

Objective

By the end of this lesson, you will be able to use algebraic thinking to build structures with magnetic tiles.

Materials and Prep

- Magnetic tiles
- Clear workspace

No prior knowledge or preparation is required for this lesson.

Activities

1. Begin by introducing the concept of algebraic thinking. Explain that algebra is a branch of mathematics that uses letters and symbols to represent numbers and relationships.
2. Show the student how to use the magnetic tiles to build different structures. Encourage them to experiment and be creative.
3. Ask the student to describe the patterns they notice in their structures. For example, they might observe that adding one more tile to a row always increases its length by one.
4. Guide the student to use algebraic thinking to predict the number of tiles needed to build a specific structure. For instance, if they want to build a tower with a height of 5, ask them how many tiles they would need.
5. Encourage the student to test their predictions by building the structure and counting the tiles.
6. Repeat the process with different structures, varying the height, length, or width, and asking the student to make predictions and test them.

Kindergarten Grade Talking Points

- "Algebra is a special kind of math that uses letters and symbols to represent numbers and relationships."
- "We can use algebraic thinking to figure out how many tiles we need to build different structures."
- "When we build structures with magnetic tiles, we can notice patterns. For example, adding one more tile to a row makes it longer by one."
- "We can use our algebraic thinking to predict how many tiles we need. We can make a guess and then test it to see if we're right!"
- "Let's try building different structures and see if our predictions are correct. It's like being a detective and solving a math mystery!"