

IRRIGATION SYSTEMS



**Crop production and
management**

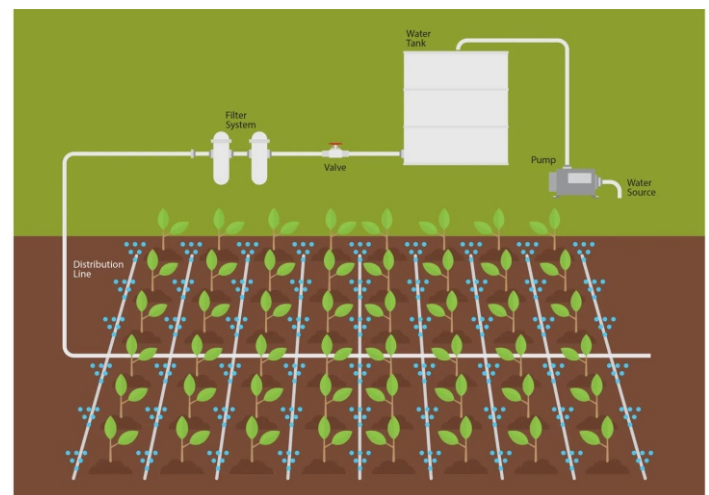
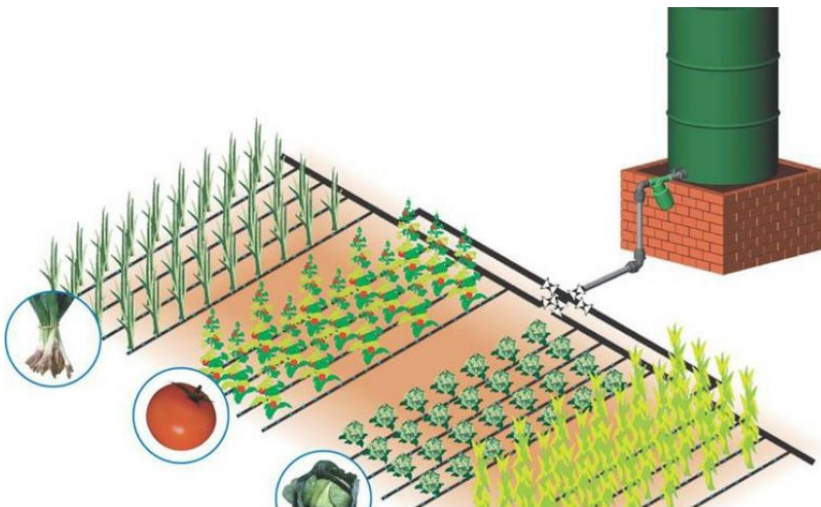
Time	Difficulty	Warning
40 minutes	High	10+ Years

WHAT IS AN IRRIGATION SYSTEMS

irrigation is a customised watering system for crops, ensuring they receive the perfect amount of water they need to flourish and produce a successful harvest.

Various irrigation methods are used depending on the type of crops, soil, and environmental conditions.

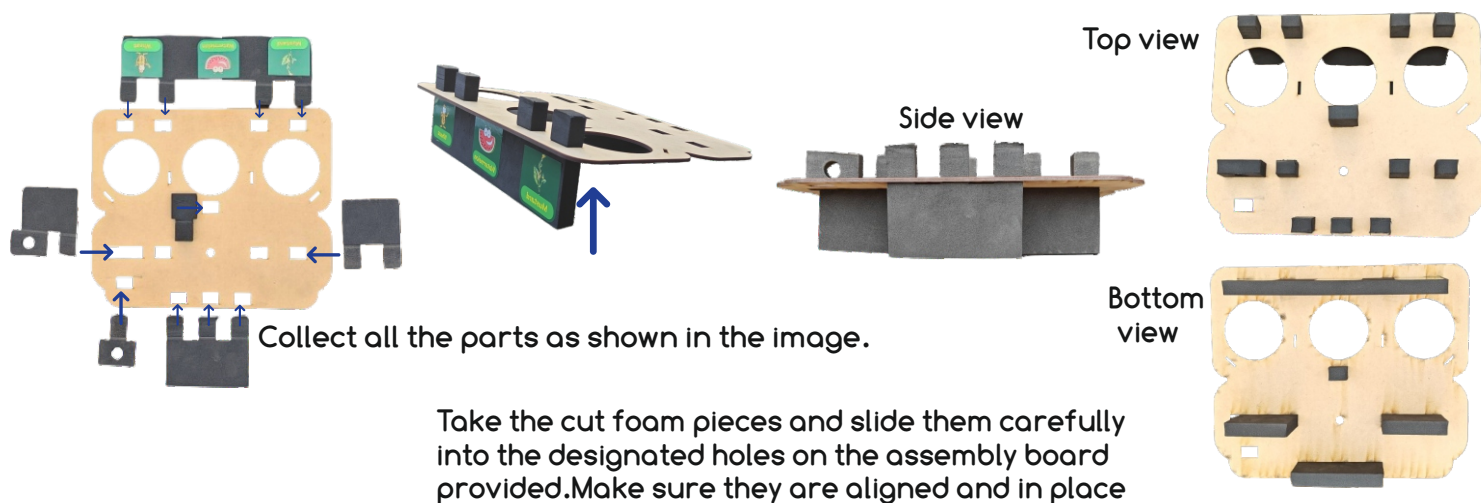
Materials



Drip irrigation is a watering method where water is delivered directly to the plant's root zone through a network of tubes, pipes, and emitters. It conserves water by minimizing evaporation and ensures precise, targeted irrigation for optimal plant growth.

Lets build

Step 1

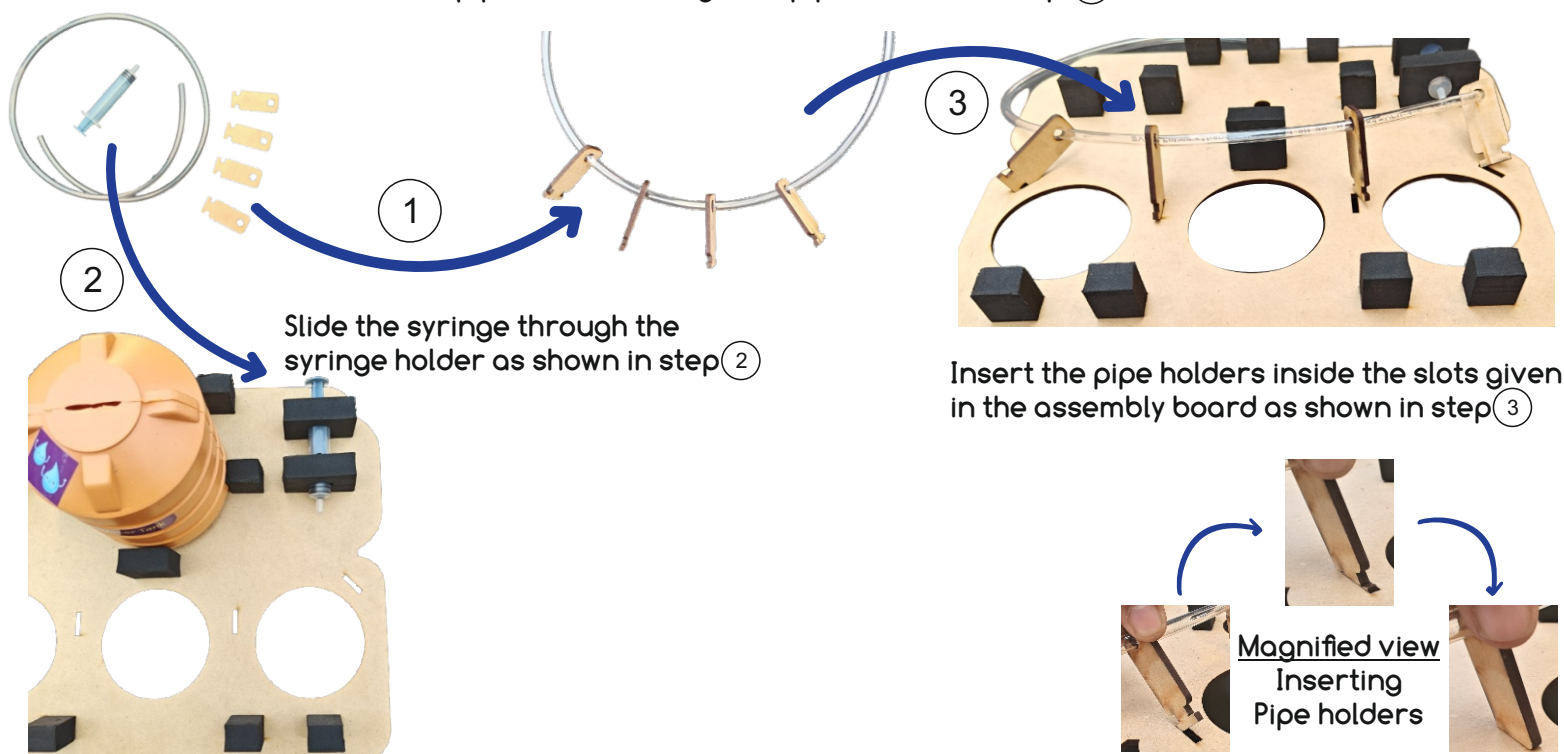


Step 2



Step 3

Slide the pipe holder through the pipe as seen in step ①

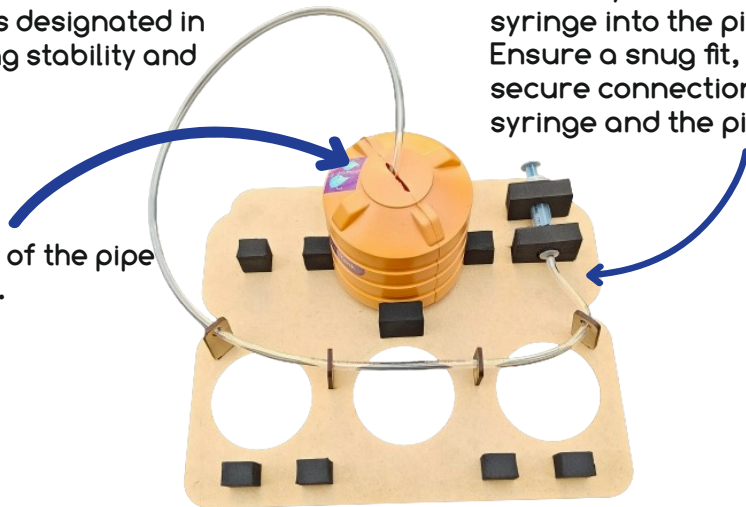


Step 4



Fill the water tank with 80% water. Position the tank as designated in the image, ensuring stability and accessibility.

Slide the other end of the pipe into the water tank.



Carefully insert the tip of the syringe into the pipe. Ensure a snug fit, allowing for a secure connection between the syringe and the pipe.

Step 5



Now, position the pots containing seeds into their designated slots. Gradually fine-tune the water pipe's height before delicately situating each pot.



Ensure a secure and firm placement for the pots.

Step 6

Facilitate Water Flow:

Using a push pin, make a small hole in the pipe right above each pot.



Push pin

This step ensures a smooth flow of water through the pipe and into the pots.



Control with the Plunger:

Gently pull the plunger of the water tank. Watch as water flows from the tank into the pipe. Experiment with different plunger levels to control the rate of water flowing out of the pipe.

Important Tips:

Avoid pulling the plunger too quickly to maintain control over water flow.



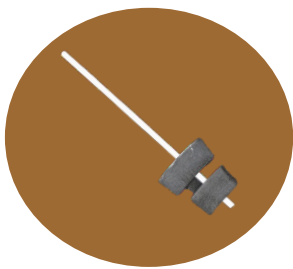
Sprinkler Irrigation

Sprinkler irrigation mimics natural rainfall, promoting even and controlled watering for improved crop growth.

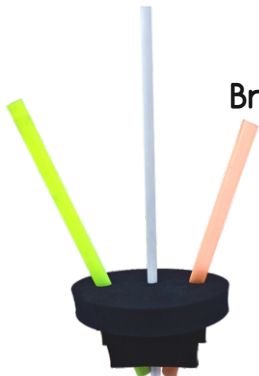
Let's build



Steps:

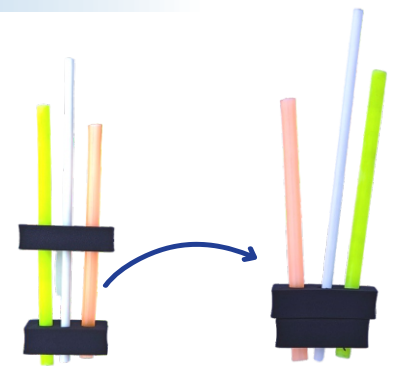


Insert the white tube through the centre hole of the cut foam pieces



Bring all the 3 straws, add the circular foam and align them as shown in the image

Pour water into the cup to fill about 30% capacity. Dip the foam inside the water and hold it upright using the white tube.



Insert the 2 colored tubes through the remaining 2 holes, push down the foam pieces to bottom.



Now, grip the white tube using 2 fingers and rotate alternatively both in clockwise and anticlockwise direction.



Observation.

You will see the water spraying out of the 2 colored tubes, showing how a sprinkler works.