



04737 Fuller Rd | East Jordan, MI 49727
231-536-3369 | info@miravenhill.org | MiRavenHill.org

Raven Hill Discovery Center, incorporated in 1991,
is a 501(c)(3) tax-exempt corporation.

Open year-round on weekends – noon to 4pm Saturdays and 2pm to 4pm Sundays.
Between Memorial Day and Labor Day, hours expand to include weekdays from
10am to 4pm. The Center is also open other times, including holidays, by appointment.

MISSION: to provide a place that enhances hands-on and lifelong
learning for all ages by connecting science, history and the arts.

WHERE SCIENCE HISTORY AND ART CONNECT

To: Raven Hill friends
From: Cheri
Date: March 9, 2024
Re: **It's about time!**

Man first started keeping track of **time** by observing the stars. It was useful to follow the stars to help plan for a new growing season, but there was no need for accurate, measured **time**. However, as society became more sophisticated, so did the necessity for keeping closer track of **time**. The earliest known timekeeping device was the sundial. It allowed people to track local solar **time** using a shadow cast by a straight pointer called a "style or gnomon." The shadow of the gnomon moved with the movement of the sun. The earliest sundials were ancient Egyptian shadow clocks dating back to around 1500 BCE.



The obelisk shadow points to the month of the year and **time** of the day stamped on bricks inlaid in a cement path.

Raven Hill's obelisk is a giant sundial. It also acts as a calendar
Of course, no sun meant no date nor **time!**

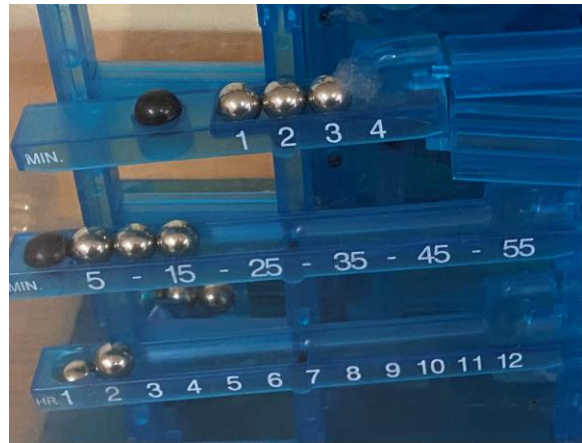


The sundial at Raven Hill has two sets of numbers, so that visitors can read the shadow and tell the **time** for both Daylight Saving Time (DST) AND Eastern Standard Time (EST).

Most people are familiar with the concept of springing forward and falling back, whether they like Daylight Saving Time or not! The concept supposedly makes better use of daylight during the longer days of summer. By moving the clocks forward by one hour in the spring, evenings have more daylight and people can take advantage of it for recreation or conserving energy by reducing the need for manufactured lighting. Benjamin Franklin was the first to describe the concept of Daylight Saving Time in 1784, but it was not used until World War I, when it helped the troops conserve energy. Germany and Austria were the first countries to adopt Daylight Saving Time in 1916.

Some people have suggested that Daylight Saving Time on Sunday should always be followed by a national holiday on Monday.

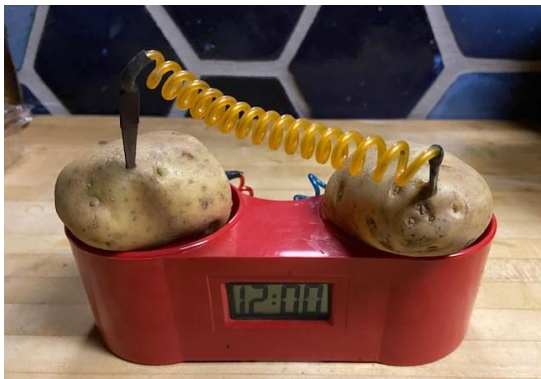
—author unknown



(Left) This **Time Machine** uses batteries, ramps, levers and steel bearing balls to keep **time**. Every minute a ball is released and rolls down a ramp. A fifth steel ball tilts the lever and the ball rolls into position to mark 5 minutes. After this happens 11 times (55 minutes), the next 5-minute ball marks 60 minutes, the ball tips the lever and a single ball rolls down to mark 1 hour or 60 minutes on the clock. Look closely and you can determine how many hours before the clock needs to be reset. —Raven Hill Collection

There are both advantages and disadvantages to Daylight Saving Time as a method of planning for new seasons. Extended daylight provides more light during the evenings, allowing people to enjoy outdoor activities and potentially reducing energy usage for lighting. Some studies indicate that Daylight Saving Time can stimulate economic activity through increased consumer spending and tourism. Longer daylight hours in the evening may encourage physical activity and outdoor recreation, which can have positive effects on a person's health and wellbeing. On the other hand, changing the clocks twice a year can disrupt sleep patterns, leading to potential health issues such as fatigue and decreased productivity. Adjusting to the time change can be inconvenient, causing confusion and disruption to schedules. While Daylight Saving Time was originally intended to conserve energy, its impact on energy usage is debated, with some studies suggesting minimal effect on energy consumption. The benefits of Daylight Saving Time may also vary with different people living in diverse locales.

More modern timekeeping devices include clocks, watches and cell phones. Cell phones even recognize Daylight Saving Time and update automatically for the time change. We reset most of our clocks, even though we may not look at them much anymore, because we use our cell phones instead! Other timepieces are just plain old fun, like the **Time Machine** pictured above and the **potato clock** to the left! William Borst invented the potato clock in 1983. He was helping his stepdaughter with her science project and remembered a physics project of his in which potatoes were used to generate electricity. Potato clocks are still popular today & can run on cans of soda or lemons as well as potatoes!



Two different metals—zinc & copper—inserted into potatoes cause enough potential difference allowing electricity to flow with the potato juices. The potato becomes a simple battery that can power a potato clock and help you tell the **time**!

—Raven Hill Collection

Speaking of **time**, right now, Raven Hill is open to the public on weekends. **Time** is noon to 4pm on Saturdays and 2pm to 4pm on Sundays, plus any other **time** by appointment. You can call 231.536.3369 or email info@miravenhill.org for reservations during the week. Do not forget to “spring forward” this weekend. Sunday morning at 2am is when the **time** officially changes, so remember, Monday will happen an hour earlier!