



March 31, 2021

Wednesday Reader

Montana Quality Educator Loan Assistance Applications Due Today, March 31

Through House Bill 211, the 2019 Montana legislature renewed the quality educator loan assistance program as a recruitment and retention aid for rural schools. The Office of Public Instruction is responsible for administering the program. Applications for the [Montana Quality Educator Loan Assistance Program](#) will be accepted from February 15-March 31, 2021.

Newly hired quality educators who teach or work in a subject that has been identified as a “critical quality educator shortage area” at an “impacted school” are eligible to receive state paid loan assistance for up to four years, so long as they remain a full-time employee at an impacted school.

The program provides for up to \$3,000 of state funded loan repayment at the end of the first year of teaching, up to \$4,000 at the end of the second year, and up to \$5,000 at the end of the third year. In addition, the school district has the option to offer up to \$5,000 at the end of the fourth year, but this is entirely a local decision.

[See the Quality Educator Loan Assistance FAQ's](#) for information on the criteria, applying, the list of impacted schools, and quality educator shortage areas.

At the time of application, the quality educator will have to provide the most current loan statement showing the remaining principal balance of the loan. To be eligible, the educational loan must not be in default, and the balance must be at least \$1,000. The authorized loan assistance repayment amount will be the lesser of the principal balance or the maximum amount shown above.

Tomorrow, April 1, is the Early-Bird Registration Deadline for ACTE Region V's 2021 Virtual Conference

Hosted by Nevada ACTE, the [2021 ACTE Region V Conference](#) will be held virtually, April 15-17.

Early registration is now open and can be completed [online](#). The early registration rate for ACTE members is \$199 and ends April 1. After April 1, the registration rate increases to \$299.

Preliminary details can be found on the [2021 ACTE Region V Conference](#) website.

For questions regarding the 2021 conference, please contact Jennifer Fisk at fiskje@nv.ccsd.net.

Save The Date for Wear Orange Wednesday

Every April since 2015, [Montana No Kid Hungry](#) has organized an event called [Wear Orange Wednesday](#) as a way for all Montanans to stand united in the cause to end child hunger in our state.

Orange is the color that represents child hunger awareness. Join in and show your support for ending hunger on April 7 by wearing orange in a social media photo and sharing with #WearOrangeWednesday. Also challenge your friends on social media to do the same.



If social media is not your thing—no problem. Please feel free to email your fun photos to jenny.martini@mt.gov and they will be included in No Kid Hungry's 2021 collection.

Visit the [Wear Orange Wednesday](#) page at [Montana No Kid Hungry](#) for ideas, resources, and promotional materials; but no matter what, have fun with it. Orange nail polish, socks, pets, foods—Montana No Kid Hungry wants to see it all. Spread the word to your friends and work colleagues.

Let's Turn Montana Orange on April 7 for the Cause of Ending Hunger.

March Classroom Resource from Start Here, Go Places.®: *How much should we charge?*

Engage your students' cost accounting savvy with this month's resource from Start Here, Go Places.®: [How much should we charge?](#)



Over the course of six weeks, your students will gain real-world experience putting their knowledge of cost accounting to work for a new business venture in which they are part owner of a dog treat company.

After assigning students to small groups, they will receive weekly tasks in which they must take the necessary steps to develop a realistic, well-informed pricing structure for four unique products. Once pricing is established and other business decisions are made, students will also have to tackle cost-related issues that arise and participate in a Shark Tank-style pitch to help take their businesses to the next level.

The [downloadable activity](#) includes a student worksheet and teacher guide.

When visiting the [Start Here, Go Places.®](#) website, be sure to also to check out the March [Accounting Crossword Challenge](#). The new March crossword puzzle has been created and draws from more than 300 accounting terms curated by our in-house experts to keep your students fresh.

Celebrating Montana High School Seniors with Reach Higher Montana's Senior Send-Off



Reach Higher Montana is celebrating the graduating Class of 2021 and invites all seniors to share their post-high school plans through [Senior Send-Off](#). Reach Higher Montana is awarding over \$30,000 in prizes for participating students. Prizes include scholarships, tool and equipment packages, laptops, iPads, AirPods, and more. Students must [register](#) by April 23 to be included in the prize drawings.

Whether the next steps are apprenticeships, military service, entering the workforce, or enrolling in college, graduating high school is an important milestone worthy of celebration. There is no cost to participate, and students have the opportunity to win some [great prizes](#) by sharing their post-high school plans.

Reach Higher Montana Scholarship Winners Announced

[Eighty-one Montana students](#) from Libby to Wyola—and many communities in between—have been selected to receive a [Reach Higher Montana Scholarship](#) for use in the 2021-2022 academic year.

Scholarships are for \$1,000.00 each and must be used at accredited Montana colleges (two-year, four-year, public, private, and tribal institutions).

Scholarship Opportunities from the Montana Contractors Association



The [Montana Contractors Association](#) (MCA) is now accepting applications for their scholarships and grants. The applications are available on the [MCA Scholarships and Grants site](#).

MCA is using [Submittable](#) to accept scholarship and grant applications. In order to complete and submit an application, you must first create a Submittable account. It is free and easy, and the instruction link is highlighted in the header of the main application page at [How do I submit?](#)

The following is a description of scholarships and grants offered through the MCA this year:

- **MCA Associates Presidential Scholarship – High School:** this scholarship is available to all current high school seniors who are planning on attending any

accredited postsecondary school (in-state applicants), or an accredited Montana postsecondary school (out-of-state applicants). The applicant must also have a parent or guardian employed by an MCA member company (a current member directory can be found at: [MCA Membership Directory](#)).

- **MCA Associates Presidential Scholarship – Undergrad:** this scholarship is available to all students currently enrolled at a higher education institution and working towards an undergraduate degree, and who are attending any accredited postsecondary school (in-state applicants), or an accredited Montana postsecondary school (out-of-state applicants). The applicant must also have a parent or guardian employed by an MCA member company.
- **MCA Concrete Division Scholarship:** to qualify for an MCA Concrete Division Scholarship, applicants must have parents or guardians employed by MCA member companies AND who are members of the MCA Concrete Division. The applicant must also be planning on attending any accredited postsecondary school (in-state applicants), or an accredited Montana postsecondary school (out-of-state applicants).
- **MCA Education Foundation Construction Trade Awareness Grant:** this grant is awarded to middle and high school industrial arts instructors to help fund events or projects that bring attention in your school and community to careers in construction.

The deadline for all [applications](#) is Friday, April 16, 2021. The MCA staff and board members will review scholarship and grant applications and select our award recipients before the end of the 2020-21 school year. Thank you and good luck.

Early-Bird Registration for ACTE's Hybrid CareerTech VISION is Now Open

The Association for Career & Technical Education's (ACTE's) [Hybrid CareerTech VISION](#) will offer attendees a highly interactive conference experience online and on-site in New Orleans, Louisiana, that will give you unlimited access to learning, sharing and networking this December 1-4, 2021.

[Registration](#) is now open with early-bird rates available for on-site attendees through August 15.

Interested in presenting? The [call for proposals](#) is open through April 15.

Please visit the [CareerTech VISION 2021](#) site for complete event details and associated deadlines.



You're Invited to Karel Con 2021, the 3rd Annual CodeHS Teacher Conference

[Karel Con](#) is a FREE 3.5-hour virtual conference for computer science educators. It is a great opportunity to learn from other amazing computer science educators, network, and explore new ways to use the [CodeHS](#) platform.

[Karel Con](#) will be held Saturday, April 24, 2021, from 9:30 am to 1:00 pm (MDT). All conference events will be held via Zoom.

Karel Con includes three, 45-minute breakout sessions of your choice and networking opportunities with other computer science teachers.

[Please register by April 9](#) for this FREE professional learning opportunity. Check with your district/school about receiving OPI Renewal Units for your participation.

Teachers can register for a [FREE CodeHS account](#), if needed, before Karel Con begins.

[Karel Con 2021](#) will also provide exclusive raffle prizes. Attendees will receive a hardcover copy of the new *Read Write Code* book by CodeHS CEO, Jeremy Keeshin. Attendees will also be entered into a raffle to win a MacBook Air or one CodeHS Pro License for the 2021-2022 school year.*

**The Pro License can only be won by a teacher currently using CodeHS Free.*



Scratch Week 2021. Save the Date.

The [Scratch Team](#) has exciting news to share: [Scratch Week](#) is coming soon.

From May 17-23, the Scratch Team is hosting a weeklong celebration of Scratch, packed with virtual events and activities for Scratchers around the world. Stay tuned



on the [Scratch Week site](#), where the latest information and scheduling details will be shared.

This year's events and activities are currently under wraps, but keep an eye on the [Scratch Week page](#) and [@Scratch](#) on Twitter for more information.

In the meantime, visit the [Scratch in Practice](#) and the main [Scratch](#) websites for ideas, resources, and tools for both teaching and learning computational thinking and coding skills using Scratch.

The NBEA Rosemarie McCauley, Floyd L., and Doris H. Crank Memorial Business Education Scholarship

Administered by the National Business Education Association's (NBEA) Council for Business Teaching and Research, the Rosemarie McCauley, Floyd L., and Doris H. Crank [Scholarship](#) honors these three individuals who were business education leaders. They each had a long history with NBEA and a shared vision to help those seeking higher education.



These individuals are now departed from us; however, along with other NBEA leaders and contributors, they are making this scholarship opportunity possible, and it is to them we dedicate this opportunity.

Scholarship guidelines and eligibility include being an outstanding business education student in one of the following three areas:

- Undergraduate Business Education Program
- Graduate Business Education Program
- Doctoral Business Education

Two (2) scholarships will be awarded worth \$3,000 each.

The [application](#) deadline is close of business on May 1, 2021. Awards will be announced by July 1.

To access scholarship information from [NBEA's website](#) menu, choose Councils, Council for Business Teaching & Research, McCauley-Crank Scholarship. [View a list of donors](#) who made this scholarship possible. Want to be included? You can still [donate directly](#) on the NBEA website.

Save the Date for the Virtual NGPF FinLit Conference

The 2021 Next Gen Personal Finance (NGPF) [Virtual FinLit Conference](#) will be on April 24, 2021. The conference will showcase 18 new, timely, and updated Virtual PD sessions, with a bonus 1-hour session on the 'State of Financial Education in the U.S.'

NGPF is excited to gather educators from all around the country to learn and engage together on all things financial education—especially with April being Financial Literacy Month.



Come and join NGPF; as with all things at NGPF, the conference is free and open to all.

When [registering](#) for the 2021 Virtual FinLit Conference, please note:

- You must register for each session you want to attend, including the State of Financial Literacy Education session.
- Please do not register for more than one session in a single time slot.
- If you want to attend more than 1 session in the same hour, don't worry, these sessions will be repeated through our regular NGPF VPD scheduling starting late April. To make for a cohesive and engaging experience, NGPF asks that you do not jump from session to session in the middle of an hour.
- For each session you attend, you will get [1 NGPF Academy credit](#); each session will also have a gift card raffle.

For a complete listing of session topics and to register to participate, please visit the [2021 NGPF Virtual Conference](#) site.

Registration is Now Open for the 1st Virtual Dual Enrollment Summit Hosted by UM

Calling all educators, staff, and administrators of high schools and colleges (two-year or four-year). The University of Montana Missoula College, along with the University of Montana Summer Office and Reach Higher Montana, invites you to save the date and join them virtually for the first-ever Montana [Dual Enrollment Summit](#) taking place virtually on June 17, 2021. As some of you know, the Summit was originally planned for last summer, and due to the COVID-19 pandemic, the decision was made to move it from 2020 to 2021 to ensure the health and safety of our participants, speakers, and staff. In preparing for this year's Summit, overwhelming response has been received to host it virtually for 2021, with the hopes of coming together in-person in 2022.



The [Dual Enrollment Summit](#) is a professional development opportunity for the educators, staff, and administrators of high schools and colleges. The Summit aims to provide an opportunity for connections and networking between college and high school faculty, staff, and administrators to support continuous improvement, quality, and rigor in dual enrollment course offerings to Montana high school students.

Registration is now open, and space is limited, so [sign up today](#). OPI Renewal Units will be available if requested. Please contact Jordan Patterson at jordan.patterson@mso.umt.edu with any questions.

The University of Montana also invites proposals for the Summit, with the sessions aimed at the professional development of others and common goals of celebrating the current successes and highlighting the best practices of dual enrollment in Montana, as well as improving the quality of Montana dual enrollment. For information on submitting a proposal, please click [here](#).

If you have any questions, please reach out to Jordan Patterson in the UM Dual Enrollment office at jordan.patterson@mso.umt.edu or to Becka Simons in the UM Summer Office at becka.simons@mso.umt.edu.

Collaboration. Leadership. Networking. MBEA Seeking a Vice President for 2021.

The [Montana Business Education Association](#) (MBEA) is looking for an energetic team member to fill the position of Vice President. MBEA knows everyone has plenty to do during this crazy year; however, this is an opportunity to get to know the association better and network with other educators who are fighting the same battles and earning similar victories. The Vice President is also voting member of the Montana Association for Career & Technical Education's Executive Board and helps to plan the Fall Institute that takes place annually in October.

The Vice President moves into the position of President-elect in January 2022 and President in 2023. Both positions attend the Western Business Education Association's conference in February, takes part in leadership training, and represents Montana on the regional board. The MBEA budget offers financial assistance to attend. The payoff for being on the board far outweighs the small amount of added work.

Please consider increasing your involvement and your benefits by volunteering as the Montana Business Education Association Vice President. Please contact MBEA President Mandy Wichman at mandy.wichman@hobson.k12.mt.us for more information.

MCEE Announces Two Spring Challenges for Your Students—Register Teams Today

The [Montana Council on Economic Education](#) (MCEE) is excited to announce they will officially host both the [Montana Economics Challenge](#) and the [Montana Personal Finance Challenge](#) this spring. There is no cost to compete in either Challenge. Registration is open now and testing for both Challenges will need to be completed by April 15, 2021.



As an added incentive this year, MCEE will offer a \$500 cash team prize for first place in the [Montana Personal Finance Challenge](#) and \$500 for the winners of both divisions in the [Montana Economics Challenge](#).

As always, all top performing teams will have a chance to compete at regional, and potentially national, competitions, which will also be held virtually.

MCEE is already arranging partners for 2022 and hope to gather again for in-person competitions.

On the bright side for this year, MCEE hopes to attract new interest without the geographic barriers of travel to Helena in March.

Thank you to this year's sponsors: Montana Banker's Association, First Interstate Bank, BNSF, and the [Montana Financial Education Coalition](#).

For questions regarding either the [Montana Economics Challenge](#) or the [Montana Personal Finance Challenge](#), please contact Dax Schieffer, MCEE Executive Director, at mcee@montana.edu.

Montana State CTE (VoEd) and Perkins Funding Applications Due April 15, 2021

All high schools and K-12 districts with qualifying CTE Programs are eligible to [apply](#) for both Montana State CTE (VoEd) allocations and Perkins Grant Application.

The 2021-2022 Montana State CTE (Vo-Ed) Funding is an allocation based on the 2020-2021 school year data entered in Terms of Employment Accreditation and Master Schedules (TEAMS) and with Career and Technical Student Organization (CTSO's) State Directors' membership rosters. The funding is allocation-based and requires only a "Yes" in the [application](#) to receive the school's allocation for the 2021-2022 school year.

Carl D. Perkins provides funding to strengthen the Career and Technical Education programs offered to students; helping them to explore careers in high wage, high skill, and in-demand career fields. There are 16 Montana Career Pathways allowing students to explore the areas of Agriculture Education, Business and Marketing Education, Family and Consumer Sciences, Health Science, and Industrial Technology Education. Courses and programs must be taught by instructors endorsed in the respective curricular area.

The grant application and 2021-2022 allocations will only be made available to those schools indicating that they wish to apply for Perkins in the [application](#).

The Montana State CTE (VoEd) and Perkins Funding application can be accessed and completed [here](#). The deadline to submit applications is April 15, 2021.

Elementary districts are not eligible. For assistance, please contact the Career and Technical Education Division at 406.444.9019.

AIM CTE Collection Change

There have been several significant changes to the CTE Collection that historically would take place in March.

Please note, the Spring CTE Collection is no longer taking place in March; it is now called the End of Year (EOY) CTE Collection, and it will be opening in May.

New AIM resources pertaining to the new EOY CTE Collection, including a new AIM User Guide and webinar information, will be sent out closer to the collection date.

AIM will be hosting Webinars May 5 and 6, 2021.

Subscribe to AIM Updates [here](#).

Cybersecurity Curriculum Workshop from Gallatin College

Gallatin College MSU and Clark State Community College present a two-day [Cybersecurity Curriculum workshop](#) for Montana high school teachers, June 17-18, 2021.

Selected participants will review cybersecurity lab activities, complete workshop labs, and prepare to teach 50+ minutes of cybersecurity curriculum during the 2021-2022 school year.

Participants will receive \$500, an iPad, and cybersecurity curriculum for student instruction.

The workshop will be held at the Gallatin College East Campus, 705 Osterman Drive, in Bozeman.

Space is limited to 10 attendees. Get more details and apply to attend [here](#).

Code.org Offering a New CS Fundamentals Deep Dive Workshop

Are you currently teaching [Computer Science Fundamentals](#) from Code.org? If so, level-up your skills with Code.org's [Computer Science Fundamentals Deep Dive Workshop](#).

The Computer Science Fundamentals Deep Dive workshop is designed for K–5 educators who have started teaching CS Fundamentals and want to "dive deeper" into the curriculum and solidify their own implementation strategies.

The [CS Fundamentals Deep Drive](#) workshops include customized action plans, ideas for developing strong classroom rapport, and strategies to address implementation roadblocks.

There are currently three (3) upcoming, no-cost workshops scheduled—

- Option 1: [April 13](#); 4-7 pm

- Option 2: [April 20](#); 4-7 pm
- Option 3: [May 15](#); 9 am-3:30 pm

The CS Fundamentals workshop is not a prerequisite for Deep Dive, but participants should have started teaching CS Fundamentals before attending. If you would like to take both workshops, it is recommended to schedule them at least a month apart so you have time to try out a few lessons with your class. Find an introductory CS Fundamentals workshop [here](#).

Renewal Units will be offered from AVID/Code.org for each workshop. For questions regarding the CS Fundamentals Deep Dive, or any Code.org offerings, please email code@avid.org.

Code.org Updates Summer 2021 Workshops to Virtual & Opens More Spring Options for CS Fundamentals

[Code.org](#) has announced all face-to-face summer 2021 workshops planned for Computer Science Discoveries and Computer Science Principles will be switched to a virtual format. Both Computer Science Discoveries and Computer Science Principles workshops were planned for Helena in June.

K–5 Educators: Computer Science Fundamentals Virtual Sessions

[Computer Science Fundamentals](#) blends online and “unplugged” activities, especially designed for teaching in the K-5 classroom. Using methods like puzzles, classroom games, and storytelling, students are taught basic computer science concepts through fun and engaging lessons that fit flexibly into any classroom schedule.

[Workshops](#) include comprehensive lesson plans, an online teacher dashboard, and are compatible with a variety of servers.

Virtual Computer Science Fundamentals workshops offered at no-cost for Montana educators are available at multiple times this spring. If interested, select the workshop best fitting your schedule.

- [April 3](#); 9 am-3 pm
- [April 12-14](#); 6-8 pm each day
- [May 1](#); 9 am-3 pm

Visit the [Code.org](#) website to create a free teacher account, to register for a virtual workshop, and to learn more about the [Computer Science Fundamentals](#) curriculum.

Computer Science Discoveries & Computer Science Principles Virtual Options

During summer 2021, four (4) virtual workshop options will be available for [Computer Science Discoveries](#) (grades 6-10) and [Computer Science Principles](#) (grades 9-12).

Additionally, scholarships are available for Montana educators from Code.org for qualified 6-12 applicants from schools with over 50% Free and Reduced Meals (FARM) or 50% under-represented community students; or, if a school is federally classified as “rural,” the minimums drop to 40%.

Virtual workshops for both [Computer Science Discoveries](#) and [Computer Science Principles](#) will be offered four times during the summer.

- Option 1: June 21-25; 9 am-5 pm daily
- Option 2: July 19-23, 9 am-5 pm daily
- Option 3: August 2-6; 9 am-5 pm daily
- Option 4: August 9-13; 9 am-5 pm daily

[Applications](#) for the summer CS Discoveries and CS Principles virtual offerings are now being accepted.

Renewal units will be offered for all virtual workshops. For questions regarding the workshops and/or scholarships, please contact code@avid.org.

New Product Spotlight, \$scholarships, & Current Events from EVERFI

EVERFI's [306: Continuing the Story](#) (grades 8-12) extends the lessons of the original 306: African American History course, teaching students about events in U.S. history from both before and after the Civil Rights Era that have shaped the experience of many Black people in the United States.

This African American History curriculum celebrates exceptional achievements made by Black leaders, trailblazers, and communities, despite an undeniable context of racism, trauma, and dehumanization. Students will draw connections from past and present events to recognize and empathize with the ongoing challenges Black people continue to face in the United States.

Middle school students using EVERFI's FutureSmart financial literacy resource are eligible to enter the 2020-2021 [MassMutual FutureSmart Scholarship Contest](#) for a chance to win one of ten, \$1,000 529 College Savings gift cards.

The [FutureSmart Scholarship Contest](#) is open to any U.S. student in grades 6-8 who has completed at least three of the FutureSmart digital lessons and submitted a short essay. Spring semester entries must be received by May 31, 2021. [Click here for details](#).

[Women's History Month](#) is a time to honor extraordinary women and their achievements, struggles, and triumphs throughout history. Celebrate and recognize the contributions women have made by incorporating these [lesson ideas](#).

When getting ready for April and Financial Literacy Month, check out [EVERFI](#)'s suite of financial education resources and schedule a time to connect to discuss the rollout of these resources:

- [High School Financial Wellness Suite](#)
- [Middle School](#)
- [Elementary School](#)

For questions, or to learn more about EVERFI, contact Sean Thomas, Schools Manager, at sthomas@everfi.com, or Caitlin O'Connor, Director of K12 Programs, at caitlin@everfi.com.

ACTE's 2021 CareerTech VISION 2021 Call for Proposals Due April 15

ACTE's [CareerTech VISION](#) is the premier annual gathering of career and technical education (CTE) professionals. This year, CareerTech VISION will look a bit different. In an effort to include more participants in the valuable professional development experience, ACTE is planning a hybrid approach to delivering a high-quality experience. ACTE's [2021 CareerTech Hybrid VISION](#) will be held December 1-4, in New Orleans, Louisiana, and online.



ACTE is seeking [proposals](#) addressing a full range of issues facing CTE educators, administrators and other key stakeholders as they strive to prepare students with the knowledge and skills to succeed in the 21st century economy.

The selection committee will focus on innovative ideas or new approaches to key challenges within CTE, and will choose sessions featuring evidence-based, high-quality career and technical education program of study elements. Quality sessions will engage the audience and provide attendees with practical, "how to" ideas and resources that directly impact CTE programs and student achievement.

This year, ACTE is seeking both [virtual and in-person proposals](#). The deadline to submit a [Call for Proposal](#) is April 15, 2021.

Please visit the 2021 CareerTech VISION's [Call for Proposals](#) page for complete details.

Registration for CSTA 2021 is Open to All Members

The [Computer Science Teachers Association](#) (CSTA) is excited to announce registration for [CSTA 2021](#) is now open for all members.

This year's conference spans two and a half days full of amazing CSTA sessions. With over 150 presentations, there is tons of new content to help you inspire your students.

Register early to ensure you receive this year's swag box (U.S. and Canada residents only) and do not miss out on the fun.

The [CSTA 2021 Virtual Conference](#) will be July 14-16.

If you are not a CSTA member, you can become a [CSTA Basic Member](#) for free.

Apply Today for a CSTA 2021 Conference Scholarship

The [Computer Science Teachers Association](#) (CSTA) prides itself in promoting equitable access to the [CSTA Annual Conference](#) by offering [scholarships](#) that subsidize 100% of the program cost. These scholarships are intended to support teachers whose limited financial

resources may prevent them from attending. The goal is to support as many teachers as possible.

To be eligible for [scholarships](#) to the 2021 CSTA Conference, you must:

1. be a [CSTA Basic \(free\) or CSTA+ member](#),
2. directly teach computer science to K-12 students, and
3. not have access to funding from your school or organization to cover conference registration fees.

Applications close on April 30, 2021.

Fun Facts and Trivia

The scientific name of zebrafish is *Danio rerio* and it belongs to the minnow family, Cyprinidae.

The fish got its common name from the presence of five uniform and pigmented horizontal stripes on the side of its body, which resemble the stripes of a zebra.

The characteristic stripes of zebrafish are blue in color and they extend from the gill cover to the end of the caudal fin.

They are popular aquarium fish as they are robust and hardy, as well as easy on the eyes.

Native to the Himalayan Region, zebrafish are naturally found to be shoal fish and tend to live in shallow ponds and standing waters.

The zebrafish is an omnivore, eating many different things from mud and sand, insects and arachnids, plants and algae, to fish scales and even rubbish.

The zebrafish is one of the most frequently used model organisms for genetic and developmental studies.

The zebrafish is known for its unique regenerative abilities and rapid embryonic development.

Zebrafish embryos grow in eggs, are transparent, and can be easily viewed and manipulated.

Zebrafish grow to maturity and are able to breed within two to three months.

They also produce large numbers of offspring with a female zebrafish laying up to 200 eggs a week.

The sequencing of the zebrafish genome began in 2001 and is currently ongoing; although the zebrafish genome is only half the length of the human genome, the genetic structure is remarkably similar.

Zebrafish mutants are currently used to model many human diseases, including Alzheimer's disease, congenital heart disease, polycystic kidney disease, and some cancers.

Zebrafish are one of the few fish sent to space.

Researchers at the University of Maine have created a zebrafish model of human influenza A virus (IAV) and have found treatment with anti-influenza compounds increased survival.

Zebrafish hearts have the ability to regenerate after damage.

Zebrafish can lose up to 20% of their heart muscle without long-term consequences, as they can repair the damage completely within eight weeks.

For questions, please contact:

[Eric Swenson](#), Business Education Specialist - 406.444.7991

The OPI is committed to providing reasonable accommodations to people with disabilities. If you need a reasonable accommodation, require an alternate format, or have questions concerning accessibility, contact the OPI ADA Coordinator, 406-444-3161, opiada@mt.gov, Relay Service: 711.
