Monday Topic: Rotational Symmetry of a Parallelogram

Big Idea: Shapes can be rotated around a point and still look the same. The number of times this happens in one full turn is called the order of rotational symmetry.

🟩 Mild

Look carefully at the parallelogram.
➡️ Does this shape have rotational symmetry?
Circle Yes or No and explain what makes you think so.

🟨 Medium

Imagine rotating the parallelogram around its center.
➡️ How many times does it look the same during one full rotation (360°)?
Write the order of rotational symmetry and explain how you know.

🟥 Spicy

Compare the parallelogram to a rectangle and a rhombus.
➡️ How is the rotational symmetry of the parallelogram different from these shapes?
Describe which properties (angles, sides, or diagonals) influence the order of rotational symmetry.

Tuesday Topic: Comparing Quadrilaterals

Big Idea: Quadrilaterals can share some geometric properties while differing in others, such as side lengths, angles, and parallel lines.

🟢 Mild

Look carefully at the two shapes.
➡️ How are they the same?
➡️ How are they different?
Think about side lengths and angles.

🟡 Medium

Use math vocabulary to compare the blue rectangle and green parallelogram.
➡️ How many pairs of parallel sides does each shape have?
➡️ How do the interior angles compare?
Write two similarities and two differences.

🔴 Spicy

A student says, “A parallelogram is just a stretched-out square.”
➡️ Do you agree or disagree?
Use geometric properties—like side length, parallel lines, and angle measure—to explain your thinking.
If possible, include a diagram or example to prove your reasoning.

Wednesday Topic: Top, Front, and Side Views of 3D Objects

Big Idea: 3D objects can be represented and identified by their 2D views from different perspectives.

🟢 Mild

Look at a cube.
➡️ What shape would you see from the top, front, and side?
Draw or describe each view.

🟡 Medium

A rectangular prism has dimensions 2 blocks wide, 3 blocks tall, and 4 blocks long.
➡️ Sketch or describe what the top, front, and side views would look like.
Which two views are the same? Why?

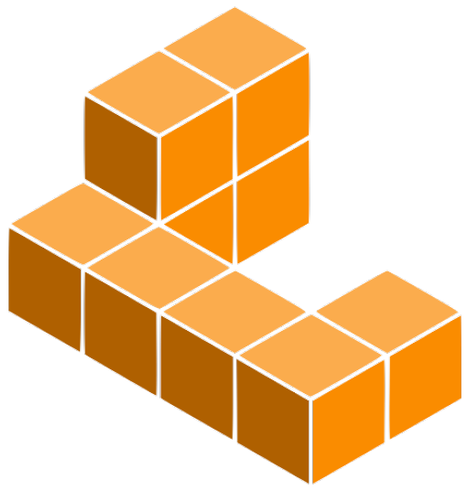
🔴 Spicy

Two students build different 3D shapes that have the same top view.
➡️ Explain how this is possible.
Design (or describe) two different solids that share the same top view but look different from the front and side.

Thursday Topic: Identifying 3D Objects from Top, Front, and Side Views

Big Idea: 3D structures can be represented and understood using 2D views from different perspectives.

🟢 Mild



Look carefully at the cube structure.
➡️ How many cubes are there in total?
➡️ What shape would you see if you looked straight down from the top?

🟡 Medium

Imagine viewing the structure from the front and side.
➡️ How many cubes would be visible from each view?
➡️ Sketch or describe what you think the front and side views would look like.

🔴 Spicy

Two students looked at this same 3D structure and drew different front views.
➡️ How could that happen?
Describe or show two different front views that could both be correct depending on how the object is turned.

🧠 Friday – Geometry Connections Sketch Challenge

Big Idea: We can represent and compare 2D and 3D shapes by analyzing their properties and symmetry.

🟢 Mild

Think of a shape you can see around the classroom (like a square, rectangle, or parallelogram).

➡️ Sketch it on your grid paper.

➡️ Use arrows to show if it has rotational symmetry (and how many times).

🟡 Medium

Compare a square and a parallelogram.

➡️ Sketch both on your grid paper.

➡️ Label their sides and angles, then use shading or symbols to show:

- Which sides are parallel
- Which shape has right angles
- Which has rotational symmetry (and how many times)

🔴 Spicy

Design your own 3D structure using cubes.

➡️ Sketch the top, front, and side views of your creation on grid paper.

➡️ Challenge: Arrange your cubes so that the top view has rotational symmetry (it looks the same when turned halfway around).

➡️ Label each view clearly.