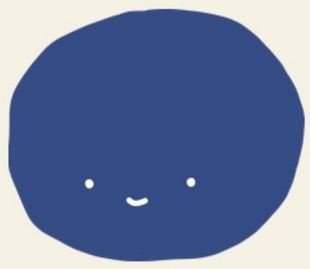
ACTIVITY A

Modeling Simple Shapes



Activity Brief: Explore a new CAD Modeling program by creating multiple simple shapes such as spheres, cubes, pyramids, etc.

PrinterForm: Play around with what printing form best fits your CAD shape. (curved form, rectangle form, etc).

Objective: A simple introduction to 3D modeling and how PrinterForm can help transform digital 3D models into real life prototypes (without 3D printing).

Target Age Group: Upper Elementary School

Recommended Tools: Try using TinkerCAD or Fusion360 to model your 3D shapes.

TINKERCAD AUTODESK Tinkercad F FUS

INSTRUCTIONS

Step 1 - Create

Create simple 3D shapes using a CAD modeling software experiment with different tools. You can try making a sphere, cube, pyramid, etc.

Step 2 - Modify

Modify your modeled shapes until you find the one you're ready to print. Make sure its a solid for and able to be exported as a .STL file type.

Step 3 - Upload

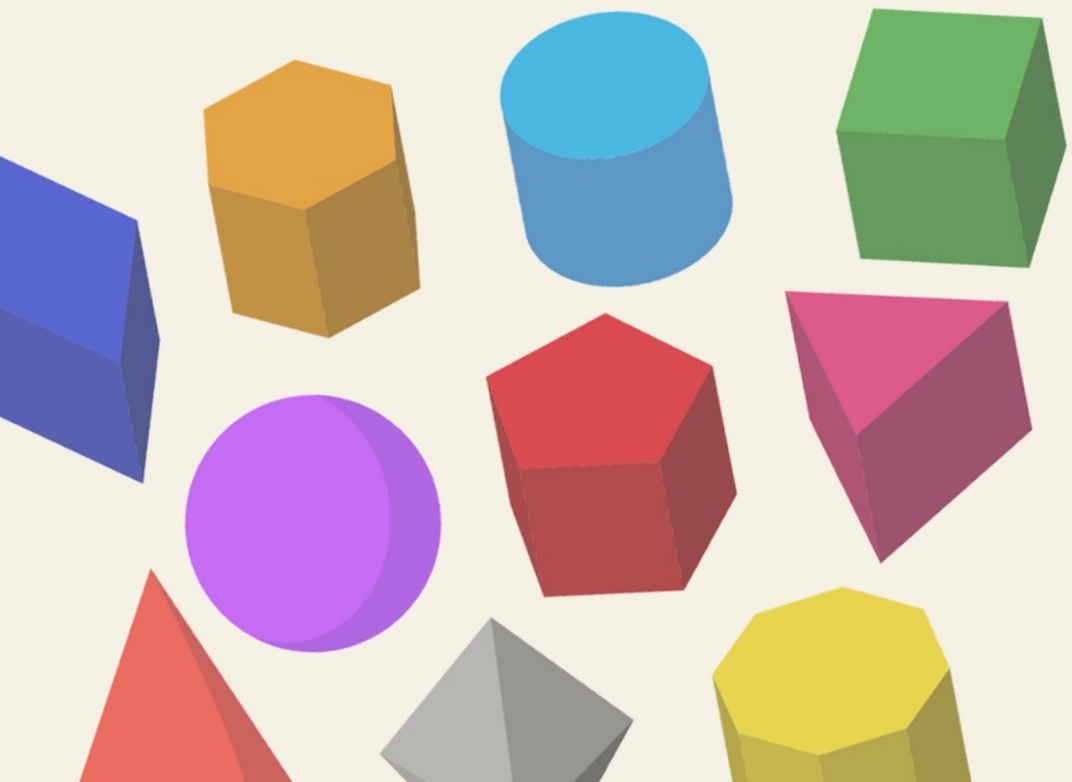
Upload your .STL file to PrinterForm and choose which print template best suites your shape. Look at how many sides and what geometry best matches your form.

Step 4 - Print & Fold

Using standard 8.5” x 11” paper print your form on its corresponding template then follow the dotted lines and printed direction to fold and create your printed prototype.

Step 5 - Share Your Work

Upload an image of your finished printed file to our gallery page and help us further develop this tool by providing your feedback at this PrinterForm Survey.



Additional Links

- UC San Diego - Makerspace 3D: Introduction to 3D Design & Printing
https://extendedstudies.ucsd.edu/courses-and-programs/middle-school-makerspace-3d-introduction-to-3d-design-and-printing
- Puzzle Shift Create - Teaching 3D Printing in a Middle School STEM Class
https://www.puzzleshiftcreate.com/3d-printing/teaching-3d-printing-in-a-middle-school-stem-class-free-lesson-plans/
- Create Education - School 3D Printing Workshops
https://www.createeducation.com/learn-3d-printing/school-3d-printing-workshops/