KSI Brownie Investigation

**Directions:** Follow the procedures in the **Cooking Instructions** (using the ingredient list to find the amount of each ingredient needed). Remember to record your observations for each step with your group’s marker.

**1-Egg Brownies**

**Ingredients**
- 4 ounces semi-sweetened chocolate, chopped
- 1/2 cup butter (1 stick)
- 1 large egg
- 1 1/4 cup sugar
- 1/4 teaspoon (Tsp) salt
- 1 teaspoon (Tsp) vanilla
- 1/2 cup flour

**Special Equipment:** An 8-inch square baking pan, parchment paper

**Cooking Instructions**

**Step 1**
Make sure that the oven has been preheated to 350 degrees F. Line the bottom and sides of the baking pan with parchment paper or foil, leaving an overhang on two opposite sides. Set the pan aside.

**Step 2**
Heat water in a wide skillet to nearly boiling. Place the chocolate and butter in a medium-sized heatproof bowl. Set the bowl into the skillet of barely simmering water. Stir until the chocolate is melted and the mixture is smooth.

**Step 3**
Remove the bowl from the skillet. Slowly stir in the sugar, vanilla, and salt with a wooden or plastic spatula.

**Step 4**
Add the egg, stirring until it is incorporated.

**Step 5**
Stir in the flour and beat until the batter comes away from the sides of the bowl, 1 - 2 minutes.
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Step 6
Scrape the batter into the lined pan with your spatula, and smooth to even it. Measure the height of your brownies and record the height on the observation chart for this step. Bake at 350 degrees for 25 to 30 minutes or until the brownies just begin to pull away from the sides of the pan. The surface of the brownies will look dry, but a toothpick inserted in the center may come out gooey. Do the Eggs Oil and Water science experiment.

Step 7
Once the brownies are done, remove from the oven and allow to cool. Measure the height of your brownies and record the height on the observation chart for this step.
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**Directions:** Follow the procedures in the **Cooking Instructions** (using the ingredient list to find the amount of each ingredient needed). Remember to record your observations for *each* step with your group’s marker.

### 2-Egg Brownies

**Ingredients**
- 4 ounces semi-sweetened chocolate, chopped
- 1/2 cup butter (1 stick)
- 2 large eggs
- 1 1/4 cup sugar
- 1/4 teaspoon (Tsp) salt
- 1 teaspoon (Tsp) vanilla
- 1/2 cup flour

**Special Equipment:** An 8-inch square baking pan, parchment paper

**Cooking Instructions**

**Step 1**
Make sure that the oven has been preheated to 350 degrees F. Line the bottom and sides of the baking pan with parchment paper or foil, leaving an overhang on two opposite sides.

**Step 2**
Heat water in a wide skillet to nearly boiling. Place the chocolate and butter in a medium-sized heatproof bowl. Set the bowl into the skillet of barely simmering water. Stir until the chocolate is melted and the mixture is smooth.

**Step 3**
Remove the bowl from the skillet. Slowly stir in the sugar, vanilla, and salt with a wooden or plastic spatula.

**Step 4**
Add the eggs one at a time, stirring until the first one is incorporated before adding the next.

**Step 5**
Stir in the flour and beat until the batter comes away from the sides of the bowl, 1 - 2 minutes.
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Step 6
Scrape the batter into the lined pan with your spatula, and smooth to even it. Measure the height of your brownies and record the height on the observation chart for this step. Bake at 350 degrees for 25 to 30 minutes or until the brownies just begin to pull away from the sides of the pan. The surface of the brownies will look dry, but a toothpick inserted in the center may come out gooey. Do the Eggs Oil and Water science experiment.

Step 7
Once the brownies are done, remove from the oven and allow to cool. Measure the height of your brownies and record the height on the observation chart for this step.
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**Directions:** Follow the procedures in the **Cooking Instructions** (using the ingredient list to find the amount of each ingredient needed). Remember to record your observations for each step with your group’s marker.

**3-Egg Brownies**

**Ingredients**
- 4 ounces semi-sweetened chocolate, chopped
- 1/2 cup butter (1 stick)
- 3 large eggs
- 1 1/4 cup sugar
- 1/4 teaspoon (Tsp) salt
- 1 teaspoon (Tsp) vanilla
- 1/2 cup flour

**Special Equipment:** An 8-inch square baking pan

**Cooking Instructions**

**Step 1**
Make sure that the oven has been preheated to 350 degrees F. Line the bottom and sides of the baking pan with parchment paper or foil, leaving an overhang on two opposite sides.

**Step 2**
Heat water in a wide skillet to nearly boiling. Place the chocolate and butter in a medium-sized heatproof bowl. Set the bowl into the skillet of barely simmering water. Stir until the chocolate is melted and the mixture is smooth.

**Step 3**
Remove the bowl from the skillet. Slowly stir in the sugar, vanilla, and salt with a wooden or plastic spatula.

**Step 4**
Add the eggs one at a time, stirring until the first one is incorporated before adding the next.

**Step 5**
Stir in the flour and beat until the batter comes away from the sides of the bowl, 1 - 2 minutes.
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**Step 6**
Scrape the batter into the lined pan with your spatula, and smooth to even it. Measure the height of your brownies and *record the height on the observation chart for this step*. Bake at 350 degrees for 25 to 30 minutes or until the brownies just begin to pull away from the sides of the pan. The surface of the brownies will look dry, but a toothpick inserted in the center may come out gooey. Do the *Eggs Oil and Water* science experiment.

**Step 7**
Once the brownies are done, remove from the oven and allow to cool. Measure the height of your brownies and *record the height on the observation chart for this step*. 
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**Directions:** Follow the procedures in the **Cooking Instructions** (using the ingredient list to find the amount of each ingredient needed). Remember to record your observations for each step with your group’s marker.

4-Egg Brownies

**Ingredients**
4 ounces semi-sweetened chocolate, chopped  
1/2 cup butter (1 stick)  
4 large eggs  
1 1/4 cup sugar  
1/4 teaspoon (Tsp) salt  
1 teaspoon (Tsp) vanilla  
1/2 cup flour

**Special Equipment:** An 8-inch square baking pan

**Cooking Instructions**

**Step 1**  
Make sure that the oven has been preheated to 350 degrees F. Line the bottom and sides of the baking pan with parchment paper or foil, leaving an overhang on two opposite sides

**Step 2**  
Heat water in a wide skillet to nearly boiling. Place the chocolate and butter in a medium-sized heatproof bowl. Set the bowl into the skillet of barely simmering water. Stir until the chocolate is melted and the mixture is smooth.

**Step 3**  
Remove the bowl from the skillet. Slowly stir in the sugar, vanilla, and salt with a wooden or plastic spatula.

**Step 4**  
Add the eggs one at a time, stirring until the first one is incorporated before adding the next.

**Step 5**  
Stir in the flour and beat until the batter comes away from the sides of the bowl, 1 - 2 minutes.
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Step 6
Scrape the batter into the lined pan with your spatula, and smooth to even it. Measure the height of your brownies and record the height on the observation chart for this step. Bake at 350 degrees for 25 to 30 minutes or until the brownies just begin to pull away from the sides of the pan. The surface of the brownies will look dry, but a toothpick inserted in the center may come out gooey. Do the Eggs Oil and Water science experiment.

Step 7
Once the brownies are done, remove from the oven and allow to cool. Measure the height of your brownies and record the height on the observation chart for this step.