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

Mission: Raven Hill provides a place that enhances hands-on and lifelong learning for all ages by connecting science, history & the arts.

To: Friends and Family everywhere
From: Cheri and Raven Hill
Date: November 21, 2020
Re: Thanksgiving greetings from Raven Hill!

Hello, Everyone!

I know you have heard this too many times already, but the Center for Disease Control and Prevention (CDC) website says, "As cases continue to increase rapidly across the United States, the safest way to celebrate Thanksgiving is to celebrate at home with the people you live with." For many of us, it will likely make it a very different Turkey Day this year.

In an attempt to "lift" your spirits, I share the following memories and ideas with you. Since 1995, I normally spend fall and winter traveling around northern Lower Michigan, visiting local schools and sharing hands-on science with teachers and students. It is a favorite part of my job. Support for these outreach programs comes mainly from Michigan Council for Arts and Cultural Affairs, Charlevoix County Community Foundation, Petoskey-Harbor Springs Area Community Foundation, Great Lakes Energy People Fund, plus Raven Hill members and donors. For many years, I would put a piece of art on layaway at a local gallery and make monthly payments, as I traveled around. At the end of the year, there would be a new piece of art to install at Raven Hill and a reward for many hours on the road. In 2005, I found this sculpture at Indian Hills Gallery in Petoskey. "Rebirth Upon Wings" was created by Ojibwa artist, S. Lafountain.



This carved alabaster eagle comes to life as the sun shines through it. "Rebirth Upon Wings" always lifts my spirits.



Speaking of wings, in the 1700's, Daniel Bernoulli discovered and explained how objects can stay up in the air. Bernoulli found that there are differences in air pressure. In a plane, the difference is above and below the wing. Air has to travel faster over the curved top of the wing and so there is less pressure there, allowing the air underneath to **lift** the airplane. **Lift** is the force that is greater under wing and less on top that allows a plane to fly in the air.

You can use a blow dryer to demonstrate **lift**. Place a ping pong ball on the dryer. Keep the dryer in a vertical position. Turn the dryer on high & watch ball "float" as the column of fast moving air is "blown away" and slow moving air fills in from underneath to **lift** the ping pong ball. Caution: don't keep the dryer on too long at one time, as it will get very hot!

See how far you can lean the blow dryer to the side and still keep the ball in the air.

I found the following “History of Aprons” among my mother’s many clippings and papers. It fits perfectly with Thanksgiving and brings back good memories of my mother and grandmother. It reads something like this...I don’t think many kids know what an apron is. The principal use of Grandma’s apron was to protect the dress underneath, because she only had a few. It was easier to wash aprons than dresses and they used less material. Along with that, it served as a potholder for removing hot pans from the oven. It was wonderful for drying children’s tears and, on occasion, was even used for cleaning out dirty ears. From the chicken coop, the apron was used for carrying eggs, fussy chicks, and sometimes half-hatched eggs to be finished in the warming oven. When company came, those aprons were ideal hiding places for shy kids.

When the weather was cold, Grandma wrapped her apron around her arms. Those big old aprons wiped many a perspiring brow, while bent over the hot wood stove. Chips and kindling wood were brought into the kitchen in that apron. From the garden, it carried all sorts of vegetables. After the peas had been shelled, it carried out the hulls. In the fall, the apron was used to bring in apples that had fallen from the trees. When unexpected company drove up the road, it was surprising how much furniture that old apron could dust in a matter of seconds. When dinner was ready, Grandma walked out onto the porch, waved her apron and the menfolk knew it was time to come in from the field for dinner. It will be a long time before someone invents something that will replace the ‘old-time apron’ that served so many purposes...



I don’t have a chef’s hat to match my apron, like my grandkids, but I’ll have my apron on next Thursday, while I cook my Thanksgiving dinner and listen to the Nutcracker!



Believe it or not, it is possible to whisper and hear it 250 feet away! Try it next time you visit Raven Hill.

I don’t always answer long distance phone calls, but something made me pick up the phone this time. The call was from southern Michigan. The caller was interested in our whisper dishes or acoustic mirrors. He and his wife are starting a lavender farm and want to have a park area as part of it. He googled “whisper dishes” and ended up at our website, where there is a video of our setup. He asked where we got ours. I told him that volunteers created them out of two old satellite dishes! If you want, go to Raven Hill’s website (www.miravenhill.org), click on “Visit” and then check out the [Facilities and Exhibits](#) page and the [Exhibit Video and Audio Library](#) to learn more about Raven Hill’s whisper dishes.

Finally, a good supporter sent information on the Great Lakes Children’s Museum in Traverse City. They have some wonderful virtual programming. Check out their STREAM programs at <https://www.greatlakeskids.org/offerings/> Their First Steps Science link specifically is <https://www.greatlakeskids.org/first-steps-science/> These all get archived on their website and they are also on YouTube. The video link is https://www.youtube.com/channel/UCsGxJaNB_110rqB4SNodIYA. The more science, the better!

Take care of yourselves and think positive thoughts. Stay safe this Thanksgiving, so you can be together with family & friends next year. It will be worth it. You can text or call my cell—231.675.6025 or email cheri@miravenhill.org anytime, as you know that I always enjoy hearing from you.

Hugs from a distance, *Cheri*