



RCX Robot Construction







Constructing the Robot

Parts:

- 1: 2 x 2 Boat Stud
- 1: 2 x 2 - 2 x 2 Bracket
- 1: 2 x 2 Brick
- 3: 2 x 4 Bricks
- 1: Light Sensor
- 1: Mindstorms RCX
- 1: Rotation Sensor
- 2: Short Wires
- 2: Technic Mini-Motors
- 7: 1 x 2 Plates
- 6: 1 x 2 Plates with Door Rails
- 4: 2 x 2 Plates
- 2: 2 x 4 Plates
- 1: 3 x 6 Plate without Corners
- 3: Technic Axles length 6
- 1: Technic Axle Pin
- 6: 1 x 2 Technic Bricks with Holes
- 6: Technic Bushes
- 3: Technic 8 Tooth Gears
- 3: Technic 40 Tooth Gears
- 2: 2 x 6 Technic Plates with Holes
- 1: 2 x 8 Technic Plate with Holes
- 2: Wheels

Instructions:

<p>1</p> 	<p>2</p> 
Place a 1 x 2 plate with a door rail at both ends of a 2 x 8 technic plate.	Place 1 x 2 plates behind the other 1 x 2 plates on the 2 x 8 technic plate.

<p>3</p> 	<p>4</p> 
<p>Attach two 1 x 2 bricks with holes on top of each set of plates. Make sure the holes face out as shown.</p>	<p>Place a 1 x 2 plate and a 1 x 2 plate with a door rail on top of the right pair of bricks as indicated.</p>
<p>5</p> 	<p>6</p> 
<p>Place a 2 x 2 block on top of the set of plates added in the previous step. Add a 1 x 2 plate with door rail on top of the other set of 1 x 2 bricks.</p>	<p>Slide the indicated set of 1 x 2 plates with door rails into the slots in the side of the motor. Secure the motor across the bottom with a 2 x 6 plate. Make sure to attach a short wire to the motor (wire not shown)</p>
<p>7</p> 	<p>8</p> 
<p>Repeat the same process from the previous step to attach the other motor.</p>	<p>Place on top of the 1 x 2 plate with door rail a 1 x 2 plate. Place two 2 x 2 plates on top of that to help secure the motor. Take two 1 x 2 bricks with holes and line them up as shown. Place a 1 x 2 plate with a door rail on top and another on the bottom. Attach two more 1 x 2 plates as shown and slide the assembly into the motor.</p>

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Place a 2 x 2 plate to secure the front set of bricks. Place a 1 x 2 plate as shown.

10



Attach an 8 tooth gear to both motors. Also connect a technic axle pin into the front set of bricks.

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Insert a length 6 axle through the rear set of blocks on either side. Secure it on the inside with a technic brush. Connect a 40 tooth gear on the outside that meshes with the gear on the motor. Secure that with another technic brush. Repeat on the other side. Attach another 40 tooth gear to the pin in the front.

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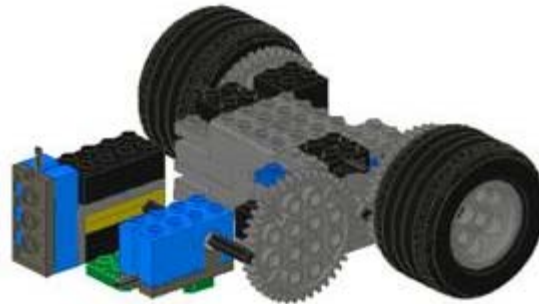
Attach two wheels to the back two axles.

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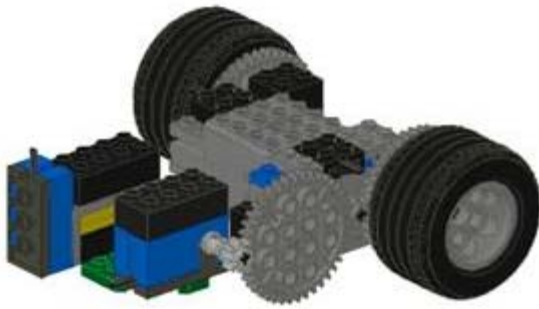
Place a 2 x 4 brick in front of the motors. Attach on top of that two 2 x 4 plates. On top of that place a 2 x 2 - 2 x 2 bracket and a 2 x 2 plate. Attach to that another 2 x 4 brick.

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Place below those bricks a 3 x 6 plate without corners. Attach a light sensor as shown to the bracket. Attach a rotation sensor to the plate. Insert through the rotation sensor a length 6 axle. Place a 2 x 2 boat stud on the bottom to serve as a skid.

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Attach to the length 6 axle a skid on both sides of the rotation sensor to secure it in place. Attach an 8 tooth gear on the end. Place a 2 x 4 brick on the rotation sensor.

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Place the RCX on the motors and sensors. Attach the wires from the motors and sensors to the RCX as indicated.

The Finished Model

