



## Olla Irrigation

### Experiment with a self-watering system

When it's hot out, plants need consistent hydration just like us. An **olla** (oh-yah) is an ancient technique to help keep crops happy and hydrated in **arid** (hot and dry) climates. How does it work?

#### What you'll need:

- Some ground you can dig in
- A plastic bottle with a cap
- Nail
- Water



#### Here's what to do:

1. With adult supervision, use the nail to carefully punch 4-6 small holes in the bottom half of the bottle, including the bottom.
2. Dig a hole in the ground almost as deep as the bottle. Leave a little space for the cap and neck to be above ground.

3. "Plant" your olla! Place the bottle in the hole and scoop the soil around it. Leave the neck and cap of the bottle uncovered.
4. Fill the bottle with water. Screw the cap on part way.
5. After an hour or so, use your fingers to dig down in the soil by the olla. What do you notice? What about the next day? What happens to the water in the olla?

#### Explore Further:

- Try moistening the soil around the olla. What happens to the water in the olla?
- Experiment with tightening and loosening the cap. How does this affect the water flow? How do more or less holes in the bottle affect the water flow?
- Explore different materials or different shapes to make an olla. What works best?

**Ask a farmer or gardener:** How do they keep their plants hydrated in hot temperatures?