

Miner Rescue Cage Lab

Theme: Structure

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Purpose

Building a strong structure will be important to any robot you build. This lab will demonstrate some good building practices and give you experience building good structures of various shapes.

Constructing the Cage

Parts:

8 x 2 x 8 Plates


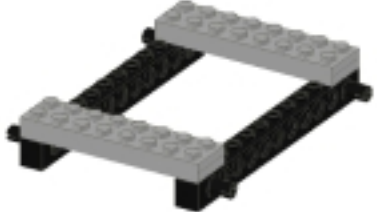
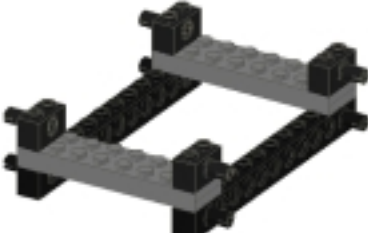
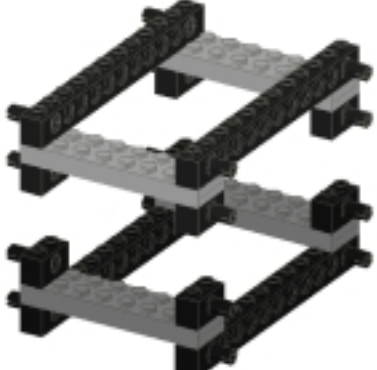
8 x 1 x 2 Technic Bricks with Holes

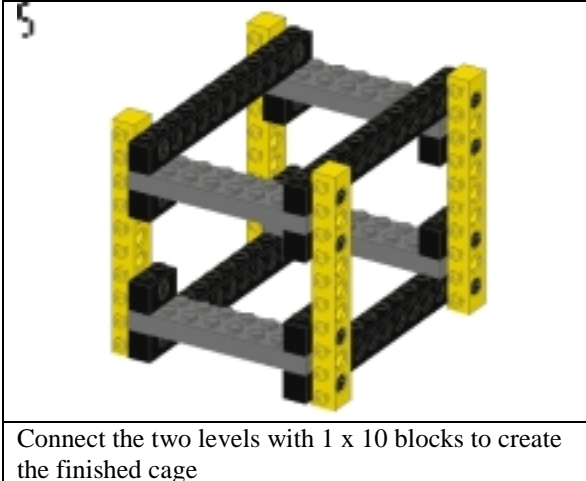
4 x 1 x 10 Technic Bricks with Holes

4 x 1 x 12 Technic Bricks with Holes

16 x Technic Pins

Instructions:

<p>1</p> 	<p>2</p> 
<p>Place two 1 x 12 blocks with holes next to each other as shown. Add a technic pin in each corner hole.</p>	<p>Stack two sets of two 2 x 8 lego plates on top of each other and connect the two blocks with these plates at their ends.</p>
<p>3</p> 	<p>4</p> 
<p>Place four 1 x 2 blocks at the corners with technic pins in each of them as shown.</p>	<p>Repeat steps 1-3 except with the 1 x 2 blocks on the bottom and the 1 x 12 blocks on the top</p>



Connect the two levels with 1 x 10 blocks to create the finished cage

Questions

1. What makes this rescue cage so strong?
2. Try to make a box using only LEGO blocks. Is it strong?
3. Can you make a triangular shaped cage? A round one?

Challenge

Now try to build your own rescue cage. Take a roll of pennies and draw a miner in the paper sleeve. Design a rescue cage that may hang from a string and safely raise the miner from the floor to a tabletop.