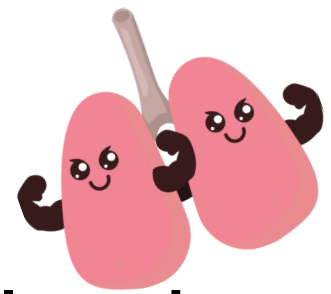


# LUNGS in a Cup!



## What will we see?

**Inhale:** When you pull down on the knotted balloon (acting as the diaphragm), it expands the volume inside the bottle. Air then flows down the straw (acting as the trachea) to enter the expanded space, inflating the balloon (acting as the lungs) attached to the straw.

**Exhale:** Releasing the knotted balloon reduces the space in the bottle, expelling air from the balloon and making it deflate.

## You will need:



Plastic Cup (1)



Scissors and Tape



Balloons (2)



Drinking Straw (1)

1



Poke a hole at the bottom of the plastic cup with the scissors, just large enough for the drinking straw to fit through.



Trim the tip off the neck of **balloon #1**.

Cut the drinking straw in half.



Fasten a knot at the neck of **balloon #2** and trim part of the wider top section of the balloon off.

2

Insert one tip of the straw 1-2cm into **balloon #1** and securely seal the balloon around the straw with tape.

Insert the free straw tip into the cup opening, and guide it up and out through the hole.

Pull the straw through the hole until the balloon-lung is fully inside the cup and tightly seal the straw in place with tape.

3

Take **balloon #2** (with the knot) and stretch the open end over the wide bottom of the cup, so the knot is facing outside the cup. Secure the balloon with tape.

**Time to breathe!** Holding the cup, pull the knot of the balloon away from the cup to see lungs in motion!



Join the Integrative Cardiopulmonary Physiology Lab this May to learn more about how your heart and lungs work!

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