

# National Brownie Day

Brownies are fun to make and delicious to eat! We have added a spin to making these brownies; get your math skills ready. Discover different measurements and the process of converting them in this tasty recipe.

**TEKS:**

3.5D Explore and recognize that a mixture is created when two materials are combined such as gravel and sand and metal and plastic paper clips.

5.5D Identify changes that can occur in the physical properties of the ingredients of solutions such as dissolving salt in water or adding lemon juice to water.

**Math TEKS:**

4.7B Convert measurements within the same measurement system, customary or metric, from a smaller unit into a larger unit or a larger unit into a smaller unit when given other equivalent measures represented in a table

5.7 Geometry and measurement. The student applies mathematical process standards to select appropriate units, strategies, and tools to solve problems involving measurement. The student is expected to solve problems by calculating conversions within a measurement system, customary or metric.

**Materials:**

- 9in x 13in pan
- Measuring spoons
- Mixing bowl

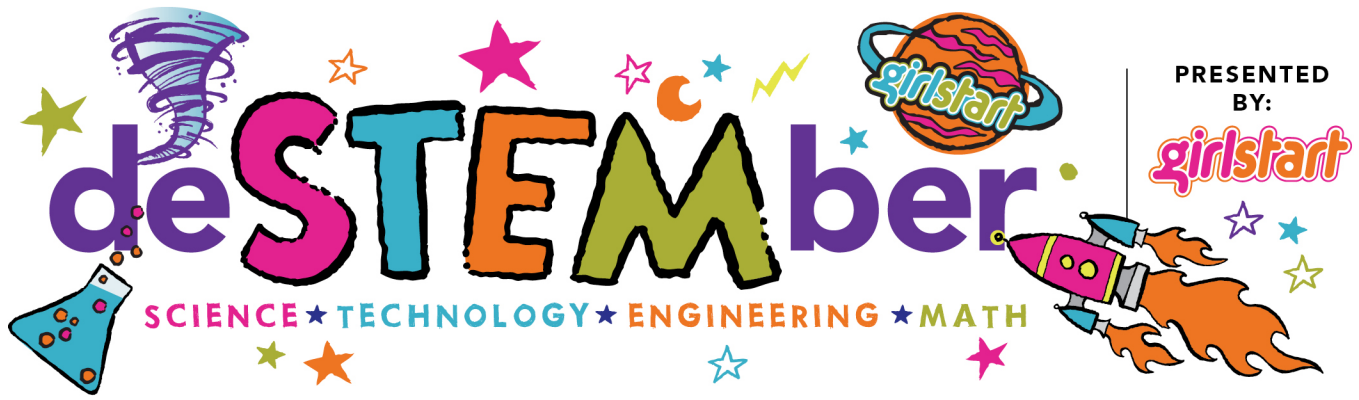
**Ingredients:**

- ½ teaspoon baking powder
- ½ teaspoon of salt
- 1 teaspoon of vanilla extract
- 4 eggs
- 8 tablespoons of cocoa powder
- 16 tablespoons of butter or margarine
- 24 tablespoons of all- purpose flour
- 32 tablespoons of white sugar

**How To**

1. Melt the butter or margarine
2. Add each ingredient to the mixing bowl in the order listed and mix well.
  - 16 tablespoons of butter or margarine
  - 32 tablespoons of white sugar
  - 8 tablespoons of cocoa powder
  - 1 teaspoon of vanilla extract
  - 4 eggs
  - 24 tablespoons of all- purpose flour
  - ½ teaspoon baking powder
  - ½ teaspoon of salt

**31 Days of STEM FUN!**



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## How To Continued...

3. Preheat oven at 176.66 degrees Celsius
4. Spray your 9in x 13in pan with nonstick cooking spray
5. Pour mixture into pan
6. Bake the brownies for 1200 seconds to 1800 seconds
7. Take the brownies out and let them cool. Ask an adult for help; the pan will be hot!

## Why Does it Work?

Conversions are everywhere and it is always best to be prepared. You may only have teaspoons instead of cups or tablespoons and vice versa available to use. Possibly even a timer that counts in seconds instead of minutes. A slightly bigger pan or even a smaller pan and you have to change the proportions of your ingredients. Here are a few conversions that will make this project and other projects easier.

$$^{\circ}\text{C} (9/5) + 32 = ^{\circ}\text{F}$$

$$16 \text{ tablespoons} = 1 \text{ cup}$$

$$3 \text{ teaspoons} = 1 \text{ tablespoon}$$

$$60 \text{ seconds} = 1 \text{ minute}$$

## Career Connection:

A career that benefits from the knowledge of conversion of units is a **Chemists**. In order to do any of their experiments they must be able to measure the substances they use accurately in equal proportions.

Resources: <http://allrecipes.com/Recipe/Quick-and-Easy-Brownies/>

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