

NASA Classroom Activities



Locally Developed Curriculum

NASA's STEM Engagement is designed to increase student engagement in STEM fields and provides many tools which can be utilized locally. The Smoky Mountains STEM Collaborative strives to help local educators find those tools and resources that meet their classroom needs.

Title: [Catapult Shooter](#)

Authors: Matt Cass (adapted from Carol Huddle)

Audience: All Ages

A scale-able, fun and inexpensive catapult design project that has been adapted to utilize modern STEM education pedagogy.

Title: [Heating in the Home](#)

Author: Jennifer Love

Audience: Middle School

This STEM Kit assists middle school students in understanding the basic needs of heat transfer through the real-life problem of home heating.

Title: [River Cane Restoration](#)

Author: Randi Neff

Audience: Middle School +

An activity that serves as an introduction to Geographic Information Science and NASA's Giovanni data visualization system.

Title: [Space Pixels](#)

Author: Randi Neff

Audience: Middle School +

An activity that explores how images of objects are taken by spacecraft, such as the Hubble Space Telescope, and transferred to Earth.

Title: [Star Students](#)

Author: Jennifer Love

Audience: Middle and High School

Students will investigate how scientists know what elements can be found on other planets/stars by learning more about the electromagnetic spectrum and the Periodic Table of Elements.

Title: [STEM for All](#)

Authors: Sally Butler, Deana Booth, Trudi Gunter

Audience: 6th Grade

This STEM Kit is designed to be used across the 6th grade curriculum in Language Arts, Mathematics and Science classrooms. This broad spectrum approach also advocates for equity in STEM while adding NASA content to the classroom.

Title: [Water Rockets](#)

Author: Jennifer Love

Audience: Middle and High School

This kit assists students in understanding the basics of the kinematics and dynamics involved in a rocket launch.

Middle School Curriculum

A list of NASA activities and resources aligned to North Carolina middle school course standards for both mathematics and science.

Title: Mathematics

Compiled by: Randi Neff

[6th Grade](#)

[7th Grade](#)

[8th Grade](#)

Title: Science

Compiled by: Randi Neff

[6th Grade](#)

[7th Grade](#)

[8th Grade](#)

High School Curriculum

A list of NASA activities and resources aligned to North Carolina high school course standards for both mathematics and science.

Title: Mathematics

Compiled by: Randi Neff

[Calculus](#)

[Math I](#)

[Math II](#)

[Math III](#)

Title: Science

Compiled by: Randi Neff

[AP Biology](#)

[Biology](#)

[Chemistry](#)

[Environmental and Earth Science](#)

[Horticulture](#)

[Physical Science](#)

[Physics](#)

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