

Instructions for Building the Solar Car (30 minutes)



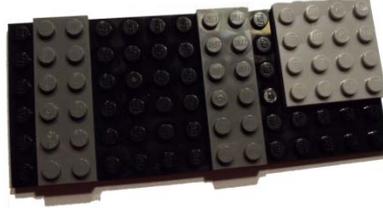
1. Start with the 6 X 14 Lego[®] body and place one of the flat 2 X 6 Lego[®] pieces one row back from the front of the body and the other one four rows back from that.

1



2. Next place the flat square Lego® piece that the motor will be mounted in the farthest left-hand corner of the body.

2



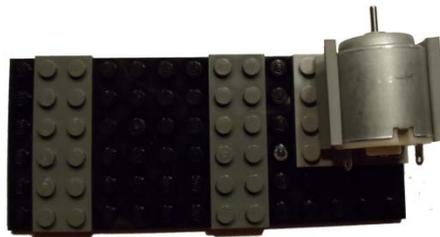
3. Take the paper film off of the motor holder and stick it onto the edge of the square Lego® piece closest to the edge of the car. Make sure the motor holder's open ends face side to side (as pictured).

3

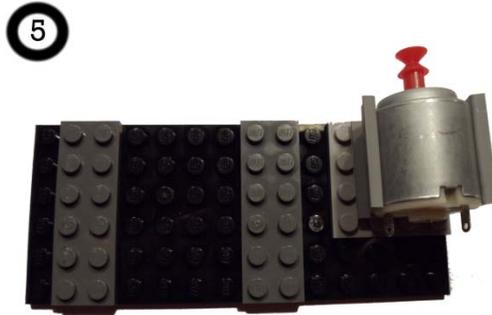


4. Place the motor into the motor holder so that the prongs are facing inward and the motor axel is facing outward.

4



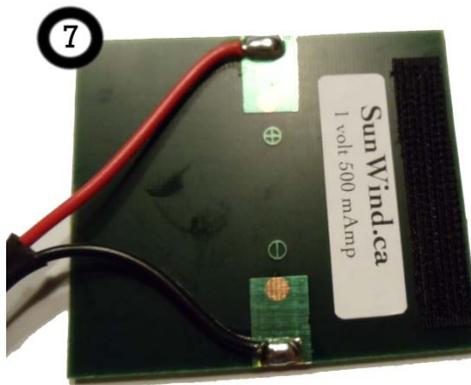
- Put the red motor axel cover on the motor's axel so that the indented half is on the outside.



- Peel the paper film off of the Velcro pieces. Place the soft side on the one flat Lego[®] piece that is closest to the front.



- Place the rough side of the Velcro on the edge of the underside of the solar panel. (Keep it at the top and avoid the wires). Set the panel aside; it will be added to the car later.



8. On one of the axels, slide on two of the Lego® axel holders.



9. Then place two pieces of rubber tubing on the axel, just far enough so that the axel holders can fit onto the edge of the body but not be touching the rubber tubing because this causes friction. Also make sure to leave some space at the end of the rods for the wheels. (The rubber tubing is to assure that the axels don't wiggle around too much and cause the car to drive crooked.)



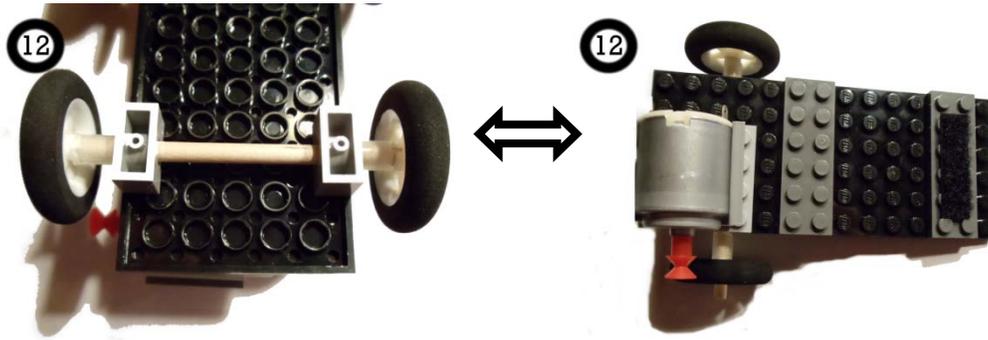
10. Then place two wheels on the outside of the axels. If the wheels don't fit onto the axels, lightly sand the axels down and try again. Make sure the wheels are on far enough that they don't fall off.



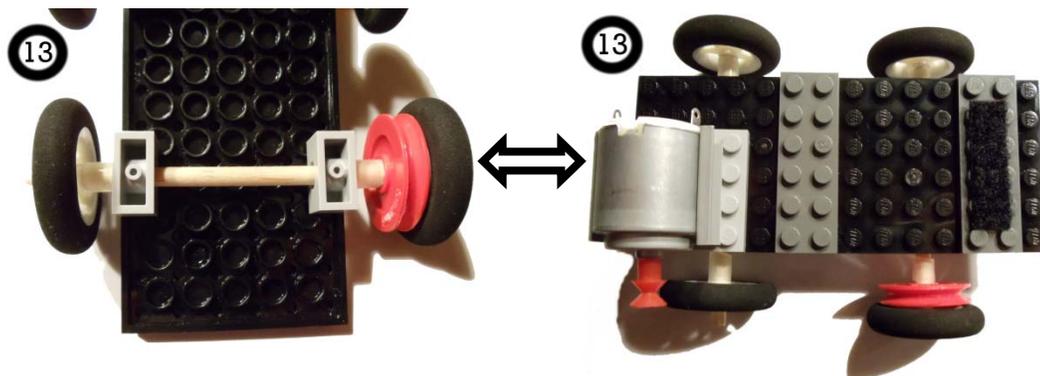
11. Repeat steps 7-9, except in step 9, place the red pulley in between one of the pieces of rubber tubing and the wheel.



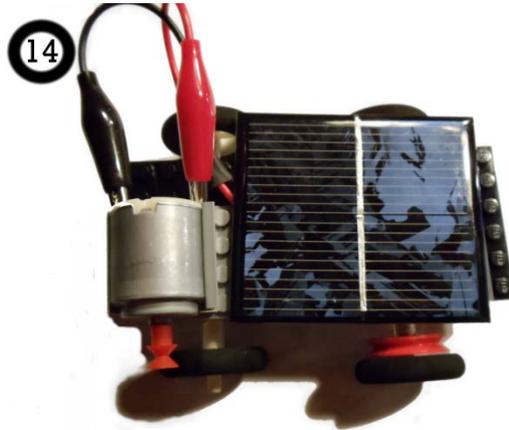
12. Place the finished axel with wheels and Lego® pieces on the bottom of the car's body 2 rows from the edge of the back, make sure axel holders line up with the edge of the side of the body.



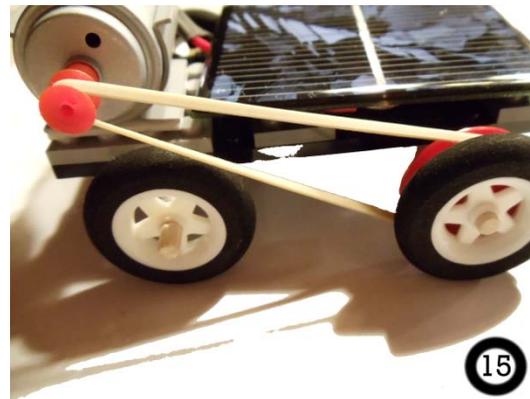
13. Place the axel with the red pulley 3 rows back from the front of the car (farthest from the motor). Make sure the pulley is on the same side as the red motor axel cover.



14. Place the solar panel onto the body of the car so that the Velcro pieces touch and hook the wires up to the prongs on the motor. MAKE SURE THE WIRES DO NOT TOUCH THE WHEELS!



15. Stretch the rubber band between the red pulley and the red motor axel cover. AVOID PLACING THE RUBBER BAND AROUND THE REAR AXEL!



16. Place the car in a light source. If the car does not go in the desired direction, switch the wires on the prongs.

