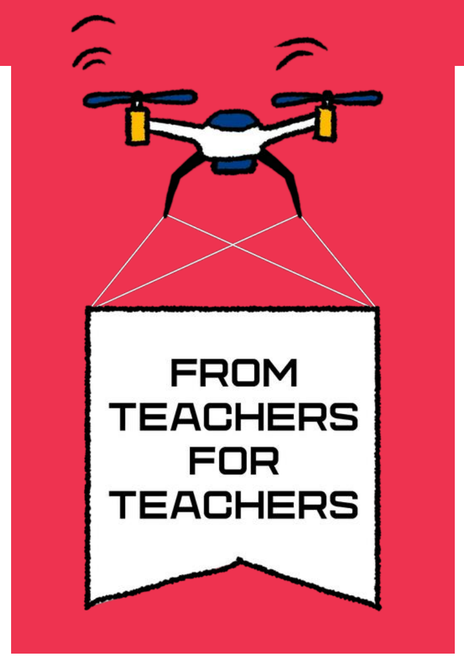

Sustainable Development Goals in Education

Bouliari Georgia, Physicist 2nd General Lyceum | Kalivia-Lagonisi | Greece

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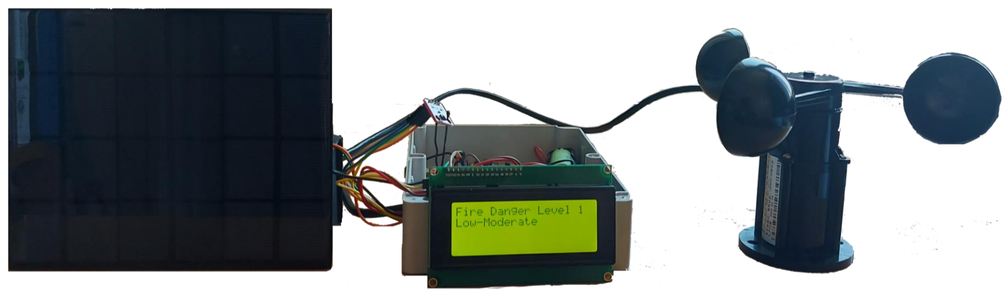
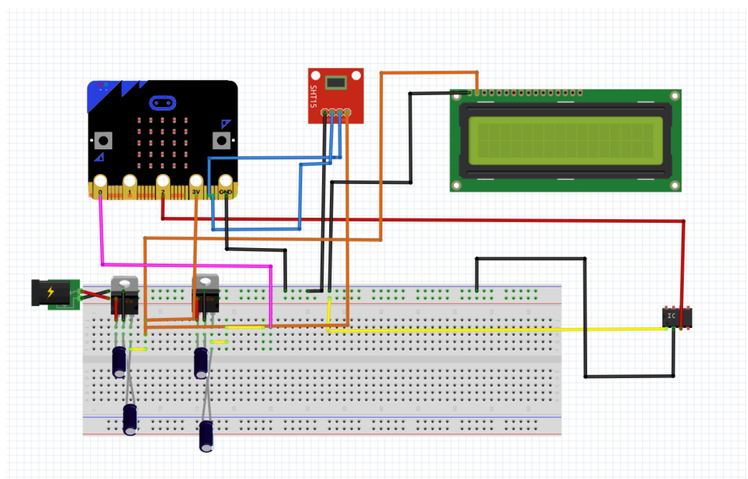
FIRE START FORECASTING SYSTEM

(FSFS)

- Satellite systems are often used to predict wildfires (meteorological stations and the civil protection data).
- Our team thought to build an autonomous fire prediction-information system, which collects local data for more reliable information.

Scan me!





- The device relies on temperature and wind sensors to collect the real-time data, which is then used to calculate the fire danger index, based on the Mark 5 indicator (improved form of McArthur's model), one of the most reliable indicators for predicting the onset of fires.
- The processor running the system is a Microbit BBC V2 which is coded in Micro-python, while also having various I2C protocols. The index is then presented on an LCD screen alongside other helpful real-time information, such as local temperature, wind speed and humidity.
- A solar panel and a lithium battery are securing the system's autonomy rendering it applicable everywhere.

The Fire Start Prediction System (FSPS):

- Provides us with reliable information and valid data about the real conditions of the area.
- Has the ability to inform a large number of people and sensitise them on the subject of fires.
- Can mobilize a part of people to help the firefighting means both in the region and in the country.
- s easy to implement and quite cheap, compared to other similar systems (i.e. portable weather stations), which do not provide the degree of risk of starting a fire.

Wild fires are an extremely serious problem not only endangering human lives but also the fauna and flora of every region, destroying the environmental equilibrium. Preventing them is the no. 1 step in saving countless lives.

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