

**CONNECTICUT STEM FOUNDATION, INC.**

**CURRICULUM FOR A HIGH SCHOOL STEM RESEARCH PROGRAM:  
AN IN-DEPTH STUDY OF THE NGSS SCIENCE & ENGINEERING PRACTICES**

**DRAFT 3: PHILOSOPHY/INTRODUCTION**

**Unlike most high school science courses which are based on specific science content, a high school Science Research Program is based on science inquiry skills and engineering design skills. STEM students enrolled in a Science Research Program select a science area that is of interest to them, research STEM journals to learn more about their topic of interest and find an aspect of the topic that is unknown and needs to be researched. Thus, the STEM investigation that they conduct is original research; it has not been done before. In the process of their investigation, they develop and hone the science inquiry skills and engineering design skills that are used in STEM careers.**

**Only thirty-three Connecticut school districts participated in the 2021 state-wide Connecticut Science and Engineering Fair. To encourage more Connecticut school districts to include a high school Science Research Program in their course offerings, the Connecticut STEM Foundation as part of its outreach program to Connecticut science students has developed a Science Research Curriculum guide that is based on the NGSS (Next Generation Science Standards) Science and Engineering Practices. It is available, free of charge to all Connecticut High Schools on its website, [ctstemfoundation.org](http://ctstemfoundation.org).**

**Additionally, the Connecticut STEM Foundation has instituted a Mentorship Program that supports Connecticut science teachers who are eager to assist their students conducting science research and participating in STEM fairs. Thus, any Connecticut high school that is considering implementing a Science Research Program will have a mentorship support system available to its Science Research Teacher(s). Information on the Mentorship Program is available on the Connecticut STEM Foundation's website, [ctstemfoundation.org](http://ctstemfoundation.org).**