

Lesson IV – Milling and Packaging

Day 7 – Milling (Grinding) Wheat

Day 8 – Packaging Wheat

Goal: To introduce the process of milling wheat into flour and to consider some of the changes in storing and packaging wheat products.

Objectives for Students by Grade Level:

- K-2 To understand that wheat is ground into flour.
- K-2 To recognize wheat products in various packages.
- 2 To recognize that storage of wheat has changed.

Day 7 – Milling (Grinding) Wheat (15-20 minutes)

Materials to pull from trunk:

- Hand Grist Mill
- Hopper
- 2 C-clamps
- Container of white flour
- Container of whole wheat flour
- “Grain of Wheat” booklet
- Worksheets
 - Patterns for grain of wheat booklet
 - Pattern for mill apron

Materials supplied by teacher:

- Wheat seeds (kernels) about 1 lb.
- Photocopies of worksheets (One per student is needed of the booklet. Only one is needed of mill apron.)
- Tray or container to catch flour.

Day 7 – Milling (Grinding) Wheat (continued)

Suggested Introduction:

People learned to grind wheat seeds into flour so that wheat could be made into bread. Very long ago people used rough stones to break the wheat seeds into a powder that could be baked as bread.

Activity: Grinding Wheat

1. Set up the hand grist mill and hopper on a table using the two C-clamps to fasten it to the table. (The hopper is a funnel piece that fits into the top of the mill. Wheat is placed directly into the hopper.)
2. Place a pan or tray directly under the buhrstones to receive the flour when the wheat is ground. You may want to make a paper apron to catch the flour (the mill apron).
3. Pour wheat into the hopper.
4. Under an adult's supervision children can turn the handle and watch as the wheat comes from the buhrstones as whole wheat flour.
5. **Please clean the mill before returning it to the trunk. To do this turn it upside down over a trash can and empty the wheat and flour out. Also loosen up the buhrstones a bit, jiggle them, and let the flour caught between them fall into the trash can.**

Activity: "Grain of Wheat" booklet

Look at the booklet of the grain of wheat. Find the white part which is ground into flour. Look inside to find the part of the seed that sprouts to grow a new plant.

Use the patterns for the parts of the grain for children to make their own booklet. Discuss the parts of the wheat seed and what each part is used for. Show children the whole wheat and white flour. (Whole wheat uses the entire grain of wheat. White flour uses only the endosperm.)

Parts of a Grain of Wheat (use with booklet)

- Bran – Outer covering of wheat seed or kernel.
- Endosperm – Source of white flour.
- Germ – Embryo or sprouting section.

Day 8 – Storing and Milling Wheat and Packaging Flour (15-20 minutes)

Materials to pull from trunk:

- Golden Rule flour sack
- Smoky Valley flour sack
- Photographs
 - #11 – Gunnerson Grain Elevator
 - #12 – Farmarco Grain Elevator
 - #13 – Teichgraber Mill
 - #14 – Smoky Valley Roller Mill

Materials supplied by teacher:

Day 8 – Storing and Milling Wheat and Packaging Flour (continued)

Exercise: Photographs #13 and 14

Suggested introduction: Storage of Wheat

Today the wheat harvest is stored in huge concrete bins, called elevators, along railroad tracks. Trains and trucks take wheat to mills.

In our state of Kansas there are mills where wheat is ground into flour. At the grocery store try to find the words “Kansas” and “wheat” on a flour sack..

Vocabulary:

buhrstone – Also burrstone – A siliceous rock used as material for millstones.

Suggested Introduction: Milling Wheat and Packaging Flour

People invented machines to help with the work of making wheat into flour. Mills grind wheat into flour. Long ago farmers took their wheat to mills near home. Today some wheat is shipped far away to be ground into flour.

Activity: Use photographs #11 and 12 and the flour sacks

1. Look at the flour sacks and find the word “Wheat.”
2. Find the image of the bundle of wheat on the Golden Rule sack.
3. 2nd grade – Compare the Smoky Valley flour sack and the photograph of the Smoky Valley Mill. Find the words “Smoky Valley” on each.