



SAMPLE MATERIAL

Sample Lesson Plan: Changing the Density of Bread

Clarke N. Johnsen Junior High School, Utah

Topic: Encouraging Girls in Math and Science

Practice: Sparking Curiosity

This lesson plan provides a hands-on opportunity to make predictions and experiment with a piece of bread to understand concepts related to mass, volume, and density. Students acquire the skills of scientific investigation and explanation. At the end of the experiment, students should learn that changing the volume while not changing the mass will change the density of the bread.

Title: Changing the density of Bread.

Name: _____

Purpose: Try to change the density of a slice of bread?

Materials: One slice of bread, triple beam, metric ruler, calculator, plastic knife.

Prediction: How can you change the density of a slice of bread?

Procedure:

1. Cut the crust off of a slice of bread so that the bread is square.
2. Measure and record the density of the slice of bread.
3. Plan and conduct your experiment.
4. Measure and record the new density.

Data:

1. Did they have the same mass? _____ Why or why not?
2. Did they have the same volume? _____ Why or why not?
3. What is the density of bread at first?
4. What is the density of the bread now?
5. Why did the density change?
6. Can you think of any other ways to change the density of a slice of bread?
7. Sketch a picture showing the particles in the bread at first and then later.

Conclusion: (two things you learned).