

HOW MANY SIDES?

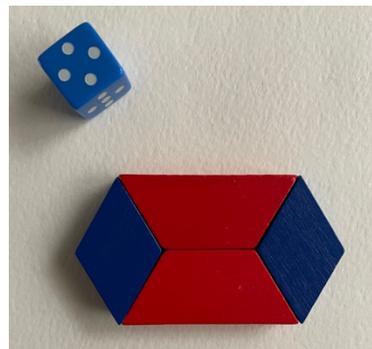
adapted from a game in the book Pattern Blocks: A tool for mathematics education by Simon Gregg

Mathematics concepts, competencies, and strategies:

counting, one-to-one correspondence, composing and decomposing 2D shapes, visualizing, mental math strategies

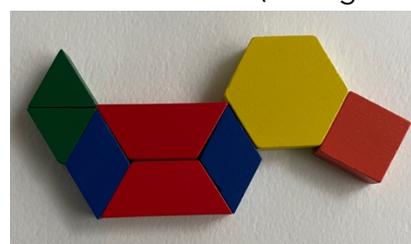
Materials:

one die, pattern blocks



How to play:

1. This is a partner game. The first partner rolls the die. The second partner chooses that number of pattern blocks and creates a composite/compound shape or figure. The first partner counts the number of total sides for the shape/figure. In the example above, the shape is made with four pattern blocks and has six sides.
2. The first partner chooses one pattern block and shows the second partner. The second partner visualizes how many sides the new shape will have once their partner adds the new pattern block. The second partner says how many sides they think there will be and the first partner places the block. The partners count how many sides there are now.
3. The roles reverse and the second partner chooses a new pattern block to add and the first partner needs to visualize and state how many sides they think there will be now.
4. Partners keep playing until they have each added three additional blocks (or begin with one or two each or extend to five each).
5. Partners discuss what their shape creation looks like and gives it a name. For example, the one in the photo to the right, made after adding a new block two turns each was called "unlucky ducky" and was determined to have thirteen sides.



Other ways to play:

- Use a ten or twelve-sided die to start.
- Have students keep tally marks 'scores' for correct visualization of the number of sides during their turn.
- Invite students to record and label their shape creations.
- The students could trace around their shape creation for others to fill in like a puzzle.
- Take a photograph to use for How Many? math talks.

