nclab
Learning for Industry 4.0

3D Modeling Project #8

INTERLOCKING BRICKS

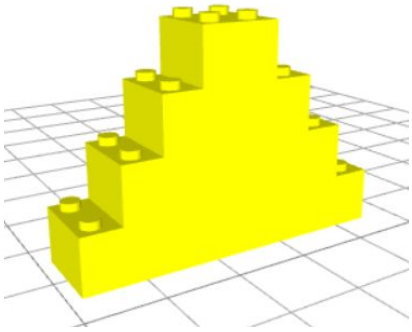
Make interlocking blocks that snap together.

Before You Start

Go to the Creative Suite, open a new PLaSM CAD project, and save it as Project-8 in the folder course-3D-projects/.

Project Goal

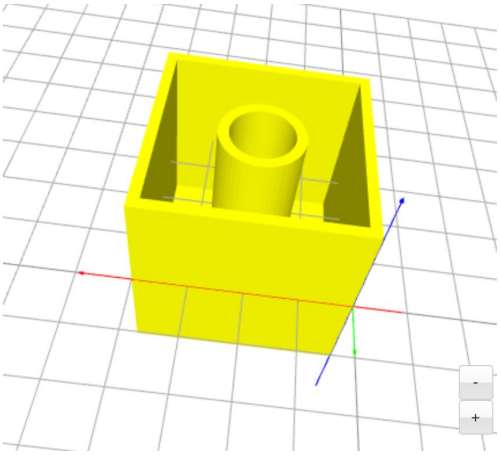
The goal of this project is to build a interlocking brick or model of your choice!



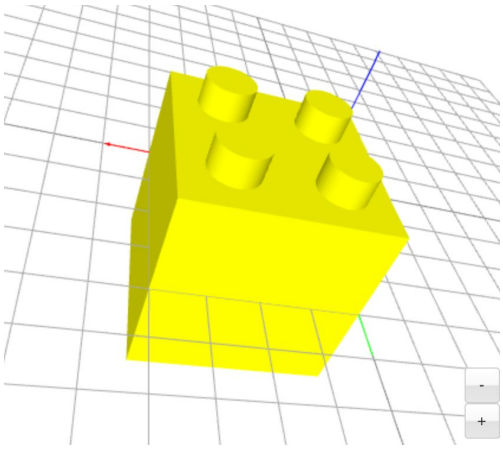
Interlocking Bricks

Your bricks should interlock. This means that the bottom should be able to lock together with the top of another brick when pushed together.

Here is an example of one possible design:

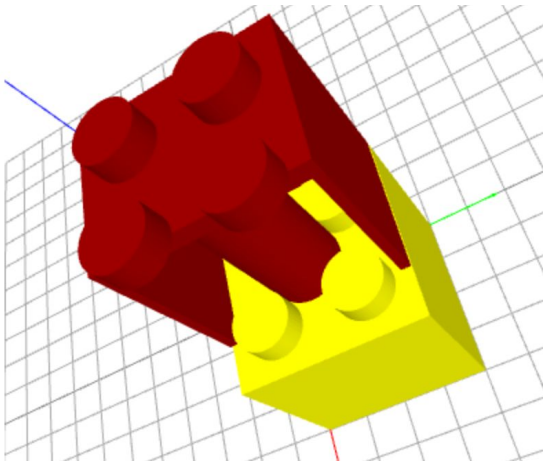


The bottom of the brick



The top of the brick

In engineering, clearance is a term for a gap between two surfaces. In this example, there needs to be very little clearance between the four pegs and the center ring. If the center ring is too small, the surfaces will not touch. If the center ring is too big, they will intersect!



The two surfaces have very little clearance.

Design Your Own

How else might you design a brick that is interlocking? Can you create another shape that has an interlocking base?

Useful commands for this project are: SUBTRACT(), SCALE(), and ROTATE().

Project Checklist

Your project will be finished when:

1. You have finished your 3D model.
2. Your program is saved as Project-8 in folder course-3D-projects/.