**Group Term Project**

**EARS 06: Environmental Change**

**Fall 2019**

**Instructor notes**

**Project overview:**

Through this project, the students will have the opportunity to measure environmental change. Students will also be exposed to temperature and insolation related public datasets. The project is appropriate for courses in introductory environmental sciences, earth sciences, and any other courses related to the climate. It is designed to be done on students’ own time outside of the classroom throughout the course of a term or semester. There is an option to use one class time to show video abstracts that students will have created by the end.

For this project, it is expected that the students have familiarity with terms associated with the environment and climate. If not, some lecture time should be taken to establish knowledge of determinants of climate and weather. It will also be beneficial if the students have prior knowledge of the scientific method as they will be exercising it throughout the project.

**Instructor pre-project requirements:**

* Significant portion of the project includes using publicly available datasets. Although it is not expected that there are frequent changes in the public datasets, each one should be checked prior to the start of the project to confirm that they are able to be used.
  + NOAA Temperature <https://www.ncdc.noaa.gov/cdo-web/>
  + Dartmouth MacLean Solar Panel (John Stark, Facilities at Thayer) <http://s40418.mini.alsoenergy.com/Dashboard/2a566973496647334243554b772b716f3d>
  + SolarEdge Australia Solar Panel <https://monitoring.solaredge.com/solaredge-web/p/home>
* If the data is not usable, there are separate 2018 – 2019 datasets available for use.
* Students will be calibrating their shoes with rulers to measure the length of the shadow of the building. Calibration stations in the classroom will need to be set up in a location where students can easily access.
* To ensure collaborative effort of each member of the group, the students will be aggregating all data used in the project into a single Google Sheets file. Instructors should ensure that students have access to Google Sheets.
* Set proper deadlines for each deliverable