

Make your own robotic hand and use it to perform simple tasks!

ITEMS NEEDED



Glue



Air-dry clay / blu tack

8



String



Key rings

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Cardboard roll / box



Scissors



Drinking

Drinking straws

Pencil

Tape





INSTRUCTIONS

Step 1

Cut out cardboard in the shape of a hand

Place your hand on the cardboard and use a pencil to trace the outline of it. Cut the traced hand out. Make folds on the cardboard hand to represent the joints of the fingers.



Attach a handle to the hand

Use the remaining cardboard to make a handle for you to hold on to with your own hand. Attach the handle to the cardboard hand with tape.

Step 3



Cut and attach drinking straws

Cut drinking straws into lengths of about 2-3 cm and glue them onto the fingers of the cardboard hand, where the palm would be. You may add tape to secure them.

Step 4



String and ring them together

Thread strings through the straws and attach key rings at the end nearer to the wrist zone. Secure the ends nearer to the fingertips with air-dry clay or blu tack.



Attach the rubber bands

Tape some stretched rubber bands to the top side of the fingers to provide tension so that the fingers can spring back to their original positions easily.



Test the robotic hand out!

Try out your product by sliding your fingers through the handle and loop your fingers around the rings. Use it to grab an item from a table and place it down elsewhere. You can also use it to make hand gestures.





USES OF A CARDBOARD ROBOTIC HAND

Picking Up Objects

The robotic hand can be used to pick up and manipulate light objects such as empty drink cans or stationery. By pulling the strings with your real fingers, the cardboard fingers close and grip the object tightly. To release the object, simply reduce the tension on the strings.



Dexterity Challenges

It can also be used to design challenges where participants use the robotic hands to complete tasks such as picking up small items, and promoting problem-solving and teamwork.





USES OF A CARDBOARD ROBOTIC HAND

Teach Physics and Biomechanics

A cardboard arm helps children to understand how the human body (like the bones, muscles and tendons in your arms) moves using simple parts.



Decorating and Customization

Decorating the robotic hand with markers, crayons, paint, stickers, or other materials can encourage creativity and self-expression.





