

# HYDRAULIC CLAW

SPRING PROJECT

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IT GIRLS

LEVEL CREEK ELEMENTARY

BERKELEY LAKE ELEMENTARY



**IT Girls**

INSPIRING GIRLS TO PURSUE THEIR PASSIONS

# Hydraulic Claw

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Hydraulics are used all over, from airplanes to factories to theme parks. Explore engineering and learn how to build your own hydraulic lifting claw

[Hydraulic Claw Demo](#)





LET'S GET  
STARTED

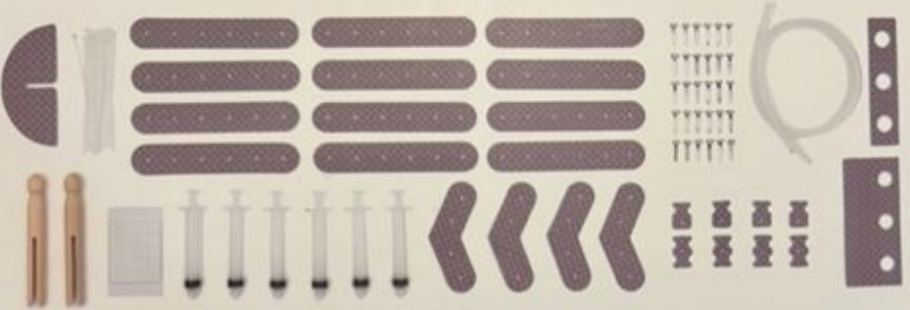
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# Your Hydraulic Claw Kit

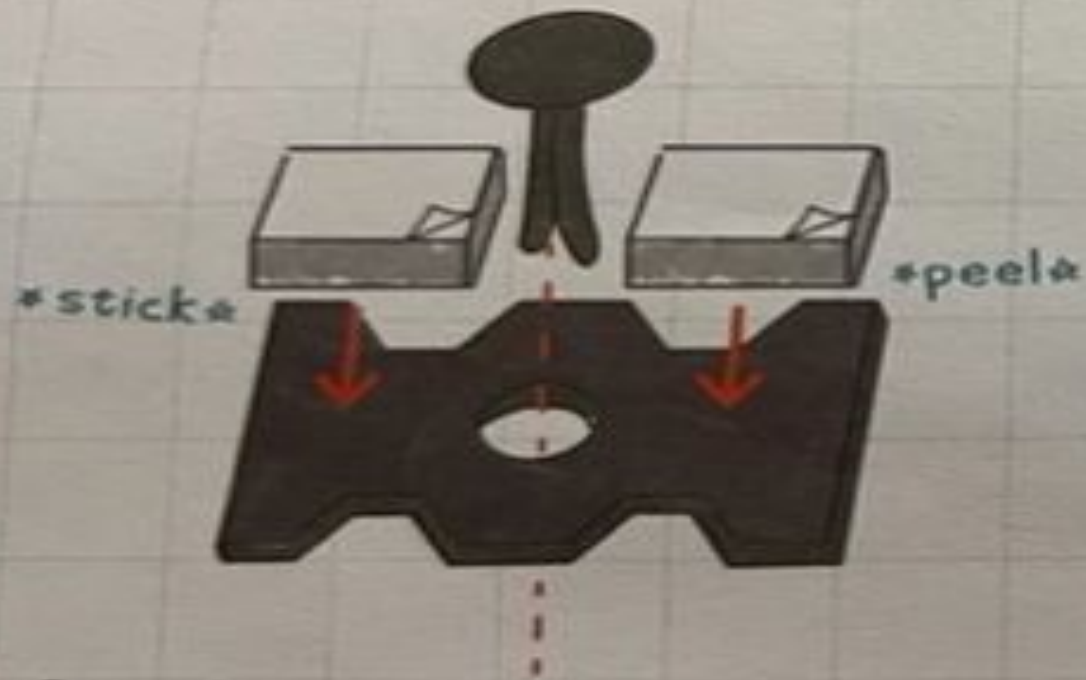
Remove the items from your kit this morning and leave everything else in your box

Includes everything you need:



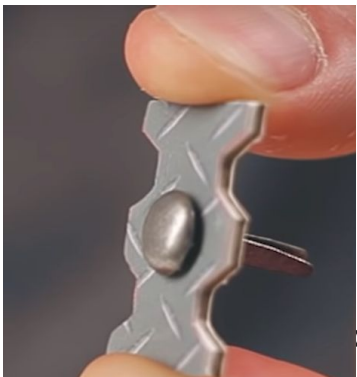
- 27 chipboard pieces
- 6 syringes
- 3 tubes
- 30 brads
- sticky foam sheet
- 12 zip ties
- 2 clothespins
- illustrated instruction booklet
- tinker zine

Syringe Tubes  
 Brads  
 Sticky Foam / Zip Ties  
 Small Cardboard pieces



### Step 1

Put a brad through the center of the longer fastener piece. Stick a sticky foam piece on either side.



# Build A Hydraulic Assembly

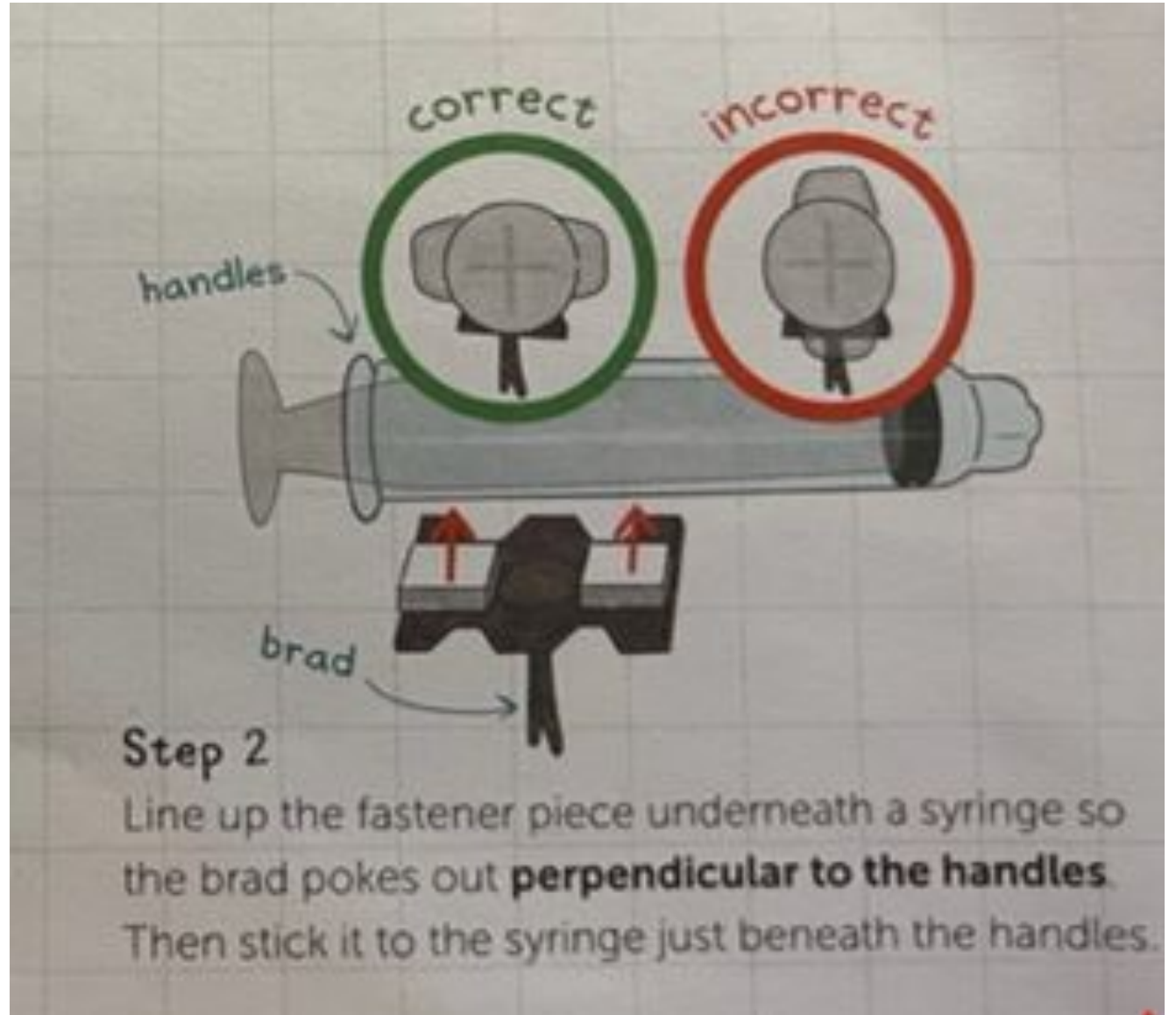
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### Steps:

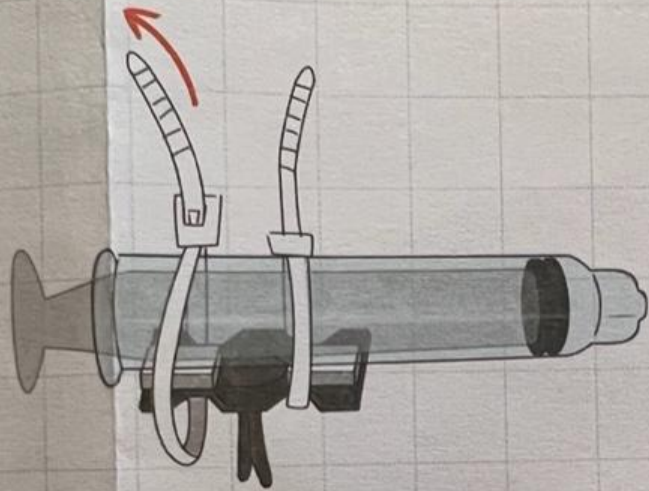
1. Put the brad thru the center of the fastener
2. Stick a sticky foam on both sides

# Build A Hydraulic Assembly

## STEP 2



2/20/2022



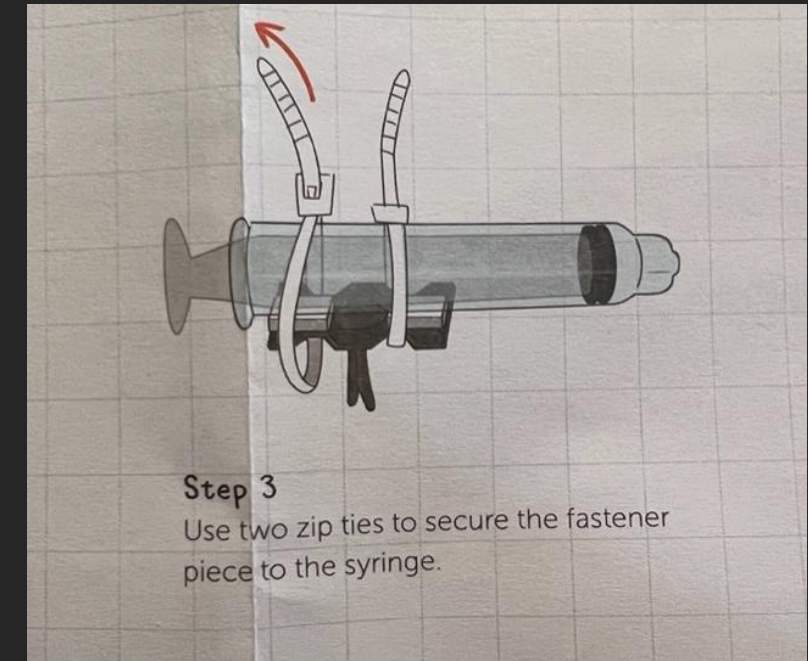
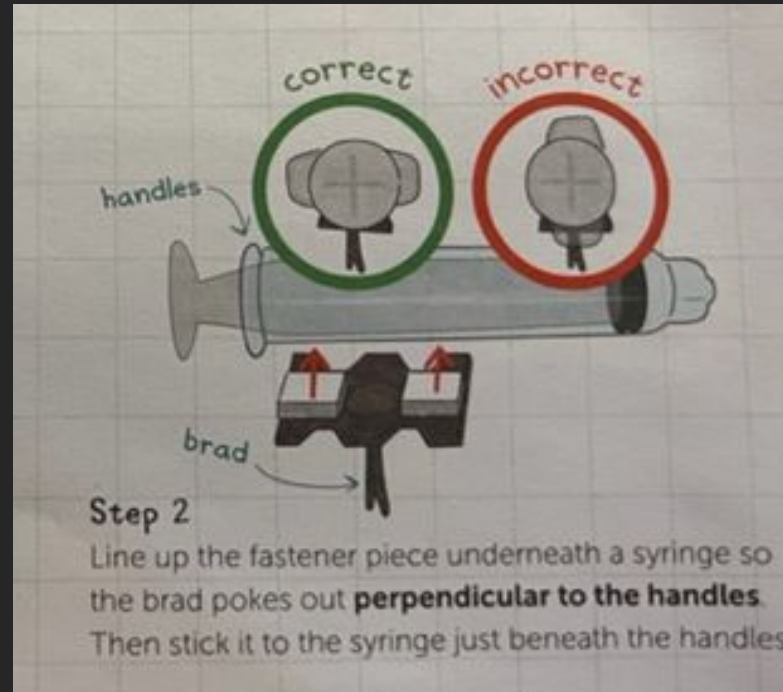
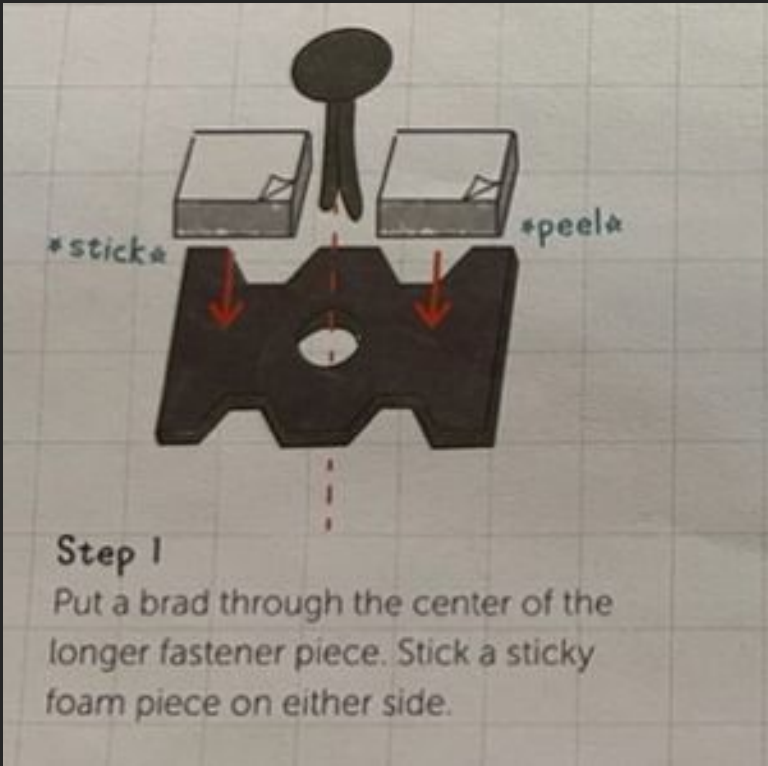
### Step 3

Use two zip ties to secure the fastener piece to the syringe.

## Step 3:

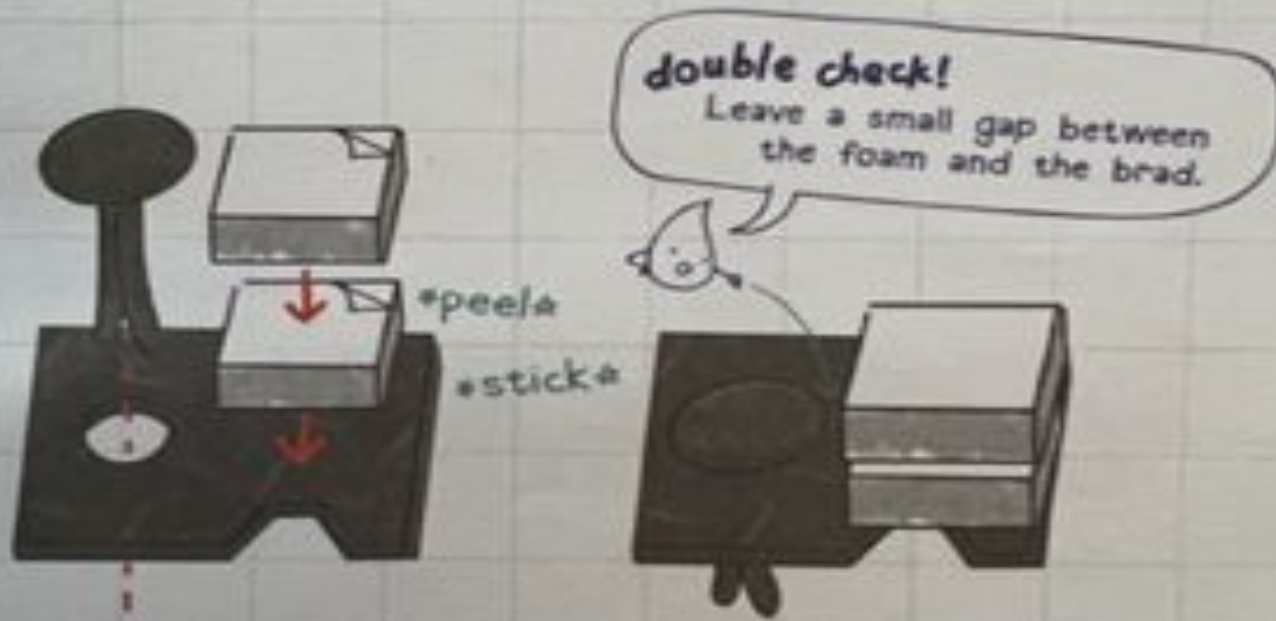
Use 2 Zip ties to secure the fastener piece to the syringe





# Build 2 More Hydraulic Assemblies



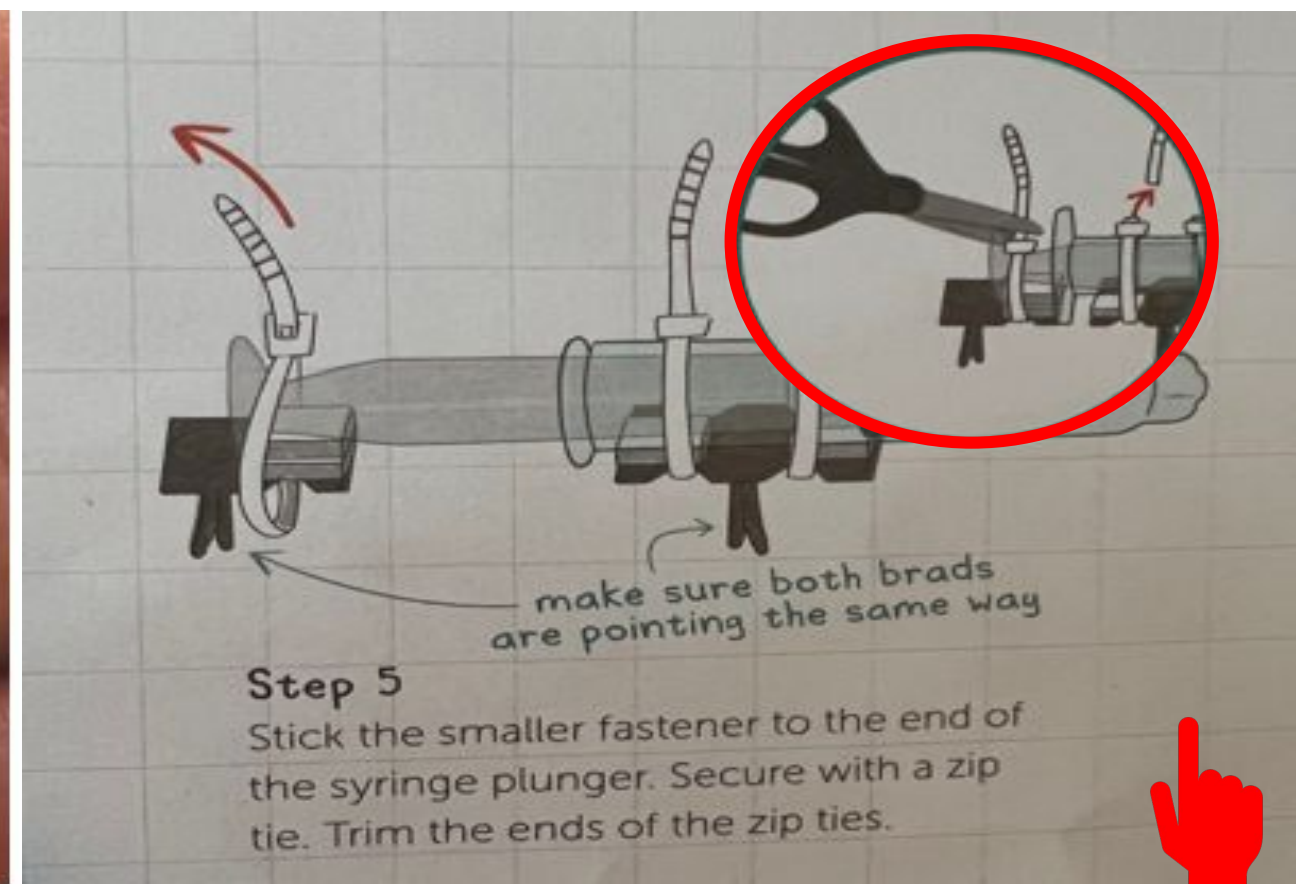


#### Step 4

Put a brad through the hole in the shorter fastener piece. Stick two foam pieces together, then stick them next to the brad.



Step 4  
Build 3 pieces the same way



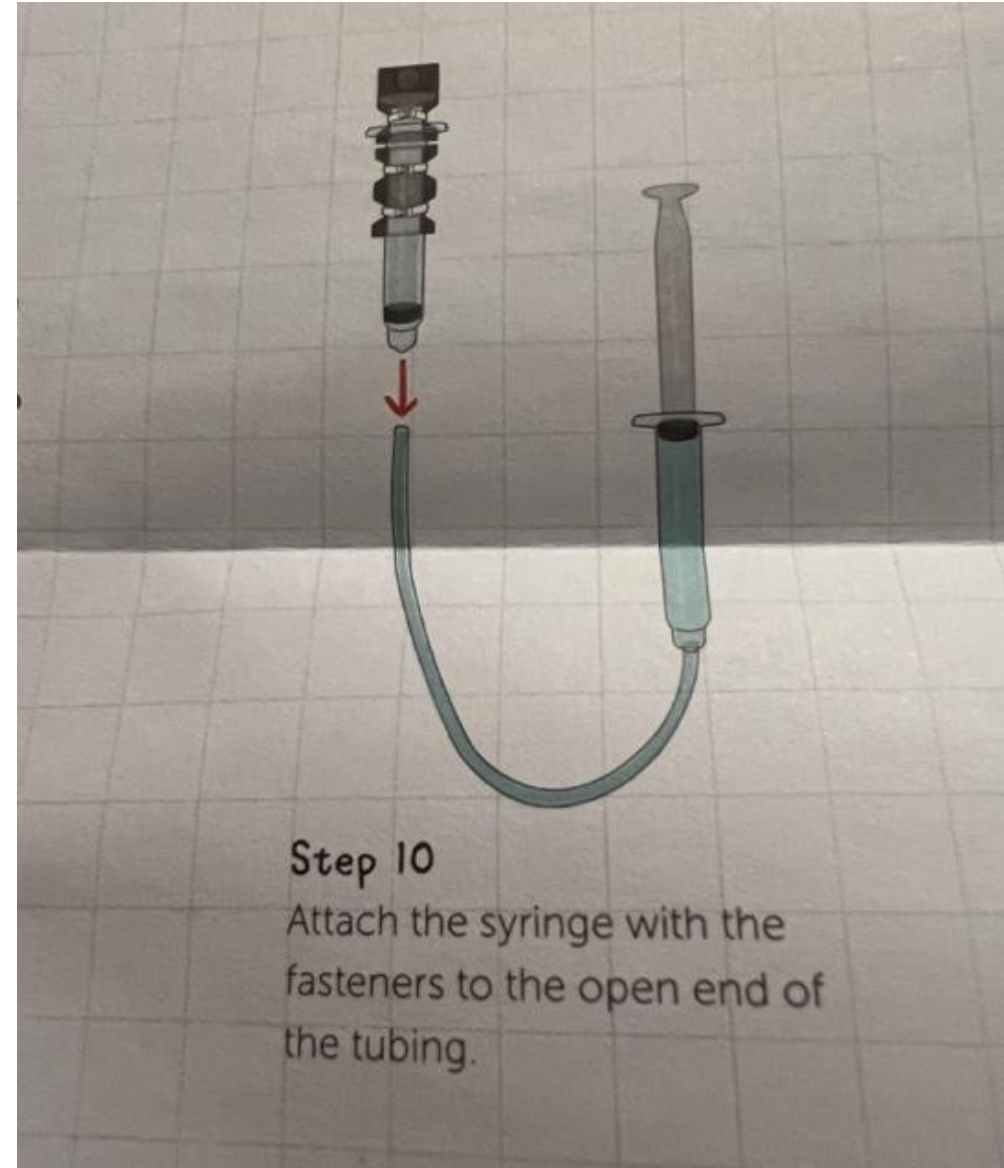
# Step 5 — Do this for all 3 hydraulic assemblies

**Don't forget to trim the end of your zip ties!**

# LAST STEP of the hydraulic assembly

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- Attach the syringe to one of the tubes
- Attach a new syringe to the other end



# You are Finished!

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## Next Time We Will:

- Keep building on our claw
- Add the hydraulics (water)
- Run some experiments – 3<sup>rd</sup> Week