

Spark the Facts Toolbox — README

What Is This Toolbox?

This toolbox supports students in learning how to find, read, visualize, and act on real data. It was developed as part of the Spark the Facts project financed under the Digital Sparks call, and follows a simple idea: data is only powerful when you know how to understand it. By the end of this toolbox, students will have worked with real data from the UN, Eurostat, and OpenAQ, built charts in Desmos, and explored a real mobile app by MIT app Inventor built from 10 years of air quality measurements in their own city.

What Is Inside?

The toolbox contains **5 files**:

File	What is it?
Worksheet_1.pdf	What is the Data Telling Us?
Worksheet_2.pdf	Visualizing and Comparing Data
Worksheet_3.pdf	Statistics in Desmos
Worksheet_4.pdf	From Real Data to a Mobile App with MIT App Inventor
Spark the Facts toolbox.xlsx	All datasets students need, organized in 4 tabs



The Excel File

Tab	Information
Tab 1	Introduction to the toolbox
Tab 2	Air pollution in Skopje
Tab 3	Eurostat Data
Tab 4	UN data

How to Use This Toolbox

Each worksheet is self-contained and takes **30 minutes**. Students work directly on the printed worksheet while using Desmos or MIT App Inventor on a laptop or tablet. The worksheets build on each other — it is strongly recommended to follow the order.

Two things students need before starting:

- A free Desmos account at desmos.com
- A free MIT App Inventor account at ai2.appinventor.mit.edu

Data Sources

All data in this toolbox comes from verified, open sources: **OpenAQ** (openaq.org), **Eurostat** (ec.europa.eu/eurostat), **United Nations** (data.un.org), and the **Macedonian Ministry of Environment** (air.moepp.gov.mk). Students are encouraged to visit these sources directly and explore further.