

<p>Unit 6</p>  <p>Week 1</p>	<p>Small Group: Flower Pattern Mural</p> <p>Medium Support</p>	<p>Math SG 1</p>	<p>Standards: MELDS.M.OAT.PS.8 MELDS.M.MD.PS.5 MELDS.M.MD.PS.9</p>
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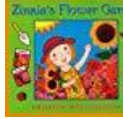


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<p>Guiding Math Ideas:</p> <ul style="list-style-type: none"> ● Empowering Mathematical Thinking: Habits of Mind for School Success ● Review and Reinforcement: Quantity ● Patterns: Extension and Creation <p>Math Concepts from Unit Learning Progressions:</p> <ul style="list-style-type: none"> ● Cardinality is the foundation for understanding quantity and operations ● Comparing groups of numbers (<> + =) ● Completing, extending and describing patterns ● Applying data skills to everyday activities and practical questions
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<p>Materials:</p> <ul style="list-style-type: none"> ● <i>Zinnia's Flower Garden</i> by Wellington ● <i>ABABA Book of Pattern Play</i> by Cleary (Unit 5 reference) ● Long roll of brown or white paper for mural ● Assorted colors of tissue paper, cut or torn into squares approximately 6" size- see <i>Zinnia's Flower Garden</i> book for colors. ● Paper plates to organize tissue paper ● Color name cards that match tissue paper (use Dog's Color Name Cards from Unit 4 and add the color white) ● Large Glue Sticks * ● Blue Masking/Painter's Tape 	<p>Math Vocabulary:</p> <ul style="list-style-type: none"> ● Mural: A big picture on a wall. ● Pattern: something that shows repeating in a certain type of way that helps you so you know what's next (from the <i>ABABA Book of Pattern Play</i>) ● Sequence: What comes next in a pattern
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Preparation:
This Small Group takes place AFTER the read-aloud *Zinnia's Flower Garden*. The small group takes place next to the mural. **The lesson plan is written as if children are sitting on the floor in a group near the mural. Adjust as needed.** If not possible, after creating the pattern and flowers bring the glue and flowers to the mural area.

Cut a long piece of paper for mural and tape or tack to the wall using painter's tape at a height where children can reach it. Write *Our Flower Pattern Garden* across the top. Use the hallway, low bulletin board or any other large wall space.

Cut tissue paper into small squares and group by color using paper plates or other organizing tool. Choose at least 3 colors that match colors from Zinnia's Flower Garden. A lot of tissue paper is necessary; substitute construction paper scraps, if needed.

*Experiment ahead of time to see if glue sticks will hold tissue paper flowers to mural. If not, have children use tape or watered down glue and foam paint brushes.

Procedure:

Gather small group around the mural.

In Large Group, we made a People Flower Garden together. Today, we're going to make another kind of garden together. Let's look at Zinnia's Flower Garden. What colors grew in her garden?

Children look at book, and discuss colors of flowers they like.

*Together, we are going to make a BIG pattern picture called a **mural**. What is a **mural**?... A mural is a very big picture on the wall.*

Show mural on the wall nearby.

*In Zinnia's garden, she planted groups of flowers that were alike together. Her garden made a **pattern** of color. A **pattern** is a repeating design that has a **sequence**- things that follow each other in regular ways. We will make a very big flower garden pattern on our mural, using our different colors of flowers. Zinnia also used a sequence, an order, when she planted her garden, from choosing seeds, to digging, to planting, to measuring.*

First, let's make some patterns here on the floor.

Use color cards. Children can work alone or together, creating patterns, such as *white, purple, blue, white purple blue*.

*Now let's think about our big mural. I have written *Our Flower Pattern Garden* across the top. Before we make our mural, let's create a BIG pattern for our mural.*

Work with children and use color cards to make one group-created pattern of flower colors for mural.

Introduce tissue paper flowers.

Here is some tissue paper we can use to make flowers. When we "scrunch it" it looks sort of like the petals of a flower.

Demonstrate scrunching tissue paper.

We'll put our pattern on our mural and scrunch a lot of flowers for that section.

Children scrunch paper and make some flowers.

Let's follow our pattern and fill it in with LOTS of flowers.

Move to the mural and write several sections of the pattern. Refer to the pattern often, label/designate different sections of the mural and have children be the guide in creating the pattern, writing the color words and attaching matching tissue paper flowers.

What comes next? Let's look at our pattern we created together.

We will start at this left side of our mural and work to the other, right, end.

White...Purple... Blue

What color do we need here? Who can make some purple flowers?

Children continue to make flowers as they work directly on the mural, scrunching and gluing or taping them into the matching color section. The entire small group can work on the mural at the same time, filling in different sections, scrunching/taping flowers, etc.

If it helps, draw a line at the end of each color section in order to help “read” the pattern from left to right. Continue creating the mural, choosing colors and gluing. If you typically break your class into 2 different small groups, each can create a mural.

Read the pattern together as the activity ends. If there is space, leave the mural so that children can continue to add to it during the Unit. Create a pattern sequence above the mural to guide children’s placement of colors and support during Center time as needed. Take opportunities to “read” the pattern together with children during the week, noting their skills in pattern identification and creation.

Strategies to Provoke Math Thinking:

- Patterns: Pattern development typically occurs in this sequence: Recognize- Copy- Complete- Extend-Describe. Visual patterns are used in this activity, but auditory or movement patterns also need to be regular activities to accommodate for any individualized needs and to highlight the underlying concepts common to all types of patterns.
- Math IS Patterning! A simple but profound definition of math: *The science of Patterns*. Math often involves finding patterns—relationships between numbers and concepts. Counting is a 1 + pattern. Life cycles, as introduced in Unit 6 overall curriculum, are predictable patterns. Regular use of activities that feature pattern-making will encourage children to “look for the patterns” in math problem-solving in more advanced math activities introduced in the primary years.
- Ongoing projects: A mural is a perfect way to extend math projects over time. Other elements can be added besides color patterns such as size or number. Include literacy and art, adding color words and descriptors, or studying about artists who are muralists.

Adaptations for Additional Challenge:

- The highest competency of pattern use means creating a pattern using different materials, but that matches the model pattern construction presented. For example: Use blocks to create an AA B AAA pattern, such as long, long block, a short block, long, long, long block and then repeat.
- Mystery pattern: Create patterns and have children guess and “read” the pattern.

Documentation:

- As children work in groups, pay special attention to children and their varying abilities with pattern concepts. If some children are working at the beginning skill of recognizing patterns, provide additional activities before expecting them to copy or complete patterns.

Provocation:

- Continue the color pattern and add other collage items to the wall mural. Suggestions are old silk flower petals, buttons, paper scraps. Flower seed packets (such as used in Zinnia’s flower Garden book), are rich sources of flower names and have lots of math information, for example: height of flowers, spacing the seeds or seedlings, length of days until flowering, etc.

