

Unit 5  Week 4	<p><b><i>Small Groups: Napping House Art</i></b></p> <p><b>Low Support</b></p>	<b>Math</b> <b>SG1</b>	<b>Standards:</b> MELDS.CA.VA.PS.3 MELDS.M.MP.PS.4 MELDS.M.MD.PS.5
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***Guiding Math Ideas:***

- Integrated Projects- STEAM, **Science**, Technology, Engineering, **Arts**, and Math
- Patterns- Adding Complexity
- How does light affect the ways things look? (from Essential Questions)

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

- Science and Math are a natural fit
- Math is a part of many learning projects – Uses Math in STEM or STEAM activities
- Patterns- Growing complexity

This activity also meets an Art Standard.

***Materials:***

- *The Napping House* by Audrey Wood and Don Wood
- Watercolors
- Water
- Brushes
- Paper
- A selection of clear containers of paint in Dark Medium and Light Colors\*
- Sticky notes or index cards

***Math Vocabulary:***

- Observation: Looking seriously and carefully at something in order to learn
- Gradations: gradual changes, like the paintings in *The Napping House*

***Preparation:***

This activity follows the Large Group reading and acting out of *The Napping House*

Preparation will depend on the type of watercolors your program uses. You can choose Dark Medium and Light Colors, \* *It would be more hands-on if the children can do this. If possible have the children name and select the dark and the light colors.*

On sticky notes write Dark Lighter Light and some arrows indicating how the pain fades from dark to light. Place all supplies in Small Group Area.

***Procedure:***

*Today we are going to paint Napping House pictures.*

Show book.

*In large Group, we had a lot of fun acting out this book about people and animals piling into a bed.... And then suddenly leaving. Scientists, artists and mathematicians use **observation** to learn things. Any ideas*

about what I mean by **observation**? Let's use our power of observation, looking carefully at each page. I'm going to show you the pictures without reading the words.

Slowly turn pages without reading the text.

We are talking about light, shadows and reflections. Do you have any **observations** about about light, shadows or reflections as I turned the pages of this book?

Each page gets lighter and lighter. This is a type of growing pattern—the light increases or gets brighter with each page. In Small Group today we will explore this pattern. A slow change like this in color or light is called **gradation**. What else do you see?

Children may have many more comments about things they notice in the book.

What do you observe about our paints?

Yes, some are dark and some are light.

Let's try painting Napping House pictures, One idea is to paint pictures that are dark and then get lighter How could we do that?

Children give ideas.

One idea is to start on one wide with dark paint and then end up at the other side with light paint.

Write on Sticky Notes and put on or beside paints.

These words say Dark, Medium and Light. Children paint. Children can also add water to lighten up darker paints. Demonstrate this if they show interest.

Another option is Buddy painting, using large paper with 2 children working together.

As they paint, talk about things that change from dark to light or from light to dark. Children may have different ideas about what is dark, medium or light. Children may or may not paint in an organized manner- No problem! Wrap up and discuss paintings with children.

### **Strategies to Provoke Math Thinking:**

- Observation: The power of observation is a useful one for young mathematicians and scientists to develop. This low-key activity allows children plenty of time to observe and experience STEAM projects- it includes science, art and math.
- Gradual change: Nature is full of examples of gradual change, and is a good “teacher” for children who may pay more attention (like adults) to sudden or dramatic change. Although there are “right” answers in math, change and flexibility are also important in mathematical thinking.

### **Adaptations for Additional Learning:**

- Set up a color mixing station in the art center and encourage children to mix and label unique colors using the color equations from Unit 4, or creating their own equations.
- Observation station: The classic celery/colored water science experiment is a perfect example of gradual change. Brainstorm with children about adding math to this experiment. Measuring the progress of colored water up the stalk? Adding the same amount of water each day to the glass?

**Documentation:**

- As the week or unit ends, bring some of the Dark/Light pictures to LFOAI or Story-Telling along with the book. Napping House Pictures can also be used as a background for self- directed activities about counting the people in the Napping House.

***Provocation:***

- Place gradations of a single color of paint at the easel for several days. Label them dark to light and observe any connections children make to Small Group and Large Group.
- Read the book in a semi-dark room. Have a helper gradually turn on the lights, or open the blinds around the room in relation the light increases on the pages.