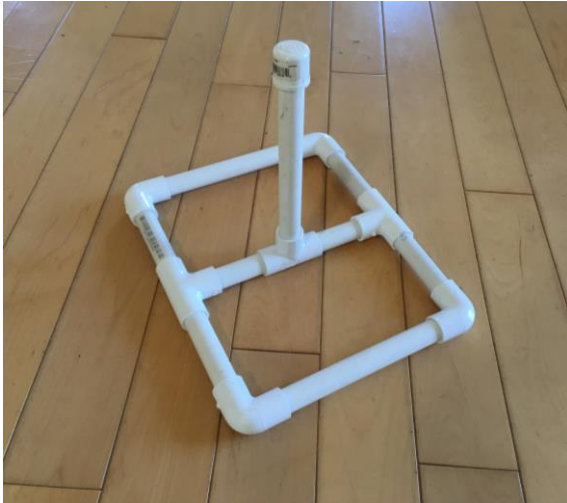


Project Make/Make 2

Due: 4th period, Monday 1/11/21 midnight
3rd, 7th, Tuesday 1/12/21 midnight

PVC pipes are used for outdoor irrigation systems, moving water around for sprinklers and other watering needs. The pipes are handy for making non-water-specific projects too (for example hurdles, clothes drying racks, tool racks, etc.) Here is a simple object that I created using PVC pipe and some elbow and T pieces and a cap:



Think of this as a target for a flying ring. You would set this up across the yard and then try to fly your flying ring toy over to land on it over the vertical post. (Or if the game of horseshoes makes more sense to you, imagine that.)

This creation is 10 inches wide on the closer side shown above and 12 inches long the other way. The vertical pole is 10 inches tall.

Your tasks:

1. Figure out how many of each part you would need to build this thing. Perhaps make a sketch on a piece of paper if that helps you. I want to know how many pipe pieces we need (and how long each pipe piece needs to be) plus how many elbow joints we need, how many T joints we need and how many end caps we need. Figure this out first. You can estimate lengths. For example, for the 12 inch direction you could guess that you need two 5 inch pieces of PVC pipe (to go in each side of the T joint) so that the end result side would be around 12 inches.

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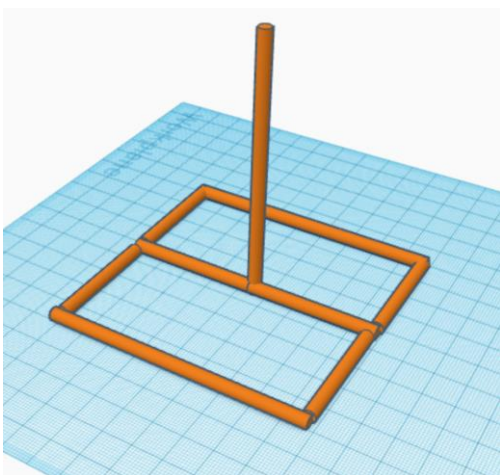
- On paper, list out what you need. For example, I'm telling you up front that you need four five inch pipe pieces and one end cap. You will fill out the following table in a Google Doc in the next step.

Item	# needed
elbow joint	
T joint	
end cap	1
5 inch pipe	4
<other pipe length>	
<other pipe length>	
<other pipe length>	
Total pipe length required	

- Once you know you need in terms of parts, open the Google Doc I gave you attached to this assignment and fill out the table. I already put 4 for the 5 inch pipe pieces and one for the end cap piece just to get you started.

Replace the "<other pipe length>" fields with measurements, like "9 inch pipe". In the right column, list how many of that length pipe you need.

- After you have figured out all the pieces you need, figure out how much pipe you need altogether. For example, if you need four 5 inches pieces of pipe that adds up to 20 inches of pipe ($4 \times 5 = 20$). Figure out what all the pieces add up to and put that number there for "Total pipe length required".
- Finally, go to Tinkercad and create one of these using cylinder pieces. For example, here is what I created:



Tinkercad by default is in millimeters. For measurements pretend that 10 mm is equal to 1 inch.

- Copy a Tinkercad share link and paste it into your Google Doc. Turn in the Google Doc on the Google Classroom.