# Leak Detection and Repair

This playbook provides a detailed guide on how to identify leaks within plumbing systems and execute repairs to conserve water and cut down expenses on water bills.

### Step 1: Inspection

Conduct a thorough inspection of your entire plumbing system. Look for any signs of moisture, water damage, or corrosion around pipes, fittings, and fixtures.

### Step 2: Meter Check

Perform a water meter check. Ensure no water is being used inside or outside your home; then watch the meter. If it changes, there's likely a leak.

### Step 3: Dye Test

For toilets, use a dye test by adding a few drops of food coloring to the tank. Wait 10-15 minutes. If color shows up in the bowl, there's a leak.

### Step 4: Determine Size

Assess the size of the leak. Decide whether it's a small, fixable leak or if it requires professional assistance based on the extent and location of damage.

### Step 5: Gather Tools

Gather the necessary tools and materials such as wrenches, sealant, and replacement parts based on the type of leak and its location.

### Step 6: Shut-Off Water

Before repairing, shut off the water supply to the area of the leak. This may involve closing the main water valve or a localized valve.

### Step 7: Repair

Execute the repair. This may involve tightening fittings, replacing worn components, sealing gaps, or other actions depending on the specific leak.

### Step 8: Test

After the repair, turn the water supply back on and monitor the repair site. Make sure that the leak has completely stopped.

### Step 9: Cleanup

Once the leak is fixed and no further water escape is detected, dry the area, clean up any debris and return any moved items to their place.

## General Notes

### Safety First

Always prioritize your safety when dealing with plumbing repairs. Wear appropriate protective equipment, and if in doubt, consult with a professional.