



# Sorting Beans

Standard Connection:

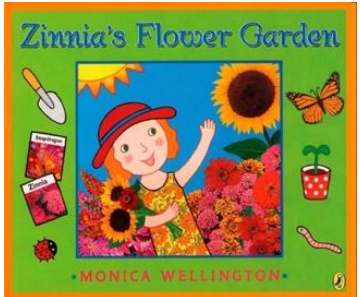
ELA.L.PK4.1e  
ELA.W.PK4.5  
M.CC.PK4.5a  
M.MD.PK4.3  
S.PS.PK4.1  
S.T.PK4.2  
SS.OW.PK4.1  
PD.FM.PK4.2  
PD.SHS.PK4.3

## Enduring Understanding(s):

- Living things need food, water, and proper conditions to survive and thrive.
- Living things are part of interdependent systems.

## Essential Question(s):

- How do people impact the environment in positive or negative ways?
- How do living things respond and adapt to their environments?

Materials	Vocabulary		Books
<ul style="list-style-type: none"> <li>• <i>Zinnia's Flower Garden</i></li> <li>• variety of seeds/dry beans</li> <li>• small containers for sorting</li> <li>• index cards for labels</li> <li>• writing utensils</li> <li>• small tongs or tweezers</li> <li>• magnifying glasses</li> <li>• images of seeds (see Resource)</li> </ul>	<p><b>attribute:</b> a thing's shape, size, or color</p> <p><b>bean:</b> a type of seed</p> <p><b>garden:</b> an area where fruits, flowers, or vegetables are grown</p> <p><b>group:</b> things of the same kind or type</p>	<p><b>label:</b> gives information about what is planted</p> <p><b>plant:</b> to put seeds in the dirt to grow</p> <p><b>seed:</b> used to make a new plant</p> <p><b>sort:</b> to group by size, shape, or color</p>	

Intro to Centers	
Preparation: Set up materials.	
"In <i>Zinnia's Flower Garden</i> , Zinnia planted <b>seeds</b> in her <b>garden</b> . What do you notice?"	Show illustrations. <b>Children respond.</b>
"Here are images of <b>seeds</b> . What do you notice?"	Show images. <b>Children respond.</b>
"The <b>seeds'</b> <b>attributes</b> - their shapes, sizes, and colors - are different."	Show images.
"Here is a container of <b>beans</b> - a type of <b>seed</b> . What do you notice?"	Show materials. <b>Children respond.</b>
"How could we <b>sort</b> the <b>beans</b> into <b>groups</b> ?"	<b>Children respond.</b> Model.
"This <b>group</b> of <b>beans</b> could be <b>labeled</b> _____ because they are the same (size). This other <b>group</b> of <b>beans</b> could be <b>labeled</b> _____ because they are the same (color)."	Model writing labels for the two groups of beans.
"Today in Science, you can <b>sort beans</b> into <b>groups</b> and create <b>labels</b> for the <b>groups</b> with these materials."	Show materials.

## **During Centers:**

Encourage children to collaborate, e.g., one child can sort, another child creates the labels. Encourage children to play Building Blocks Guess My Rule. Encourage children to compare and contrast their groups to the illustrations/images/each other's groups. Encourage children to use their bean groups in Garden Center and Beans.

## **Guiding Questions During Centers:**

- How is sorting beans similar to or different from making collections?
- How is your group of beans similar to or different from your friend's group of seeds/illustrations/images?
- Which group has more/ less beans? How do you know?
- What is \_\_\_\_\_'s rule for his bean group? How do you know?
- How is using a magnifying glass helpful in sorting beans?

## **Thinking and Feedback:**

Invite children to share their processes. Encourage children to describe the challenges they might have encountered.

## **Documentation:**

Collect samples of the children's work as well as photographs of their processes; use the documentation to launch a discussion during Thinking and Feedback.

## **Provocation:**

Encourage children to research seeds that are used in food, e.g., chili, trail mix, soup, etc. Encourage families to share dishes that use seeds/beans.

## **Differentiation/Accommodation:**

For Intro to Centers, children with limited verbal skills can use a pre-programmed voice output device to answer questions about the story. (Keep in mind these will likely be closed-ended questions, as those are easiest to program into devices.) This can also be used to help students answer Guiding Questions. During Centers, strategically partner children for collaboration. Provide larger manipulatives for children to sort if needed for fine motor or sensory challenges.