

Canyon County Parks, Cultural and Natural Resources

CROSSROADS

Summer 2020



OUR VERY **DIFFERENT** EDITION OF

C R O S S R O A D S

S U M M E R 2 0 2 0



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FROM THE DIRECTOR

UNPRECEDENTED

adjective

never done or known before

without previous instance; never before known or experienced; unexampled or unparalleled

Synonyms

novel, unexampled, unique, extraordinary, strange, unaccustomed, unfamiliar, exceptional, unknown

Antonym

familiar, common, customary, normal, ordinary, usual

Growing up, whenever my sister or I didn't know what a word or idea meant, our mother always said the same thing. 'Look it up.' I'm dating myself, but back then that meant walking to the bookshelf to pull out the gigantic dictionary or one of the volumes of our encyclopedia set. I used to hate that response. 'Look it up.' We heard it all the time. As we got older, we knew what mom's response would be (and we didn't want to hear it out loud) so we reluctantly lugged ourselves over to the bookshelf and just figured it out on our own. It became an independent habit. 'Look it up.'

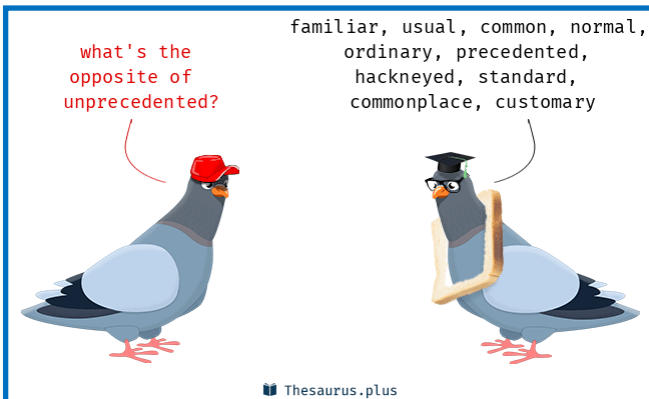
Today, I am so extremely grateful that our mom did this. (Thanks Mom!) I look up words and ideas *all the time*. Only, these days it's even easier as all I need is a cellphone or internet, no trip to the bookcase or encyclopedia sets. Lazy, convenient learning! Whenever I hear words that aren't used on a regular basis, I like to look them up to make sure they're being used correctly and that I actually understand the words that I'm using. I like to read about a word and mull it around in my mind like clay. What does it mean, where did the word come from, what other words does it relate to. Do I really understand and use this word correctly?

Lately I've been doing this activity a lot. So many uncommon words and ideas used right now. Quarantine, pandemic, virus, stay-home order vs. shelter-in-place, ventilator, crisis. In my family we've been looking them up and reading about these words with my daughter who has also picked up on a desire to understand the words we use (again, Thanks Mom!). Somehow, it helps to look up these words – to get their definition. It gives them substance and gives us some control over the word.

If it was up to me, the word of the year for 2020 would be 'unprecedented'. It's fitting. It's encompassing (enveloping). Everything right now is novel, strange, unfamiliar, and unaccustomed (yet, it's **NOT** impossible!) You will find that our Crossroads Magazine is also unprecedented right now as we too face unfamiliar challenges. Our standard articles related to Spring field trips, Archaeology Month, Desert Studies Institute classes, and anything else related to social gatherings are all gone. Like every organization, we've had to make tough calls to cancel field trips and events to prioritize the safety of our citizens,

visitors and staff. However, publishing Crossroads itself is a tradition that we can control and continue, even if the content inside is novel (different, unique) to fit the times at hand. This magazine will be unlike any we've done in the past. It will be different than what you're used to, but we hope that you find it fun and positive and enjoyable!

Nicki



The Importance of Being Outside

by Laura Barbour

Three of us—two people and a very furry cat—stuck in a house together. After two weeks, our yard is looking amazing (more on that elsewhere in *Crossroads*). The inside of our house, somewhat less so. Given a choice between wallowing in our own filth or pulling out the scrub-brushes and vacuum—we went for a hike, leaving the cat to enjoy some much-needed alone time. In the hills, early ephemeral wildflowers were blooming—violets, larkspur; yellowbells. Ladybugs were clustering in the bunchgrass, and we spotted deer and elk feeding in the high sagebrush benches and bedded down in the sunshine on the long bare ridgelines. The draws and creek bottoms were fiery with bare-stemmed willows and dogwoods. I startled a grouse and tip-toed away quietly, we were startled by chuckars bursting from underfoot, and we found a couple mule deer antlers lying among the twisted roots of the sagebrush. We came home a few hours later, footsore and slightly sunburned but refreshed, with a couple mule deer sheds strapped to our backpacks. And then we pulled out the scrub-brushes and the vacuum and cleaned the house.

Whether the inside of your house is a disaster zone or in mint condition, studies show that getting *outside* your house is critical to both your physical and mental health. Exposure to nature plays a “profound role” in regulating our autonomic nervous system—reducing stress hormones like adrenaline and cortisol, and immunoglobulin A, an inflammatory marker. Enjoying nature has also been shown to lower blood pressure and can help alleviate anxiety and depression. In a 2018 study, researchers in Philadelphia randomly allocated vacant lots across the city “to either receive no intervention, receive regular trash removal and mowing, or be turned into open pocket parks, with trees and a pleasant, short wooden-perimeter fence.” They surveyed residents before and after the intervention experiment, and found that “residents of neighborhoods where lots had been greened were much healthier psychologically than those whose lots had merely been cleaned.” In neighborhoods near the greened lots, people were 42% less likely to report “feeling depressed,” and 63% less likely to describe themselves as having “generally poor mental health.” Interestingly, the survey residents weren’t always aware that the greening had occurred in their neighborhood, suggesting that nature can have health benefits even if you don’t know it’s around you. (Reuben 2019).

Throughout the coronavirus pandemic, people around Idaho and the U.S. have been turning to the outdoors (parks, trails and open space) for recreation and relief. With restaurants, movie theaters, and other social gathering places closed, crowds of people are flocking to “nature,” whether a neighborhood park or a nearby hiking trail—often causing overcrowding. When there’s not enough locally-accessible open space for an area’s residents, people getting outdoors can overwhelm staff and facilities at outdoor recreation sites, causes deterioration of the resource as well as posing a health concern—especially when parks or trailheads become so crowded that proper social distancing is impossible. “If a city doesn’t have enough green space for the amount of people who live there, that’s a public health issue,” said Assoc. Prof. Marc Berman, a leading expert on how environmental factors can affect the brain and behavior. (Wang 2020).

We’re lucky in Idaho to have relatively high access to open space and natural areas, but there are rules and guidelines for getting outdoors safely during the COVID-19 crisis. Avoid crowded places and peak times, and always stay a safe distances from other recreationists (at least 6 feet). Wash your hands and don’t go to public spaces if you’re feeling sick. Stay close to home rather than driving up the road (less chance of spreading the virus to a new place)—go for a walk around your neighborhood or to a nearby open space area if you can do that safely. Research and respect closures and restrictions at your favorite parks and recreational facilities—don’t be dependent on public restrooms, and try to pack out your own trash to minimize the load on staff that are





“We came home a few hours later, footsore and slightly sunburned but refreshed, with a couple mule deer sheds strapped to our backpacks.”

already stretched thin. Be sure to check with health experts and organizations from the CDC to state & local governments for the latest rules and recommendations about going outside, as well as updates about facilities hours & availability. (CDC 2020, Outdoor Alliance 2020). There are also rules you should follow anytime you head into the great outdoors—it’s called responsible recreation and it helps keep you safe, protects wildlife, and ensures that the people who come after you will be able to enjoy the same nature experience you did. (US Forest Service 2020, Leave No Trace 2020).

That being said, what if you can’t safely get outdoors right now? Maybe you don’t have a yard, or the open space near your neighborhood is overcrowded (or closed). Maybe you’re feeling sick and self-isolating in your house. Well, there is some good news. A 1984 study looked into a hospital ward for gallbladder surgery recovery. Patient’s rooms were identical, except that some had windows overlooking a cluster of trees and other’s only had a view of a brick wall. Looking over 10 years of hospital records, the researchers found that patients with the “green” view tended to need fewer painkillers, be in better spirits during their stay, and be discharged from the hospital on average one day earlier than those with no view (Reuben 2019, Ulrich 1984). Other more recent studies show that interacting with house plants, and even looking at images of nature (such as the beautiful photos you’ll find

throughout this magazine), watching nature documentaries, or listening to nature sounds can be calming—reducing stress, lowering blood pressure, and generally helping make you a happier, healthier person. For those of you working from home, it's also shown to boost productivity. A University of Melbourne study found that pausing a “tedious, attention-demanding task” for just 40 seconds (a “microbreak” during which participants looked at a computer-generated image of a green roof) resulted in increased focus and performance once participants returned to the task at hand. (Lee et al 2015, Dockrill 2016, Mooney 2015)

So get outdoors—close to home—if you can safely do so, while following COVID-19 rules & restrictions. If you have a yard, garden, patio or balcony, get out and make the most of it. If you can't safely get outside right now, you can still experience some of the benefits of nature. Bring nature, or at least some small reminders of it, into your day-to-day life. Spend some quality time with your houseplants. Schedule some “microbreaks” into your day for window-gazing, or find some soothing nature views in a magazine (you're welcome), or online. Watch a nature documentary. Get your art supplies out of the back of the closet and paint or draw a picture of a place in nature that's close to your heart. Or simply grab a small container and a couple scoops of soil: plant a seed, add water, and watch it grow.



List of resources:

Leave No Trace: <https://lnt.org/the-leave-no-trace-recommendations-for-getting-outside-amidst-covid-19/>.

Centers for Disease Control: <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/social-distancing.html>.

Idaho Department of Health & Welfare: <https://coronavirus.idaho.gov/>.

Outdoor Alliance: <https://www.outdooralliance.org/blog/2020/3/24/how-to-get-outside-during-a-pandemic>.

U.S. Forest Service: <https://www.fs.usda.gov/visit/know-before-you-go/responsible-recreation>.

Idaho Coronavirus Page

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Dockrill, Peter. 2016. Just looking at photos of nature could be enough to lower your work stress level. *Science Alert*: <https://www.sciencealert.com/just-looking-at-photos-of-nature-could-be-enough-to-lower-your-work-stress-levels>.

Mooney, Chris. 2015. Just looking at nature can help your brain work better, study finds. *The Washington Post*: <https://www.washingtonpost.com/news/energy-environment/wp/2015/05/26/viewing-nature-can-help-your-brain-work-better-study-finds/>.

Lee, Min-Sun; Lee, Juyoung; Park, Bum-Jin; and Miyazaki, Yoshifumi. 2015. Interaction with indoor plants may reduce psychological and physiological stress by suppressing autonomic nervous system activity in young adults: a randomized crossover study. *Journal of Physiological Anthropology* 34(1):21.



Recreate Responsibly Idaho

All of us must work to keep areas open for recreation during the COVID-19 pandemic. By following the Recreate Responsibly Idaho guidelines, we can minimize closures resulting from people overcrowding areas and ignoring social distancing.

Let's Work Together



Safety First

Do not engage in outdoor recreation if you're sick, stay home instead.

Enjoy outdoor recreation as close to home as possible to prevent the spread of COVID-19.



Don't engage in high-risk outdoor recreation activities to preserve emergency medical service, urgent care clinic, and hospital capacity.

Check before you go

Idahoans and visitors to our state should be aware some campgrounds and boat ramps are closed, so research your plans before recreating and respect private property.



Spread out

If a trailhead or boat ramp is congested, consider finding another or going during off-peak hours.



When recreating outdoors, maintain appropriate social distancing, which is defined as six feet or more from others.



Be prepared

Bring your own food and water to preserve supplies and limit exposure in local communities.



Bring your own sanitation supplies (i.e. water, hand sanitizer, toilet paper) as these may not be available.



Be prepared to pack out your own trash as garbage service may not be available.

coronavirus.idaho.gov

EXPLORE OUTDOORS!

Please enjoy these outdoor learning opportunities assembled by Amelia Barton,
Programs Coordinator for Canyon County Parks, Cultural, and Natural Resources

Getting outdoors can be challenging during this stay-at-home order, but it is extremely important that we do our best to get outside for at least thirty minutes each day, especially for kids! I know that there is a focus on at home learning at this time, but this can be extended to a neighborhood trail, a local park, or even your backyard. In this issue, I am happy to provide some activities and resources for outdoor learning. Outdoor exploration helps kids build a connection to the natural world, practice science skills, and enhances curiosity and critical thinking. These outdoor activities are aligned with science standards, so they really are taking the classroom outdoors! Just make sure to practice safe social distancing while venturing outside, and check your local guidelines for where in your neighborhood is okay to explore!

Science Journals

Making a homemade science journal can spark enthusiasm for outdoor exploration. This DIY project won't take long or many materials.

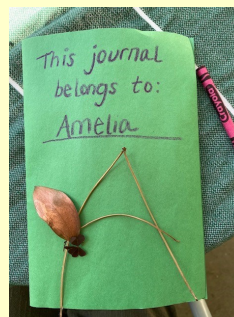
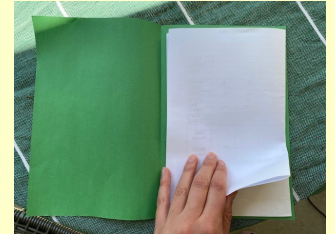
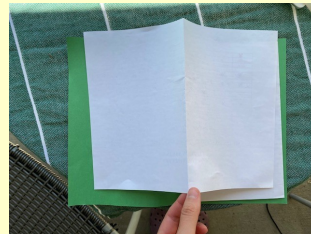
All you need is:

- Construction Paper
- White paper or scrap paper (one side blank)
- Glue or tape
- Stapler or hole punch
- Some collected "nature treasures"

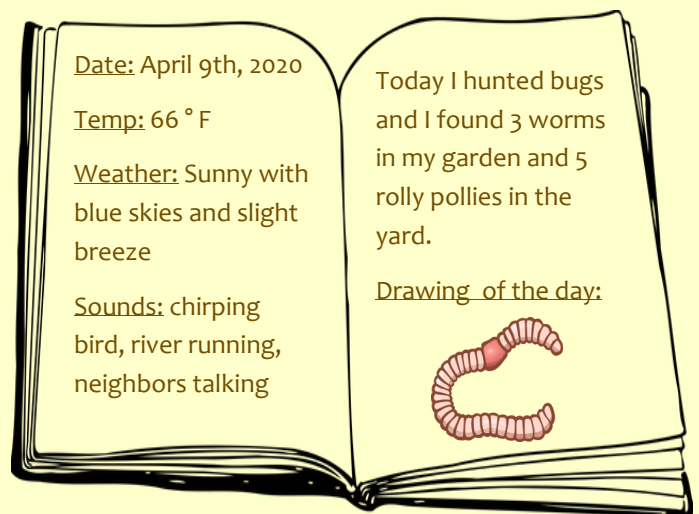
Steps:

1. Fold construction paper in half like a book
2. Either fold the white paper in half and insert into the cover OR fold several pieces of scrap paper so the white side of the paper is facing out. Insert in the cover so that where the two edges meet is at the spine and the crease is the edge of the page.
3. Either staple the spine or punch three holes and attach with string.
4. Decorate cover with markers and nature treasures like flowers, leaves, and sticks!

Here's an example!



These science journals can be used for all sorts of things! Kids can record daily logs of things like temperature, weather, sounds they hear, animals they see, bugs they catch, and so much more!



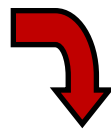
These two activities are adapted from **The Beetles Project**, a well-known outdoor science education organization whose mission is provide free educational resources for outdoor educators. I have been teaching outdoor science education for five years and have used and adjusted their activities for many different programs. These are two of my favorites, but I am including their website as well as some others as great resources! Both these activities encourage inquiry based learning. Kids learn very well when they ask questions that they can answer themselves through observations. Observation is an important part of being a scientist and helps kids develop their critical thinking skills.

For kids K-2nd grade: I notice, I wonder, It reminds me of

Have your child find a natural object. This can be a bug in your yard, a sage bush in the foothills, or a bird they can watch. Have them sit with that object in their sight.

I notice...

- If you are able to sit with them, ask your child to tell you some observations they make about the object. If you aren't, encourage them to talk to their object. Then record in your journal!
- Some example observation statements include: "You are yellow and smaller than a penny." "I notice you chirp for five seconds and are silent for ten." "You have a smooth texture but are multicolored."

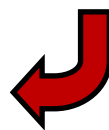


I wonder...

- Have your child ask questions about the object that they would like to research further. Try to have them ask questions that they can answer through observations, maybe even the observations they have already made.
- Some examples are "I wonder if your leaves are always yellow?" "I wonder if you chirp another bird will answer?" "I wonder if your colors are in a pattern?"

It reminds me of...

- Have your child make comparisons to things they have seen in their life before.
- "It reminds me of the frosting on my birthday cupcakes" "It reminds me of the flowers grandma grows in her garden." "It reminds me of rocks we find by the river."



For Grades 3rd-6th: Interview an Organism

In this activity, kids will discover what kinds of questions they can ask about an organism that they can answer themselves through *observation*. So much of what we know about living things has come from scientists doing just that for years and years! I have included some examples of the types of questions that work well for this activity, and some to avoid. It is helpful to have a discussion about this before you begin. Encourage your kids to draw the organism and record findings in their journal!

Descriptive Questions

- “What color is your skin?” I see your skin is brown with some spots and bumpy.
- “What is your body’s structure?” I see you have four legs, a head that has big eyes, and is connected to a small body.
- “What type of place do you live in?” I see you are near a stream in the mud.



Counting and Measuring Questions

- “How long are you?” I see you are about the length of my pointer finger, which is a couple inches long.
- “Are your legs all the same length?” I see your back legs are longer.
- “Are there other organisms similar to you around?” I see one other across the stream.

Behavior Questions

- “Are you making any sounds?” I hear you make a low, quick sound from your mouth.
- “Where are you sitting?” I see you are on a rock in the sun.
- “How close can I walk before you move?” I can only get within two steps of you before you jump away.

Time Questions

- “How long between each sound you make?” I count about sixty seconds between when you make sounds.
- “How long will you sit in the sun?” I have been here for fifteen minutes and you are still in the sun.

AVOID: Thinking, feeling, or “why” questions. We as humans cannot truly know what an organism thinks or feels. “Why” questions are hard to answer through observations!

Additional Resources:

Beetlesproject.org: Outdoor science activities

Parksandrecreation.idaho.gov: Virtual junior ranger programs

McCall Outdoor Science School: Experiential learning resources



Message from a park visitor:

"spread love"

Photo credit: Juli McCoy

A piece of business finished before coronavirus!

Although COVID—19 has brought some of our projects to a temporary halt, here's a project that DID get completed... right under the wire. These photos of the **pole fencing project at Lake Lowell Park** are proof of a job well done through the combined effort of two fine groups: **Canyon County Facilities Grounds staff** (*photos, below*) and a crew of **Boy Scout volunteers** under the direction of **Eagle Scout candidates, Kai and Levi Fisher** (*photos, next page*). This community service project put the finishing touch on a major landscaping change at the park. Begun in late winter, the grounds staff chain-sawed their way through overgrown trees and shrubs along the park perimeter, hauling away loads of brush and timber. The open space that was created became the perfect setting for a fence to mark the park boundary.





Archiving the Past for the Future

By Juli McCoy

In February, 2020 a free workshop was presented by the **Southwest Idaho RC&D** and **Boise State University Archaeology Association** with funding from a **Canyon County Historic Preservation** grant. The workshop, ***"Archiving the Past for the Future"***, was designed to provide a general understanding of the tools and processes for successful digital archiving and was taught by **Ryan Cronrath**, a Canyon County native and skilled IT wiz. Read more about Ryan, below.

The workshop was offered on three dates at various locations around the county to give numerous opportunities for citizens to attend. Workshops took place on February 8th at the **Nampa Train Depot**; February 15th at **College of Western Idaho**; and February 22nd at the historic **Friends Tower Theater** in Melba. Each session was well attended and participants garnered a great deal of useful information that was applicable for county historical societies as well as for folks working on their personal collections.



A programmer analyst for Canyon County by day, Ryan has been instrumental in developing an easy-to-use process and instruction guide for historical archiving. He lives in Nampa with his wife and two children and when he has any spare time at all he enjoys photography, a hobby which has resulted in some remarkable artistic work.

Ryan's workbook full of useful information is available free of charge to community members. You can get your copy by contacting Juli McCoy at jmccoy@canyonco.org to request one.

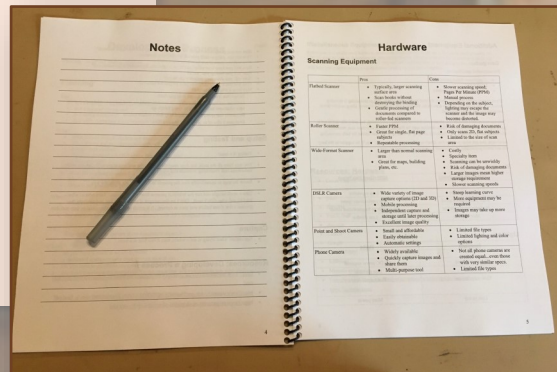




Photo credit: Amelia Barton

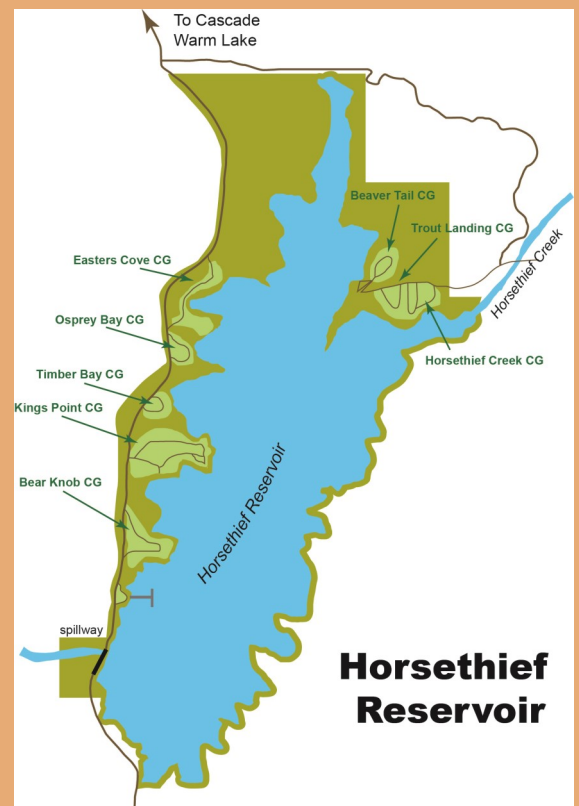


Aerial view of Horsethief Reservoir - Summer, 2019. In the foreground, crews can be seen putting the finishing touches on the King's Point Campground and Boat Ramp.

Photo courtesy of Jordan Messner, IDFG

Horsethief Reservoir is managed cooperatively by the **Idaho Department of Fish and Game (IDFG)** and the **Treasure Valley YMCA**. IDFG oversees Horsethief's popular trout fishery, while the YMCA is responsible for campground management.

For Horsethief Reservoir campground questions, please contact YMCA representative Randy Spiwak at 386-212-7123.



Bill Moore, Project Coordinator, *reporting for the:*

Southwest Idaho Resource, Conservation and Development (SWIDRCD)

Horsethief Reservoir Project

In partnership with the **Idaho Department of Fish and Game (IDFG)**, the **Treasure Valley YMCA** and **Idaho Department of State Parks and Recreation (IDPR)**, the **SWIDRCD** is pleased to announce that improvements at King's Point campground have been completed.

With the success of that project, the partners successfully applied for and were awarded another grant through IDPR for more campground improvements at Osprey Bay and Easter's Cove.

This coming summer, the Osprey Bay and Easter's Cove Campground loops will be upgraded. The Osprey Bay loop road will be graded and paved, as will the loop camp sites. The Easter's Cove loop road will be properly graded, graveled and compacted. Campsites in both loops will be improved with the installation of new living pads, picnic tables and fire rings. Due to construction, these loops will be closed for a good portion of the 2020 camping season. The SWIDRCD has just awarded a contract for this work which will begin in July, continuing until early October.

Just two other camping loops remain to be improved at Horsethief - Bear Knob and Timber Bay. IDFG, SWIDRCD, and the Treasure Valley YMCA are applying for IDPR Recreational Vehicle Fund grants to finance improvements to these camping loops in 2021. Bear Knob campground will mimic King's Point and Osprey Bay, with a widened, paved entrance road and paved campsites, while improvements to Timber Bay will maintain a more primitive camping experience, similar to Easter's Cove and the Eastside camping loops.

Even with all the camping improvements, visitors should not overlook the great fishery that Horsethief Reservoir provides. A study by IDFG staff this past fall showed that rainbow trout are the most abundant fish species in Horsethief, ranging up to 15 inches long, followed by brown trout and Kokanee salmon, many of which exceed 14 inches in length. And what goes better with camping than a fresh fish dinner?

TOM BICAK

STRANGER THAN FICTION



**"Truth is stranger than fiction, but it
is because fiction is obliged to stick to
the possibilities; truth isn't."**

Mark Twain

T

here is a time, when you learn where your roots are, and about the tree that led up to you. You might have to kind of piece it together but, your identity, as created by your mother, father, grandparents, great grandparents and other folks, takes shape. You identify with a group; you claim membership and inherit cultural traditions. You understand why your grandmothers baked the things they baked. You “get” your story.

Just before Christmas, I surrendered to the internal argument that had been disrupting my peace for months. I am infatuated with evolutionary biology. I also love the idea of man creating culture. I made a career out of these. Obviously, as the two roads diverged in a wood, I took the one less traveled by, without regret. But there was a niggling, an irritation, an itch to be scratched. I typed in my credit card number and had my DNA analyzed.

You have a DNA molecule in every cell, 40 trillion identical copies of your story written in nucleotide base pairs. This molecule is your identity and your history from at least 1.9 million years ago right up to your birthday. Your family can’t give you this version of why you are here. Given what I had experienced over the last huge number of decades, I was confident as to where I came from. I had eaten the Kolache. I, however, am a scientist.

There was no doubt that I was descendant of Slavs and Vikings. Grandparental information led me to believe that I was $\frac{3}{4}$ Czech and $\frac{1}{4}$ Danish. Family names, linguistics, traditions, music, and cuisine confirmed this simple proportion. Could there possibly be any surprises in the DNA analysis that would shake my world? Of course, my people were THE aggressive central and western Europeans. They were cosmopolitan. The clean proportion of my family story couldn’t possibly be, and it isn’t.



Kolache



Prague



Pardubice Pernik (gingerbread)

Here is what I learned from my molecule. I am only 49% Czech, specifically, my ancestors were from Prague, arguably the most beautiful city in Europe and the scholarly city of Pardubice, home of gingerbread and the University of Pardubice which welcomes students from 60 different countries. I am 11% German, but only from Schleswig -Holstein, which abuts, Jutland, Denmark. I am 8% Danish, and my ancestors lived in the lower 1/3 of Jutland, right next to Schleswig-Holstein. Those Germans and Danes enjoyed a fluid border and my extant relatives identify with the Danes, not the Germans. Hey, Mom, I am 2.4% Italian. When I was born, I had brown eyes and suntan complexion, not at all typical of Czechs or Danes. My parents speculated about latent Italian genes. I enjoy 2.5% Balkan heritage, and any little bit left of me is broadly European. I have about 1400 new relatives and email access to second cousins in Czech Republic, Slovenia and Latvia. I have three second cousins in Denmark and one in Iceland. Three 3rd cousins live in the UK and one in Ireland, and a slew of 4th cousins in Italy, Bulgaria, Croatia and Romania. Christmas cards just became complicated.



Cheddar Man

According to my maternal haplogroup inheritance, I am related to Cheddar Man. First discovered in 1903 in Cheddar Gorge, Somerset, England, the Cheddar Man is Britain's oldest complete human skeleton. Researchers have dated his bones back to nearly 9,000 years ago, when the Ice Age had ended but farming technology had not yet made its way across the continent, and people in England still survived by hunting and gathering. Well didn't we all. Also, I am related to, and I like to think, the rightful and direct heir to the throne of Niall Noígíallach, or in English, Niall of the Nine Hostages. He was the Irish King of Tara, the ancestor of the Uí Néill dynasties that dominated the northern half of Ireland from the 6th to the 10th century. I am available at the moment, so if they need a king, I could step in.



Niall Noígíallach

Now here is some news. I have more Neandertal genes than 91% of humanity. (Some of you might have suspected this, but you were too kind to mention it). I have 307 Neandertal genetic variants. The world record is 397. I want to meet that guy... gal? So, by luck of random assortment, I can legitimately identify as Neandertal. No, I am proud to include Neandertal as part of my identity. Neandertals went extinct about 30,000 years ago. They may have been just absorbed by throngs of African *Homo sapiens* swarming into Europe and Asia. They were described from fossils found in the Neander Valley on the Belgian, German border. Coincidentally, a place equidistant from Odense, Denmark (707 km) and Prague, Chechia (725 km).



Odense, Denmark—equidistant from Prague, Chechia

On average, people carry about 2% Neandertal genes in their genome. Some less some more. In Papua New Guinea and the Marshal Islands, they carry an average of about 5% of Neandertal genes in their genomes. We all inherited slightly different combinations of Neandertal genes, so putting all the pieces together, about 40% of the Neandertal genome is preserved in us. We are not the evolutionary descendants of the Neandertal, however. They are our distant, distant relatives. *Homo neanderthalensis* and *Homo sapiens* split from a common ancestor about 300,000 years ago. Neandertals lived in Eurasia and we lived in Africa. Our ancestors decided to walk out of Africa about 100,000 years ago. They entered Eurasia where Egypt meets the Middle East and the Neandertals were there to meet them. Love bloomed and inheritance happened... frequently. There is a third party in this story. Three teeth and the tip of a child's pinky from a cave in Denisova in the Bashelaksky Range of the Altai mountains, Siberia, Russia, is all the biological evidence we have of a human species



Pinky bone

Homo denisova, or the Denisovans. The Neanderthal and Denisovans met up, shared a cave (really) and there was mutual attraction. A Neandertal bone, from the cave, the size of a pencil stub revealed it was from an individual whose mother was

Neanderthal and father was Denisovan. Some people, mostly in east Asia have Denisovan, and Neanderthal genes represented in their genomes. It is a friendly world sometimes.

Back to the Neanderthals. Is there any consequence to having Neanderthal genes? We wouldn't be human without them! Here is a short list.

We inherited at least two skin issues from the Neandertal. Actinic Keratosis, damage from exposure to ultraviolet light causes scaly bumps on the skin. If untreated, Squamous Cell Carcinoma may result. Seborrheic Keratosis are tan to black, harmless skin growths called "barnacles."

Neanderthals contributed 31 genes to our immune system. The OAS1, OAS2, and OAS3 genes increase the activity of the anti-viral genes, which helps humans overcome contagious diseases. Let's hope we don't have to put them to work. Another gene, TLR1/6/10 haplotype is found mostly in East Asia and confers resistance to *H. pylori* and stomach ulcers. BUT, people with this gene may be more prone to allergies.



Denisovan guess

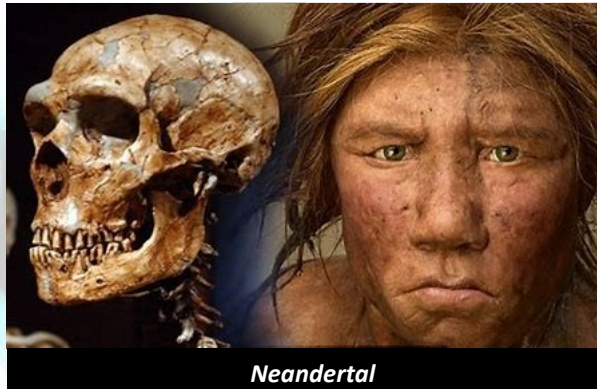


Denisova cave

Genes ASB1 and EXOC6 are associated with a preference for staying up late and napping during the daytime hours. The incidence of this gene increases with distance from the equator. Northern latitudes have a greater shift in day length through the year, which affects your circadian rhythm. The ASB1 and EXOC6 genes are beneficial to folks in northern climates with short day-length cycles in the winter. These genes are also associated with an increased level of chronic depression. Lack of sunlight is a known cause of depression. Neandertal CDH6 gene is associated with an increased frequency of feeling unenthused and apathetic.

Addiction to tobacco is also influenced by a Neandertal gene. While rare in European population, LC6A11 gene increases the likelihood of addiction and is a positive predictor of smoking behavior.

In the European population, a Neanderthal mutation on the SLC6A11 gene increases formation of blood clots. This gene is a template for a protein that causes cells and platelets to adhere to wound areas and to inflamed blood vessels. Another gene encoding Factor V Leiden, and the Neanderthal rs3917862 gene increase the probability of thrombosis. The risk of having a deep vein thrombosis is increased to a higher level than with the Factor V Leiden mutation alone.



SLC6A11 was detected in a large genome-wide association study (GWAS) of more than 8,000 Mexicans and other Latin Americans. The GWAS approach looks at many genes in different individuals, to see whether they are linked with a particular trait. SLC6A11 is found in about half of people with recent Native American ancestry, including Latin Americans. They are about 25% more likely

to have diabetes than those who do not have this gene. People who inherited copies from both parents are 50% more likely to have diabetes.

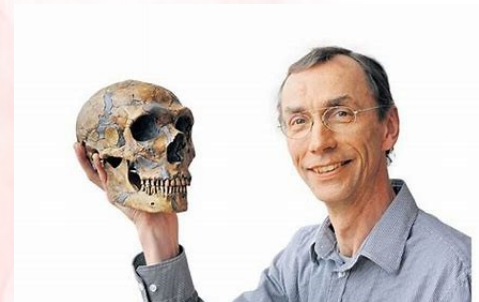
Neanderthals ate a diet high in protein and low in carbohydrates. A smart thing to do and I practice this as well. Thiamine (vitamin B1) is a nutrient primarily found in beef, liver, eggs, and other protein-rich foods. Their SLC35F3 gene produces a thiamine transporting protein. This can increase the chance of malnutrition, as the amount of thiamine available to the body is reduced for those who consume a diet high in refined carbohydrates. Unfortunately, since modern refinement practices reduce the amount of thiamine available in grains to begin with, humans with this mutation may be at a risk of this deficiency, also known as "beriberi." This condition, "high-calorie malnutrition," occurs when a person is obtaining enough calories, but is not getting enough nutrients for body functions to work correctly. Be safe, lay off the carbs.

The OCA2 gene is responsible for producing hair, skin, and eye color. While people originating from Africa have over 74 genetic differences from the Neanderthal sequence for this gene, those from non-African locations only demonstrate a little over ten differences from the archaic genome. This indicates a rather recent influx of Neanderthal genes into the human population that migrated out of Africa. One mutation that is consistent between the Neanderthals and modern-day humans is OCA2 which produces a blue eye color. Blue eye color, however, does not arise solely from this gene. Humans also have genes causing blue eyes: so, the origin of blue eyes is likely due to a multitude of factors.

Neanderthals had variations in skin tone, like modern humans. Some SLC24 genes are Neanderthal and cause susceptibility to sunburn. About 66% of Europeans have this gene. This variant also causes skin lesions due to keratosis. It is responsible for a lighter skin tone and an increased ability to process Vitamin D in low-sunlight conditions. These genetic mutations also cause an increase in susceptibility to skin cancer. A smaller proportion of Europeans inherited darker skin from the Neanderthals. Gene SLC24 is associated with increased pigmentation in the skin.

The team that discovered the variant carried out additional analyses, in collaboration with Svante Paabo of the Max Planck Institute for Evolutionary Anthropology. They discovered that

the SLC6A11 sequence associated with risk of type 2 diabetes is found in a newly sequenced Neanderthal genome from Denisova Cave in Siberia.



Svant Paabo

YOU know about that fun place!

Analyses indicate that the higher risk version of SLC6A11 was introduced into modern humans through interbreeding between early modern humans and Neanderthals.

Treat yourself some evening. Get your preferred beverage, sit back and watch Svante Paabo deliver his keynote speech after receiving the Nierenberg Prize for Science in the Public Interest. (On YouTube: 56 minutes, <https://www.youtube.com/watch?v=R1R8yrEGAqw>). Svante is Director of the Department of Evolutionary Genetics at the Max Planck Institute for Evolutionary Anthropology in Leipzig (what a fun word), Germany. His lab is the best at sequencing ancient DNA. His slow, Swedish way makes understanding the complex genetics effortless. Simple sentences, crazy complex stuff, he is on my list of extraordinary geniuses. I have a list of ordinary geniuses too; chronic list making is probably a Neanderthal trait.



Neandertal? You decide.



Photo credit: Laura Barbour



Crossroads is a forum that allows us to stay in touch with all of you throughout the year. In “From the Director”, Nicki mentioned that this issue would be different. These next few pages are definitely a departure. We’re sharing hobbies and/or activities that have filled our spare time during the COVID-19 stay-at-home order. We hope this special edition of **Crossroads** will connect with you in a way to brighten your day!

kathy kershner

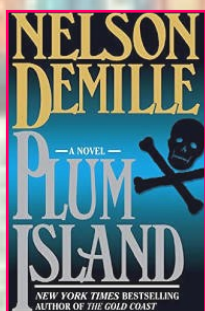
This is one of the institutions that played a part in developing my love of reading—the Winfield Public Library, located in Winfield, Kansas. It is a Carnegie library—one of the 2,509 libraries built in the United States between 1883 and 1929 with funds graciously donated by Andrew Carnegie, a Scottish-American businessman and philanthropist. This one was built in 1912, and is on both the National and Kansas State Historic Registers. I was not frequenting the library in 1912; however, I spent a lot of time in this building throughout the sixties and into the early seventies (do the math!).



My family lived on a farm outside of Winfield and Mom usually combined a lot of errands (grocery, tractor parts for Dad, Dairy Queen treat!) when we made a trip to town. Particularly in the summer, the library was on that list.

One of my best childhood memories is taking home a stack of books and spending summer afternoons under the shade trees reading. Sometimes my Mom would have to remind me to pace myself so I didn’t have all the books read well before we’d be going back to town.

I still read voraciously. I almost always have a book (or two or three) going. Reading provides a wonderful escape. It’s no wonder that while sheltering at home, I’ve managed to wade through a few good reads!

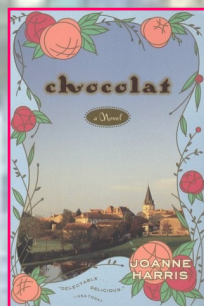


I had never read DeMille’s work until my friend and former Director, Tom Bicak, gave me this book. In fact, he gave me several books when, during a recent home renovation, he was led to set some of his extensive library “free”! The subject matter, as it turns out, was quite coincidental for these times. Looking forward to more DeMille.

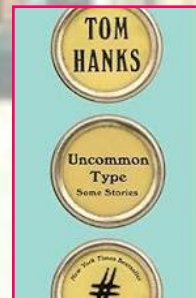


Love when a book opens my eyes to people and things I didn’t know about. In this book, I learned about the blue-skinned people of Kentucky (a rare blood disorder that caused their skin to appear blue) and the Kentucky Pack Horse library service of the 1930s where usually women on horseback delivered library materials to people in the back woods of Kentucky.

I’d seen the movie but had not read the book. I have to say, I enjoyed the book more. A fantasy of sorts, the delightful part of this story was “meeting” the fascinating characters that reside in the charming French village location.



Tom Hanks, the actor, is also Tom Hanks, the author of short stories! He also collects vintage typewriters. Who knew?! Each of the fictional stories link to a certain typewriter in his collection—some very obviously, some not so much. As I read, I could hear the actor’s voice. Sometimes it was Forrest Gump; other times it was Jim Lovell, “Houston, we’ve had a problem”.



Lori's great accomplishment!

THINGS I'VE BEEN DOING

BY LORI BERRY

We all find ourselves making the best of the current situation. I guess we do that no matter what the circumstances in life. I personally hope that a lot of good comes from this experience. It's up to each person to find something beneficial to take from any given event, whether it be challenging and difficult or easy and wonderful. I believe this life is all about learning from it. The key here is to take advantage of the time presented to us. We are always complaining that life is demanding and busy, there's never enough time in a day. Many of us have been given the gift of time against our wills. To see the benefit of this unprecedented experience has been difficult for some of us because it means financial burdens, isolation and having to reevaluate our priorities. I personally see all these things as a possibility to appreciate the little things that are normally taken for granted.

Celebration Park is currently allowing visitors, but no overnight camping is allowed and all buildings are closed. With visitors flowing in due to school closures and temporary employment gaps, to the need for normal spring time maintenance upkeep, my position as Maintenance Coordinator for Canyon County Parks hasn't slowed down much. I have actually had to adjust to the lack of assistance I would normally have to get the time sensitive work load completed.

I've spent the better part of a week researching and building a way to reduce the spring weed growth in many of the large open areas with specialized equipment. Many non-native, invasive species such as cheat grass, tumble mustard and bur buttercup are early germinating and have already taken over many areas. I have made a project of combining equipment I already had available and new equipment to add to my arsenal to combat this problem.



With the help of a kind D&B expert named Dave and Director Schwend's thumbs up on my idea, I put together a boom spray system that made a 2 or 3 man job into a one *woman* job. I am now able to complete my weed abatement duties (if the wind would ever quit blowing!) in a timely manner.

I feel a sense of accomplishment and pride in devising a plan of attack, researching my options and building something that will be efficient and useful for years. I also learned a lot in the process. This would not have happened had I not been forced to reevaluate my circumstances and overcome an obstacle. This is my "something good" I choose to take from this strange time. I hope you find one too.





Amelia Barton

I have been making jewelry since I was about ten years old. While my designs have changed drastically over the years, it has been a craft I return to over and over for so many reasons. Beading requires a lot of focus, which helps keep my mind occupied. Finding things to focus on while I am spending a lot of time alone can be challenging but I always come back to beading as a companion! It is a calming activity I can do anytime and anywhere. It “flexes” several parts of my brain, which not many activities do. It uses my creative, artistic side when I come up with designs and color patterns. Counting and measuring the beads uses the logic and math part of my brain. And the focus and stillness I have to practice helps with mindfulness and stress relief. I have been making pairs for my family and friends, with the hope of sending them when I can get to the post office again. During this time when we are all separated, it brings me joy knowing I can give something colorful to people I care about. It usually takes me two days to make a pair if I spend a couple hours each day beading. I have at least twelve people who have requested a pair, so I better get to it!

“Beading requires a lot of **focus**,
which helps
keep my mind **occupied.**”



Fred Bread!

How I've Spent my Quarantine or Lessons Fred Taught Me

Juli McCoy

When I was growing up my mother, step-mother and grandmother all had sourdough starter going at one point or another. I loved the goodies that resulted but had never taken time to venture into this arena myself. That all changed with recent world events which resulted in my spending considerably more time at home than in the past. I decided to begin my journey into the long pondered but never explored world of sourdough making! The internet, being a wonderful source of not just tall tales but actual usable information was my starting point. I googled sourdough starter recipes and found that the beginnings of it all are actually pretty simple, combine flour and water then wait. The waiting has been the hardest part, for me, having grown up in our instant gratification culture and possessing a slight Type A personality. Perhaps a result of this will be an enlarged character in addition to an enlarged waistline?

Day One: I mixed together a cup of whole wheat flour and 100 mils of non-chlorinated water and we were off! Or so I thought. By the next morning, Fred (my starter's given name) was not looking too impressive. It resembled a dried out lump more than anything. My husband was completely unimpressed and gave me a look that suggested I abandon the entire experiment but I pressed on removing ½ cup of questionable looking goo and replacing it with flour and water.

Day Two: I removed half a cup of Fred and not having the heart to toss it as instructed I set it aside for later use in something, no idea what but something (see pictures for treats made with feeding leftovers). I fed Fred the suggested ½ cup flour and 90 mils and water and placed him in a lighted oven to stimulate his growth.

Days Three through Five: Looked much like day two. I'd feed Fred, he would grow a bit and then shrink back down and I, in my impatience, would grow a bit of hope only to see it shrink each time Fred did.

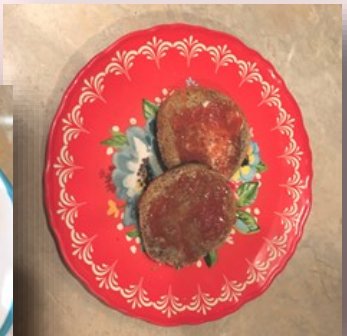


Day Six: I did a bit of research over a wide variety of blogs and decided Fred was in need of new digs and an increase in food. I moved him from a mixing bowl into a quart jar and upped his meals to twice a day. Fred began to grow and thrive and my heart and faith in my ability to care for things grew right along with him.

Days Seven and Eight: I kept Fred in his jar in the lighted oven giving him

regular meals, morning and evening. He grew stronger and stronger! Finally we were at the stage of bread baking! This proved to be yet another test of my patience and willingness to persevere in difficult, well, not difficult but not instant gratification circumstances.

The actual making of the bread proved to be yet another learning experience. I began thinking it would be like all other bread that I have made. I quickly realized however that baking, as with everything sourdough, perfection takes time. Well, we're not to perfection yet but a finished product takes time. I began with a ball of goo that stuck to everything in sight and required lengthy times to raise as well as numerous sessions of folding to build the structure of the dough into something that could be formed into the iconic ball shape we all know and love. The end result considering my skill level didn't come out too bad!



*Pancakes and Crumpets...
YUM!*

Raising Fred has taught me some interesting things. First, my spouse is a deeply patient man who is willing to share my affections. Not once did he tell me to stop talking incessantly about this new man in my life. Second, I tend to be a very rush, rush, get it done right now kind of person. This can be both good and bad, I'm efficient but impatient. Having this time to slow down and really focus on creating something has been eye opening. I'm on the move far too much and rarely take the time to focus on one thing for more than the brief period required to move it into my "done" column. This has required that I give something time to grow and flourish, a lot of time to grow and flourish, and to remain patient as I work through what looks like a potential failure only to see success from sticking it out. Raising Fred has taught me the value of slowing down, focusing and being patient both with myself and with something that I don't have much control over. Hopefully these lessons will go with me as life returns to normal, or rather a new normal that includes a somewhat slower pace, more patience and a bit more kindness.



Nicki, Teagan and Trae!

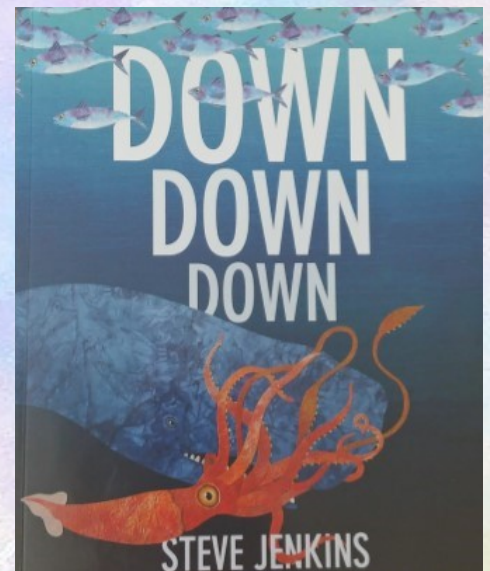
Although I'm a reader and lover of books, right now I'm unable to find time to read for myself but I'm enjoying several books with my kids. **Nicki Schwend**



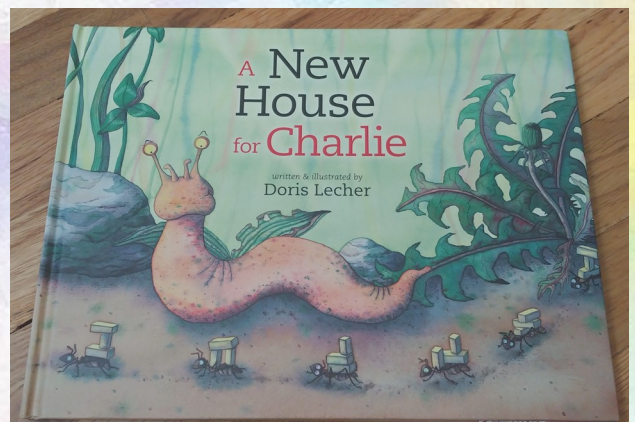
My fourth grade daughter, **Teagan**, is reading one of MY favorite childhood books called *Dragon's Milk* by Susan Fletcher. It's an adventure of a young teenage girl on a quest for dragon's milk to save the life of her young adopted sister who's fallen ill with a rare fever.

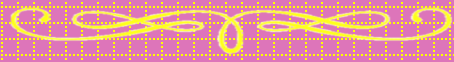


Trae, my four year old, is reading his two favorite books over and over and over again. They are; *Down, Down, Down: A Journey to the Bottom of the Sea* by Steve Jenkins, and *A New House for Charlie* by Doris Lecher. He loves all the fishes and rocks in both books!



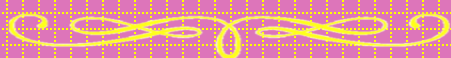
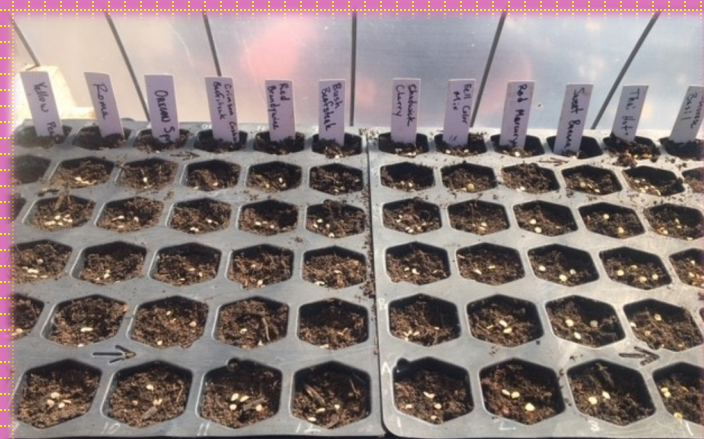
As a family, we have been enjoying daily painting of river rocks. It's a fun project to do together and we're starting to deliver them to family and friends as a way to cheer people up and tell them we love them too. We've also got a hive of bees to take care of... that's 10,000 new neighbors to assist us with our garden and hopefully provide us lots of honey this fall. Yumm!







Working in our yard and garden has been key for our household during the stay-at-home order, as spring took us from the first crocus to the first iris, and took our flowering plum tree from bare-branched to blooming white to green leaves. Even though the typical rhythm of our lives has been interrupted—commutes, offices, weekends—we can measure the passage of time in the growth of the seedlings sprouting in our greenhouse, the progression of the flowers, and the ever-lengthening days. It's also given us a way to get outside daily while social-distancing, to soak up some sunshine (and vitamin D). It's also been a great way to safely interact with our community. Lots of neighbors have been walking past our house on the sidewalk lately, and more often than not they stop for a quick chat if we're out weeding the front garden beds: "yard looks nice," "how are you holding up?" and "we're all in this together." During COVID-19, we've met more of our neighbors than we had since we moved in two years ago, and it does feel more like we're part of a community. We like to think our flowers will give our community—neighbors and passers-by—the same things they give us: color, beauty, reassurance, and a reason to smile.



winter desert ecology field trip

WINTER 2019—2020



why a winter field trip

Outdoor education doesn't have to end when winter arrives. We think it provides another opportunity for students to learn about the desert environment no matter what the season. Besides, winters can be quite pleasant in the Snake River canyon!

the students

Offered to upper elementary through high school students, four adventurous middle and high school groups each spent a day this season exploring, hiking and enjoying some time on the atlatl range.

programming

The students participated in discussions about the winter adaptations of the area plants, animals, and pre-historic/historic

cultures. They also "met" some birds of prey and heard about the adjustments these flying predators make for winter. Our very special thanks to the **Morley Nelson Conservation Area for Birds of Prey**, and **Education Specialist, Cory Roberts**, pictured here with great horned owl, Archimedes.

our vision

Teachers and students - take advantage of this rewarding field trip!

Registration for 2020-2021

school year is available at: www.canyonco.org/parks/field-trips



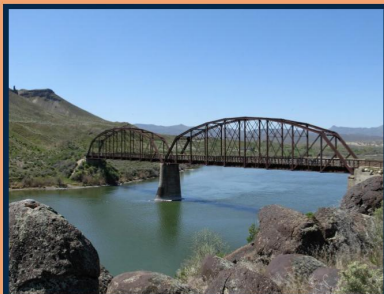
Your field trip at Celebration Park

Fall 2020 Field Trip Schedule

Brought to you by Canyon County
Parks, Cultural & Natural Resources



We now offer **ONLINE BOOKING** for field trip programs! Visit www.canyonco.org/field-trips to learn more about our programs, view available dates, and reserve your field trip today. Contact Programs Coordinator Amelia Barton (abarton@canyonco.org) for more information.



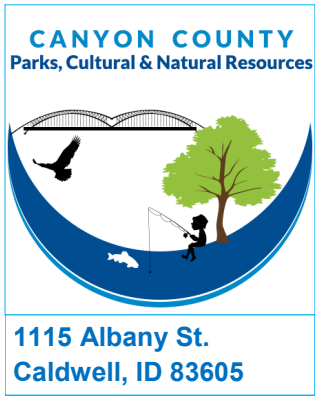
Day	Date	School
F	9/4/2020	New Plymouth Elementary
M	9/7/2020	OPEN
T	9/8/2020	OPEN
W	9/9/2020	OPEN
Th	9/10/2020	The Village Charter School
F	9/11/2020	St. Joe's Catholic School
M	9/14/2020	North Star Charter School
T	9/15/2020	Amity Elementary
W	9/16/2020	Riverside Elementary
Th	9/17/2020	Horizon Elementary
F	9/18/2020	Riverside Elementary
M	9/21/2020	Highlands Elementary
T	9/22/2019	Chief Joseph Elementary
W	9/23/2020	Collister Elementary
Th	9/24/2020	Community Collaborative Homeschool Co-op
F	9/25/2020	Cole Valley Chrisitan Schools
M	9/28/2019	Riverstone International
T	9/29/2020	Pioneer School of the Arts
W	9/30/2020	Pierce Park Elemntary
Th	10/01/2020	Sienna Elementary
F	10/02/2020	Sienna Elementary
M	10/05/2020	OPEN
T	10/6/2020	River Valley Elementary
W	10/7/2020	Desert Springs Elementary
Th	10/8/2020	Longfellow Elementary
F	10/9/2020	Adams Elementary
M	10/12/2020	Koelsch Elementary
T	10/13/2020	OPEN
W	10/14/2020	Lake Hazel Elementary
Th	10/15/2020	Anser Charter School
F	10/16/2020	Roosevelt Elementary
M	10/19/2020	OPEN
T	10/20/2020	Sherman Elementary
W	10/21/2020	OPEN
Th	10/22/2020	Hunter Elementary
F	10/23/2020	Hunter Elementary
M	10/26/2020	OPEN
T	10/27/2020	OPEN
W	10/28/2020	OPEN
Th	10/29/2020	OPEN
F	10/30/2020	Taft Elementary



Stories in Stone/Archaeology



Wildland Fire



Return Service Requested

