### Investigating clover growth in different environments

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This idea originated while preparing our school garden for the GLOBE Bloom and Buzz Project.

We sowed and planted different flowering herbs, plants and shrubs which attract bees.

One of these plants is the clover plant.\_



We started asking many questions and became very curious!

We decided to sow clover seeds and observed their sprouting and growth rate.

# **Materials Used**

Clover Seeds 2 greenhouse containers Potting and garden soil Water





We

- prepared the containers and a small garden bed.
- filled the containers with potting soil, and prepared the garden bed by loosening the soil.
- sprinkled a small number of clover seeds on the soil surface.
- these were spaced about 1-2 inches apart in the container and in rows in the garden bed.
- watered seeds ensuring the soil was moist but not soggy.









#### Selecting 3 different sites within our school







Site 1: Outdoor School Garden Site 2: Indoor glasshouse container in direct sunlight

Site 3: Outdoor glasshouse container in the shade of a Carob tree



# Data collection

From each site:

- we measured the soil surface temperature and the air temperature.
- 6 readings were taken around noon for a whole month.
- Additionally, we recorded the sprouting and measured plant growth.
- Leaf colour was also observed and recorded.



### Taking soil surface t<u>emperature</u>





## Measuring plant growth



### Site 1 : Outdoor School Garden

# Taking air temperature



### Site 2: Indoor glasshouse container in direct sunlight







Taking soil surface temperature Measuring plant growth Taking air temperature

#### Site 3: Outdoor glasshouse container in the shade of a Carob tree



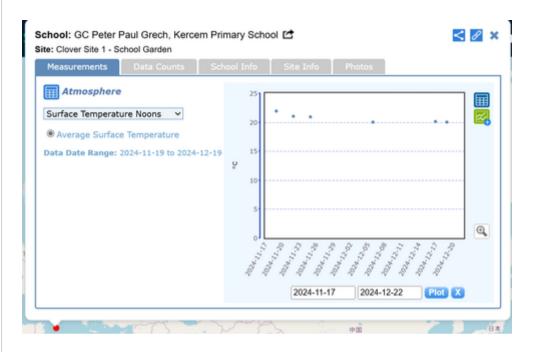




Taking soil surface temperature

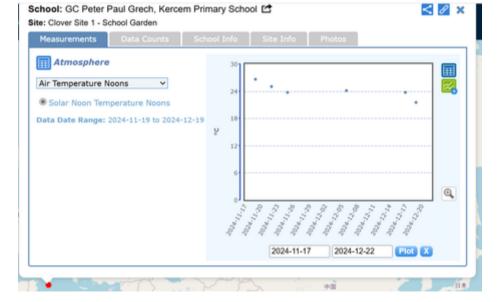
Measuring plant growth

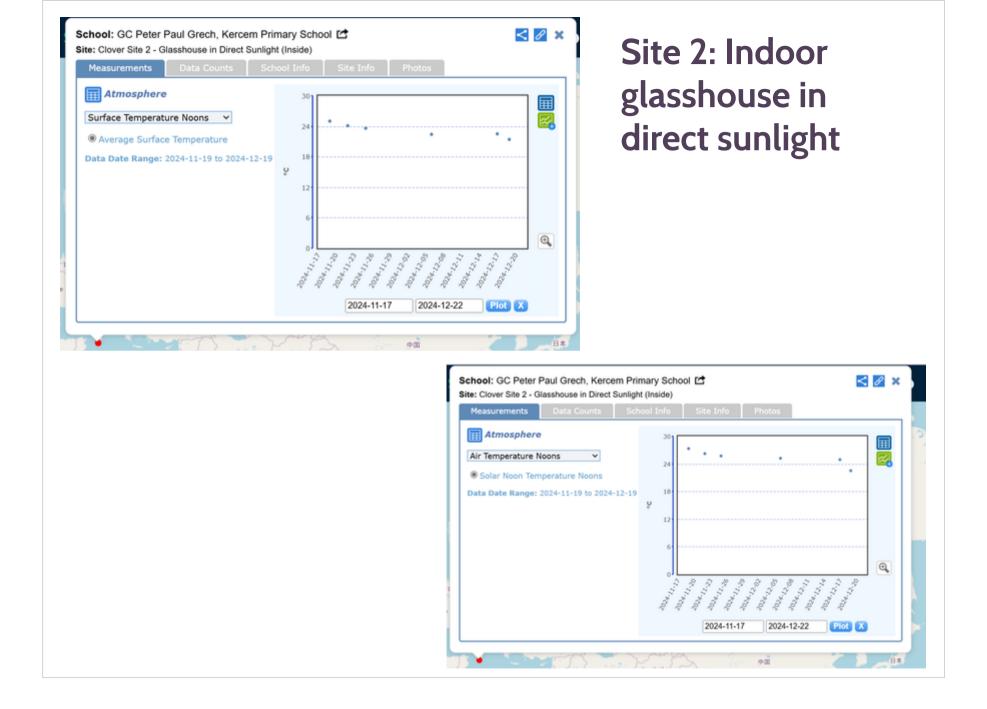
Taking air temperature

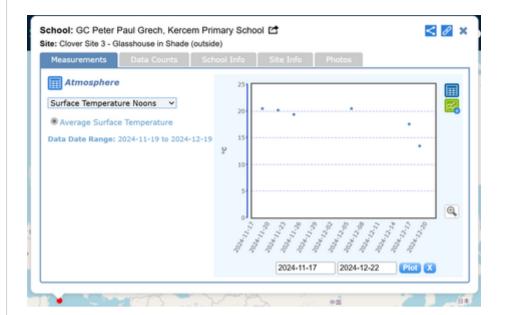


### Site 1 -Outdoor School Garden

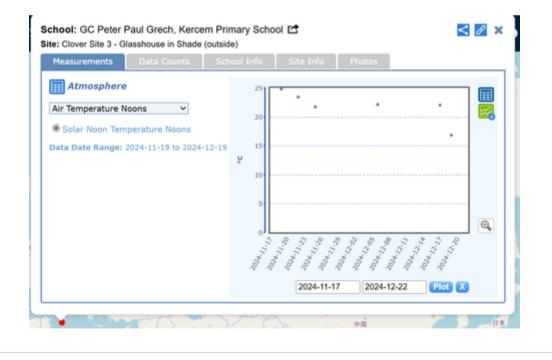
Screenshots from GLOBE website showing the air temperature and soil surface temperature graphs







### Site 3: Outdoor glasshouse in the shade of a carob tree



### **Findings**

The indoor greenhouse was the most adequate environment for the seeds to sprout and grow into healthy plants.

The temperature, moisture and sunlight provided the ideal conditions for full and fast sprouting.

However, we noticed that once the plant reached a certain height (7.5 cm) they stopped growing.

Site 3 now was the best option as it provided better conditions, like space, nutrients and water.

