Welcome to WISEST’s STEM @ Home Educational Resource Guide!

As an organization committed to providing valuable STEM experiences for students from elementary to high school, WISEST is excited to share the following resources with you and the curious young minds in your life! If this resource is helpful to you, please share it with others to inspire their creativity and curiosity!
DiscoverE

[link] ualberta.ca/engineering/community/discovere | Grades K-12

Join our friends over at DiscoverE for some fun home activities, stories, and educational projects that you can do in the comforts of your home. They upload new content weekly on their Facebook, Instagram, Twitter, and Youtube page (@discovereuofa).

Let’s Talk Science

[link] letstalkscience.ca/educational-resources | Grades K-9

Our friends over at Let’s Talk Science has put together a wide range of activities for kids wanting to do STEM at home. They range from online challenges, contest & competitions to a list of web series that dive into STEAM, coding, AI and more!
Check out Let’s Talk Science and its activities.

Bamfield Marine Sciences Centre

[link] youtube.com/user/BMSCLive | Grades 7-12

Want to visit the ocean but you’re stuck at home? Don’t fret, UAlberta is one of the five universities that runs and operates the Bamfield Marine Science Centre, located on Vancouver Island. They’re bringing the ocean right to your screen over the next few months by taking you on virtual field trips! Some of the topics include marine invertebrates, plankton, fish, a trip on the MV Alta, and more!

Future Energy Systems

[link] futureenergysystems.ca/resources/learning | Grades K-12

In 2016, Future Energy Systems was launched at the U of A as a way to help Canada transition to a low net-carbon energy economy. As part of their outreach, they are releasing weekly videos for all grade levels tackling questions related to energy!
InSTEM @ Home - Aboriginal Access to Engineering at Queen’s University

aboriginalaccess.ca/instem-at-home | Grades 1-8

Aboriginal Access to Engineering at Queen’s University has launched InSTEM @ Home program to keep Indigenous youth engaged in STEM while staying safely at home. Featuring weekly design challenges using common household materials, participants can share creations with the instructional team and be entered for a chance to win a weekly prize! There will also be Indigenous engineers who will relate the content to the “real world” of engineering.

PHET Interactive Simulations

phet.colorado.edu/en/simulations/category/physics | Grades 4+

Do you like physics and want to learn about it through simulations? PHET Interactive Simulations (part of University of Colorado Boulder) has interactive physics simulations that teach you more about different topics like bending light, building an atom, battery voltage, buoyancy and more!

UBC Physics & Astronomy

pinterest.ca/ubcphas/physics-astronomy-hands-on-demo-k-12 | Grades K-12

Have you been looking for some Physics activities to infuse in your weekly schedule? Look no further, the University of British Columbia (UBC) Physics Astronomy group has a pinterest board of hands-on physics and astronomy demos that are easy DIYs at home!
Girls Who Code

girlswhocode.com/code-at-home/ | Grades 6-12, Educators, Parents

To help get you started on learning how to code, Girls Who Code is releasing easy-to-follow weekly activities! Each activity will feature a woman in tech who pioneered innovative technology!

General STEM Activity Banks

Science Odyssey

facebook.com/ScienceOdyssey | Grades K-12

Since the nationwide Science Odyssey Week was canceled this year, they’ve been sharing fun online resources that you can participate in.

US Field Museum (Chicago)

fieldmuseum.org/blog/experience-field-home | Grades K-12

Do you love dinosaurs and want to learn more about them? Whether you’re a parent wanting to help facilitate your child’s learning, or a teacher wanting to incorporate it into your curriculum, the Field Museum has you covered with downloadable activities.

Mad Science

madsciencepromo.com/athomeexperiments | Grades Pre-K+

Mad Science has some fun STEM-themed coloring sheets and easy to follow videos with corresponding instruction sheets that guide students through fun and hands-on science experiments while also explaining what’s happening!
Explore the world of science and learn new concepts with your little ones with JumpStart’s engaging science activities. Watch them grow into the scientist they truly are!

Science Buddies has put together some great resources ranging from fun STEM activities to resources talking about COVID-19 to getting tips on how to keep STEM alive in the house right now!

Looking for lessons, activities and worksheets for your young learner? Check out Science4Us’ 1000+ resources! There are also resources specifically for parents and teachers for how to help their kids succeed.

Explore the world of STEM with Stemfinity. They have a bank of even more organizations that are offering resources for specific topics like coding and programming to, women in STEM, to math competitions, etc. There’s so much to choose from!
**Calgary Zoo - Your Daily Dose and Your Daily Dose at Home**

calgaryzoo.com/YourDailyDoseandDailyDoseAtHome | Grades K-6

Miss going to the zoo? Check out the Calgary Zoo online! They’re releasing daily educational videos about the different animals that live at the zoo and providing worksheets to go along with the videos to help you learn more about the topic and animal.

**Vancouver Science World**

scienceworld.ca/dome-at-home/ | Grades K-7

Vancouver Science World has online resources to learn about air, flight, coastal connections and more!

**TELUS Spark**

sparkscience.ca/spark-science-from-home | Grades K+

Join TELUS Spark for some fun home activities, experiments, live science shows, and your science questions answered - all in the comfort of your home.

**California Science Center**

californiasciencecenter.org/stuck-at-home-science | Grades K-12

California Science Center has a new at home activity live every weekday at 10am! Every week is a new theme with a downloadable activity guide and supplemental videos!
The Kid Should See This

This website features more than 4500 educational videos on a variety of topics for teachers and parents to share with their classrooms or at home. From engineering and science activity videos to videos talking about coronavirus and the importance of proper handwashing and social distancing, there is a ton of fun and engaging content.

The Space Gal - Science Experiments at Home

Emily the Space Gal has put together 21 kid-friendly experiments that you can do with ingredients you probably have at home already. She talks about just exactly what's happening in each of them. Join her for some fun, interactive, hands on science.

Government of Canada

The Government of Canada has put together a variety of activities, lesson plans, videos and more to help youth learn about science and technology.

Khan Academy

Khan Academy is a not-for-profit who is charged with the mission to provide free education to anyone, anywhere. They have a variety of curriculum activities that cover a wide range of topics (ex. Math, Science, Engineering, Computing, Arts & Humanities, Test prep, etc.) for all grade levels.
UC Berkeley Understanding Science, Evolution, and global change

undsci.berkeley.edu | evolution.berkeley.edu | biointeractive.org | Grades K-12

UC Berkeley has three online apps to teach you how the scientific method works, how tree diagrams work, and information about environmental science.

Podcasts

Science Friday Podcast

sciencefriday.com | For Various Ages

Jumping into the podcast world or looking for new recommendations? Science Friday is a great podcast for all things science. Easily accessible on Spotify and iTunes, you’ll be sure to learn about some pretty cool things!

Beyond the Microscope

scopepodcast.com | For Various Ages

Friends Lindsay Claiborn and Mumu Xu host Behind the Microscope, where they discuss science, technology, innovation and business with women working in the STEM fields. Recent subjects include planetary science, paleontology, anthropology and health law. They also discuss books, movies and feature question and answer segments.

STEMxm: The STEM Career Podcast

stemxm.libsyn.com/2017 (also on apple podcasts) | Grades 7+

The host of STEMxm, Mel started her podcast as a way to showcase women and minorities as role models as well as providing a resource for others interested in pursuing STEM careers.
STEM on Fire

stemonfire.com | Grades 9+

STEM on Fire is dedicated to helping high school and college students interested in pursuing a STEM career make educated decisions regarding a career path.

Remarkable Chatter- STEM Everyday

remarkablechatter.com/category/podcasts/stem-everyday | Educators

The STEM Everyday podcast focuses on how teachers can infuse STEM into their everyday lessons.