

# HYDRAULIC CLAW

SPRING PROJECT

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IT GIRLS

LEVEL CREEK ELEMENTARY

BERKELEY LAKE ELEMENTARY



**IT Girls**

INSPIRING GIRLS TO PURSUE THEIR PASSIONS

# What we've learned so far

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

**Hydraulics are used all over, from airplanes to factories to theme parks.**

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# To Build A Hydraulic System...

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**You need a hydraulic system to power the motion of the machine**

**You need a mechanical device to move the machinery around**





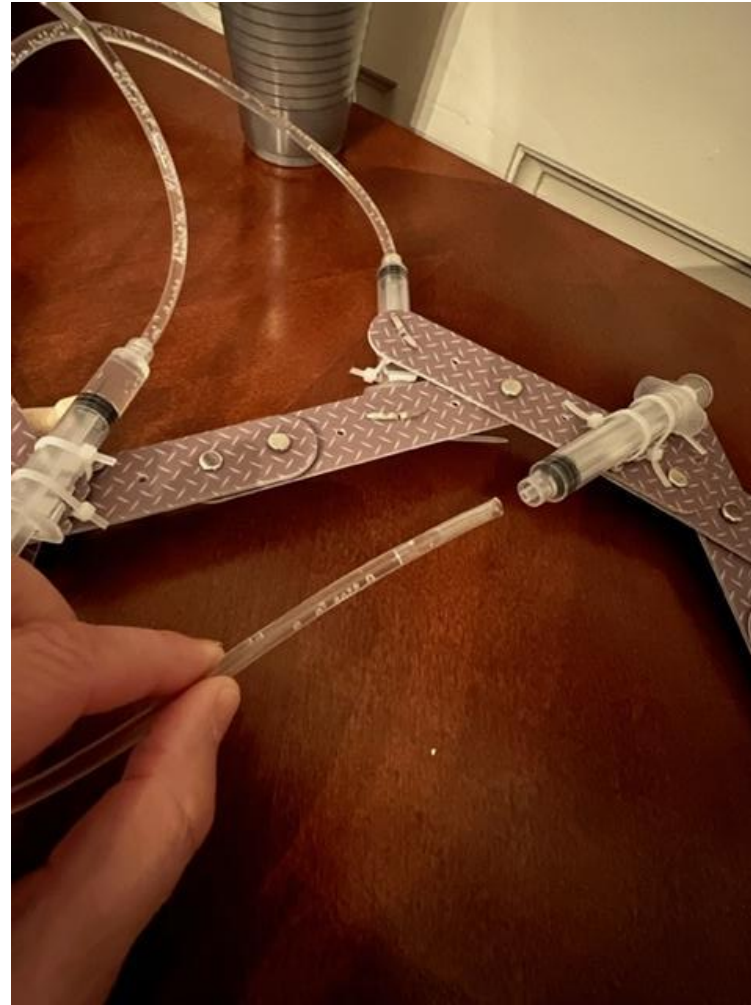
LET'S KEEP  
BUILDING

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# Prepare your hydraulics

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1. Remove your tub and syringe from each of the attached syringes – Very Carefully!
2. Remove the tube completely from the other syringe



# PREPARE THE HYDRAULIC UNIT with WATER

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**Fill the syringe completely with water**



**Attach the tubing to the end of your syringe**

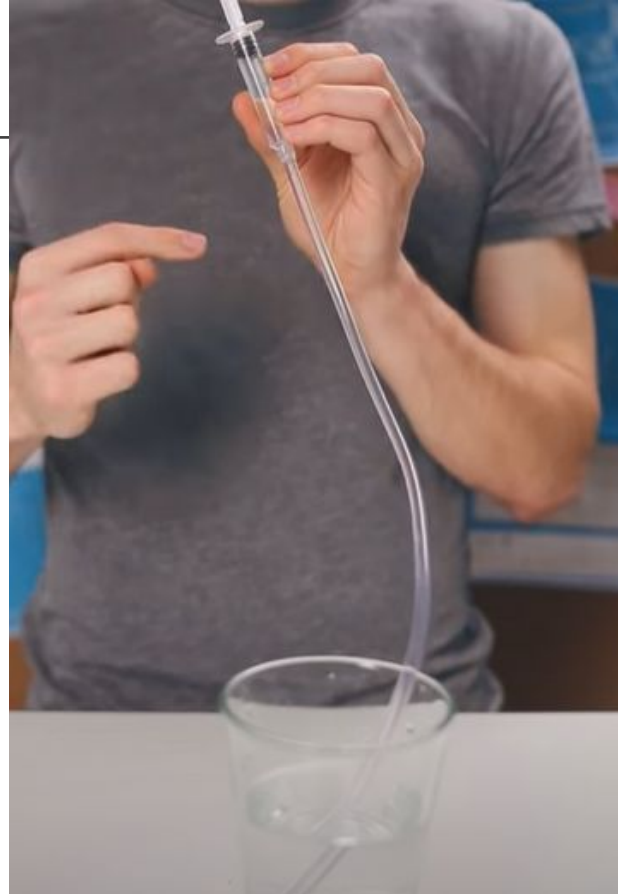


**Put the tube in the water  
Press out the water from the syringe into the tube**



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**Fill your syringe back up with water**



**Now your entire syringe will be filled up with water**

# MAKE A CONTROL PANEL

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**Add your syringes to the control panel**



**Add 4 sticky pieces to the control panel**



**Attach the smaller piece to the larger one**





A close-up photograph showing a pair of hands carefully placing a grey, diamond-plate textured control panel into an orange cardboard box. The panel has three white circular buttons with a ribbed texture. The hands are positioned at the top corners of the panel, guiding it into the box. The background is a soft, out-of-focus orange color.

Place your control panel into your  
box |

Attach the  
tube back to  
your  
hydraulic  
pieces

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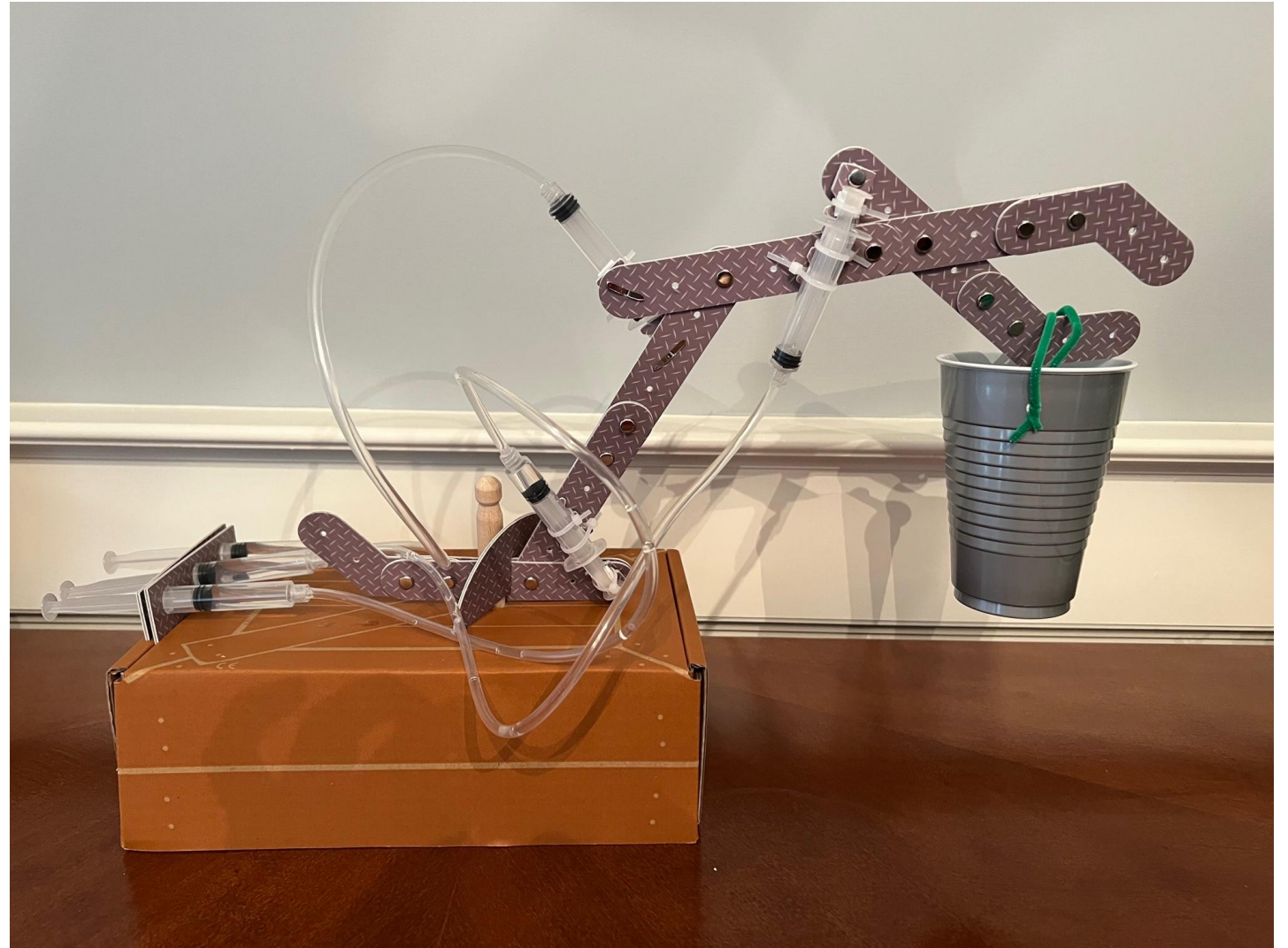


# Now time to experiment!

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Make your claw pick up a cup!

Hint: You need to use all three Hydraulic levers to make the claw move



# Next Week

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Create a presentation on what you learned and any new experiments you tried at home. (examples include picking up a plastic bottle, ball of twine, ball of tin foil or any other light objects)

You can create a Powerpoint presentation, make a video or just have a speech prepared. **No longer than 1-2 minutes**

Most importantly, have fun!

