

<b>Grade</b>	3
<b>Topic</b>	Science, physical and chemical changes
<b>Title</b>	Cooking up Some Changes

### **Standards:**

- 3.2.2 Measure and Mix dry and liquid materials in prescribed amounts, following reasonable safety precautions.
- 3.1.2 Participate in different types of guided scientific investigations, such as observing objects and events and collecting specimens for analysis.
- 3.1.3 Keep and report records of investigations and observations using tools, such as journals, charts, graphs, and computers.

### **Objectives:**

#### Cognitive Domain:

Students will be able to classify changes as either chemical or physical.

#### Affective Domain:

Students will work in cooperative groups to bake cookies.

#### Psychomotor Domain:

Students will use appropriate tools to measure ingredients accurately.

### **Materials:**

- Science journals,
- Chart paper
- Markers
- Sticky notes
- Measuring cups
- Recipe, ingredients
- Baking sheets
- Wax paper
- Paper towels
- Oven, oven mitts
- Measuring spoons

### **Procedures:**

- 1) Pretest: Have students classify changes as physical or chemical
- 2) Present definitions of chemical and physical changes.
- 3) Give examples of each type of change.
- 4) Talk about how baking cookies is a chemical change.
- 5) Break the class into workable groups.
- 6) Each group will bake a batch of cookies. They can all make the same kind of cookies or you can have each group make a different type of cookies.
- 7) Students should read the recipe.

- 8) Students should do all the measuring.
- 9) Have a discussion with your group about how to measure dry ingredients verses liquid ingredients.
- 10) When students have sampled their fare, have them repeat the pretest.

### **Pre-Assessment:**

- Have students classify changes as physical or chemical changes.
- Put categories on chart paper (physical and chemical).
- Write examples of physical and chemical changes on sticky notes.
- Have students stick examples in the correct categories.

### **Post-Assessment:**

Repeat pre assessment either as a whole group or have students create individual charts in their science notebooks.

### **Created by:**

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