

HYDRAULIC CLAW

SPRING PROJECT

IT GIRLS

LEVEL CREEK ELEMENTARY

BERKELEY LAKE ELEMENTARY



IT Girls

INSPIRING GIRLS TO PURSUE THEIR PASSIONS

Get your hydraulic claw box but do not
remove any of the pieces just yet

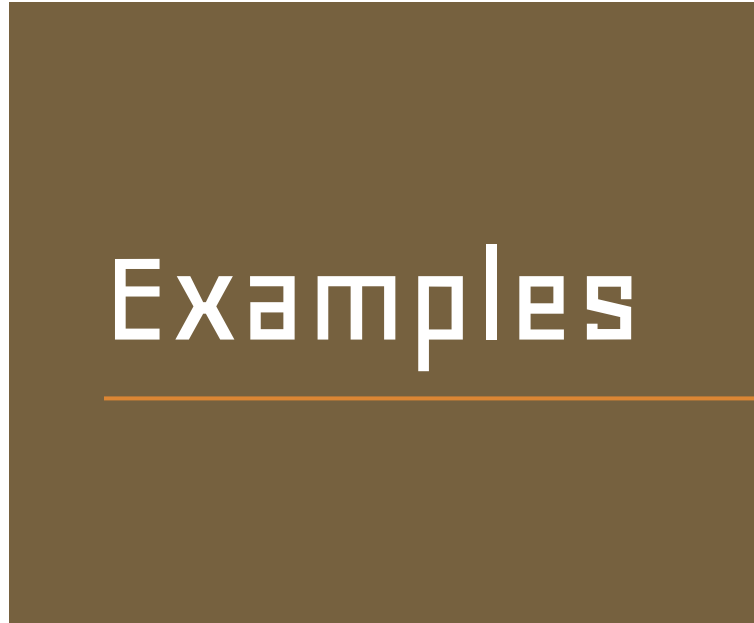
Enjoy your breakfast!

Hydraulic Claw

What we Learned Last Week

Hydraulics is the study of how fluids move and how that motion can be used.







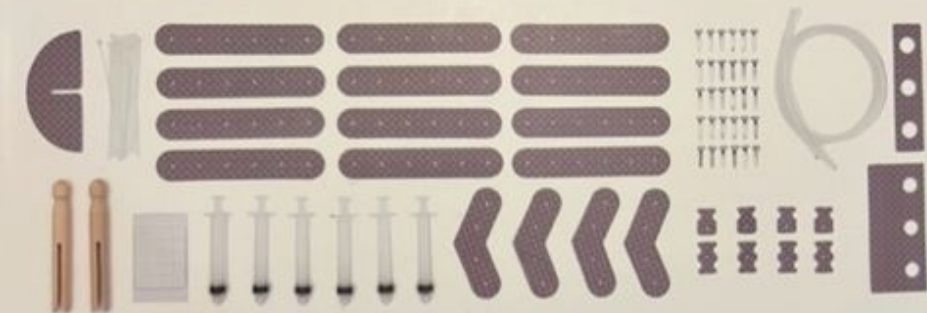
LET'S KEEP
BUILDING



Your Hydraulic Claw Kit

Remove the items from your kit this morning and leave everything else in your box

Includes everything you need:

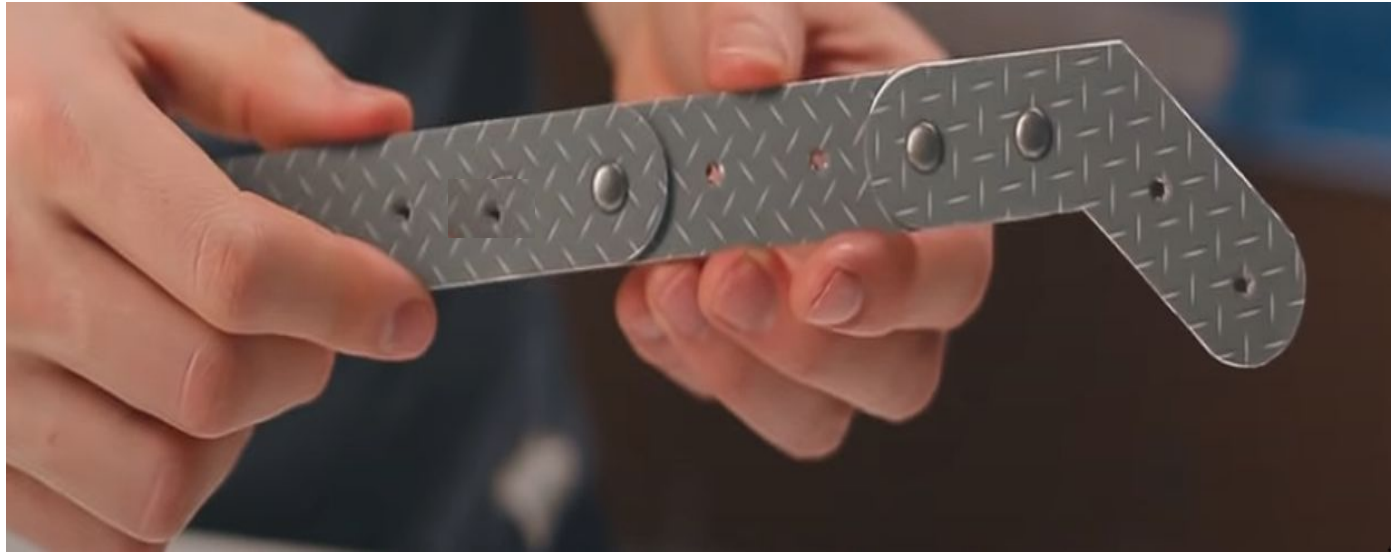
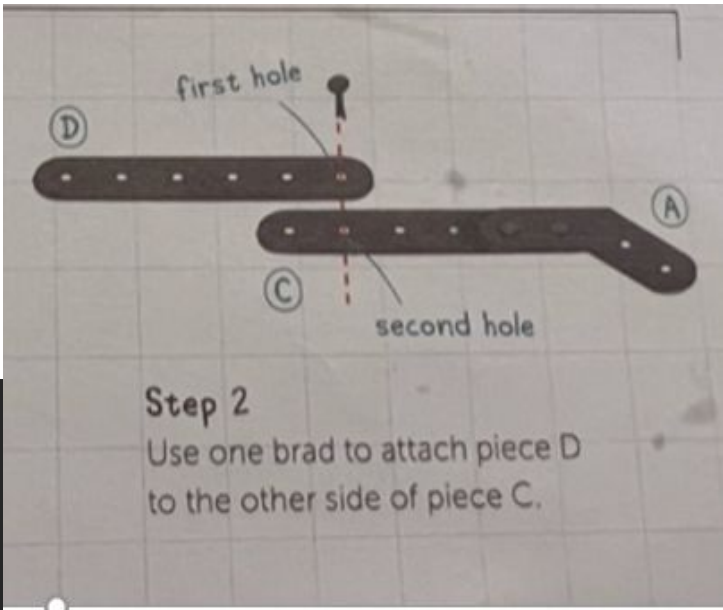
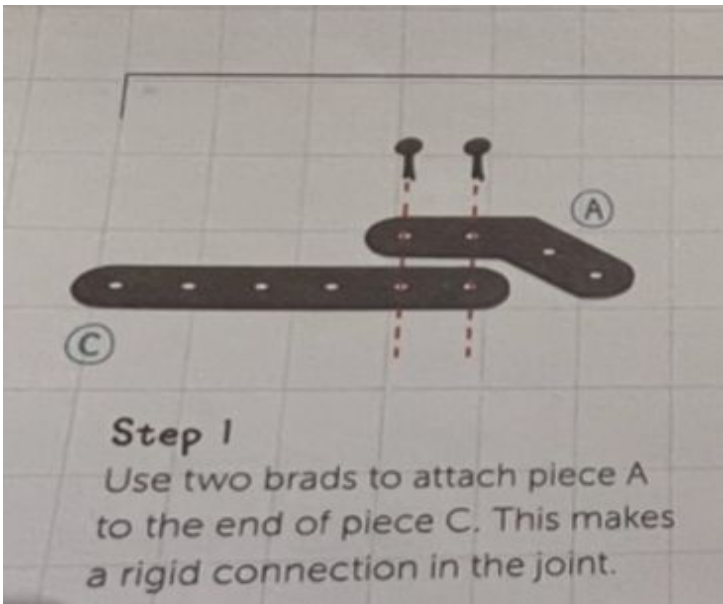


27 chipboard pieces
6 syringes
3 tubes

30 brads
sticky foam sheet
12 zip ties

2 clothespins
illustrated instruction booklet
tinker zine

Completed Hydraulic Tubes
Brads
Carboard pieces



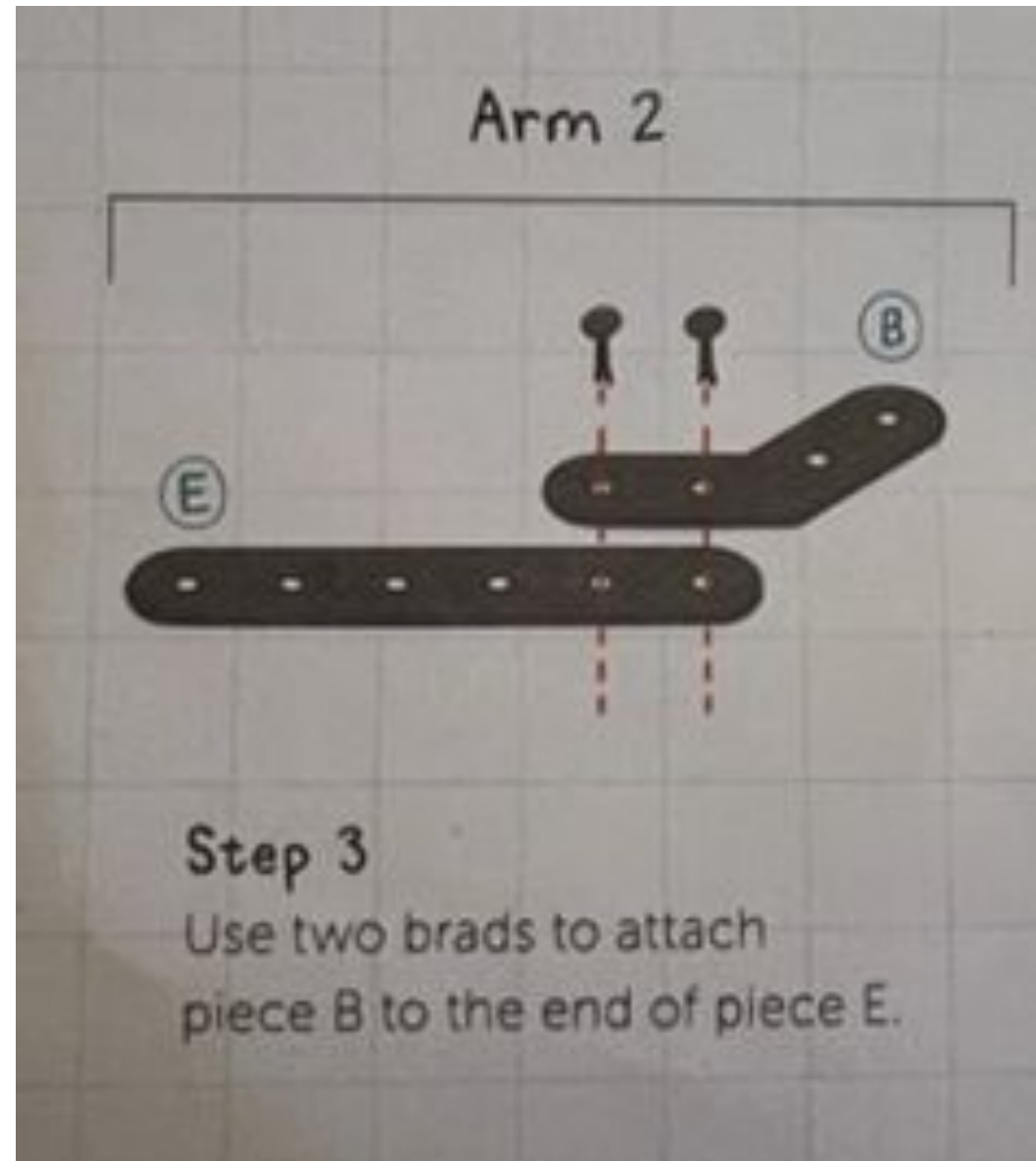
**Make Sure to
fasten your brads!**



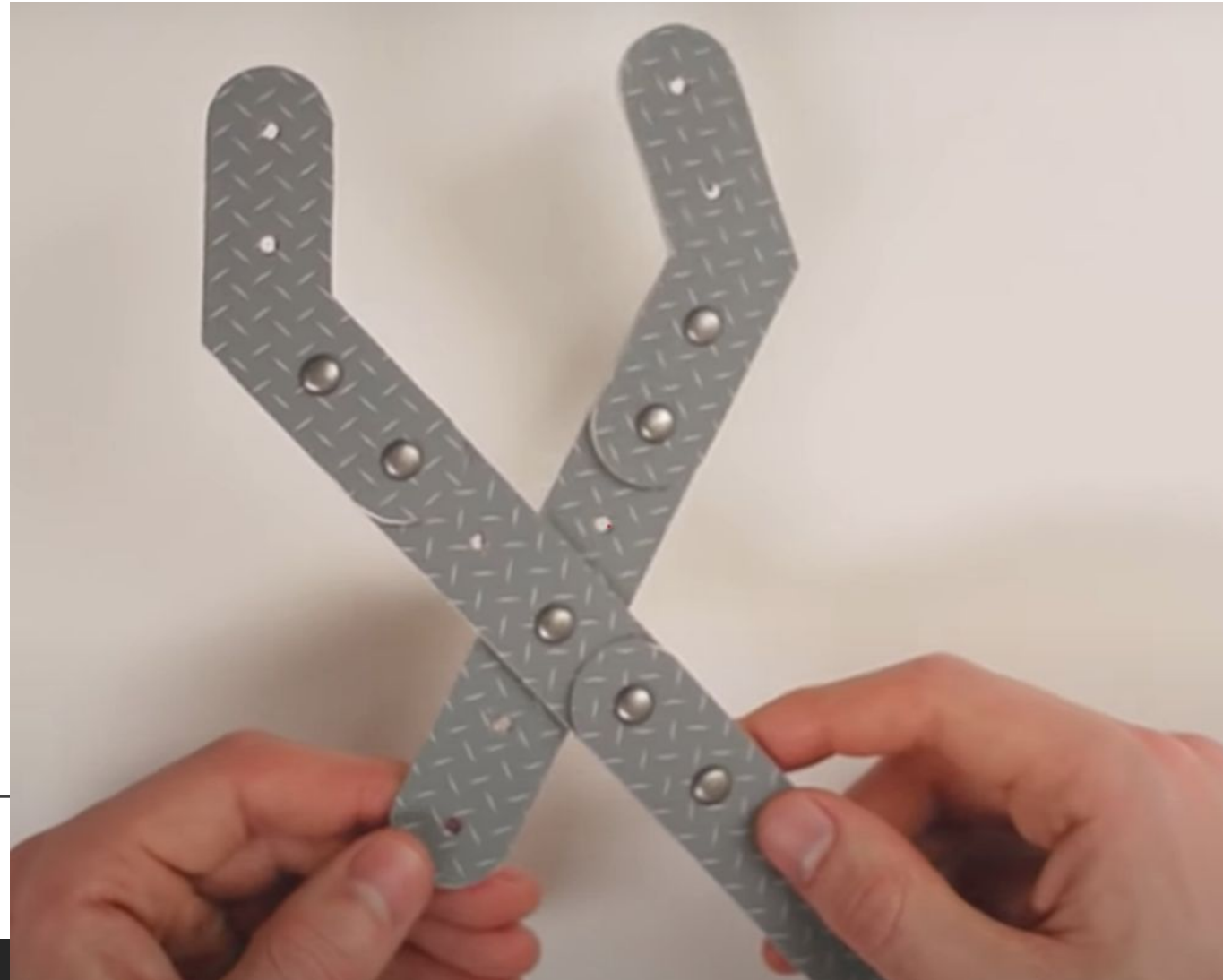
MECHANISM

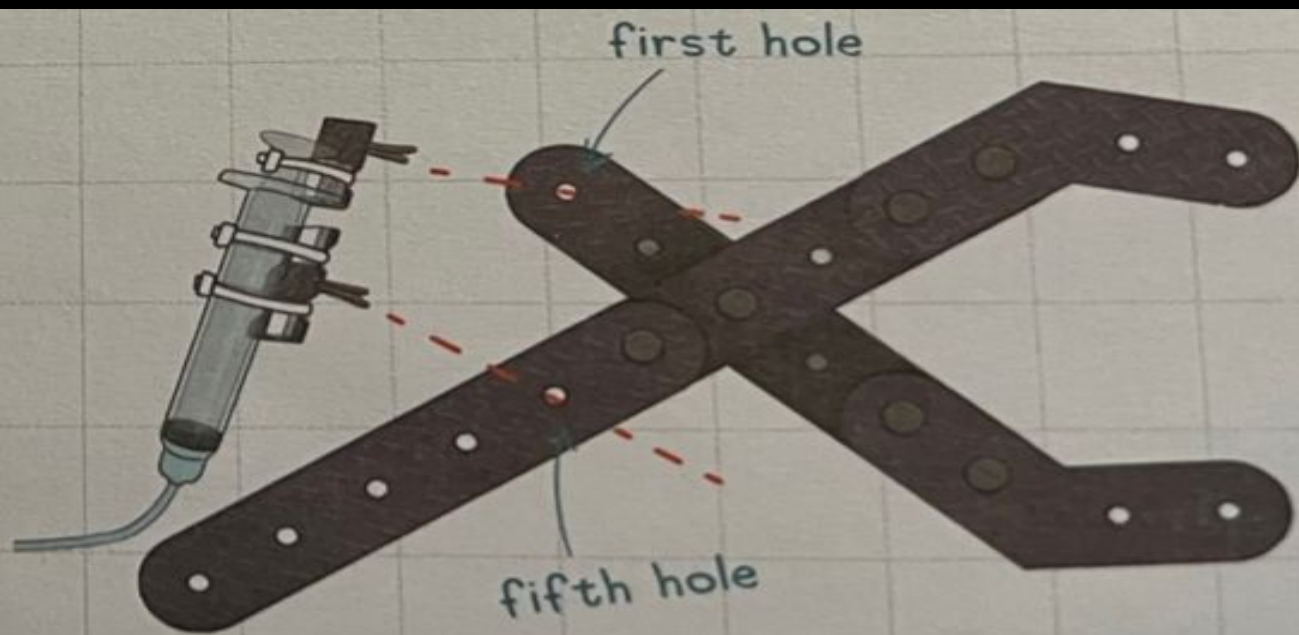
Build the Claw Arm

Assemble the 2nd Arm



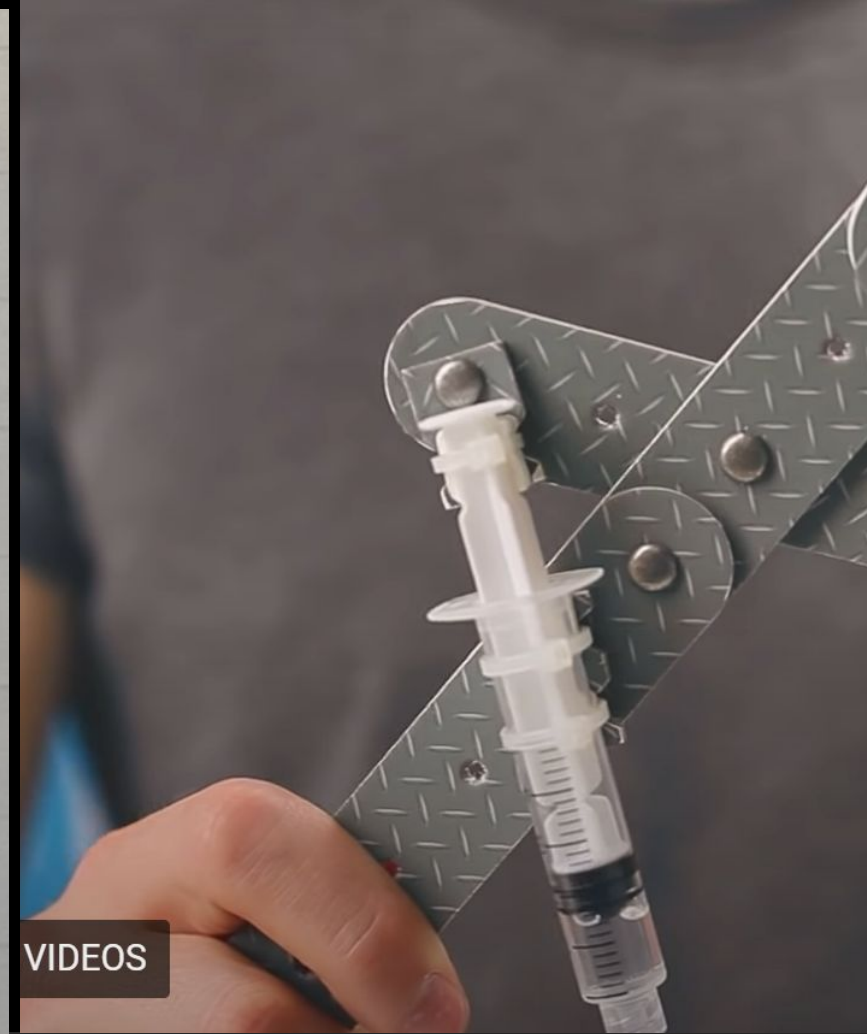
ASSEMBLE BOTH MECHANISMS TO FORM A CLAW





Step 5

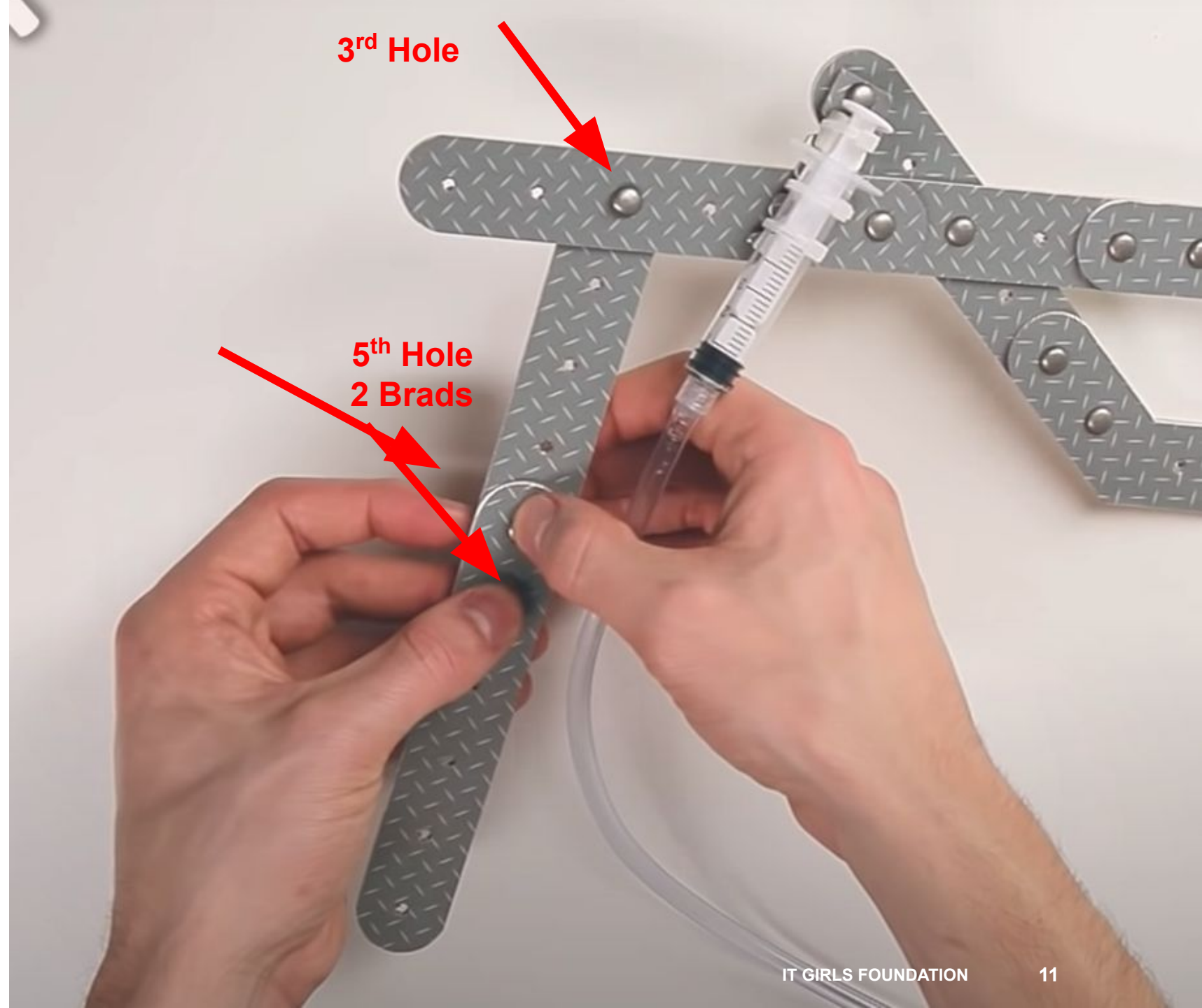
Attach the syringe with the fasteners. The plunger attaches to the shorter arm. The syringe body attaches to the longer arm and makes a rigid connection.



POWER THE CLAW WITH THE HYDRAULICS

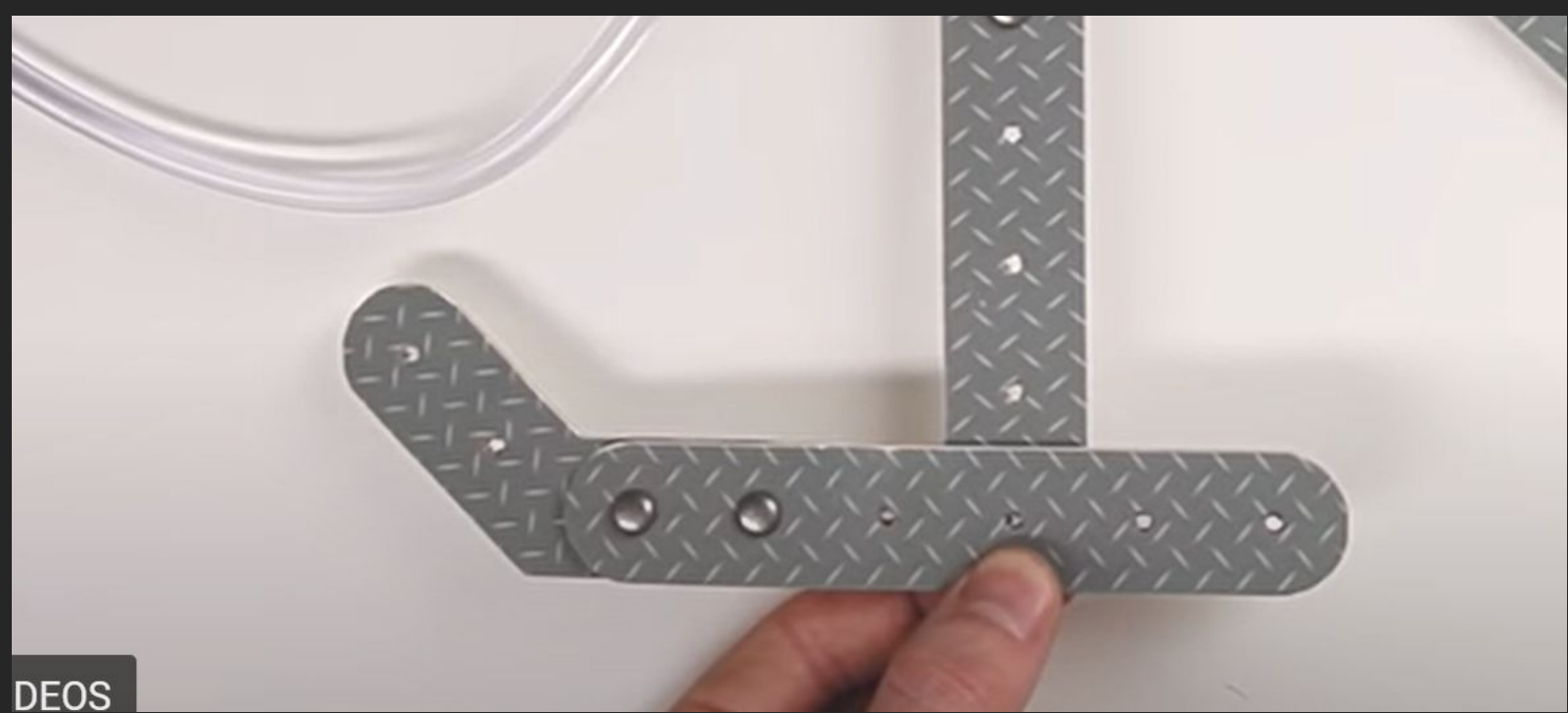
EXTEND THE ARM

- You will need 2 long cardboards
- Add 2 straight boards to your claw
- Attach with brads

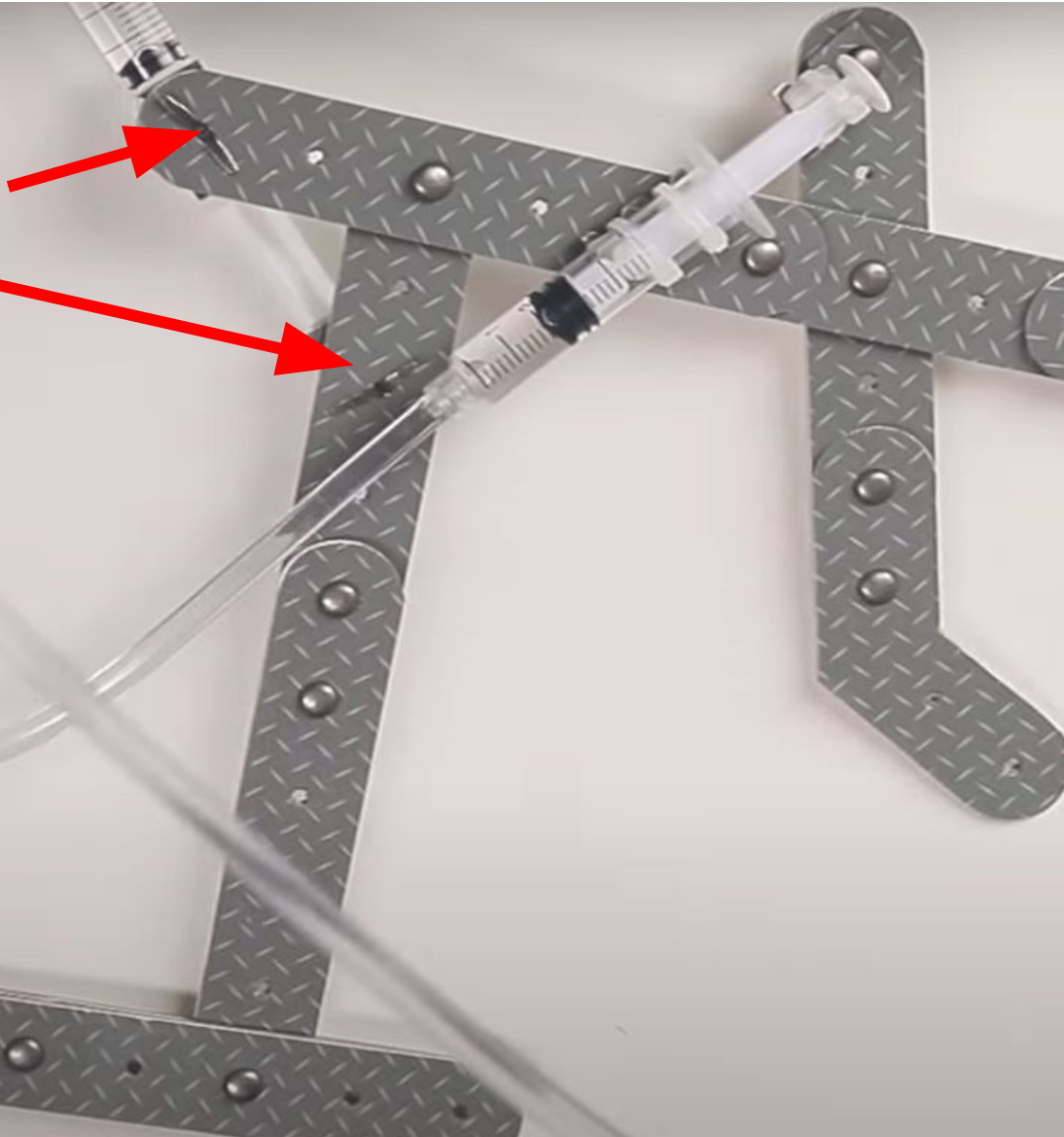


ADD A BASE TO YOUR CLAW

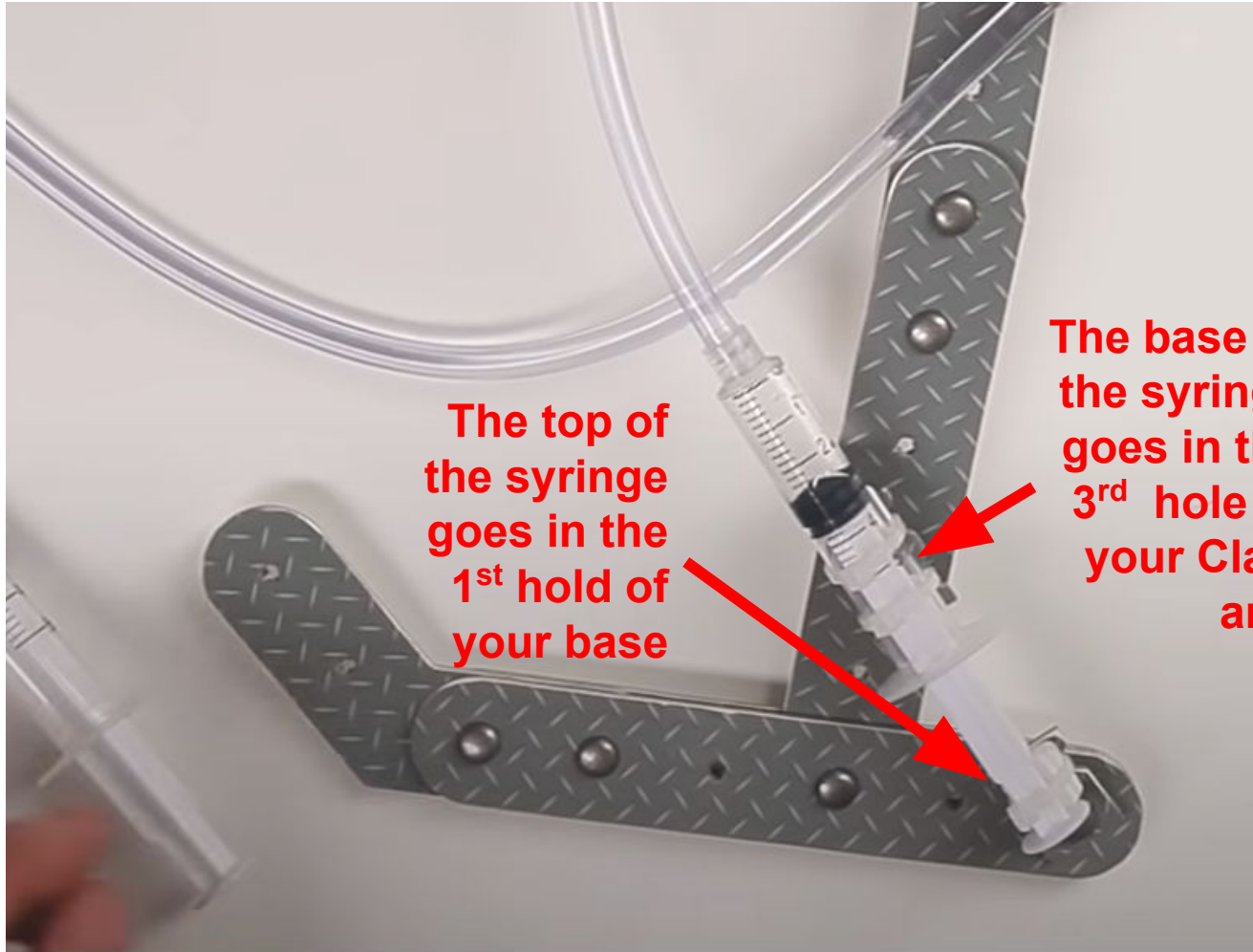
You will need 2 long
cardboards and 1 bent
cardboard



The base of the syringe goes in the first hole
The top of the syringe goes in the 3rd hold



ADD ANOTHER HYDRAULIC



The top of the syringe goes in the 1st hold of your base

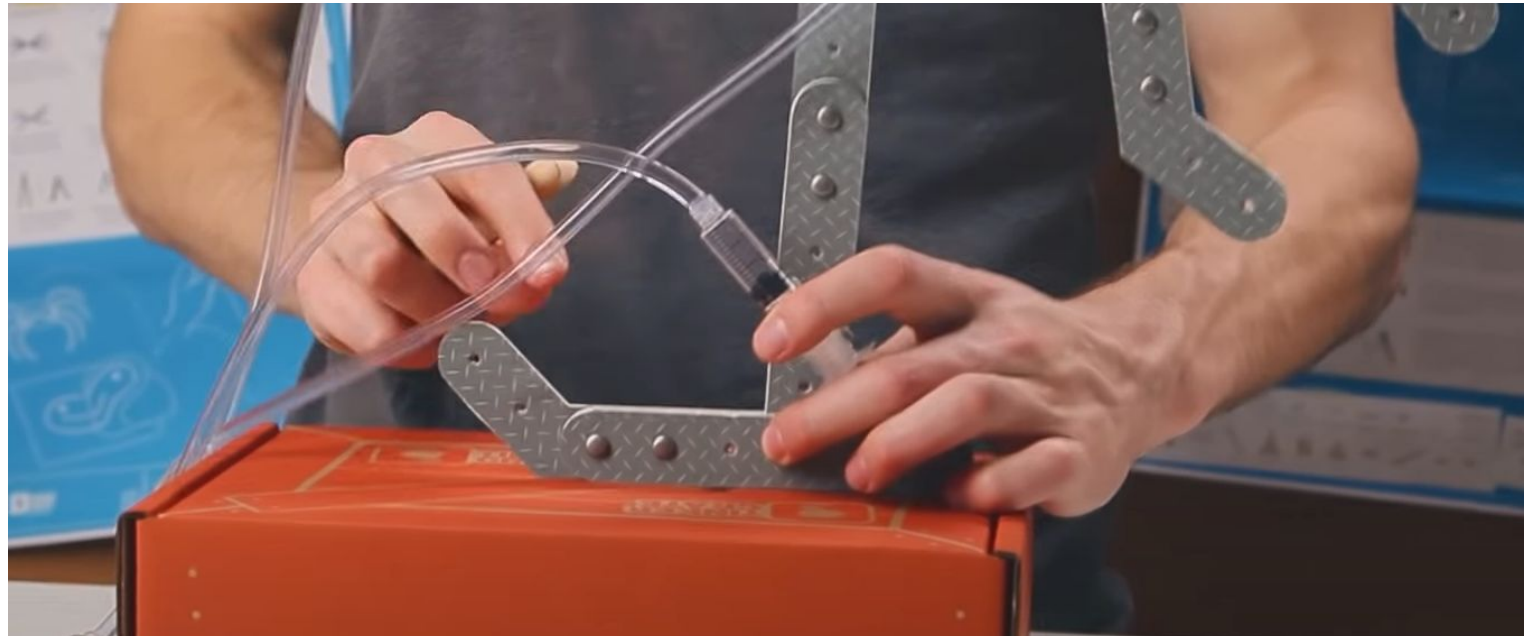
The base of the syringe goes in the 3rd hole of your Claw arm

ADD THE LAST HYDRAULIC

TO BRING FULL MOVEMENT TO YOUR CLAW

Now you have a completed hydraulic claw!





Mount the claw to your
box with a clothespin



ADD YOUR
LAST BASE
PIECE

You are Finished!

Next Time We Will:

- Build a control panel
- Fill add water to our syringes
- Run some experiments!