4-H STEAM resources for parents and teachers:

Science, Technology, Engineering, Art, Mathematics:
Looking for easy ways to get your kids interested in science? These various websites provide activities and lessons for fun, hands-on STEAM activities for kids of all ages to do anywhere! These hands-on activities are designed to instill curiosity and critical thinking, helping kids develop skills to be successful in life. They are also fun, easy to do, and some feature a messy factor just for you!

Chemistry
"You be the chemist": Facilitator activity guides and student worksheets:

You Be The Chemist Challenge® is a collaborative, multilevel academic competition that celebrates the science of chemistry and elevates STEM careers. There are 8 chemistry based facilitator activities guides- each containing various activities and student worksheets.

States of Matter http://www.4hstemk12.colostate.edu/wp-content/uploads/2020/03/AG-States-of-Matter-min.pdf
Student Worksheet: Melting Ice with Salt, Moving Molecule Stomp, Solid And Liquid, The Air Around You.
http://www.4hstemk12.colostate.edu/wp-content/uploads/2020/03/Melting-Ice-with-Salt-student-WS-min.pdf

Life Earth Sciences
http://www.4hstemk12.colostate.edu/wp-content/uploads/2020/03/Life-Earth-Sciences-min.pdf
Student Worksheet: Blubber In Sea Animals, Capillary Carnations, Dew Drops, Hold The Salt, Iron In Cereal.

Properties of Matter- Density
http://www.4hstemk12.colostate.edu/wp-content/uploads/2020/03/Properties-of-Matter-Density-min.pdf
Student Worksheets: Buoyant Butter, Dancing Raisins, Density Totem, Liquid Rainbow

Properties of Matter- Solubility
http://www.4hstemk12.colostate.edu/wp-content/uploads/2020/03/Properties-of-Matter-Solubility-min-1.pdf
Student Worksheets: Crystal Art, Fountain Of Soda Pop, T-Shirt Tie-dye, Wacky Waxy Watercolors.

Chemical Reactions- The Basics

http://www.4hstemk12.colostate.edu/wp-content/uploads/2020/03/Chemical-Reactions-The-Basics-min.pdf
Student Worksheets: Brown Bananas, Cleaning Pennies, Lumpy Liquids, Rusty Wool.

Chemical Reactions- Acids & Bases
http://www.4hstemk12.colostate.edu/wp-content/uploads/2020/03/Chemical-Reactions-Acids-Bases-min.pdf
Student Worksheets: Egg Dye Solutions, Exploding Bags, Rubber Eggs.

Chemical Reactions- Rxns Rates and Catalysts
http://www.4hstemk12.colostate.edu/wp-content/uploads/2020/03/Chemical-Rxns-Reaction-Rates-Catalysts-min.pdf
Student Worksheets: Ageless Apples, Elephant Toothpaste, Seltzer Rxn rates.

Forces & Interactions
http://www.4hstemk12.colostate.edu/wp-content/uploads/2020/03/Forces-Interactions-min.pdf
Student Worksheets: Antigravity Water, Balloon Rockets, Grasping for Air, Magnetic Metals, Puffed Rice Fleas.

Coding/Computer Science: (13 resources)
Today on our 4-H series we will be sharing resources related to coding and computer science. **Coding** is the act of writing instructions for a computer to make the computer perform different tasks.

Coding helps teach kids to develop problem solving skills, perseverance, trial and error and understanding of cause and effect, analytical thinking and reasoning skills, as well as math and language skills. It also challenges children to think creatively and to pursue innovative ideas and solutions.

Here are several games, websites, and activities that help teach kids how to code using various computer languages. Enjoy and happy coding!

Google for Education
This site has a lot of hands-on curriculum. Students learn through video-based activities, with different themes like sports, art, and game design.

https://csfirst.withgoogle.com/s/en/home

Code.org

Code.Org is a well known site for teaching sciences and computer science. Kids in fifth grade to middle school can enjoy the interactive one-on-one tutorials that advance and progress. Kids also can learn to code in whatever computer language they wish.
https://code.org/

Scratch
Developed at MIT for kids aged 8-16 years, this is a wonderful website where they can learn how to build practically anything they can think of. The website was created as an online community to help young kids become programmers through easy activity packs and a great support system.
https://scratch.mit.edu/

Khan Academy
Khan Academy offers interactive "talk throughs" and challenges that teach kids how to code for free. It is more suitable for kids in the elementary levels as the lessons could be detailed and a little technical for preschoolers.
https://www.khanacademy.org/computing/computer-programming/programming/intro-to-programming/a/learning-programming-on-khan-academy

Code Combat
This is a great site for all ages who love playing online games and want to learn how to code in the process. The games are interactive and to control actions of players, the kids have to write lines of code. The difficulty rises as kids advance in stages.
https://codecombat.com/

Code Monster
This website introduces kids to Javascript programming through a fun and interactive game with a fun and friendly monster. There are two boxes- one box for the kids to code in and the result is displayed in the other box.
http://www.crunchzilla.com/code-monster

Blocky
As the name suggests, this website teaches programming using a series of puzzles and blocks. Kids solve puzzles through drag and drop to create a story that ultimately solves a certain problem. They then get to see the results of their work in action.
https://blockly.games/

Tynker
Tynker allows kids to learn at their own pace. There are tons of easy lessons and tutorials, teaching kids to make practically anything they want including applications, web apps, games or

website pages. The website is free to use but there is a subscription if kids want to advance to the expertise level.
https://www.tynker.com/

Code Moji
Using everyday and familiar emojis- kids learn at their own pace with easy to follow and interactive lessons.
https://www.codemoji.com/

CodinGame
This free site for upper elementary kids and older lets kids to improve their coding skills by exploring game play and creation. Youth practice by solving puzzles, competing in coding battles, contributing to multi-player games, and learning to code in various languages.
https://www.codingame.com/start

Code Monkey
CodeMonkey lets kids practice coding by solving a variety of progressively harder and more challenging puzzles. Each new level includes new codes and new functions to learn. CodeMonkey offers a free 30 day trial.
https://www.codemonkey.com/

Thimble
Mozilla created this site which allows kids to learn interactive programming through a platform where they can code directly and observe what the output of their coding becomes. It lets kids create their own online web pages while still learning more detailed programming.
https://foundation.mozilla.org/en/artifacts/thimble/

Code Wars
Created for older kids in high school, this site provides a space where coding competitions can take place through real challengers online.
https://www.codewars.com/

Additional STEM Activity Websites:

Watch, join and follow along with Bill Nye the Science Guy. Check out his home demos and you can even do experiments along with him!
https://www.billnye.com/home-demos

STEMFinity has done a great job compiling FREE STEM resources and activities from a variety of sources. You can filter through their resources based on topics.

https://www.stemfinity.com/Free-STEM-Education-Resources

Interactive and free! Filter through their numerous resources based on topic and age.
https://learn.concord.org/

Bring National Graphic home! You can find, and pick and choose activities, reading resources, videos and more based on age and subject matter.
https://www.nationalgeographic.org/education/

https://ssec.si.edu/expedition-insects
Entomology resource

https://mysteryscience.com/school-closure-planning

https://www.brainpop.com/

https://www.ageoflearning.com/programs/#abcmouse

https://growingupbilingual.com/2018/latino-parenting/fun-hands-on-stem-projects-for-kids/

https://thestemlaboratory.com/stem-activities-for-kids/

https://tra.extension.colostate.edu/stem-k12/stem-resources/
There are resources in the archived ST[EMpower] newsletters.

https://wabisabilearning.com/blogs/stem/36-stem-project-based-learning-activities
A list of terrific STEM project-based learning activities that can be tailored to meet your students' needs. Many of these activities are customizable so they can be catered to toddlers all the way up to high school students.

https://www.jpl.nasa.gov/edu/teach/activity/stem-activities-for-families/
Great resource from the Jet Propulsion Laboratory, including a few rocket activities that may look familiar.

https://www.iheartnaptime.net/play-dough-recipe/
Great homemade playdough recipe

https://karouselkidsstemkreations.tumblr.com/post/612937171568115712/stemdate-31820

Technology Tuesday:

NASA Science Space Place- Explore Earth and Space
Explore outer space, our solar system and the earth with this great resource from NASA. They have tons of videos, crafts, games, and other educational tools to teach kids about these amazing topics.
https://spaceplace.nasa.gov/menu/parents-and-educators/
NASA Jet Propulsion Laboratory: STEM Activities for Families
Great resource from the NASA Jet Propulsion Laboratory that has many science, technology and engineering lessons for kids and the whole family. They even have several cool rocket activities.
https://www.jpl.nasa.gov/edu/teach/activity/stem-activities-for-families/

Space Racers
This website has a variety of many resources and activities! Watch episodes about the space racers (rockets) as they go on adventures throughout the solar system. They also have educational crafts, activities, and educational tools for youth and families.
https://www.spaceracers.com/grownups/

National 4-H Resources:
Access to free materials and activity guides. However, for some you might have to enter some information (name, email, etc.) to have access to some of the downloadable resources and activities guides

https://4-h.org/parents/stem-agriculture/youth-stem-activities/

https://4-h.org/parents/stem-agriculture/youth-stem-activities/

https://4-h.org/about/blog/inspire-kids-to-do-inspiring-stem/

https://4-h.org/about/inspire-kids-to-do/

http://www.4hstemk12.colostate.edu/stem/staff-resources-stem/

Free books, music and activities:

https://www.jpl.nasa.gov/edu/teach/activity/space-school-musical/

https://classroommagazines.scholastic.com/support/learnathome.html

https://kidsactivitiesblog.com/135609/list-of-education-companies-offering-free-subscriptions/
List of education companies offering free subscriptions due to school closures

http://library.nyam.org/colorourcollections/2020-participating-institutions/
Coloring sheets

https://www.spellingcity.com/
Spelling resources for parents and kids.

Movement Mondays
Go Noodle
GoNoodle engages kids with movement and mindfulness videos created by child development experts. Available for free at school, home, and everywhere kids are!
https://www.gonoodle.com/

Dancing with Miss. Melodee
Do an at-home dance class. Miss Melodee invites children to engage in dramatic and symbolic play promoting cognitive development through song and dance.
http://www.missmelodee.com/

Cosmic Kids Yoga
All kinds of yoga-for-kids videos. It's not just for kids, either; you can all do yoga together as a family!
https://www.youtube.com/user/CosmicKidsYoga

YMCA 360: Introductory fitness classes and technique videos. Videos and guides for all ages, sports, and activities.
https://ymca360.org/

Cleo Parker Dance
Ongoing series of pick-your-price virtual dance classes and movement activities, serving all ages and levels of ability.
https://cleoparkerdance.org/academy/

LIVE Makin' Music Classes
Makin' Music Carolina is offering free music classes for families with young children. Also learn how to make fun instruments out of household materials.
https://www.facebook.com/makinmusiccarolina

LIVE Sing & Dance with Mr. Jon & Friends
Mr. Jon & Friends is a group that writes and performs music just for kids! They are hosting weekday live streams and fun videos each day. These virtual events are all about fun, music, and laughter.
https://www.facebook.com/MrJonandFriends/

Theatre Activities for Kids:

Hands-on and instructional activities to help kids write, design, and create their own plays.
https://lifestyle.howstuffworks.com/crafts/seasonal/theatre-activities-for-kids.htm

Scholastics: Writing Tips for Kids.
Activities to help get those creative juices flowing! Writing activities for kids!
https://www.scholastic.com/teachers/articles/teaching-content/25-ways-get-kids-writing/

Mask Making
Mask ideas for your next play!
https://www.thesprucecrafts.com/mask-crafts-1252693

Puppet Making
Learn to make different types of finger and hand puppets!
https://craftsbyamanda.com/kids-puppets/

Zoo, Museum, and Park Tours and Webcams:

Monterey Bay Aquarium
https://www.montereybayaquarium.org/animals/live-cams

San Diego Zoo
https://zoo.sandiegozoo.org/live-cams

Smithsonian's National Zoo & Conservation Biology Institute
https://nationalzoo.si.edu/webcams

Houston Zoo
https://www.houstonzoo.org/explore/webcams/

Georgia Aquarium
https://www.georgiaaquarium.org/webcam/beluga-whale-webcam/

Touring Thursday:

The Louvre
https://www.louvre.fr/en/visites-en-ligne

Boston Children's Museum
https://www.bostonchildrensmuseum.org/museum-virtual-tour

Smithsonian National Museum of Natural History
https://naturalhistory2.si.edu/vt3/NMNH/z_tour-022.html

The National Gallery, London
https://www.nationalgallery.org.uk/visiting/virtual-tours/google-virtual-tour

British Museum
https://britishmuseum.withgoogle.com/

https://www.nps.gov/yell/learn/photosmultimedia/virtualtours.htm
Virtually visit the Mud Volcano, Mammoth Hot Springs, and so much more with a digital field trip to Yellowstone.

https://explore.org/livecams

https://explore.org/livecams/african-wildlife/african-watering-hole-animal-camera
Watch African wildlife

https://explore.org/livecams/currently-live/service-puppy-cam
Watch puppies sleep and play!

Spanish Resources:

https://growingupbilingual.com/es/

https://es.khanacademy.org/

http://peepandthebigwideworld.com/es/

https://www.biointeractive.org/es/recursos?search=

Resources for talking with children about Covid 19.

https://www.pbs.org/newshour/health/10-tips-for-talking-about-covid-19-with-your-kids

https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/talking-with-children.html

Sewing Saturday:

Sewing:
Step-by-step guide to teach kids to hand sew in a safe and easy way!
https://makeit-loveit.com/teaching-kids-to-hand-sew

Lots of great sewing and fabric crafting lesson plans for kids!
https://www.redtedart.com/teaching-kids-to-sew/

Knitting:
Step-by-step guide with pictures and videos to help teach kids and adults how to knit!
https://imaginationsoup.net/teaching-kids-knit/

Learn now to finger knit! This website has a lot of different finger knitting projects for kids that are easy and fun!
https://www.howweelearn.com/knitting-for-kids/

Reading Friday:

Reading and Free books!
Audible: Audible has launched Audible Stories which lets families and kids listen to hundreds of free titles such as ""Alice's Adventures in Wonderland," "Anne of Green Gables," and "Harry Potter and the Philosopher's Stone," The available books come in six languages: English, French, Spanish, Italian, Japanese, German.
stories.audible.com.

LibriVox: Recorded books that can be sorted based on language and age. Available in several different languages. You can also give back- help record yourself reading- anyone can volunteer to do so!
ibrivox.org.

International Children's Digital Library: There are tons of award-winning books divided into reading levels, ages, lengths, etc. Browse literature in English, Spanish, Hindi, and so many other languages!
Go to en.childrenslibrary.org. Registration is optional, but registered users can select a preferred language and save books to a personal shelf

Denver Public Library:
Denver Public Library has tons of amazing virtual resources for kids and families! Join them for story times in both English and Spanish! You can also participate in a virtual book club, their Plaza Online English Conversation Group, various webinars, and so much more. They also have a list of resources to help kids and adults read, write, and have access to books.
https://www.denverlibrary.org/

Food/Gardening/Agriculture:

School Garden Resources
Gardening and STEM resources, recipes, lessons and activities divided up by age group.
https://extension.uga.edu/programs-services/school-garden-resources/curriculum.html

4-H Afterschool Agriculture
Download hands-on activity ideas to promote agricultural literacy among youth during out-of-school time while developing their understanding, appreciation, and application of science.
4-h.org/parents/curriculum/afterschool-agriculture/

Popcorn.org
Recipes, activities, training slideshows, and crafts about popcorn and agriculture. Available in Thai, Mandarin, and Spanish.
https://www.popcorn.org/

Farm Food 360
360-degree virtual tours and fact sheets from Canadian farm operations and food processing plants.
https://www.farmfood360.ca/

Big Green at Home
Follow the link to sign up for a weekly email of age-appropriate activity bundles, live demonstrations, tutorials, and video lessons.

AgExplorer
Robust, comprehensive, interactive career resource to explore the broad range of careers in the agriculture industry.

Milk Street Cooking School: Online Classes
Explore courses that introduce you to new cooking techniques, recipe types, cooking theory, and science.

Natural Resources:
Water:
Project WET: Water Education Today
Interactive website and games to explore the role of water in our lives.
https://www.projectwet.org/distancelearning#HomeSchoolResources

The Greenway Foundation: Just For Kids!
Activities, experiments, and crafts for safe outside play and exploration along Denver's South Platte River.
https://www.thegreenwayfoundation.org/just-for-kids.html

National Oceanic Atmospheric Administration (NOAA): At-home Science Activities
NOAA's most popular educational resources to help you safely hunker down while learning

about the ocean and atmosphere.
https://www.noaa.gov/education/stories/staying-in-keep-learning-with-science-activities-kids-and-families-can-do-at-home

National Weather Service: Educational resources
Lessons, games, and videos to keep kids engaged in weather-related science.

The Nature Conservancy Youth Engagement Nature Lab
Access resources aligned to The Nature Conservancy's research and designed specifically for a young audience and classroom use.

General Education/School Resources:

Great Schools Resources
Resources and toolkits to help your child learn from home including suggested daily schedules, books, and worksheets.

City of Denver Support– Youth Assistance
https://www.denvergov.org/content/denvergov/en/environmental-health/news/coronavirus-info/support-services/youth-assistance.html

Denver Public Schools Resources and At-Home Activities
https://www.dpsk12.org/coronavirus/at-home-activities/

DSST Public Resources for Elementary, Middle and High Schools
- Optional Academic Resources
  https://docs.google.com/document/d/1n4A0NCtCAJY0mb5xSJVUW7CT7IxY8KZlEzVXPdEO9xo/edit?__hssc=158181541.1.1585258298761&__hstc=158181541.e0d03ec076be1f257cdfff75e936a0fc.1585258298760.1585258298760.1585258298760.1&__hsfp=2088064629&hsCtaTracking=e5e
- AP/PSAT/SAT Resources
  https://drive.google.com/drive/folders/19hdjZdndceRNVQgNwkDegfl0qY2pzw7c?__hssc=158181541.1.1585258298761&__hstc=158181541.e0d03ec076be1f257cdfff75e936a0fc.1585258298760.1585258298760.1585258298760.1&__hsfp=2088064629&hsCtaTracking=23be6e2c-75aa-4
- Printable Academic Resources
  https://drive.google.com/drive/folders/125UCuiNvah33JUHN3F0BZwpeHuraVqAn?__hssc=158181541.1.1585258298761&__hstc=158181541.e0d03ec076be1f257cdfff75e936a0fc.1585258298760.1585258298760.1585258298760.1&__hsfp=2088064629&hsCtaTracking=0502fd3f-0533-4
- Optional Academic Resources
  https://docs.google.com/document/d/1n4A0NCtCAJY0mb5xSJVUW7CT7IxY8KZlEzVXPdEO9xo/edit?__hssc=158181541.1.1585258298761&__hstc=158181541.e0d03ec076be1f257cdfff75e936a0fc.1585258298760.1585258298760.1585258298760.1&__hsfp=2088064629&hsCtaTracking=e5e

Colorin Colorado: School Responses to COVID-19: ELL/Immigrant Considerations.

https://www.colorincolorado.org/coronavirus

Homeschooling Tips para la escuela en casa en Español
https://www.healthychildren.org/spanish/health-issues/conditions/chest-lungs/paginas/working-and-learning-from-home-during-the-covid-19-outbreak.aspx?fbclid=IwAR2R88oMyiTXFakCFSIqAATuSb2kM-q8LGv1rufT65mO9DZbEQodMoA5bAI

Homeschooling Tips in English
https://www.healthychildren.org/english/health-issues/conditions/chest-lungs/pages/working-and-learning-from-home-during-the-covid-19-outbreak.aspx?fbclid=iwar2r88omyitxfakcfsiqaatusb2km-q8lgv1ruft65mo9dzbeqodmoa5bai

Other useful sites:

https://extension.umaine.edu/4h/learn-at-home/activities-all-ages/#build

https://studentorg.vanderbilt.edu/vsvs/lessons/

http://www.amazingeducationalresources.com/