

Thomas Edison Energy Smart School NASA – SMAP Project -2015-16

Dear parents,

NASA launched an Earth observing satellite called Soil Moisture Active Passive (SMAP) on 31 January 2015. Its purpose is to measure soil moisture globally with a high level of accuracy. However, ground measurements are needed in order to validate the satellite remotely sensed measurements. To do this, the SMAP team will compare GLOBE *in situ* (*on the ground*) soil moisture data with satellite data to determine how close they are to each other. If the two datasets agree then the SMAP team can have confidence that the satellite measurements are correct.

To support this effort, the SMAP satellite mission has initiated a 7-month-long [soil moisture measurement campaign](#) and invited GLOBE schools to participate. The SMAP Campaign begins 1 October 2015 and will be ongoing through 30 April 2016.

I am glad to announce that TEECS is registered as a globe School now. Students will collect soil moisture data following the GLOBE SMAP Block Pattern Soil Moisture (Volumetric) Protocol and enter these data into the GLOBE science database. (For more information visit <http://www.globe.gov/web/smap/overview/how-to-participate>). Once the data are in the GLOBE database, SMAP scientists and GLOBE students can view the student-collected data, through the GLOBE visualization tool, comparing them to the SMAP satellite data.

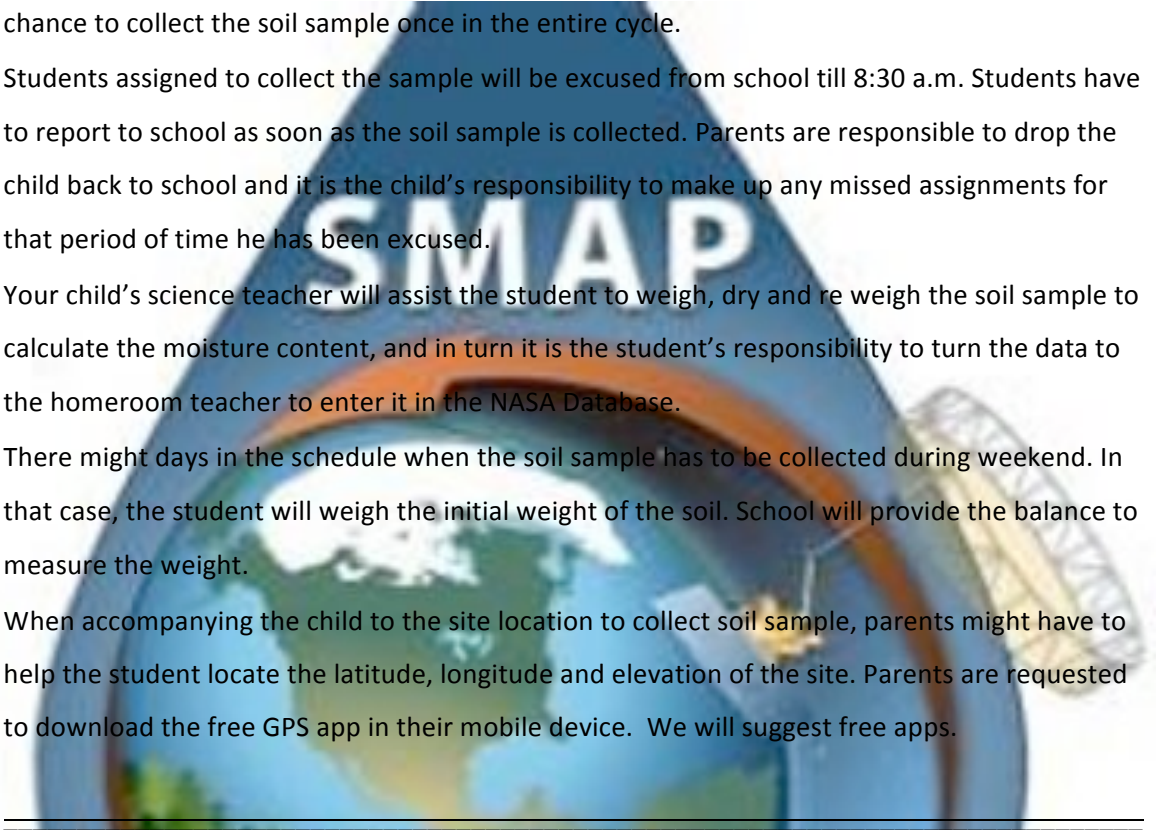
Wouldn't it be great to know that the soil moisture data that TEECS students will be submitting to the GLOBE database are being used by NASA scientists to better understand our planet's soil moisture! For more information, visit <http://www.globe.gov/web/smap/overview>.

TEECS 4th- 6th grade students are invited to be part of this prestigious NASA project. Each class will have 6 participants to collect the data. In case there are more than 6 students who have submitted their intent to be part of this mission, we will hold a lottery to select the six students for the class. Please sign and return the intent to participate form by Monday September 28th, 2015. The participants will be announced by 29th, 2015. No applications will be accepted beyond September 28th, 2015.

Thomas Edison Energy Smart School NASA – SMAP Project -2015-16

Guidelines to become a NASA GLOBE SMAP Young Scientist

- The Soil sample will be collected every 3 days when the SMAP satellite goes around our location.
- Students should be able to collect soil samples within 10 miles radius in and around the school. Parents should be able to accompany the child to collect the soil sample. Your child might get chance to collect the soil sample once in the entire cycle.
- Students assigned to collect the sample will be excused from school till 8:30 a.m. Students have to report to school as soon as the soil sample is collected. Parents are responsible to drop the child back to school and it is the child’s responsibility to make up any missed assignments for that period of time he has been excused.
- Your child’s science teacher will assist the student to weigh, dry and re weigh the soil sample to calculate the moisture content, and in turn it is the student’s responsibility to turn the data to the homeroom teacher to enter it in the NASA Database.
- There might days in the schedule when the soil sample has to be collected during weekend. In that case, the student will weigh the initial weight of the soil. School will provide the balance to measure the weight.
- When accompanying the child to the site location to collect soil sample, parents might have to help the student locate the latitude, longitude and elevation of the site. Parents are requested to download the free GPS app in their mobile device. We will suggest free apps.



<p><u>Thomas Edison Energy Smart NASA – SMAP Mission Intent to Participate FORM</u></p>
<p>I _____ (name of the parent) hereby give permission for my son/daughter _____ (name of the student) in _____ (class) to participate in the NASA’s SMAP mission. I hereby understand all the criteria to be part of this prestigious NASA project.</p>
<p>Name of the student:</p>
<p>Grade:</p>
<p>Home room Teacher</p>
<p>Parent’s name:</p>
<p>Signature of the Parent:</p>
<p>Date:</p>