



# Extrusion and Stamping (at the museum)

## Introduction:

**In the museum, begin a quick 3d print.** Then look for the Parker Bros Press and for the small stamping machine in the Innovation Station. Your print should now be complete.

## Part One: Extrusion

As you pass out the Play-Doh kits, feel free to remind students that nobody is too old to enjoy Play-Doh! Have students open their kits and experiment with extrusion.

Show the students a piece of aluminum bar stock with extrusion lines.

**Ask:** How do your students think metal is extruded?

## Part Two: Press and Stamp

Flatten your dough with your hands.

Use the 3D printed cookie cutter. Is it too thin? Too thick?

Use the roller and whichever combination colors of dough to flatten it.

Now, Use the 3D printed cookie cutter. Is it too thin? Too thick?

**Ask:** Will your cutouts be the same every time?

(Be advised, in 2020 videos of hydraulic presses squishing things were quite popular. So it's likely your students will have seen one and the following question may lead to much conversation. Ask: Have you heard of a hydraulic press?)

## Conclusion: Career Context

Even though a lot of the museum dates back two hundred years, manufacturing continues to evolve and change. Have students watch some of this [video about Stamping Dies & Processes](#). ("Sheet Metal Stamping Dies & Processes" by Tooling U – SME).

**Ask:** Are you surprised how complicated it can be? What are the differences between what we were doing and what manufacturers do? What are the similarities?

### Materials List:

Play Doh Fun Factory  
3D Printed Cookie Cutter\*  
make these in advance.  
Clay or Pasta Roller



# Extrusion and Stamping (at home or school)

## Part One: Extrusion

As you pass out the Play-Doh kit, feel free to remind students that nobody is too old to enjoy Play-Doh! Have students open their kits and experiment with extrusion.

Show the students a piece of aluminum bar stock with extrusion lines.

**Ask:** How do your students think metal is extruded?

## Part Two: Press and Stamp

Flatten your dough with your hands.

Use the printed cookie cutter. Is it too thin? Too thick?

Use the roller and whichever combination colors of dough to flatten it.

Now, Use the cookie cutter. Is it too thin? Too thick?

**Ask:** Will your cutouts be the same every time?

(Be advised, in 2020 videos of hydraulic presses squishing things were quite popular. So it's likely your students will have seen one and the following question may lead to much conversation. Ask: Have you heard of a hydraulic press?)

## Conclusion: Career Context

Even though a lot of the museum dates back two hundred years, manufacturing continues to evolve and change. Have students watch some of this [video about Stamping Dies & Processes](#). ("Sheet Metal Stamping Dies & Processes" by Tooling U – SME).

**Ask:** Are you surprised how complicated it can be? What are the differences between what we were doing and what manufacturers do? What are the similarities?

### Materials List:

Play Doh Fun Factory Kit  
Cookie Cutter\*  
Clay or Pasta Roller