Growing Staircases

PreK

Materials: A picture of the first three staircases and tiles for students to make a staircase.

Discussion on the rug: The teacher holds up the pictures of the staircases. **"Here are different staircases. How many steps do you take on the first staircase? How many squares do you need to build the first staircase? How many squares do you need to build the second staircase? How many steps do you take on the third staircase?"** The teacher asks questions to have the children think about steps and numbers of squares in the growing pattern.

In small groups: Each student has access to tiles. The teacher asks the following questions, only going on to the next question if students have success.

"This is a staircase that goes up three steps.

How many squares are needed to build the first step?

How many squares are needed to build just the second step?

How many squares in all are needed to build a staircase of two steps?

How many squares in all are needed to make a staircase of three steps?"

At the end of the investigation, have students either discuss or dictate a response to this summary question: **"Tell me how you know."**

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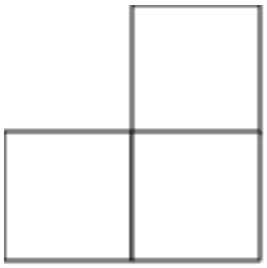
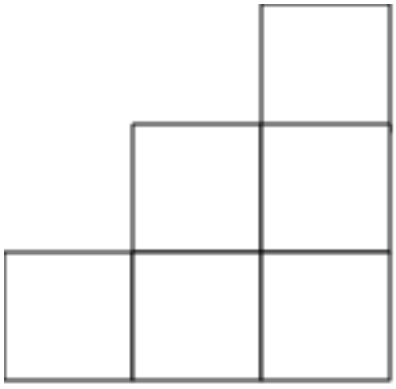
Growing Staircases

Manipulatives

First Staircase



Second Staircase



Third Staircase

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