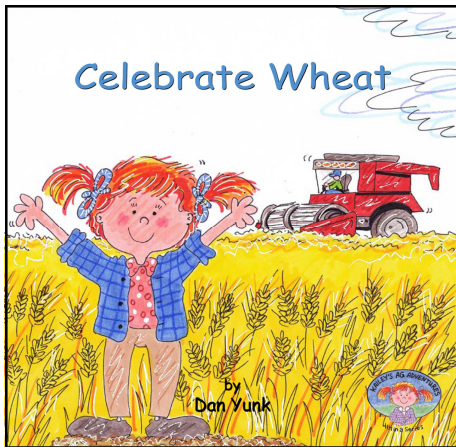


Beyond Bread!



A lesson based on the book, *Celebrate Wheat*, by Dan Yunk.

America's food supply is safe, affordable and abundant but misunderstood by the public. Kansas Farm Bureau seeks to improve consumer knowledge of the importance of farming and ranching through the *Kailey's Ag Adventure Series*, of which this book is a part.

BACKGROUND INFORMATION:

After reading *Celebrate Wheat*, you learned with Kailey how farmers plant, grow and harvest wheat. You also learned wheat is what makes the yummy crust in pizza we eat. Did you know that Kansas is the largest wheat producing state? Nearly one-fifth of all wheat is grown in Kansas. This is why Kansas is called the "Wheat State" and the "Breadbasket of the World."

Wheat was first planted in the United States in 1777 as a hobby crop. Today wheat is the primary grain used in the United States and is grown in 42 states. Approximately three-quarters of all U.S. grain products are made from wheat flour and more foods are made with wheat than any other cereal grain.

Did you know one bushel of wheat yields approximately 42 pounds of white flour and approximately 60 pounds of whole-wheat flour? That's a lot of flour per bushel! Wheat is used for many kinds of foods such as breads, cookies, cakes, pies, pastries, cereals, crackers, pasta, flour tortillas and oriental noodles. Wheat is fed to cattle, poultry and other livestock. It is also used for many non-food products you use daily. Since we use many products made from wheat, it is important we know what those products are. Today we are going to learn about many products made from wheat!

DID YOU KNOW?

One bushel of wheat contains about 1 million kernels and a family of four can live 10 years off of bread produced by one acre of wheat.

LEVEL: 1st-3rd Grade

Subjects:

Writing: 1st Grade

Text Types and Purposes

CCSS.ELA-Literacy.W.1.2

Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure.

Writing: 3rd Grade

Text Types and Purposes

CCSS.ELA-Literacy.W.3.1a

Introduce the topic or text they are writing about, state an opinion, and create an organizational structure that lists reasons.

Standards may be adjusted to fit other grade levels.

Activity Description:

The students will learn about different products with wheat in them. They will identify products as either wheat or non-wheat.

Student Learning Outcomes:

The student will know and understand wheat is also used to produce products not associated with food.

Estimated Time: 60 minutes

After reading Celebrate Wheat to the students and discussing how important wheat is to us, start discussing different products wheat plays a role in.

When you hear the word wheat do you automatically think of bread, pasta and other foods? Wheat can be used for things other than edible goods. Wheat and wheat straw have many alternative uses that make wheat valuable. Explain to the students how wheat plays a role in some of the items listed below.

Wheat is being utilized in these products:

Straw Particle Board	Paper	Glue
Plastic Bags	Cups	Golf Tees
Insulation	Cosmetics	Hair Conditioners
Liquid Detergents	Pet Foods	Alcohol
Oil	Gluten	Sweetener
Food Trays	Play-Doh	Vitamins

Play-Doh– Play Doh is a childhood favorite to many kids. Parents approve because it is non-toxic, non-allergenic and will not stain. What exactly goes into Play-Doh? Play-Doh is mostly composed of water, salt and wheat flour.

Adhesives– Wallpaper glue is an adhesive made specifically for hanging wallpaper in your home or office. This paste involves wheat flour, know as Triticum Vulgare (Sativum). You mix it with warm water to make glue. Starch from wheat is also used as an adhesive on postage stamps and to hold the bottom of grocery bags together.

Pet Foods- Wheat is the grain used as a high-quality carbohydrate source in dry dog and cat food. It provides energy for daily activities.

Cosmetics– Triticum Vulgare (Wheat) Kernel Flour is a fine, soft powder. It is used in the form of bath, body and hand, hair, and skin cleansing products.

Straw Particle Board– One acre of wheat stubble produces approximately two bales of wheat straw. 64 pounds of wheat straw produces one sheet of strawboard 1/2 thick. Strawboard is used primarily for assembling furniture and flooring, and as a foundation for lamination.

Activity: After you have gone over the products with the students, pass out the worksheet labeled “T-Chart.” To get the students up and moving you can make a T-Chart on the board or have baskets the students can bring their cards up to and either tape to the board or place in the wheat or non-wheat basket. After you have called on everyone (one at a time), empty out the basket to see if they were all correct. If there are some that are incorrect, explain why to the class. Pass out the next worksheet and have the student write a sentence on how each product relates to them.

Attached is an optional activity on how to make wheat paste. The teacher can make it at home and bring it in an ample amount of bottles to share with the class or make it in class with the students. Show the students the video on how to make wheat paste, also known as glue. Have the students cut out - and use the wheat paste - to paste the products under one of the two categories on the T-Chart.

New Vocabulary:

- bushel
- Gluten
- Triticum Vulgare (sativum)
- Starch

Materials Needed:

- Celebrate Wheat
- Copies of worksheets
- Products on T-Chart (optional)
- Bushel basket (optional)
- Scissors and glue

Sources:

Kansas Wheat council
www.kswheat.com

Oklahoma Ag in the Classroom
www.agclassroom.org/ok

eHow
www.ehow.com/facts

What's in cosmetics and personal care products?
www.cosmeticsinfo.org

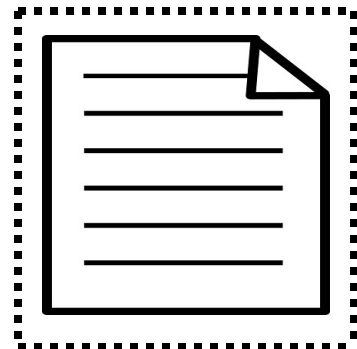
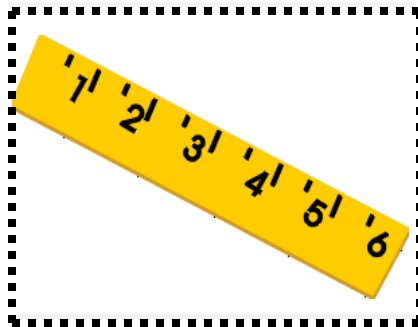
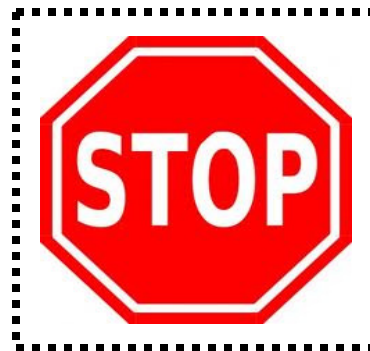


T-Chart Worksheet

Name _____

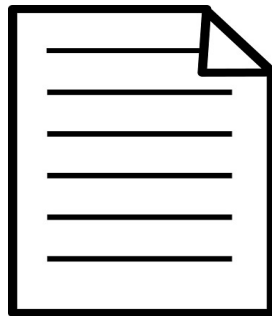
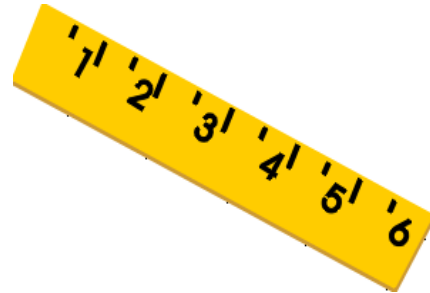


Cut the pictures out and glue them on the T-Chart.



T-Chart Worksheet

Name **KEY**



Products made from wheat..

Name _____

Wheat plays a role in these products. Choose four words from the list below then write a sentence describing how the product relates to your life. Be sure to use correct capitalization and punctuation.

Plastic Bags
Food Trays
Play-Doh

Insulation
Paper
Glue

Liquid Detergents
Cosmetics
Hair Conditioners

Oil
Pet Foods
Golf Tees

1.

2.

3.

4.



Making Wheat Paste

Wheat paste has been used for hundreds of years as a type of adhesive made from a combination of vegetable starch and water. This paste is used by street artists, crafts people, home decorators and as an alternative to wallpaper and poster glue. It is also a good all-purpose paste for children's arts and crafts.

Things you'll need

-Bowl -Mixing spoon -Saucepan -Water -Powdered alum
-Flour (not self-rising) -Sugar -Carrying container -Oil of Cinnamon

Directions:

- Gather the following ingredients to make classroom paste: 1 cup wheat flour, 1 cup sugar, 1 cup cold water, 4 cups boiling water, 1 tablespoon powdered alum (in the spice section), ½ teaspoon oil of cinnamon.
- Combine the flour and sugar in a large pot. Slowly stir in the cold water to form a paste.
- Slowly add the boiling water and stir vigorously to break up any lumps.
- Bring the mixture to a boil and stir constantly until it is thick and clear.
- Remove from heat and add the alum. Stir until well mixed.
- Add the oil of cinnamon to preserve the paste and make it last longer. If you are using the paste immediately, you do not need to add the oil of cinnamon.
- Store in a tightly closed jar. Do not refrigerate. The paste will keep for several weeks. If it gets too thick you can thin it with a bit of hot water.

Warnings:

- Watch the mixture while it boils and if it foams up, don't turn it off, just keep stirring.
- Make sure you stir it really well to prevent it from getting chunks.
- Be careful around the boiling water to avoid painful burns.



Video Link: http://www.youtube.com/watch?v=V9uwaGg_7NI

 **KANSAS FARM BUREAU**
The Voice of Agriculture®



Optional Activity