STEM TEACHING TIPS FOR PARENTS & CAREGIVERS

Providing STE teaching opportunities at home can be a daunting experience for parents & caregivers, but it can also be an opportunity to investigate new STEM topics and to develop new ways of learning. Here are a few tips that can help smooth the way:

Make Cultural and Content Connections

You can create and empowering learning environment when you highlight and celebrate your family's personal and cultural traditions into the STEM learning experience.

If you celebrate a cultural storytelling, then integrate STEM stories into the learning process. If sports and competitions define the culture you and your students are familiar with, then find examples of science and mathematics in sports and design fun challenging ways for each student to improve their designs or other projects. If your family is experienced with building, gardening, cooking, sewing, etc., find ways to make connections between those interests and the new math and science ideas they may encountering.

Your student has the unique opportunity of learning in an accepting environment that celebrates their unique cultural connections and that will allow them to experience equality and equal status.

An example of a unique set of resources for families wishing to explore some of the amazing contributions of the African American professionals in mathematics, engineering, and computer science, you may want to check out the Hidden Figures toolkit: https://www.nasa.gov/stem-ed-resources/nasa-modern-figures-toolkit.html

WHAT SHOULD STUDENTS LEARN IN SCIENCE & MATH

What Students Should Learn in Science- Next Generation Science Standards (NGSS)

NGSS provides a tool to help parents know what kids are expected to learn at each grade level in science and engineering technology. NGSS, elementary through high school, promotes exploring and engaging in science as is done in the real world by scientists incorporating engineering and technology principles. Although it may seem daunting, following NGSS core ideas at home with your kids can actually be fun and engaging for you as will as your kids. To learn more about NGSS go to: www.nsta.org/ngss or www.nextgenscience.org

What Students Should Learn in Mathematics- Common Core State Standards (Common Core)

"The Common Core focuses on developing the mathematical critical-thinking, problem solving, and analytical skills students will need to be successful."

To learn more about the Common Core, go to: www.corestandards.org/what-parents-should-know/
Activity Links:
The Hidden Figures toolkit: https://www.nasa.gov/stem-ed-resources/nasa-modern-figures-toolkit.html
Native American Advisory Committee: https://www.nasa.gov/naac
Hispanic astronauts: https://www.nasa.gov/sites/default/files/atoms/files/hispanic_astronauts_fs.pdf
Women astronauts: https://women.nasa.gov/
Asian astronauts: https://www.nasa.gov/feature/asian-heritage-month/

NASA has activities & learning resources to support you!

NASA STEM @ Home for Students:
K to 4th: https://www.nasa.gov/stem-at-home-for-students-k-4.html
5th to 8th: https://www.nasa.gov/stem-at-home-for-students-5-8.html
9th to 12th: https://www.nasa.gov/stem-at-home-for-students-9-12.html

Story Time From Space:
http://www.spacestationexplorers.org/educational_programs/storytimefromspace/

NASA Express:
nasa.gov/stem/express

NASA STEM EPDC Webinars:
https://www.txstate-epdc.net/event-post/

NASA STEM EPDC Digital Badges:
https://www.txstate-epdc.net/digital-badging/

NASA STEM Quick Bits:
https://www.txstate-epdc.net/quick-bits/