

Grade Level: Kindergarten

Title: Farmers Growing Connections (anytime in the year)

Purpose:

To understand that many plants and/or animals are grown on farms and are used as the raw materials for many products we buy.

Subject Area(s) Addressed: Social Studies, Science, Math, Language Arts

Common Core/Essential Standards:

Social Studies:

K.E.1.1 Explain how families have needs and wants.

K.E.1.2 Explain how jobs help people meet their needs and wants.

Science:

K.P.2.2 Compare the observable physical properties of different kinds of materials (clay, wood, cloth, paper, etc) from which objects are made and how they are used.

ELA:

SL.K.4 Describe familiar people, places, things, and events and, with prompting and support, provide additional detail.

SL.K.5 Add drawings or other visual displays to descriptions as desired to provide additional detail.

SL.K.6 Speak audibly and express thoughts, feelings, and ideas clearly.

W.K.2 Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.

L.K.2d Spell simple words phonetically, drawing on knowledge of sound-letter relationships.

L.K.5a Sort common objects into categories (e.g., shapes, foods) to gain a sense of the concepts the categories represent.

Math:

K.CC.B.4a When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.

K.CC.B.4b Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.

K.CC.B.4c Understand that each successive number name refers to a quantity that is one larger.

K.CC.C.6 Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.

K.OA.A.1 Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.

Vocabulary:

combining
“How to...”
parts
product
raw materials

Materials Provided:

Math questions
Flow map

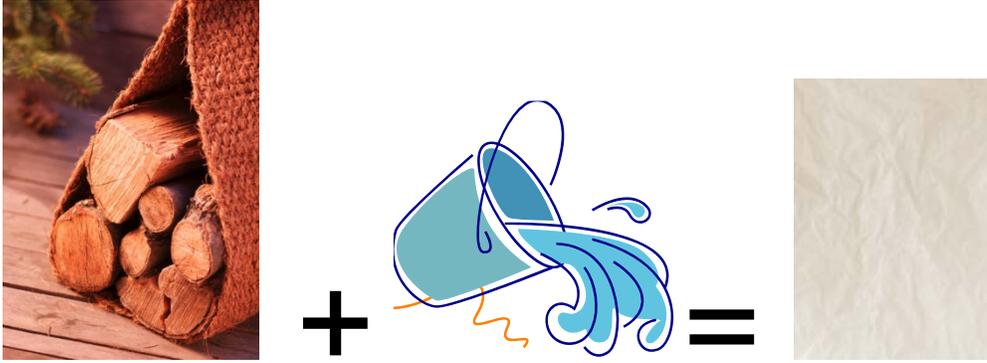
Materials Needed:

Examples of raw materials and items made from them (wood = paper; wood + graphite= pencil; cotton = t shirt; peanut butter + bread + jelly= sandwich)
Items to analyze: jewelry, shoe, pad of paper, toy
Strawberry-based products: jam, candy, cookies, cereal

Teaching Strategy:

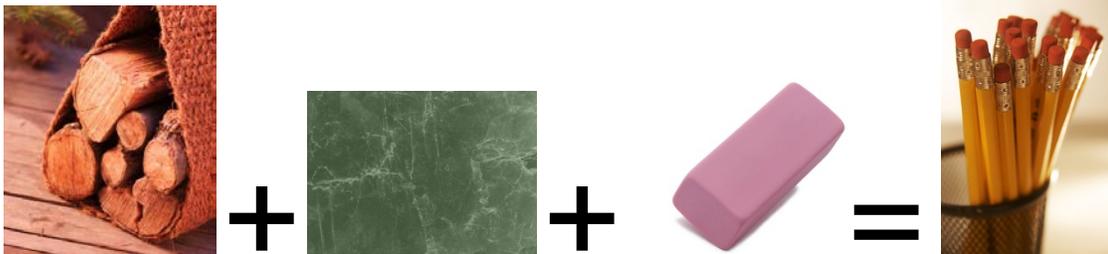
Show a variety of items that we use daily. Let students look at them carefully and describe how somebody else/factory made the item. For example, paper comes from wood, but you can't see the wood anymore.

Here is a simple “Picture Addition Sentence” to show “How to Make Paper.”



Briefly discuss the process of making paper. Making paper is more difficult than just adding them together. It takes several processes to make the changes. Wood is grown on tree farms. Wood is good to make paper because it can be ground into really small pieces made up of tiny, strong fibers. When you add water, the small fibers criss-cross and mix into a pulpy paste. When you flatten it out, and let it dry, you get paper.

But if you look at a pencil, you will see the wood, rubber eraser, and graphite. What do you think you have to do to make a pencil?



What parts of a pencil might be grown on a farm? (wood, rubber or soy for paint) It still takes work to make the pencils, but because the wood is hard, it is easy to hold the pencil. Because the graphite is “soft”, it leaves marks on paper. And because rubber is flexible it can scrape the little pieces of graphite off the page.

If you have ever made ice cream, you might know that you added cream that comes from cows, vanilla comes from beans grown on farms in Mexico, sugar comes from sugar cane grown on sugar cane farms in Florida. When you churn the ingredients in a container surrounded by salted ice (the salt makes the mixture colder), the cream changes to ice cream. Thinking about these ingredients, why would someone use them to make ice cream? (The cream changes states of matter easily and is easily accessible to people. Vanilla and sugar taste good and are easily mixed in. Some people may want to change the flavor to something that tastes better to them.)

Give each group of children one item: a piece of jewelry, a toy with parts, a shoe, or any object made of several parts. Each group will analyze the different parts and their origins. Draw a picture of each item. Discuss why the original item is a good choice to make the new item (attributes). What workers are involved in getting this item to you? Make a "Picture Addition Sentence."

Sometimes by looking at items we can see what they are made of. Sometimes we can't tell, but we can predict using our senses.

Show the strawberry jam, candy, strawberry bread, strawberry ice cream, etc. Ask students what each item has in common. Let's think about the strawberries that we are growing or the strawberries a farmer grows. Show the strawberries and let students tell what they could do with them. Can you think of anything that you might want or need that would include strawberries? (ice cream, jam, jelly, candy, pies, cakes) Why might we include strawberries in those items? (taste good, pretty for decorations, healthy fruit) Would cheese be a good choice for candy? Would potato chips be a good choice for jelly? Farmers think about these "attributes" when they decide to grow produce, "Why would someone want to buy my strawberries?" Follow a recipe using strawberries. Watch and describe the changes in the strawberries that happen as you follow the recipe.

Extension Activity:

Paint or dye with strawberries and other fruits or vegetables. Examples of other fruits or vegetables that are particularly good choices: beets, grapes, green beans, raspberries, blackberries will also all draw nicely. You may also want to try blueberries and greens, if pureed. Many cooked fruits and vegetables will stain clothes making them perfect for dyeing fabric for crafts.

Background Information:

Strawberries, found year round in grocery stores, can be used in many easy recipes. By following recipes students can see changes, sequence activities, and have a delicious final outcome.

Resources:

The NC Strawberry Association website has many recipes that can be done by kids with a small amount of supervision; some can be done in a classroom setting. See www.ncstrawberry.com/recipes.cfm and search for "Kids" or "Easy."

The NC Strawberry Association's "Strawberry Time" coloring/activity book includes recipes for frozen fruit bars, a strawberry Smoothie, a strawberry pie, and a simple dip. Pages can be downloaded at www.ncstrawberry.com/docs/StrawberryTime.htm; the booklets themselves can be ordered from the Association.

Assessment:

Students draw a series of pictures describing how to make something using strawberries.

Write about which fruit or vegetable would be a good ingredient, or not good, to make ice cream, to make jelly, and to draw a picture with. Explain why or why not.

North Carolina Strawberry Association – www.ncstrawberry.com

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