

Root Beer Float Lesson Plan

Lesson Overview

Title: Root Beer Float Lesson Plan

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Subject: Science

Grade Level(s): 3–5

Duration: 1 day

Unit Description

To observe characteristics of solids, liquids, and gases.

Lesson Description for Day

Observe the traits of a solid, liquid, and gas inside of the classroom through ice cream, root beer, and the foamy substance created by mixing ice cream. and root beer.

State Standards

3rd Grade Science Standards

-recognizes and describes the differences between solids, liquids, and gases

Goals

Unit Goals:

Students will learn that...

-liquids...

-take the shape of the space they are in

-the space between molecules is large

-have varying viscosities

-solids...

-do not change their shape or volume

-have molecules that are tightly packed together

-gases...

-have no shape or volume

-have molecules that move quickly

-have molecules that are very loosely packed

-are sometimes invisible

Lesson Goals:

Students will learn...

-how the elements of a root beer float demonstrate the properties of solids, liquids, and gases

-how to make their own root beer floats

Methods

Anticipatory Set:

-Students will learn the differences and characteristics of solids, liquids, and gases through experimenting with ice cream (solid), root beer (liquid), and the carbonation from the root beer (gas)

-view a short video covering the properties of solids, liquids, and gases

-answer questions as a class reviewing the properties of matter and making a list including an example of both

Introduce and Model New Knowledge:

To begin the class, everyone will be seated in their seats. The root beer, ice cream, cups, and spoons will be waiting on a table nearby. Students will watch a short introductory video about solids, liquids, and gases. Then we will move to make the root beer floats. I will pour an 1-2 inches of soda in the bottom of the cup and show the class the fizzing of the root beer to show the the gas. We see the gas because it is trapped among the liquid. I will then swish around the soda to show that it takes the shape of it's container and moves very easily. I will then ask a volunteer to shake the ice cream container and ask them if they heard anything. Saying no, I will explain how solids are compact and don't move easily. I will then ask my classmates who would like a root beer float, root beer, or just ice cream and pass them out. I will point to the example of each type of matter in the float. While everyone is enjoying their snack, I will use the smart board and split it into three sections naming the solid, liquid, and gas. I will ask the class what the interaction between the particles is like in each, the characteristics, and an example. With extra time, I will ask the class to think of an example of something that could be either a solid or liquid.

Provide Guided Practice:

A review of the material will happen as stated above when I use the smart board and ask them about the interaction between the particles, characteristics of each, and examples.

Provide Independent Practice:

For a fictional out of class assignment, or to be used at the end of the class if there is extra time, I will ask the class to think of a substance that is neither one type of matter or another. Then I will ask them to orally (or if written) explain why it is neither type of matter.

Wrap-Up

Assessment

Formative/Ongoing Assessment:

To assess the student's knowledge, I will be asking them as a group various questions regarding the shape of the particles in relation to each other, characteristics of each and example. If they are able to accurately identify a substance that is not fully one phase of matter and explain why, then I will know they have mastered matter.

Summative/End Of Lesson Assessment:

Test students at the ed of unit over understanding of the differences between solids, liquids, and gases.

Materials

Other Resources

- Lesson Materials
Materials: root beer, spoons, cups, ice cream, video