurization in keeping food safe.

HIGH SCHOOL

- **Lactose Lab: Some Don't Like it Sweet** - Students will learn the chemistry and composition of milk, identify the difference between a monosaccharide and disaccharide, and carry out a laboratory activity testing the effect of the enzyme lactase on various milks.
- **Milk: The Scoop on Chemical and Physical Changes** - Students apply their knowledge of physical science to dairy products to determine if the changes that take place when turning milk into cheese, butter, yogurt, ice cream, whip cream and other dairy products, is a physical or chemical change.
- **Preservation Power of Honey** - Students will learn how honey may be used as a preservative of milk in areas without access to electricity or refrigeration and how this preservation method relies on elements found specifically in honey that cannot be replicated with other sources of sugar.

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