



Water Drop Engineering Challenge

Think you can engineer a device that can hold a cup of water and not spill a drop—even when dropped from a great height?

What You'll Need:

- 8oz bottle
- Paper plates
- Coffee filters
- Trash bags
- Chenille stems
- Craft sticks
- Foam sheet
- Straws
- Rubber bands
- Twist ties
- Paper clips
- Water
- Scissors
- Tape or hot glue
- Ladder OR access to a second-story landing
- Kiddie pool or tarp (optional)

First, grab a partner. This will be a team challenge. Second, make sure you both understand the rules to this challenge. What are the rules? Great question!

- 1. The bottle must be part of your contraption. You can build around it, and it can be above or below, but the bottle must be included.**
- 2. The entire contraption (bottle included) can be no taller than 2FT from top to bottom.**

3. The bottle can be modified, but it must hold at least 2oz of water.
4. You can't just cover the top of your cup with tape or foam or anything else. Sorry.

That's it! Those are the only parameters within you must work.

Begin by writing or sketching out your plans with your teammate. Think about the challenges you might face in your engineering, and how you could overcome them.

Once you've come up with a plan, get to building! Choose your materials from the available supplies.

After you've constructed your water holding contraption, it's time to test it! Go to your testing area and give it a drop.

What happened? Were you successful? If so, how could you make your device even better? Maybe your contraption didn't quite do the job of holding all the water securely. If that's the case, you and your partner just need to revisit your plans and rework your design.