



**Research Proposal: Investigating rainfall distribution across schools in Gozo**  
Gozo College Ġuże Aquilina Sannat Primary & Special Unit School, Gozo, Malta  
Students: Year 4 students Teacher: Ms Karen Attard



## Research Question

Does the amount of rainfall recorded at different school sites across the island of Gozo vary significantly over the same time period?

## Hypothesis

We hypothesize that the amount of rainfall recorded at different locations across Gozo will be very similar, since Gozo is a small island with relatively uniform climate conditions.

## Study Site

Our primary study site is **Sannat Primary School**, located in **Sannat, Gozo, Malta** (approximately **36.024° N, 14.243° E**).

The area is a **semi-rural environment**, surrounded by residential buildings, agricultural land, and open spaces. Gozo has a **Mediterranean climate**, characterized by mild, wet winters and hot, dry summers. Rainfall mainly occurs between autumn and early spring.

Gozo is a **small island** (about 67 km<sup>2</sup>) with low elevation differences, making it an ideal location to investigate whether rainfall is evenly distributed across short distances. The school is located inland but close to the coast, which may influence local weather patterns.

Rainfall data from **eight other schools across Gozo** will be used for comparison to assess spatial variation across the island.

## Data Collection Plan

### A. Data Types and Sources

**GLOBE Protocol Used:** Atmosphere Protocol **Precipitation (Rainfall)**

- Primary data collected by students using a rain gauge at Sannat School
- Additional rainfall data collected by **eight other GLOBE schools across Gozo**.

### B. Data Collection Schedule

- **Data collection period:** 12 January to 6 February (4 weeks).
- **Frequency:** Rainfall measured **daily** (excluding weekends).
- **Duration:** 4 consecutive weeks, simultaneously with other participating schools.

### C. Equipment and Tools

- Standard **rain gauge** following GLOBE precipitation protocol.
- Data recording sheets.
- GLOBE guidelines for precipitation measurements.

### D. Who Will Collect the Data?

- Students will collect daily rainfall measurements.
- Students and teachers from **eight other schools across Gozo** collect data at their respective sites.
- Teachers supervise measurements to ensure consistency.



## Background Information

Rainfall is a key component of the water cycle and plays an important role in agriculture, water management and ecosystems, especially on small islands like Gozo. Although Gozo is geographically small, local factors such as elevation, proximity to the sea and land cover could potentially influence rainfall patterns.

This study was chosen to help students understand how weather data is collected and analysed and to explore whether **rainfall varies over short distances**. Similar studies using GLOBE precipitation protocols have been carried out worldwide to compare local and regional weather patterns.

## Expected Outcomes

- To determine whether rainfall amounts differ significantly between schools across Gozo.
- To better understand local weather patterns on a small island.
- To develop students' scientific skills in data collection, comparison, and analysis.
- To contribute local rainfall data to the GLOBE database and support broader climate studies.

## GLOBE Data Use Plan

We will compare the rainfall data collected at Sannat School with rainfall data collected by eight other GLOBE schools located in different parts of Gozo. This comparison will allow us to identify similarities or differences in rainfall distribution across the island during the same period.