Objective

By the end of this lesson, you will be able to apply geometric concepts to design and build houses in Roblox.

Materials and Prep

- Roblox account
- Computer or tablet with internet access
- Pencil and paper

No prior knowledge of geometry is required for this lesson.

Activities

1. Explore geometric shapes in Roblox:

   - Open Roblox and enter the Build Mode.
   - Experiment with different shapes available for building houses.
   - Identify and name different geometric shapes you come across.

2. Design a floor plan:

   - Using pencil and paper, sketch a floor plan for your dream house in Roblox.
   - Incorporate different geometric shapes into your floor plan.
   - Label each shape and its dimensions.

3. Calculate area and perimeter:

   - Select one of the rooms in your floor plan.
   - Measure the length and width of the room using Roblox tools.
   - Calculate the area and perimeter of the room using the appropriate formulas.

4. Build your house in Roblox:

   - Using the geometric shapes and dimensions from your floor plan, construct your house in Roblox.
   - Experiment with different arrangements and designs.

Eighth Grade Talking Points

- "Geometry is the branch of mathematics that deals with the properties and relationships of points, lines, shapes, and solids."
- "In Roblox house design, understanding geometry helps us create aesthetically pleasing and structurally sound houses."
- "Geometric shapes such as rectangles, squares, triangles, and circles can be found in various elements of house design."
- "Calculating the area of a room helps us determine the amount of space available for furniture and decorations."
- "Perimeter is the distance around the boundary of a shape, and it helps us determine the amount of fencing or materials needed."
- "By incorporating geometric concepts into our Roblox house designs, we can create unique and visually appealing virtual homes."