



Waffle Garden Design

How can you grow food with less water?

Indigenous farming traditions and strategies have made it possible to grow food in the Southwest region's **arid** (hot and dry) climate for a very long time, even during droughts! Zuni people **conserve** (save) water by using a "waffle" garden. How does this method work?



Photo credit: Library of Congress

What you'll need:

- Some ground to dig in
- Gravel or mulch or sand
- Water

Here's what to do:

1. Remove plants, twigs, and rocks from an area about the size of your hands side-by-side with your fingers spread wide.
2. Use your finger to draw a square in the cleared area. Dig down about 3 to 4 inches inside the square.
3. Use the soil you remove to make walls along the edges. Add a little water to make the soil stick together.

4. Put some gravel, mulch, or sand in the bottom of your square. Repeat to make a grid.
5. Carefully pour water into the inside of your walls. What do you notice? Where does the water go? How much can you add?
6. Check underneath your gravel, mulch, or sand a little later. Is it still wet? What about the next day?

Explore Further:

- Experiment with the height of the walls and depth of the square. What happens to the water inside?
- Try different **soil compositions** (proportion of sand, clay, and humus). What builds the sturdiest walls?
- Explore different amounts of gravel, mulch, or sand. Does the water stay in the ground longer with a larger amount of material?
- Ask a farmer or gardener: How do they conserve water and keep moisture in the soil?
- Do you have a drought in the area where you live? What are ways you can conserve water?

Read: Visit the library and check out *It's Our Garden: From Seeds to Harvest in a School Garden* by George Ancona