Grade Level: Kindergarten

Title: Sorting Strawberries

Purpose:

To recognize items sorted by attributes and to tell what the “rule” is.

Subject Area(s) Addressed:

Math, Science, Language Arts

Common Core/Essential Standards:

Science: Matter: Properties and Change:
K.P.2.1 Classify objects by observable physical properties (including size, color, shape, texture, weight, and flexibility).

Math:
K.MD.A.1 Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.

K.MD.A.2 Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference.

K.MD.B.3 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.1

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.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.1

Literacy:
SL.K.1a Follow agreed-upon rules for discussions (e.g., listening to others and taking turns speaking about the topics and texts under discussion).

SL.K.1b Continue a conversation through multiple exchanges.

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

Vocabulary:

attribute
big
cap (calyx)
centimeters
color words
grams
heavy
inches
light
little
number words
ounces
rule
sort

Materials Provided:

Strawberry Plant diagram (also available in an 18 x 24" poster)

Materials Needed:

2 quarts of strawberries
2 sorting mats for each group of 4
balance scale or digital scale
ruler
dry erase or transparency pen
chart paper and marker
containers for smaller quantities berries
Optional: Assortment of other items fruits to sort (for example, grapes, blueberries, blackberries, nuts, erasers)

Teaching Strategy:

Strawberrry attributes: Before this part of the lesson begins, have each child wash their hands thoroughly. Give each student a strawberry to examine. Ask one or two students to describe their strawberry to the class. The teacher can record the students' descriptions to begin an attribute vocabulary list. Have each student turn to a partner and describe his/her strawberry to the other. How are your strawberries the same? How are your strawberries different?

Comparing strawberries with other small fruits: If you have other fruits there as well as strawberries, have students describe the attributes of each. What is similar? What is different? This may be easier for some students than distinguishing between individual strawberries.

Strawberry sort: The teacher decides on one attribute to have the entire class to sort strawberries (i.e. caps, no caps) and writes the attribute on the sorting mat. Before passing out the strawberries, you may want to take off a few of the leafy caps; they are usually sold with the caps on. Other attributes might be size, ripeness/color, or shape though these are gradients, rather than yes/no attributes. Each student places his/her strawberry on the appropriate mat completing this statement, "I am putting this strawberry on this mat because…"
Individual sort: Give each group of four students a pint of strawberries. The students examine the strawberries and discuss attributes that could be used to

compare the strawberries. At the end of the lesson, allow children to wash the strawberries in running water, wash their hands and eat the sorted strawberries.

Extension Activities:

Use the Math Questions for Kindergarten (see file "K Essential Questions – Math") These are sample questions to help the teacher incorporate all of the Common Core math standards into the strawberry garden and lessons.

Do this same activity with a Venn Diagram instead of sorting mats, therefore comparing similarities and differences.

Before you sort, have students estimate how many strawberries are in the container. Record these estimates. Then, when each student has a strawberry, calculate the actual number. (15 students have a strawberry; there are 4 more in the container. How many were in the container at the beginning? N = 15 +4)

After the strawberries are sorted, math problems can be created using *more*, *less*, *fewer*, and number words. Students can write equations comparing the two mats (5 caps > 2 no caps)

Discuss with class: When would it be important to sort strawberries? (e.g., a chef using strawberries for cooking, garnishing a dish or displaying; winning the biggest strawberry competition; picking out any with bad spots)

Background Information:

When using sorting mats, the attributes are usually opposites (big/little; caps/no caps). For higher level thinking comparisons of attributes, use a Venn diagrams that would not use opposites (big/no caps).

When strawberries are picked they are usually sold in pints or quarts. Typically, supermarkets currently sell the berries in quarts or pounds. Club stores sometimes use larger sizes. Farm stands use quarts or 4-quart containers (bucket/basket). Sellers usually leave the green caps (calyx) on the berries because they last longer and look better. Since strawberries can easily be damaged, one of the most real-life reasons to sort is to take out any damaged ones so they can be eaten right away or discarded.

Assessment:

Given a group of strawberries, the student will be able to create a rule and sort the strawberries by his/her rule describing the attributes of the strawberry.

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Strawberry Plant