Making Better Butter

People have been making butter from cream for over 4,000 years. When unpasteurized milk is left to sit, the cream will rise to the top. Shaking or churning this cream separates it into solid butter and liquid buttermilk. Make your own butter by following the steps below.

What you will need:

- 1 cup heavy whipping cream
- Clear plastic or glass jar with a tight lid
- Spatula
- Bowl
- Cold water

Put it all together

1. Make a butter churner. Measure one cup of cream and put it in a clear jar. Screw the lid on tight. Allow the cream to reach room temperature.
2. Shake it up! Shake the cream. If you’d like, share the job with a friend and take turns shaking the jar.
3. Observe the changes. After some shaking, the cream will start to foam and thicken. If you were to open it now, you’d have whipped cream!
4. Keep shaking! Continue shaking the jar and observe how it continues to change. It should take about 10 minutes, but it will depend on the temperature of the cream and how fast you shake the jar. Stop once you see a solid lump in the center of the jar, surrounded by a thin milky liquid.
5. Separate the liquids and solids. Carefully pour the liquid into an empty bowl. This liquid is called buttermilk and is often used to make buttermilk pancakes or biscuits! The solid lump in the jar is butter. Use a spatula to squeeze out any remaining buttermilk liquid from the butter.
6. Rinse and eat! Rinse the solid butter with cold water and squeeze out any remaining liquid with the spatula. Spread your butter on some bread or toast, or store it in the fridge to use later.

Take it further!

Before refrigeration was widely available, many people relied on their local dairy to deliver milk, butter, and other fresh dairy products to their door. Alexandria Dairy Products Company opened on the southwest corner of North Pitt and Princess Streets in 1930. When this photograph was taken in 1948, the building was one of the largest dairies in Virginia, processing more than 10,000 gallons of milk a day and serving over 30,000 families in Alexandria, Arlington and Fairfax. The building was replaced by townhouses in the 1970s.

The Alexandria Dairy Company was one of the first American producers to use square glass bottles. First patented in 1898 by Charles T. Nightingale, square bottles weren’t widely used until the 1940s. Alexandria Dairy began using square bottles made by the Buck Glass Co. of Baltimore in 1941.

As shown below, square bottles can be packed more tightly than round, leaving less unused space (shown in blue). Engineers refer to this as packing density.