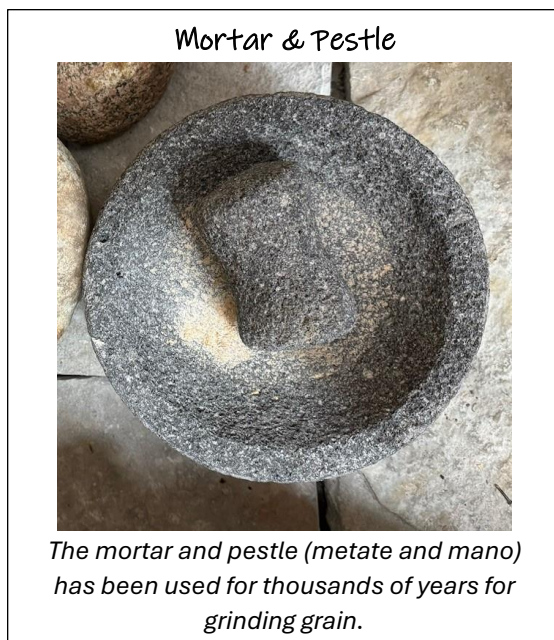


## WHERE SCIENCE HISTORY AND ART CONNECT

To: Raven Hill friends  
From: Cheri  
Date: September 14, 2024  
Re: Mixing it up

In the past, various tools have been developed and adapted for mixing foods. These utensils have changed over time, as illustrated in Raven Hill's Evolving Technology (ET) Building. We don't know exactly when the first early human picked up a **stick**, intentionally combining ingredients by stirring, but food mixing has one of the longest histories of any form of mixing.



People first used their hands or basic tools made from stone, bone or wood to mix raw ingredients like grains, nuts, and berries. Primitive cultures progressed to grinding cattails, fern roots and cracked kernels of wild grasses in crude **mortar and pestles** and then combining that with water to make a paste, similar to porridge or polenta. This was eaten raw, cooked or toasted on a hot stone to make a crude bread. Ancient civilizations, such as the Egyptians, Greeks and Romans also used grinding tools to powder spices, herbs and grains.

In many cultures, **ceramic pots** were used to mix and cook soups. In the South & Central America, **shaking containers** were filled with ground cocoa beans and water, then agitated to make a foamy drink. And in northern Europe and other cultures, bunches of birch twigs were used to **whisk** ingredients together.



### Pouches



*Animal stomachs were perfect containers for liquids.*

Some early mixing happened over 8 thousand years ago accidentally. In containers made from animal **stomachs or leather pouches**, the shaking motion made by nomadic travelers created butter and yogurt from sheep and goat milk. Milk, when stored in pouches, sometimes turned into butter from being jostled around. If that milk was partially fermented, the movement and warmth formed yogurt. Later, mechanical devices such as **butter churns** used manual cranking to mix the milk and form butter.

### Whipped cream!



*These beaters are my preference when making whipped cream for shortcake. Just don't overbeat and end up with butter!*

As human civilization advanced, mixing techniques stayed relatively the same for thousands of years. Finally in the 19th century, modern mixing technology began to change. Beginning in 1856, the simple hand crank **eggbeater** transformed mixing. Hundreds of different patents refined beater designs for efficiency, ease of use, durability and materials used. In 1885 the first patents for electric mixers were granted. In the early 20th century, **electric food mixers**, like the KitchenAid stand mixer became common, along with **blenders**. These tools changed food preparation, making

### Making mayo



*The recipe for mayonnaise is molded right into the glass of this unique mayo maker. Mix ingredients with an up & down motion.*

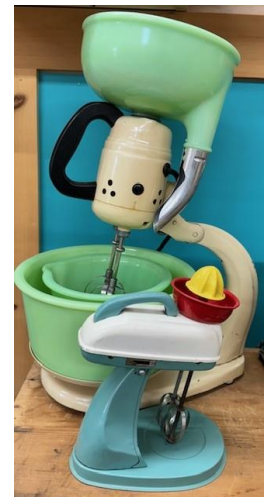
it easier to mix, purée and blend ingredients. By 1970, **food processors** provided even more versatility and mixing, chopping and puréeing food. Innovations in mixing have continued to accelerate. Today advanced technology has developed **food "mixology"** that eliminates air and achieves smaller droplet size for better food quality.

### Detachable beaters



*Ever popular handheld mixers are portable and easy to use.*

### Toy imitations



*Child's play mimics real life as this toy mixer with juicer illustrates!*

### Changes over time



Mixers--two electric (behind) and one manual (front)—can be seen as part of the cooking timeline on display in Raven Hill's ET Building.

The evolution of food mixing tools reflects the growing complexity of cooking methods, technological innovations, and the importance of quality and efficiency of food preparation. From simple wooden sticks to high tech appliances, Raven Hill visitors can see an array of devices that have shaped the way we mix and prepare food.

Fall hours are in effect. During bridge construction—September and October or until the road re-opens—the **Pop-up Museum** and outdoor exhibits will be open regular weekend hours—noon to 4pm on Saturdays and 2pm to 4pm on Sundays. Visitors can make an appointment to visit the Main Museum at other times, including holidays. Call 231.536.3369 or email [info@miravenhill.org](mailto:info@miravenhill.org) to make reservations.

Look for the **Pop-up Museum** in the Open Space on weekends. The **WHITE** inflatable tents are located at the corner of C-48, Fuller and Pearsall Roads. Parking and the tents can be accessed from Pearsall Road. Please stop there, check in, pay your \$5 (half price) admission AND play a while, before getting directions for the detour and driving around the “country block” to explore the outdoor exhibits on the Main Campus. Hope to see you here soon to visit us at the **Pop-up Museum**, AKA the **IGLOOS**! Or just stop and check us out when you drive by next time!

Cheri

P.S. Fuller road is scheduled to reopen on Friday, November 1<sup>st</sup>, if all goes as planned.



Use your eagle eyes to find us at the **Pop-up Museum** in the Open Space!