




Cardboard Cable Car Model With Recycled Materials, Working Model 250rpm Electric Motor and Basic Slide Switch ON-OFF-ON (School Science Project)

You can show this cardboard model as an enjoyable school project. At the same time learn the working principle of a cable car by building it.

 Difficulté Facile

 Durée 3 heure(s)

 Catégories Électronique, Énergie, Recyclage & Upcycling

 Coût 3.00 USD (\$)

Sommaire

Introduction

Video d'introduction

Étape 1 - Mounting Pulley Wheel on Motor Shaft

Étape 2 - Glue Popsicle Stick for Pulley Holder

Étape 3 - Plastic Pulley Wheel Holder Assembly

Étape 4 - Drill a Hole on Slingshot

Étape 5 - Mount Plastic Pulley on Slingshot

Étape 6 - Motor Base

Étape 7 - Motor Assembly

Étape 8 - Pulley Holder Mount

Étape 9 - Thread Tension Control

Étape 10 - Attach Tension Control Onto Yarn

Étape 11 - Attach the Cable

Étape 12 - Soldering System

Étape 13 - Motor Soldering

Étape 14 - Battery Attachment

Étape 15 - Cable Car Cabin Assembly

Étape 16 - Cut Cabin Hanger 30° Angled

Étape 17 - Glue Hanger

Étape 18 - Attach the cabinet to the rope

Étape 19 - Play it

Commentaires

Introduction

You can show this cardboard model as an enjoyable school project. At the same time learn the working principle of a cable car by building it.

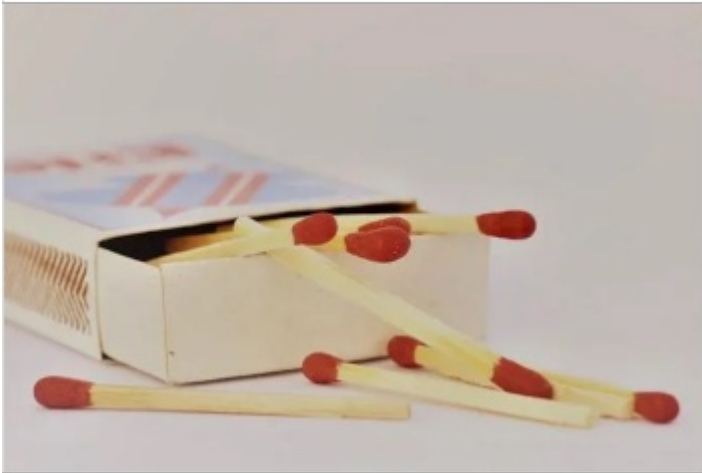


Matériaux

- 1pcs 25*35cm 5mm Cardboard for project Ground
- 8pcs popsicle stick (15cm)
- 2pcs Plastic Pulley Wheel (Recycled from old CD/DVD burner)
- 1pcs DC BO Motor (6V)
- 7x4x3cm cardboard Block (Stacked 6pcs 4*7cm cardboard)
- Plastic Bottle Cap
- 4pcs Match
- 1pcs Battery Holder
- 1pcs DPDT On-Off-On Slide Switch
- Passengers (Optional)
- Nylon yarn
- 1pcs thin nail

Outils

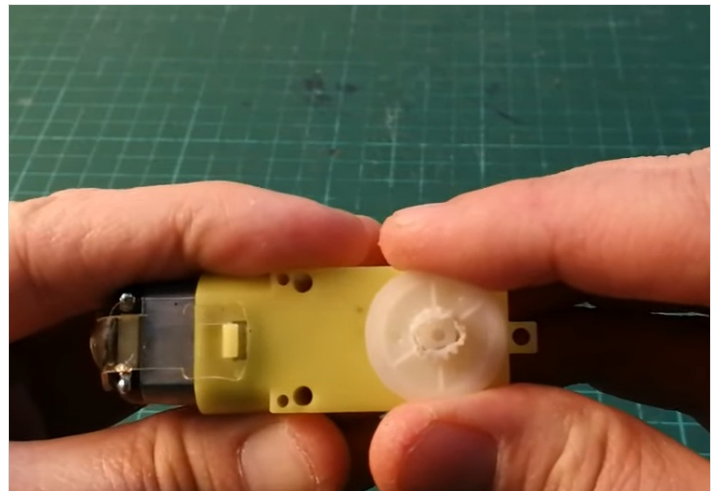
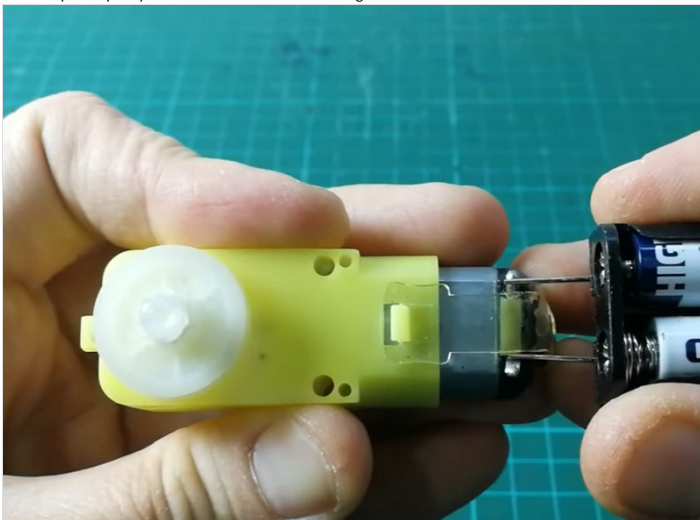
- soldering iron
- Cutter
- Glue





Étape 1 - Mounting Pulley Wheel on Motor Shaft

You can check all steps on video briefly or follow below steps.
• Mount plastic pulley wheel onto DC motor shaft and glue on it.



Étape 2 - Glue Popsicle Stick for Pulley Holder

Glue the popsicle sticks on top of each other.
1 set of 4 sticks will be glued on top of each other.
2 sets of 2 sticks will be glued on top of each other.



Étape 3 - Plastic Pulley Wheel Holder Assembly

Glue the popsicle sticks together in the form of a slingshot, keeping the group of 4 in the middle.



Étape 4 - Drill a Hole on Slingshot

Drill a hole on slingshot shaped holder for plastic pulley.



Étape 5 - Mount Plastic Pulley on Slingshot

Mount plastic pulley wheel with a nail between slingshot arms.



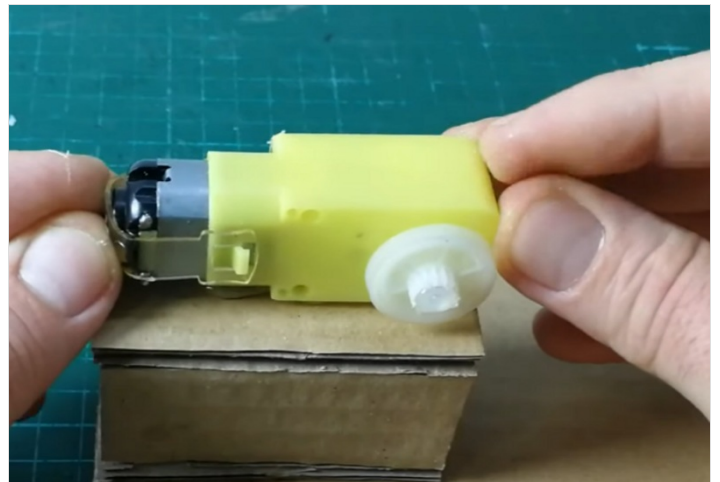
Étape 6 - Motor Base

Glue cardboard block onto base left side.



Étape 7 - Motor Assembly

Glue 250rpm 3-6V DC motor onto cardboard block.



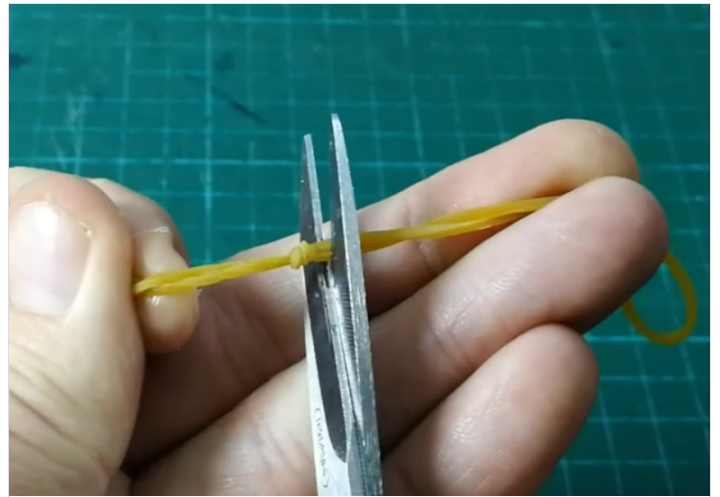
Étape 8 - Pulley Holder Mount

Glue pulley holder slingshot onto plastic bottle cap to increase height.
Glue pulley holder slingshot onto right side of base.



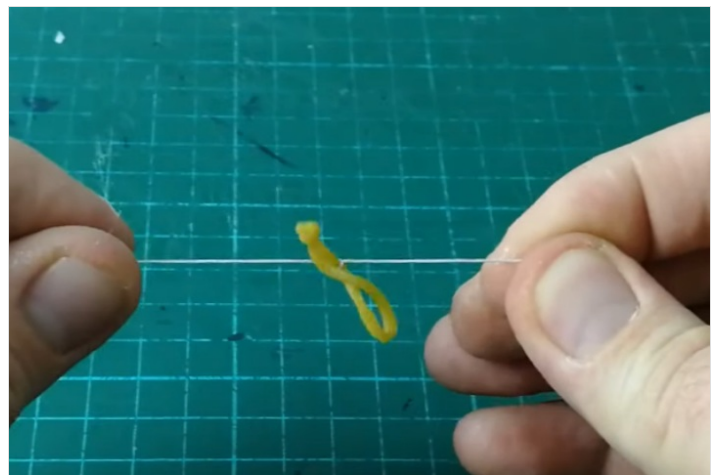
Étape 9 - Thread Tension Control

Knot the rubber band and cut it.



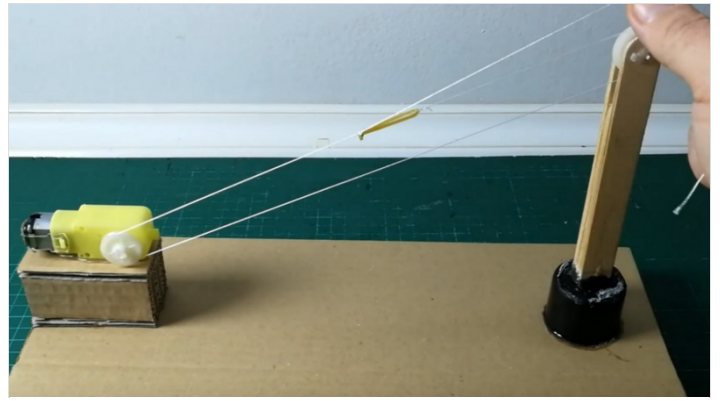
Étape 10 - Attach Tension Control Onto Yarn

Tie the rubber band together with nylon thread.



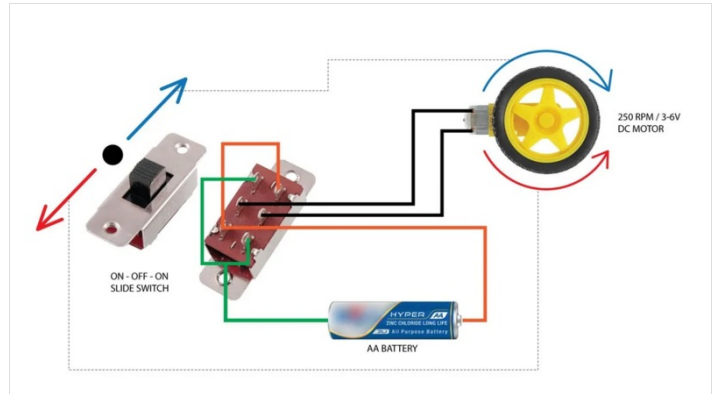
Étape 11 - Attach the Cable

Tie the yarn between the pulleys by adjusting the tension with the rubber band.



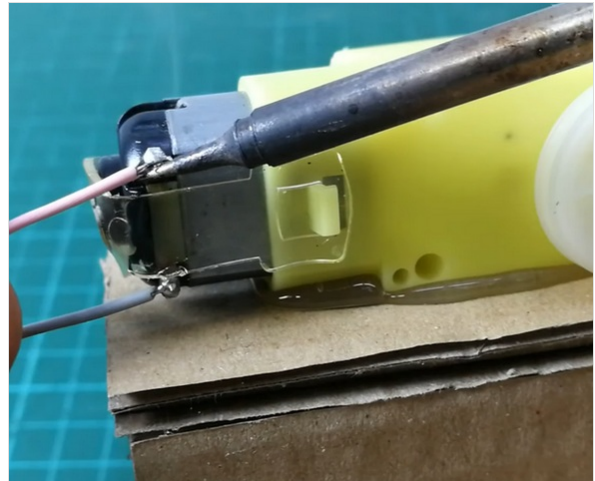
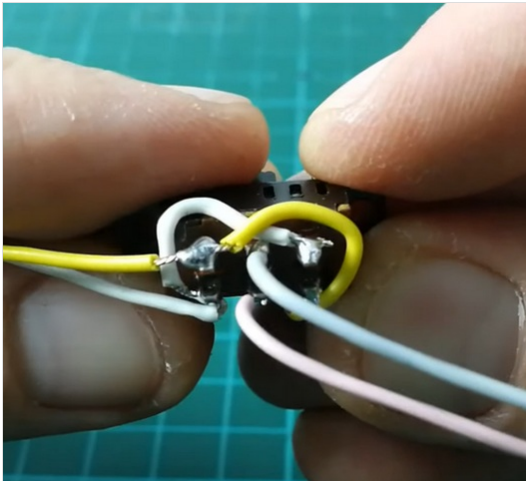
Étape 12 - Soldering System

Solder the wires onto the 6 pin slide switch for forward and reverse movement.



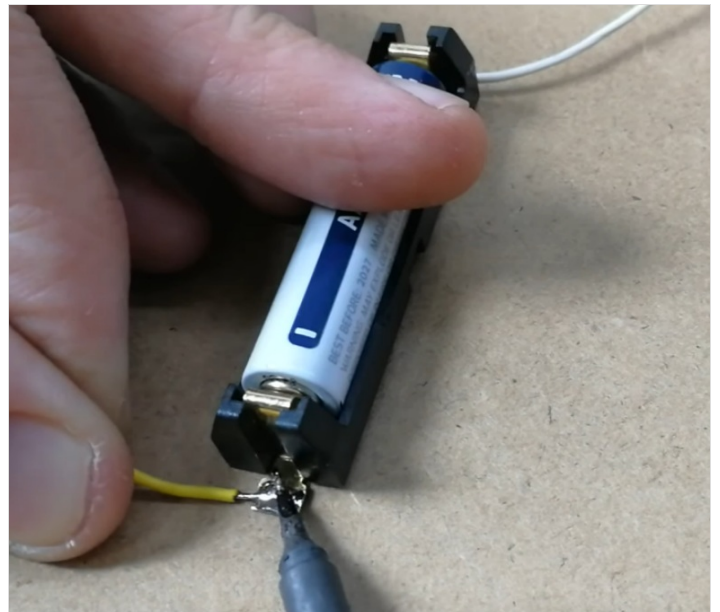
Étape 13 - Motor Soldering

Solder the cables coming from the middle pins of the slide switch to the motor pins.



Étape 14 - Battery Attachment

Solder the cables from the other ends to the pins on the battery holder.

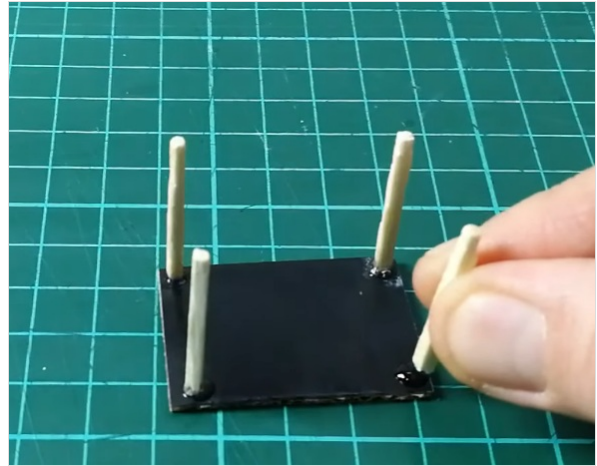


Étape 15 - Cable Car Cabin Assembly

Cut away 4pcs Match heads.

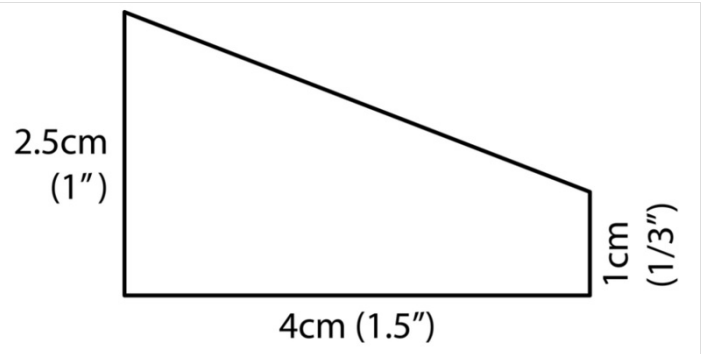
Prepare 2pcs 4x3cm 3mm cardboard and glue Matches on the corners.

Don't forget the Passengers



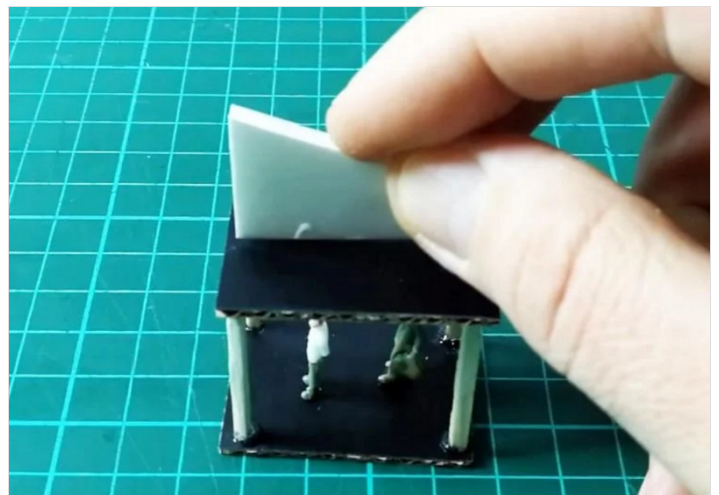
Étape 16 - Cut Cabin Hanger 30° Angled

Cut ~30° Angle Holder for Cable Car Container



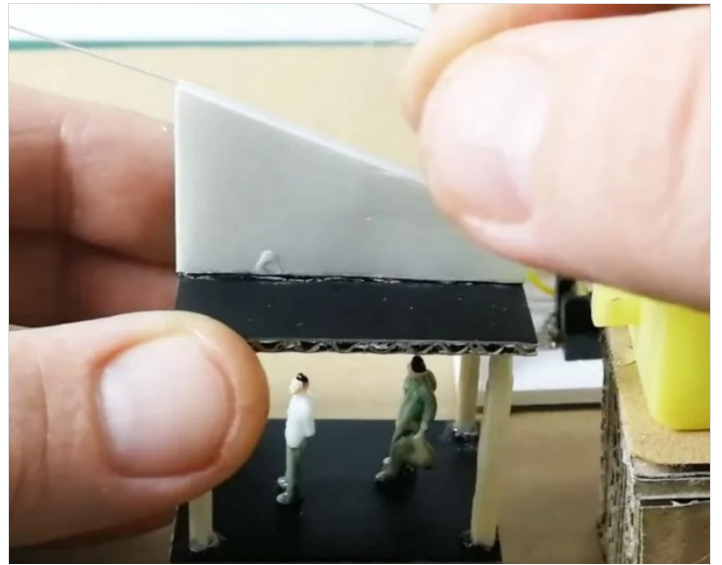
Étape 17 - Glue Hanger

Glue the angled cabin hanger onto the cabin



Étape 18 - Attach the cabinet to the rope

Attach the cabinet to the rope



Étape 19 - Play it

Start the cable car by moving the switch back and forth, have fun 🎉🎉🎉

https://wikifab.org/wiki/Fichier:Cardboard_Cable_Car_Model_With_Recycled_Materials_Working_Model_2!OFF-ON_School_Science_Project_FBSGGBXLU6YNDFK.mp4