

WEEK 2 Day 3

Math Center: Investigating Drops of Water

Children drop water and determine more or less.

Big Ideas	<p>Children will communicate mathematically through multiple forms of expression.</p> <p>Children will persevere in solving questions with a growth mindset.</p> <p>Children will solve mathematical problems using a variety of strategies.</p> <p>Children will make sense of the world around them through mathematics.</p> <p>Children will connect math to other learning and real-world examples.</p> <p>A strong, interdependent math community has qualities, such as:</p> <ul style="list-style-type: none">• shared responsibility, collaboration and support for each other.
Guiding Questions	<p>What does it mean to be a member of a math community?</p> <p>How do you use math tools?</p> <p>How do you most effectively communicate your mathematical thoughts and ideas?</p> <p>Why is collaboration and listening to the ideas of others important?</p>
Vocabulary	<p>tool: an item that you use to help you do something</p> <p>pipette: a special straw that scientists use to move small amounts of liquid</p> <p>more: an amount or number that is greater than another</p> <p>less: an amount or number that is smaller than another</p>
Materials and Preparation	<ul style="list-style-type: none">• small containers of red, blue, and yellow dyed water Use food coloring or old markers to turn color the water. Children may go through the water quickly; prepare extra water ready.• pipettes• Week 2 Math Card• water drop mats, several copies• plastic sleeves or pouches Place water drop mats in plastic sleeves.

	<ul style="list-style-type: none"> • additional containers to hold water, optional (e.g. ice cube tray) • trays for each work space • paper towels or towels <p>Bring materials to the whole group rug for Intro to Centers.</p>
Intro to Centers	<p><i>This past week at the Math Center, you noticed math around you by looking at picture books. You used your math tools to represent images from the books we are reading.</i></p> <p><i>Today I have a new Math Center to share and we will use a new tool. This center will be inspired by the work we are doing at the art studio. Can anyone tell me what colors we are using in our art studio?... Yes, we are using red, blue, and yellow and mixing them to make new beautiful colors.</i></p> <p><i>We will use these same colors but in a new way and as mathematicians. At the Math Center we will explore these colors and use a new tool that scientists use called pipettes. Pipette can be used to drop small amounts of liquid or water.</i></p> <p>Show the water cups, pipettes, and water dropping mat.</p> <p><i>You will use the pipette and practice dropping the water into the circles. You might notice as mathematicians which circle needs more or a greater amount of water and which needs less.</i></p> <p><i>First, I will show you how to use the pipette</i></p> <p>Demonstrate how to use the pipette and how to count the drops onto the paper. Invite children to notice and wonder. Dropping the water can be challenging.</p> <p><i>The math center will be open today. Remember to use the pipette and notice how the water fills the circles. I wonder if the bigger circles will take more water drops or less? When you are done with the center please help clean up the water drop page so that someone else can use it.</i></p> <p>Show children how to clean up and how to prepare the Center so that someone else can visit it.</p>
During Centers	<p>Children will use the red, blue, and yellow water and pipettes to fill the circles on the mat.</p> <p>This may be the first time children have used this tool and they may need support in dropping small amounts of water onto the mat.</p>

	<p>Prompt children to count as the water drops onto the page. Make connections to the size of the dot and the amount of water needed.. Ask children which circle may have the biggest number and which may have the fewest water drops.</p> <p>Notice what colors children make. Ask children why the colors are changing. Make connections to the art studio.</p> <p>If children use too much water or drop too much water onto the mat consider discussing with the community. Take a photo and use later for thinking and feedback, if needed.</p> <p>Encourage children to clean up the space for their peers. Discuss how to take care of the Center and to use the tools appropriately.</p> <p>Take observational notes about children’s exploration and language.</p>
Facilitation	<ul style="list-style-type: none"> • What color of water did you use the most? What color water did you use the least? • How did the water color change if you used different colors when counting the drops? • When you are dropping the water onto the mat is it hard to count each drop? Why do you think counting the drops is challenging? Is there a strategy that allows you to count more accurately? • What did you notice when using the pipette? What made it easier or harder for you to get water onto the dots? • Now that you are finished, what can you do to get the materials ready for other children to use? <p>Reflection: Were you able to circulate and hear children’s thinking while children worked in centers? If so, what routines or structures helped children work independently? If not, what routines or structures can you establish to ensure that you are able to circulate and talk to children as they work?</p> <p>Monitor children who are struggling using the pipette tools and water and find ways to help with this fine motor skill.</p> <p>Upcoming daily extension opportunities: Add different materials for children to drop the water into if needed. These can include ice cube trays or other cups. If the paper drops are too challenging for your class or too messy consider using different tools to aid in the math exploration.</p>

Standards	<p>Addressing: QR.C.2 Count to tell the number of objects.</p> <ul style="list-style-type: none"> • K.CC.B.4; K.CC.B.4a; K.CC.B.4b <p>Building Towards: QR.C.1 Know the number names and the count sequence.</p> <ul style="list-style-type: none"> • K.CC.A.1 <p>QR.C.2 Count to tell the number of objects.</p> <ul style="list-style-type: none"> • K.CC.B.4; K.CC.B.5 <p>QR.C.3 Compare numbers.</p> <ul style="list-style-type: none"> • K.CC.C.6 <p>Standards for Mathematical Practice: 1-8</p>
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<p>Notes</p>
