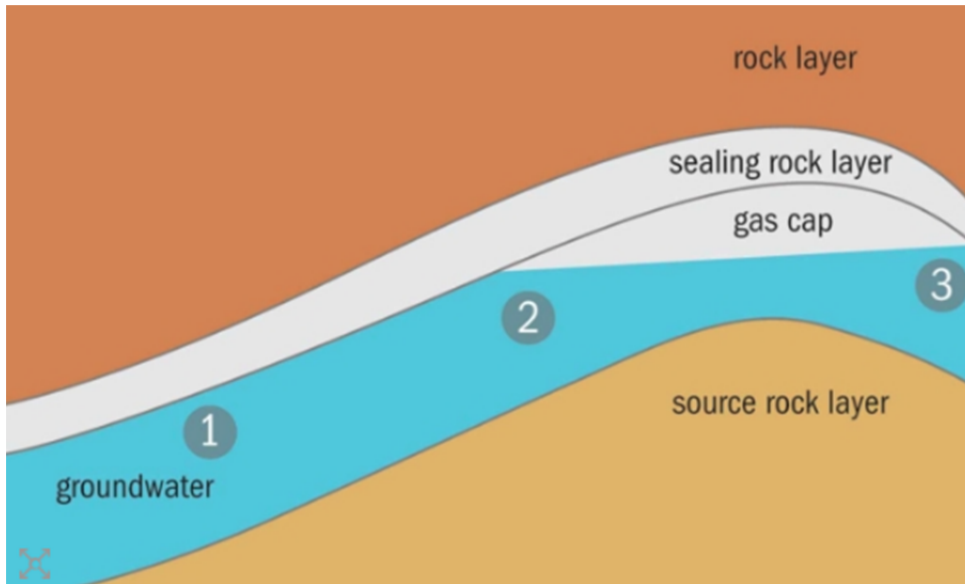


Getting Helium into the Truck

Name _____

Phenomenon: Helium is the gas under the “sealing rock layer”.



What do you notice?

What questions do you have?

- 1.
- 2.
- 3.

Guiding Questions: How can helium be mined and transported? Your task is to use some or all of the materials listed below to get the gas from dissolving Alka-Seltzer tablets (the “helium”) to the graduated cylinder for measurement. In this model, the container (bottle, flask) is the “sealing rock layer”.

Materials:

1. 1 liter pop bottle or large test tube
2. Rubber stopper with one hole that fits into #1,
3. Glass tubing that fits the hole and plastic tubing

Or: Erylmeyer flask with one hose barb and solid stopper

3. Balloon
4. 40 cm plastic tubing
5. 1 Alka-Seltzer tablet
6. Ice cream tub or large plastic dish tub
7. 200 mL graduated cylinder
8. Turkey baster or large syringe
9. Water

Criteria: Who can get the most gas?

Constraints: You can only use the materials provided. Create the gas by adding water to the Alka-Seltzer tablet.

Your plan: Draw the methods you will use:

Your data: How much gas did you get?

Explore: Use the following websites to find out where helium gas comes from and what it is used for.

<https://physicsworld.com/a/on-the-hunt-for-helium/>

<https://www.deseretnews.com/article/865577113/Nations-first-helium-well-planned-for-Utah-may-help-with-worldwide-shortage.html>

<https://cen.acs.org/articles/90/i29/Helium-Shortage-Affecting-Instrument-Users.html>

<https://cen.acs.org/articles/95/i30/helium-way.html>

Explain:

1. How is helium gas formed?
2. Why is there still helium on Earth?
3. What is helium used for?