Full Name: _____ **Date:** _____ **Block:** _____

3D Shape Activity: Part 1

In this activity, you will make your own 3D that will then be used to understand its physical properties such as Surface Area and Volume.

****Must show supporting work to justify your answer to receive full credit****

Activity 1:

- Shape MUST contain 20 cubes (no hidden or visible voids or holes)
- Arrange the cubes how you wish to create a 3D shape.
- Draw 2D perspectives for the following projections:
  - Front
  - Right
  - Top
  - Back
  - Left
  - Bottom

  Label these drawings neatly on the provided graph paper.
- Calculate this shape's Surface Area (assume a unit area of 1 for each cube). Show your work and final answer on the drawing.
- Calculate this shape's Volume (assume a unit volume of 1 for each cube). Show your work and final answer on the drawing.

Activity 2:

- Rearrange the 20 cubes this time so there is at least one voids or holes (no hidden voids)
- Draw 2D perspectives for the following projections:
  - Front
  - Right
  - Top
  - Back
  - Left
  - Bottom

  Label these drawings neatly on the provided graph paper.
- Calculate this shape's Surface Area (assume a unit area of 1 for each cube). Show your work and final answer on the drawing.
- Calculate this shape's Volume (assume a unit volume of 1 for each cube). Show your work and final answer on the drawing.
- Keep this shape intact and grab a piece of tape to put your name on the shape and submit shape with paperwork.

DO NOT DISASSEMBLE THIS SHAPE AS IT WILL BE USED TO ASSESS AND COMPARE YOUR DRAWINGS AND RESULTS.