Your teacher will guide you through a Quick Draw activity.


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## The Painted Cube

Working with a partner, solve the following problem:
A large cube is formed from smaller cubes. Four of the smaller cubes fit along each edge of the large cube. Imagine if the 4 by 4 by 4 large cube is dipped in paint. How many of the small cubes will have paint on them? You may draw in the space below and use the snap cubes your teacher has given you to help solve the problem.


Explain your solution in the space provided below.
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Look closely at the Josef Albers' artwork Homage to the Square. Answer the questions below.

1. What is a square? $\qquad$
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2. How many squares do you see in this artwork? $\qquad$
3. What words could you use to describe the colors of these squares?
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$\qquad$
4. Would you want your bedroom painted like this? $\qquad$
5. Why or why not? $\qquad$
$\qquad$
6. Compare the relationship between the widths of the borders at the sides of the squares to the widths of the borders at the bottom of the squares. How are they similar? How are they different?
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$\qquad$
$\qquad$
7. In the space provided on the next page, draw one square inside another so that the distance between the squares at the sides is twice the width of the border at the bottom, just like the Albers' squares. Use a ruler and draw carefully.
8. Measure the distance of the border at the top. Is it related to the other two distances? $\qquad$

How? $\qquad$
9. Add a third square to your drawing that is outside the second, so that the border at the bottom is equal to the border just above it and the side borders are the same, just like in Albers' squares.
10. Using colored pencils or crayons, fill the squares with colors from the same color family.
11. In the space provided on the next page, draw a large square. Draw a second square inside the first one so that the border at the sides is twice the width of the border at the bottom.
12. Try to draw another square inside the second square meeting the same conditions. Can you draw a fourth square inside the third square?
13. Using colored pencils or crayons, fill the squares with colors from the same color family.

