

Science Lesson – 3/25

Unit: Matter (continuing)

SOL Objective: Science 1.3 The student will investigate and understand how different common materials interact with water. Key concepts include:

- a) some liquids will separate when mixed with water, but others will not;
- b) some solids will dissolve in water, but others will not; and
- c) some substances will dissolve more readily in hot water than in cold water.

Student Objective: The students will review the properties of solid and liquid matter and will be introduced to the properties of gas.

Materials:

- the big book on matter
- poster from last week
- cup of water
- poster paper
- gas sign for poster
- sentence strip – “takes up space”
- balloon
- vanilla extract
- small plate
- paper fan
- grocery bags
- straws (22)
- things to blow with the straws (small pieces of paper, marbles, etc.)
- cups to hold the objects
- Scientist Journals
- gas poem

Review:

- Read the big book on matter, reviewing anything we went over last week in class (solids, liquids, gases, matter, non-matter, dissolve)
- Review matter/not matter poster

Engage:

- Show the container of water. Discuss what else is in the cup other than water. Pose the question: How do we know there is anything else in the container?
- Create a list of “How We Know Gases Exist” – use a poster or the whiteboard, or just discuss if time is short (should include something along the lines of – can feel it when I move my hand, the wind blows the trees and against our skin, etc.)
- Add the Gases sign to the chart and the sentence strip (“it takes up space”)

Explore:

-Discuss the air we breathe – can we see it? How do we know it is there? Have everyone breathe in and out, watching for their breath. Have them blow on their hands and feel the air. Blow up a balloon to demonstrate the gas blowing up a balloon. Now we can see the gas!

-Have the student return to their seats.

-“Our Noses are Gas Detectors” activity: Go around the room and fan the vanilla extract (poured on a small plate) at each table group – have them put their finger on their nose when they can smell it. Discuss why they were able to smell the vanilla without being right up close to it. Add the next sentence strip under Gases (gases “spread in the air”).

-Give each of the students a straw and a small pieces of paper. Have them carefully blow the paper on their table using the straw. Discuss the air as a gas. (have the students throw their straws and paper out)

-“We’re Going to Catch Some Gas” (if there is time) – Ask the students if they have ever used a net to catch something, like a butterfly or a fish. Give one of the most responsible students at each table a plastic grocery bag and have them wave it all around to “catch the gas around us”. (take each of the grocery bags up).

Explain:

-Have the students flip to the “Gases” page in their Scientist Journals and complete this page with them using the document camera and an extra journal or use one of the students to write on their paper under the camera.

Elaborate:

-Pass out the Gases poem to the students and have them paste it in their poetry notebooks. Read it together and have them illustrate it.

Evaluate:

-The “Gases” page in their Scientist Journals will act as a formal assessment. Answers from class discussions will act as an informal assessment.