STEM CAMP SPACE AND MORE SMORGASBORD. C. Stokes[1] [1]Houston Community College System-Southwest (Houston Community College System Southwest 10141 Cash Road, Stafford, TX 77477 carrie.felderstokes@hccs.edu).

Introduction: As a post-secondary STEM instructor it is important to expose high school students to real –world STEM experiences and career options. This was initiated through the Governor's Merit STEM Program instituted by a local community college. Students were able to connect to the vast number of jobs available through two-year colleges. Space and Moon lessons were used to show the inter-relationships to other sciences. These activities meet the National Science Standards sparking learners' interest to experiment and seek further explanation. Secondary students, especially rising 10th and 11th graders were targeted to learn more about the STEM fields. Campers are selected through a rigorous process of an interest essay, their counselors' recommendation and grades in various STEM subjects (Biology, Environmental Science, Algebra, Calculus, Geometry, Technology, etc).

Exposing students to vital STEM college courses gives them the insight into project based learning. Some of the activities included chemical titration of fruits and vegetables, forensic science solving fetal pigs' crime scene analysis, and 3D designing and application. Other activities included programming robots for competitions, and environmental water quality test-ing.

Along with the course STEM work, students were able to participate in practice field experiences in businesses, medical institutions, federal research facilities, (MITIE) Houston Methodist cutting edge technology, focusing on body and diseases, National Oceanic Atmospheric Administration sea life relating to the Moon and tides.

Project Objectives: Our five weeks camp goals are 1) Local STEM industry businesses and agencies assist in providing students with an exciting, hands-on experience that will demonstrate the practical application of STEM beyond the classroom and help generate interest in the many opportunities STEM offers. 2) Expose campers to as many STEM fields through designed lessons. Concepts learned here can be incorporated into their high school studies, colleges and eventually out into the workforce. Campers are introduced to the Engineering Design Process, which teaches you how to ask questions, imagine, plan, create, and then to improve upon what you have done. These steps work in all jobs, because every job needs you to plan, ask questions, improve on it then test it.

Project based learning activities, labs, and field lessons ignite interest in the inter-relationships of various types of science and math. Some of the activities were Space and Robotics tours such as Humanoids Six - degree-of-freedom Dynamic Test System (SDTS), Robonaut Labs and tour with Jerry Woodfill, the Weather Museum and Storm Stimulator, George Observatory and Mission Control, Rice University Observatory, Houston Methodist Research (MITIE) and Forensics. Scaffolded Earth and Space TEKS were aligned to a star gazer party and planetarium show, and teachers received certification for Moon rock exhibits for outreach STEM Nights

Mechanisms: Earth and Space Science TEKS (grades 6-8 and high school) were aligned. Students participated from the Governor's Merit Summer STEM Camps at Houston Community College System (Stafford and West Loop Campuses); other lessons for accelerated high school students also captivated other high students and parents participating. Scientist mentors provided several opportunities to over online, class visitations, and during evening receptions.

Three examples of campers tying career fields together include collecting analysis of data from a possible crime scene, gathering fingerprints and blood, and a DNA analysis to determine who might be the subject of the crime. Campers learned how forensic tools are used in surgery and medical research, and used the 3D machine to create their favorite piece, then saw how Methodist Research, NASA-JSC Robotics and Tietronix Software engineering games use equipment and tools the same way**.**

Main findings to date: Campers and parents were surprised to see so many effective activities that address the STEM content. At the end of camp, students readily implemented the strategies of their learning style, and gravitated towards others to create a team to solve the problem by analyzing what they are going to do. Most importantly, they realized that life is not always perfect in the first run, so they rolled up their sleeves and strategized to solve the problem.

After experiencing certain activities students had a better idea of their future dream career. Mark Escudero determined that chemistry is cool, but not what he wants to do, so he's eager to explore the engineering activities. Gladness Fisher knows that being a visual learner that the use of tactile activity will help her in engineering as well. Chandler Rasberry was elated to solve the mystery of what killed the fetal pig through forensics strategies.

Program Achievements: Summer STEM Campers experienced STEM career topics including jobs that

require certifications, junior colleges, degrees and post graduate studies in space, geology, environmental science, medical research, meteorology, and astronomy. Opportunities for campers to network with scientists and each other were held at NASA-JSC, Methodist Research, Galveston NOAA Sea Turtles Rice University, the University of Houston, and at the National Weather Service station.

Evaluations: All of the learning experiences that stu-dents participated in were very highly reflected in sur-veys. Many of the students' responses in the end of program were positive in regards to STEM exposure and experiences. In conclusion, programs similar to the Governor's Merit Program should continue in order to foster more STEM careers for the future .