

# DMT INSTITUTE

Developing Mathematical Thinking Institute (DMTI)



Professional  
Development



Curricular  
Resources



Assessment

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# About the DMTI Targeted Activities

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These DMTI Targeted Activities modules are designed to be played or completed with a partner or in small groups. These supplement the Primary Math Assessment and DMTI curricular materials.

The activities are intended for teachers or caregivers to play with children to build necessary math skills and math language. Each activity can be played for 10 to 20 minutes. And if there are additional activities in a module, they are built to be more advanced.

# **PMA – Grade 1**

## **Sequencing – Tower Building**

# Sequencing

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## What's involved:

- Finding patterns
- Counting forward and backward
- Recognizing numbers
- Determining quantity

## Why it matters:

- Builds one-to-one correspondence
- Begins to build proportional reasoning, which is important for many math ideas and STEM careers
- Leads to efficient computation and stronger number sense and flexible thinking

# Sequencing: Patterns with DMTI Cards

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## Materials

- Cubes or blocks (DMTI Math Pack)

# Sequencing: Tower Building

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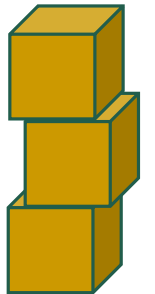
## Activity I

Build a tower with your blocks (that don't connect).

1. Count the blocks starting with zero.
2. How tall is your tower?
3. Now remove the blocks and count backwards.

Build another tower that is 2 different than the first one.

1. Count the blocks starting with zero.
2. How tall is your tower?
3. How many blocks taller/shorter than the original tower?
4. Remove the blocks and count backwards.



# Sequencing: Tower Building

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## Example

Here is Rachel's tower.

*"0, 1, 2, 3, 4, 5"*

*"My tower is 5 blocks tall."*

*"5, 4, 3, 2, 1, 0"*

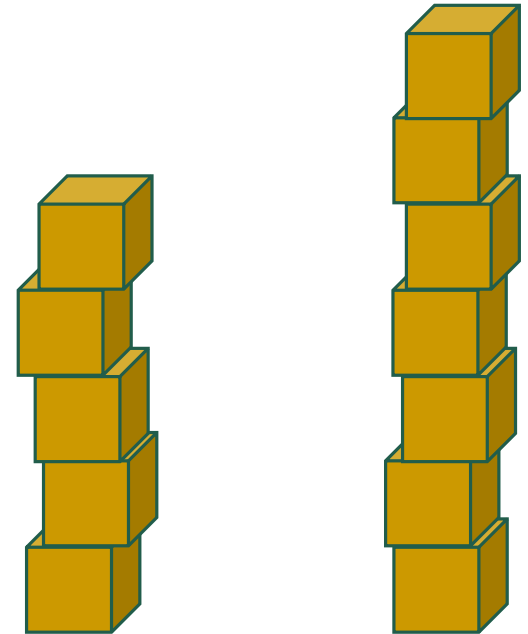
Here is Rachel's second tower that is two more.

*"0, 1, 2, 3, 4, 5, 6, 7"*

*"This tower is 7 blocks tall."*

*"It is two blocks taller than the first one."*

*"7, 6, 5, 4, 3, 2, 1, 0"*



# Sequencing: Tower Building

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## Example

Here is Rachel's original tower.

*"0, 1, 2, 3, 4, 5"*

*"My tower is 5 blocks tall."*

*"5, 4, 3, 2, 1, 0"*

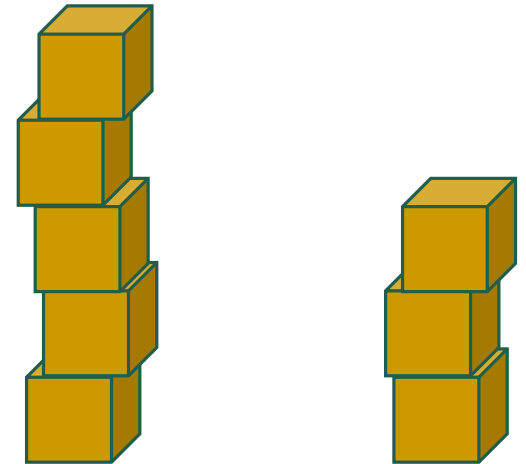
Here is Rachel's second tower that is two less.

*"0, 1, 2, 3"*

*"This tower is 3 blocks tall."*

*"It is two blocks shorter than the first tower."*

*"3, 2, 1, 0"*





# Sequencing: Tower Building

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## Activity II

Build a tower with your blocks.

1. Count the blocks starting with zero.
2. How tall is your tower?

Build two other towers that are 3 different than the first one.

1. Which tower is the tallest?
2. Which tower is the shortest?
3. How tall is each tower?
4. Remove the blocks and count backwards for each tower.

# Sequencing: Tower Building

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## Example

Isabel made a tower of 7.

*“0, 1, 2, 3, 4, 5, 6, 7”*

*“My tower is 7 blocks tall.”*

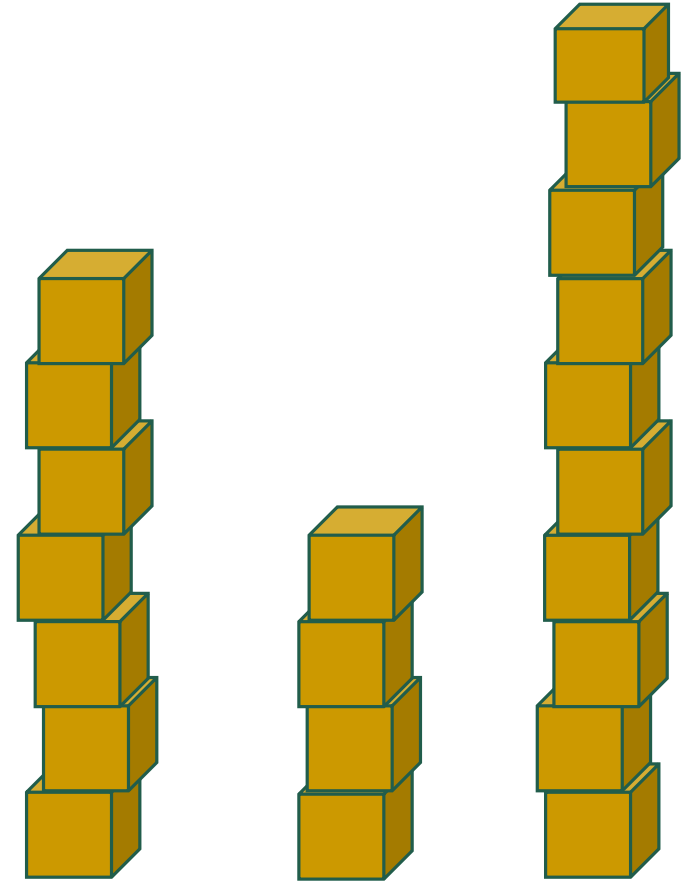
Isabel built two more towers that are 3 different.

*“0, 1, 2, 3, 4”*

*“My second tower is 4 blocks tall.”*

*“0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10”*

*“My third tower is 10 blocks tall.”*



# Sequencing: Tower Building

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## Activity III

Build different towers (3 or more) with the blocks.

1. Have the child count the blocks starting with zero.
2. How tall is each tower?
3. How much taller or shorter are the other towers?
4. Have the child remove blocks from each tower and count backwards.



“The Developing Mathematical Thinking Institute (DMTI) is dedicated to enhancing students’ learning of mathematics by supporting educators in the implementation of research-based instructional strategies through high-quality professional development, curricular resources and assessments.”

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