

# 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 Intermediate 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. Each additional activity in the module advances in difficulty.

# **IMA – Grade 3 - 6**

## **Fluency – Connect Four**

# Fluency

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## What's involved:

- Seeing a quantity visually growing or shrinking by a factor (e.g., twice as long, half as long)
- Understanding relationships between quantities
- Recognizing patterns

## Why it matters:

- Builds flexible thinking through composition and decomposition of numbers
- Lays the foundation for algebraic thinking
- Helps students make sense of multiplicative situations which supports their ability to reason proportionally

# Number Fluency: Multiplication Facts

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## Materials

- Journal or Paper
- Connect 4 Game Board (cutout Template)
- 2 Paperclips, small paper strips
- Red and Yellow chips (DMT Math Pack) or two sets of different coins or cubes.

# Number Fluency: Multiplication Facts

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## Activity 1 – Connect Four

### Directions

- Find two paper clips and about 12 chips of one color and 12 chips of a different color. (Or if using paper, you can use X's and O's.)
- Choose one player to go first.
- The first player places both paperclips on the numbers above the game board. The player puts one of their colored chips on the product.
- Now, only 1 paperclip can be moved each turn.
- The second player moves one of the paper clips to another number. Player 2 puts one of their colored chips on this product.
- Continue taking turns playing until you have four colored chips in a row – winner!

# Template: "Connect Four"

1	2	3	4	5	6	7	8	9
1	2	3	4	5	6			
7	8	9	10	12	14			
15	16	18	20	21	24			
25	27	28	30	32	35			
36	40	42	45	48	49			
54	56	63	64	72	81			



“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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