

## Objective

By the end of this lesson, the student will be able to explore the properties of magnets through creative play with magnetic tiles. They will learn about shapes, balance, and basic engineering principles while having fun building various structures.

## Materials and Prep

- Magnetic tiles (various shapes and colors)

Before the lesson, ensure that the magnetic tiles are clean and in good condition. Familiarize yourself with the different shapes and how they connect to maximize the student's building potential.

## Activities

- **Shape Exploration**

Start by identifying and sorting the magnetic tiles by shape and color. Discuss the different shapes (triangles, squares, rectangles) and how they fit together to create larger structures.

- **Building Challenge**

Set a timer and challenge the student to build the tallest tower they can using only a specific number of tiles. Discuss balance and stability as they build.

- **Creative Structures**

Encourage the student to design and create their own unique structure, such as a house, bridge, or vehicle. Ask them to explain their design choices and how they made it stand up.

- **Color Patterns**

Introduce a color pattern challenge where the student must create a structure following a specific color sequence. This will help them understand patterns and sequences while building.

## Talking Points

- "What shapes do you see in the tiles? Let's talk about how they can fit together."
- "How can we make sure our tower doesn't fall over? What do you think is important for balance?"
- "Can you explain your design? What inspired you to create that structure?"
- "Let's think about colors. How can we create a pattern with our tiles? Can you show me?"