

What's Your Angle

PreK

Materials:

- Pictures of triangle, square, pentagon, hexagon, octagon.

Discussion on the rug:

Teacher starts a discussion: **“What is a diagonal line?”**

Teacher holds up a picture of a square and invites students to come forward.

“Who can show me a diagonal line in this square? Is there a different diagonal line? Please show me. Are there more diagonal lines? How do we know for sure if we found all the diagonal lines? How many diagonals did we find in all?”

Teacher shows a picture of a pentagon. **“How many sides does this figure have? Who can show me how many? Who knows the name of this figure?”**

If no one knows, the teacher may say, **“It is called a pentagon. How many diagonals can we draw in this figure?”** Teacher invites students to come forward and demonstrate.

The teacher continues to ask, **“Are there more diagonals? How do we know for sure, and how many are there in all?”**

In small groups: Each student is given a hexagon. The students are asked to draw all the diagonals and find the total number of diagonals. If most students are successful, the teacher can try other figures like an octagon or triangle.

Teacher asks the following questions: **“Suppose you are given a new figure and you want to find all the diagonals. How do you find them all, and how do you know when you have found them all?”** At the end of the investigation, have students either discuss or dictate a response to the summary questions above.

Manipulatives for PreK



