


<p>Unit 6</p>  <p>Week 3</p>	<p>Small Groups: Growing Collages</p> <p>Low to Medium</p>	<p>Math</p> <p>SG2</p>	<p>Standards:</p> <p>MELDS.M.G.PS.4</p> <p>MELDS.M.MD.PS.3</p> <p>MELDS.M.MD.PS.6</p> <p>MELDS.M.MD.PS7</p> <p>MELDS.CA.VA.PS.3*</p> <p>MELDS.S.LS.PS.6*</p>
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Guiding Math Ideas:

- Living things grow and have life cycles (Enduring understandings)
- Measurement as Practical and Purposeful: Time

Math Concepts from Unit Learning Progressions:

- Apply Part/Whole Understandings to the natural world
- Depict understanding of sequence and time through STEM activities

*This activity also meets Visual Arts and Science Standards

Materials:

- *Inch by Inch* by Leo Lionni
- Tissue paper- many colors
- Child- sized scissors
- Watered down glue, or starch/water solution
- Small foam paint brushes
- White large construction paper or other large paper
- Markers
- Smocks
- Bowls of water for cleaning brushes and clean-up

Math Vocabulary:

- Collage
- Time and sequence words: such as first, next, last or last week, yesterday, today and tomorrow

Preparation:

Use Marker and divide each large sheet of construction paper into four sections. Example Attached. Decide whether you would like to use the sequence words, or the descriptions of the passage of time, depending on your group and their current understandings of sequence and time. Label. Organize tissue paper by color. Prepare the glue or starch mixture. Cover Small Group Table with newspaper. Have children put on smocks.

NOTE: There are **many** ways to help children’s beginning understandings of time. See *Strategies and Adaptations* for other ideas.

Procedure:

*In Large Group, we read Inch by Inch by Leo Lionni. We noticed that Mr. Lionni used lots of different colors and kinds of paper to make his book's pictures. These pictures are called **collages**. We have made collages in art this year.*

Show book and point out some of the ways that paper was used.

The grass looks like it was made with long pieces of green paper. These collage pictures show lots of plants and animals. We can make collage pictures that show growing things.

The seeds we planted are starting to grow. Did the seeds start to grow the minute we planted them?

Lead discussion about time, and how plants animals and people grow from smaller to larger.

These large pieces of paper are divided up into some parts. How many parts are there?

Children count.

Yes there are 4 parts. Let's think about how to make a pictures that shows things growing from smaller to larger, like our plants are doing. I am thinking of some words that describe how long it might take for things to grow.

Show your own paper, with words written at the top indicating time/sequence.

I'm going to make a picture that shows a flower getting bigger and bigger. I'm going to use collage. This kind of collage is called tissue paper collage. Here is how it works.

Demonstrate tearing or cutting the tissue paper into pieces, and "painting" it onto the larger paper using the small brushes.

Encourage the children to start making collages that show plants or animals growing, or things growing from smaller to larger. Invite them to dictate a story about how their garden might be growing.

Supply words, descriptions of time's passing, and assistance with the collage-making process.

As children work, discuss the growing process that they are hearing about and experimenting with in other parts of the curriculum. If you did not pre-label their 4 part pictures, work with them in choosing time/sequence words.

Clean up and place children's artwork in safe place to dry.

Strategies to Provoke Math Thinking:

- Making time visible: Time is the most abstract concept in measurement, as it is a **quality**, not an observable attribute like length or height. Ideas about time develop slowly over many years. Humans have invented ways to keep track of time. Scientific observations can help us see that time is passing in a concrete way. This project encourages children to depict the time it takes for living things to grow. Other Units such as Wind and Water or Shadows and Reflections have time concepts embedded in them.
- Simplify: Cuts strips of construction paper in graduated lengths from short to long and use as stems. Use buttons or other materials to represent flowers. Children create small to large flowers from left to right, using sequence/time words of your choice.
- Use Music to Reinforce Time Concepts: SWPL Yesterday, Today and Tomorrow and First and Next and Then and Last.

Adaptations for Additional Challenge:

- Story Sequencing: Cut apart old books, laminate the pages, and have children sequence the stories in chronological order.
- Show children your planning book, and how use a time schedule and the days of the week to plan for all of the things we do in PreK. Invite children to make their own calendars and place activities on the different days. Try to incorporate some of their ideas into planning.

Documentation:

- This activity's concepts are best documented through collecting examples for children's portfolios. Children can also bring their art work as artifacts to Story Telling time.

Provocation:

- Art/Math Connections: Monochromatic Color Collages: Continue the idea of many parts making wholes by offering art materials in different gradations of the same color. Children can make light to dark collages, or day to night collages, choosing colors that remind them of different parts of the days and night.

This is an example only of how you could divide paper in preparation for math/art work. Fill in any headings you wish, or leave the headings blank and have children name them to demonstrate their understanding of sequence and time. OR use 3 sections instead of 4.

MY GROWING GARDEN COLLAGE

First OR Last Week	Next OR Yesterday	Next OR Today	Last Next Week