

Science Research STEM Course Information 2019-20

7th Grade Science Research (Enrichment) Course, Fall and Spring Semesters

The E. T. Booth Science Research course is designed to guide students through the completion of an in-depth research project and preparation for the AP Capstone research program at EHS.

Recommended criteria for enrollment of students: Student should be a self-starter willing to cooperatively work with other students, willing to venture into new and different areas of science as research, accept challenges exemplifying a Growth Mindset, have good reading, writing, and math skills.

Students learn to critically review research literature pertaining to their chosen research problem, write in a scholarly style using APA format, design and conduct a research study, describe the results in writing and personal presentation. Fall student projects are judged at the Booth Science Fair. Highest scoring projects are recommended for competition at the Northwest Region Science Fair, where a First Place will allow them to move on to the State Science Fair. Along with lab activities in which students collect data and use Excel to analyze and visualize their data, students will also formulate survey questions and conduct a survey of their grade level. Spring students follow identical curriculum and present their findings to a panel of teachers.

6th Grade Science Research (Enrichment) Course, Fall and Spring Semesters

The E. T. Booth Science Research course is designed to guide students through the completion of an in-depth research project and preparation for the AP Capstone research program at EHS.

Recommended criteria for enrollment of students: Student should be a self-starter willing to cooperatively work with other students, willing to venture into new and different areas of science as research, accept challenges exemplifying a Growth Mindset, have strong reading, writing, and math skills.

Students learn to critically review research literature pertaining to their chosen research problem, write in a scholarly style using APA format, design and conduct a research study, describe the results in writing and personal presentation. Fall student projects are judged at the Booth Science Fair. Highest scoring projects are recommended for competition at the Northwest Region Science Fair, where a First Place will allow them to move on to the State Science Fair. Along with lab activities in which students collect data and use Excel to analyze and visualize their data, students will also formulate survey questions and conduct a survey of their grade level. Spring students follow identical curriculum and present their findings to a panel of teachers.

8th Grade

Fall Semester Students

The E. T. Booth Science Research course is designed to guide students through the completion of an in-depth research project and preparation for the AP Capstone research program at EHS.

Recommended criteria for enrollment of students: Student should be a self-starter willing to cooperatively work with other students, willing to venture into new and different areas of science as research, accept challenges exemplifying a Growth Mindset, have strong reading, writing, and math skills.

Students learn to critically review research literature pertaining to their chosen research problem, compose in a scholarly style in APA format, design and conduct a research study and report the results. Fall student projects are judged at the Booth Science Fair. Highest scoring projects are recommended for competition at the Northwest Region Science Fair, where a First Place will allow them to move on to the State Science Fair. Along with lab activities in which students collect data and use Excel to analyze and visualize their data, students will also formulate survey questions and conduct a survey of their grade level.

Spring Semester Students

The Spring Semester E. T. Booth Science Research course is designed to allow students apply their 8th grade science knowledge through the completion of hands-on team lab activities listed in Module 1, prepare for the High School Physical Science EOC, and 9th Grade Honors Biology at EHS.

Recommended criteria for enrollment of students: Student should be a self-starter willing to cooperatively work with other students, willing to venture into new and different areas of science as research, accept challenges exemplifying a Growth Mindset, have strong reading, writing, and math skills.

Module 1 – Lab activities include Sound Waves (teams build homemade instrument, create, measure, plot standing waves; both activities coordinated with Booth Music Department), Electromagnetic Waves (teams create color combinations, trace laser light rays to prove reflection and refraction), Electricity (teams build circuits, electric motor, generator), Simple Machines (teams compute gear ratio, multiply of force with pulleys), Chemistry (teams examine molecular components of food items, which also prepares student for Honors Biology).

Module 2 – Review and focus on topics that will prepare students for Honors Biology. Honors Biology preparatory information is provided by EHS Science Department.

Course Instructor – Dr. Larry Gruszecki (Lawrence.Gruszecki@cherokee.k12.ga.us)