


<p>Unit 3</p>  <p>Week 2</p>	<p><b><i>Small Groups: Measuring Water</i></b></p> <p>Medium/Low Support</p>	<p>Math SG1</p>	<p><b>Standards:</b> MELDS.M.MD.PS.2 MELDS.M.MD.PS.8</p>
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***Guiding Math Ideas:***

- Making sense of physical world using math- language, weather observations, measurement tools.
- Language of math- comparison words.

***Math Concepts from Unit Learning Progressions:***

- Using math to observe the weather.
- Math helps us describe and make sense of the physical world.
- Matching measurement tools to their purpose.

Note: This activity connects to week 1 Windssock activity with the properties of water instead of air.

***Materials:***

- clear tubs for holding water
- small clear containers for holding measured water (clear cups or plastic measuring cups)
- eye droppers
- turkey basters
- small scoops
- variety of bottles for pouring
- images of rain gauges or a real rain gauge
- trays to hold measuring and pouring tools
- smocks
- *Thunder Cakes*

***Math Vocabulary:***

- rain gauge: instrument/tool used for gathering and measuring liquid precipitation
- liquid: substances like water that flow freely
- more than
- less than
- compare
- submerge
- squeeze
- release
- transfer: to move from one place to another
- eye dropper: a clear tube with a rubber bulb at the end for measuring out liquids like medicine
- turkey baster- a tube with a bulb at one end used in cooking to spread liquids

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**Preparation:**

Choose where the activity will be set up, at a small group table or the water/sensory table. If the children will work in pair, fewer containers will be needed to hold the water. If working at a small group table, use trays with sides or small bins for collecting water as children transfer from droppers, bottles to measuring containers. Have materials handy for the demonstration.

**Procedure:**

Show the cover of *Thunder Cakes*. *In Thunder Cake the girl and her Grandmother used many measuring tools to make thunder cake as the storm approached. They measured the ingredients they needed to make the cake taste good. We use for measuring other things too.*

Hold up image of rain gauge. *This is a rain gauge, we use this tool to collect rain. It helps us to know how much rain has fallen. Today we are going to explore some tools for measuring water.*

Have children put on smocks. If they have not explored with eye droppers and submerging bottles to fill containers demonstrate how to submerge the tip of the dropper/bottle and squeeze to let the air out. Show them how to slowly release to fill the tube with water.

Give each child a container for measuring, connect this to the image of the rain gauge. Ask them to choose a tool to begin transferring the water into their cup (or rain gauge).

Ask children: *Which tool fills the gauge/cup the fastest? How many scoops/drops does it take to fill your gauge? Do you think that would be how a big storm fills a rain gauge?*

**Strategies to Provoke Math Thinking:**

- Young children are curious of their environment including the weather. This activity is a way to begin to gather information about their worlds. After the small group has been completed by all the children place the container used as a rain gauge outside on raining days. Encourage children to keep track of the rainfall.

**Documentation:**

Keep track of how many measurement tools introduced during the year and the associated vocabulary words.

**Provocation:**

We measure rain and snow differently. Invite children to explore ways to measure snowfall.