

DATA LITERACY TOOLKIT

Europe and Eurasia Region

Short interactive learning activities for students (ages 7-15) to improve data literacy skills.

- Can be easily added to GLOBE teaching sessions
- Lasting 20-45 minutes
- Suitable for Science or Mathematics lessons
- No prior research project experience required



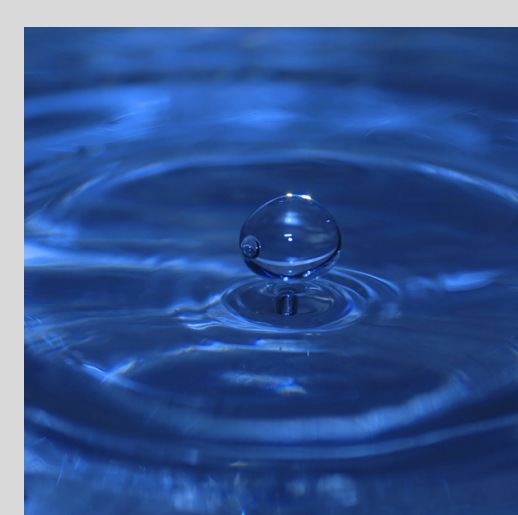
ATMOSPHERE

AIR TEMPERATURE ACROSS GLOBE DURING A YEAR

Visual presentation and interpretation of air temperature annual pattern for sites in various countries/continents and located at similar elevation.

AIR TEMPERATURE ACROSS GLOBE ON THE SAME DAY

Comparison of the air temperature measured at different locations at similar latitude the same day.



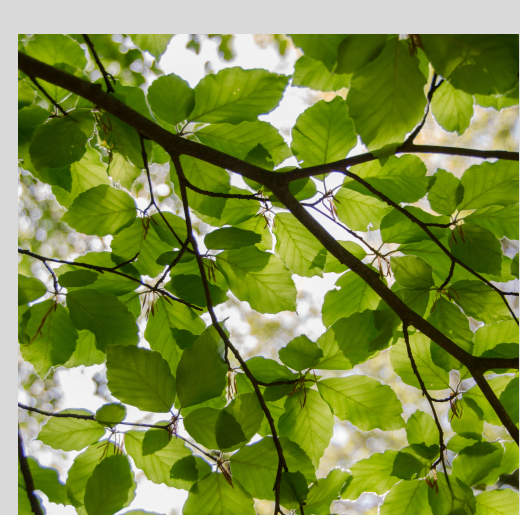
HYDROSPHERE

WATER TEMPERATURE TREND

Comparison of water temperature at three locations near each other - in the river, at the mouth of the river and in the bay.

AIR AND WATER TEMPERATURES CHANGES DURING THE YEAR

Comparison of water and air temperatures measured at the same location over the year.



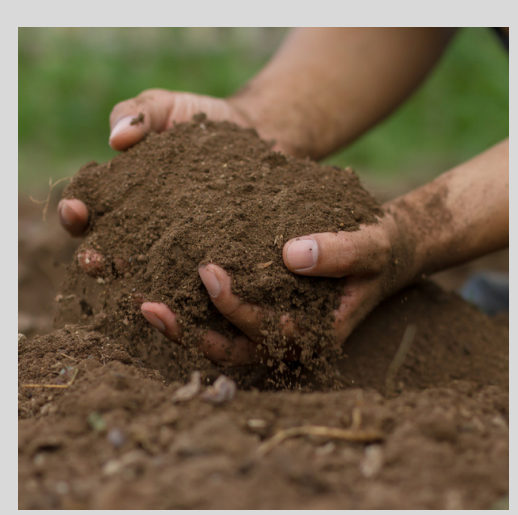
BIOSPHERE

COMPARISON OF THE GREEN-UP TIMING AT DIFFERENT LOCATIONS

Comparison of the timing of budburst and leaf growth at two locations in Croatia.

COMPARISON OF TREE HEIGHT MEASUREMENTS

Comparison of tree height measurement results using clinometer and GLOBE Observer app.



PEDOSPHERE

SOIL PROPERTIES ALONG THE CETINA RIVER BASIN

Looking at the soil properties along the river stream from its origin to the sea and interpreting the data collected.

DETERMINING THE HEIGHT OF TREES USING THE APPLICATION (GLOBE OBSERVER)

Data Literacy Learning Activity - Biosphere

The GLOBE Program

Comparison of Tree Height Measurements

Introduction

- The activity is based on results of Elementary school Rugvica, Croatia.
- Students measured height of nine trees
- They used two methods of measuring a tree height - clinometer and GLOBE Observer app
- Students compared results and tried to find out, which measurement method is more precise

Tree	Clinometer (m)	GLOBE Observer (m)	Difference (m)
1. White poplar 1 (Populus alba)	8,74	7,72	1,02
2. White poplar 2 (Populus alba)	9,00	6,52	1,48
3. Bare tree	8,66	8,85	0,19
4. Lime tree 3 (Tilia cordata)	4,64	5,00	0,36
5. Willow (Salix babingtonia)	8,18	6,38	1,8
6. Cherry (Prunus cerasus)	6,80	6,46	0,14
7. Lime tree 2 (Tilia cordata)	6,03	4,65	1,38
8. Fig tree (Ficus carica)	4,00	3,82	0,18
9. Grey willow (Salix cinerea)	16,42	11,95	4,47

- PowerPoint format for easy translation and use
- Each activity includes dataset and results
- Based on classroom activities done by GLOBE teachers
- Reviewed by GLOBE Trainers

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