



## GRAVITY (1 of 2)

### FREE FALL

 10-15 minutes +  
questions and journal time

 Follow all safety instructions from LearnLibre.com  
during the experiment.

#### **Before the Experiment**

Ask an adult for help before using scissors, knives, or any other sharp objects needed in this experiment. Find a safe and appropriate place to do the experiment, get any safety equipment you will need, and gather your materials on a tray.

Watch Lesson



#### **Materials**

- Paper cup
- Large cup filled with water
- Scissors or knife
- Bathtub or sink to catch water (this can also be done outside)
- Video recording device + helper (optional)

#### **Procedure**

1. Poke a hole in the side of the paper cup.
2. Cover the hole with your finger.
3. Fill the cup with water.
4. Take your finger off of the hole. What happened to the water?
5. Repeat steps 2 and 3.
6. If you have a helper and a video recording device, record the next step.
7. Drop the cup. What happened to the water while the cup was falling?
  - Try this a few times, or re-watch your video in slow motion if possible.

## **GRAVITY** (2 of 2) **FREE FALL**

### **Questions**

1. What happened to the water when you removed your finger? Did it stay in the cup?
2. What happened to the water when you dropped the cup? Did it come out of the cup?
3. Did gravity pull the cup down faster, the water down faster, or pull them at the same speed? What does that tell us about how gravity affects objects?



[See answers and learn more about how this experiment works by scanning the QR code at the top of the 1st page.](#)

### **Clean-up**

Wash and dry any tools you used, put materials back where you got them from, clean your work station.