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Instant Ice Cream

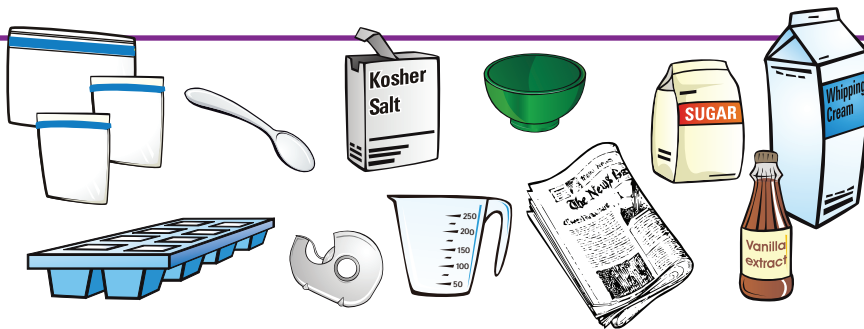
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African American inventors throughout history have designed countless products that you use on a daily basis, even around your house. One of those inventions is the ice cream scoop by Alfred L. Cralle! Let's investigate the science behind homemade ice cream and then learn about the African American inventor who made this useful tool.

What you need:

- Ice cube tray with ice
- Kosher salt
- 1 large resealable bag
- 2 small resealable bags
- Measuring cup
- Newspaper
- Spoon
- Sugar
- Vanilla extract
- Whipping cream
- Tape
- Bowl



What you do:

Step 1: Add one spoon of sugar, 80mL (1/3 cup) of whipping cream, and a dash of vanilla extract to one of the small bags.

Step 2: After the ingredients have been added, seal the bag and squish everything around to mix the contents.

Step 3: Place the bag into the second small bag and seal it.

Step 4: Add 125mL (1/2 cup) of kosher salt and 12-16 ice cubes to the large bag.

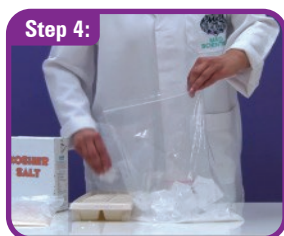
Step 5: Seal the large bag, and squish it to mix the ice with the salt.

Step 6: Put the small bags filled with ingredients into the large bag, and reseal it.

Step 7: Wrap the large bag in newspaper, and tape the package closed.

Step 8: Shake the wrapped bag for about 5 minutes.

Step 9: Open the bags and scoop out the ice cream into a bowl. Have a taste of your instant ice cream!



The science behind it:

This experiment involves something called "freezing point depression." Salt (its chemical name is sodium chloride) actually lowers the freezing point of water so that it freezes at a lower temperature. This means that the salt water can remain liquid at temperatures colder than 0°C (32°F). When you are making ice cream using ice and salt, this cold salty water surrounding the cream and sugar allows the cream to transfer its heat and freeze quickly to form ice cream. Freezing point depression is a really useful thing in cold climates where salt is spread on roads and driveways to prevent ice from forming on them, or to melt the ice on really cold days!

Now try this:

Try adding more salt or ice – can you improve the recipe to make the cream freeze more quickly? For a tasty twist, you can also try adding different flavorings, such as chocolate or strawberry syrup instead of vanilla extract.





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Ice Cream Scoop

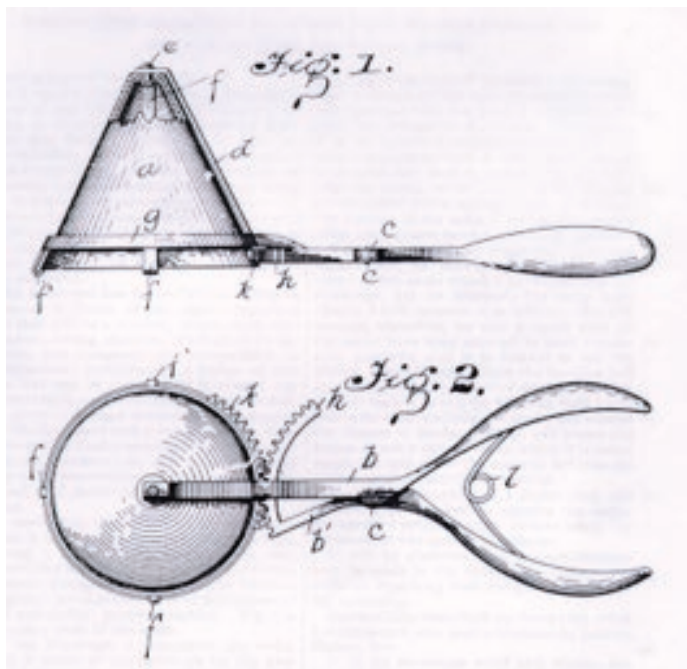
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Alfred L. Cralle, American Businessman and Inventor

Alfred L. Cralle was born in Virginia in 1866. He had many different jobs growing up, first working alongside his father in the carpentry industry and later as a porter for a hotel and drugstore in Pennsylvania. While he was working at the hotel, he noticed that the employees serving ice cream were having trouble getting the cold dessert off the spoon and into the cone. He decided to solve this chilly problem and designed a mechanical utensil which he called the ice cream mold and disher!

This new durable scoop could be used one-handed and saved time and effort. He received a patent for his invention in 1897. At the time Alfred didn't receive any credit or profit from his invention so let's celebrate this helpful tool and its inventor as we enjoy our homemade ice cream!



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