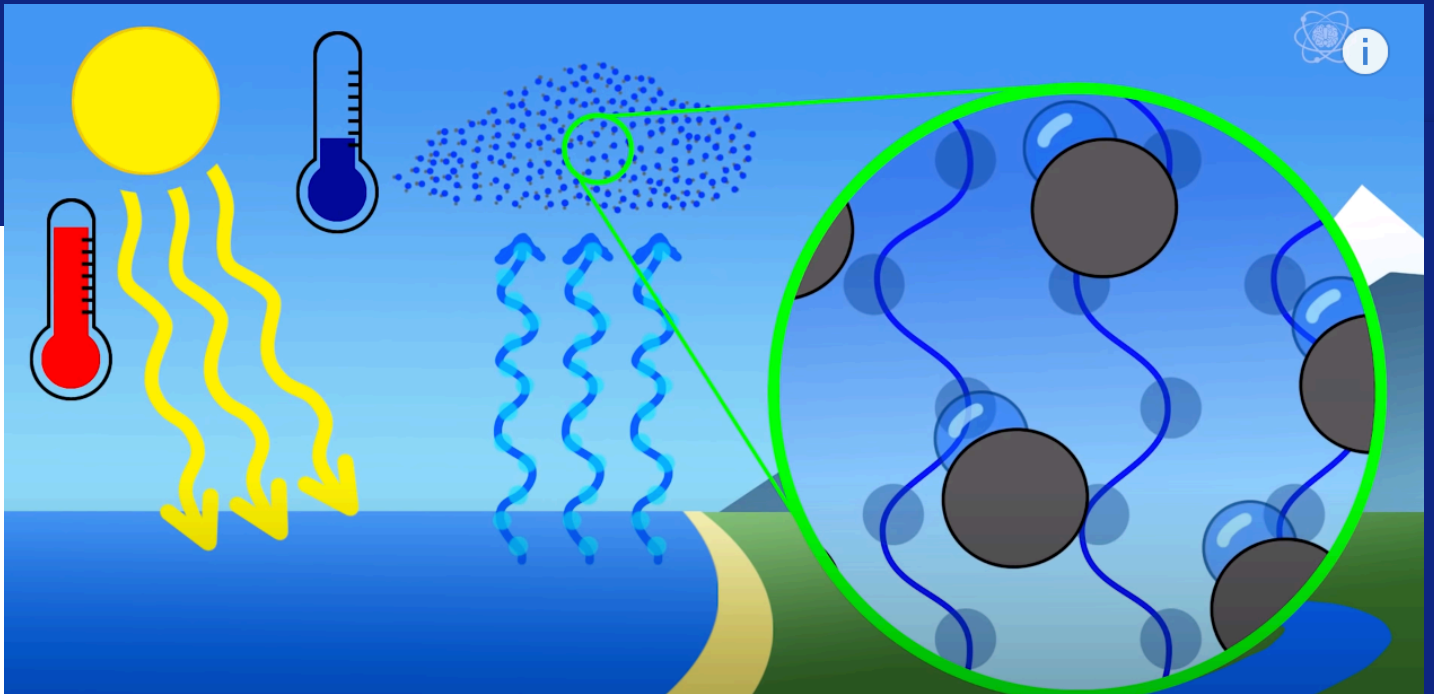


Creating Clouds

Objective: Students will add air pressure to a bottle to observe condensation and evaporation in action.



Procedure

Journal prompt: Write for five minutes in response to the following questions making your best guess or hypothesis if you are not sure: How do clouds form? What is the water cycle? How might you create a cloud yourself?

Turn and talk: read your response to your partner or table group, and discuss for two minutes.

Call on a few volunteers to share responses from their table groups.

Tell students that today you will be reviewing the water cycle and using knowledge to create clouds.



Materials:

- Empty water bottle
- Cork/Stopper
- Air pump for ball with needle
- Rubbing Alcohol

Show students a visual diagram of the water cycle and Impossible Science video to 1:04 and have them copy it into their notebooks along with the definitions.

Ask: After viewing this explanation, how might you create a cloud yourself? Discuss a few responses and restate that clouds form when water condenses on molecules in the air.

Explain that students will create clouds by adding alcohol particles to the air within a bottle. Show video through 3:30, pausing as needed while students follow along in table groups. Circulate through the room to make sure students are following steps safely.

Ask: Why would increasing the pressure in the bottle further cause the cloud to disappear. Have students guess a few responses, then show them the remainder of the video and ask again.

Vocabulary:

Water Cycle: The process by which water moves from land to air and back to land through evaporation, condensation, and precipitation.

Evaporation: The process of water turning from a liquid to a gas.

Condensation: The process of water turning from a gas to a liquid such as dew, clouds, or fog.

Precipitation: The process of water returning to the earth in the form of rain, snow, sleet, or hail.

Clouds: Small drops of condensed water vapor floating in the air.

Safety Note:

- Adult Supervision Recommended
- Protective eyewear and adult supervision recommended.

Watch the companion video here:



Lesson Plan by Whitney Gallagher based on the “Impossible Science” series.

Find more at impossiblescience.com

