

CHALLENGE: BUILD A MODEL ROBOTIC HAND

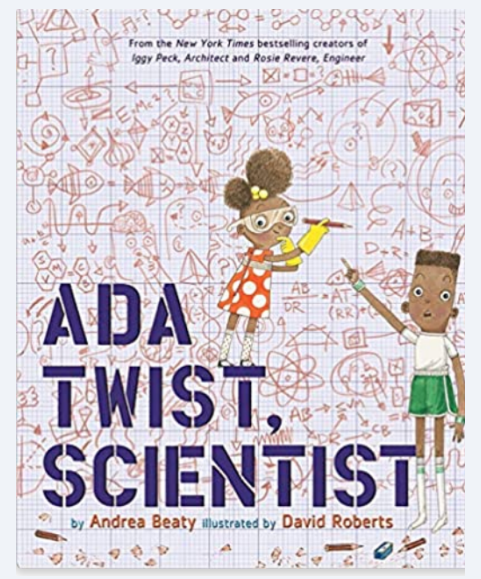
This week's challenge was to experiment with engineering principles in medical fields! You can also make a prosthetic hand that moves using household materials!

1. Gather materials.
2. Trace a family member's hand on cardboard. Carefully cut out the hand shape.
3. Glue bendable straws on each finger, so that the bendy part was on the hand and long part of the straw on the fingertips.
4. Trim the edges of the straw to align with the edge of fingers.
5. Take a pencil and mark on the fingers of the cardboard and hand the location of the joints and knuckles from a real-life hand.
6. Take scissors and carefully score the back side to the hand on those lines, so the fingers can curl and bend!
7. Carefully slice a section of the straw (at 45 degree angles) where the joints are located. This helps the fingers to bend, too!
8. Take string and run through each straw, leaving a long tail out both the top and bottom of the straw. Cut rubber bands so they would be a long strip instead of a circle.
9. At the top of each finger, tie the string and rubber band ends together in a small knot.
10. Turn the hand over and hot glue the loose ends of the rubber band down to the back of the hands.
11. Test out your model hand!



Abby Invents

Unbreakable Crayons



K - 3rd 4th- 8th

MATERIALS
*MUST BE APPROVED
BY AN ADULT!
*CARDBOARD
*SCISSORS
*BENDABLE STRAWS
*STRING OR YARN
***THICK**
RUBBER BANDS
*HOT GLUE GUN AND
GLUE STICKS
***PENCIL**

Educational Correlations:
Engineering, Science,
Mathematics, Language
Arts, Physics, & 5 C's