



## How to do “Data Talks” with pupils

### Summary

**Short Description:** This document explains how to find helpful advice to conduct “Data Talks” in the classroom.

**Language:** English

**Suitable for age:** 7-18 years

**Key words:** Data Talks, Data Literacy, Data Visualization

**Format:** .doc

**Link:** <https://www.youcubed.org/resource/data-talks/>



1. Start with the big idea in mind: Go to <https://www.youcubed.org/21st-century-teaching-and-learning/> and watch the **2 minutes video** from Jo Boaler:



2. Get acquainted with some data science topics appropriate to the age group of your students (range from elementary to high school). Here you can find some good starting points: <https://www.youcubed.org/resources/data-science-online-course-lessons/>

## Data Science Online Course Lessons

Lessons from "21st Century Teaching and Learning." Grade ranges suggested, but with creativity, they can be used in any grade!

DOWNLOAD ELEMENTARY LESSON: SORTING BUTTONS

DOWNLOAD ELEMENTARY LESSON: DATA TELLS US ABOUT OURSELVES

DOWNLOAD ELEMENTARY LESSON: SUPPLY PARADE

DOWNLOAD ELEMENTARY/MIDDLE LESSON: SWIMMING WITH WHALES (THANKS TO MIDSCHOOL MATH)

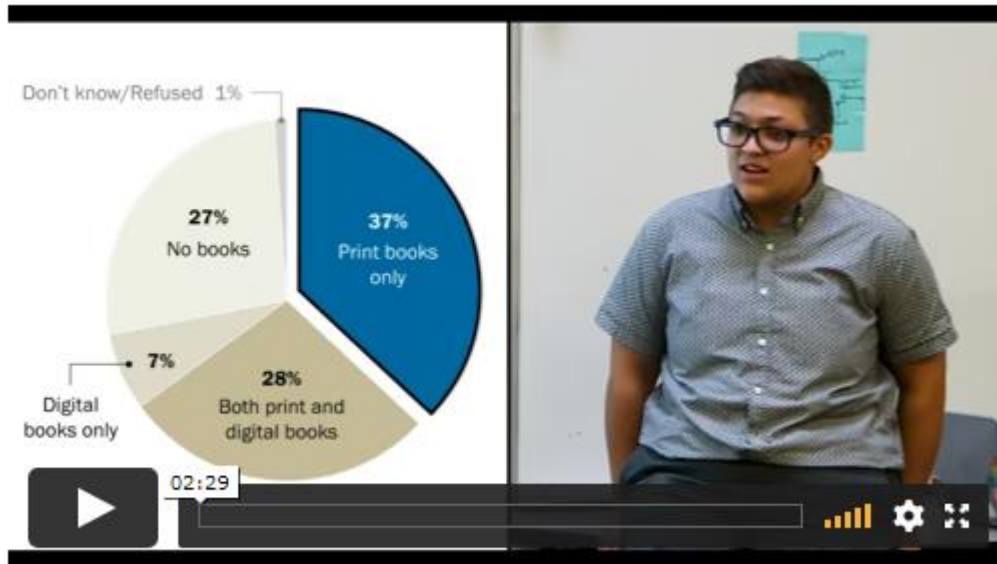
DOWNLOAD MIDDLE/HIGH LESSON: WHAT'S IN THE BAG?

DOWNLOAD MIDDLE/HIGH LESSON: WHAT'S THE CHANCE OF THAT?

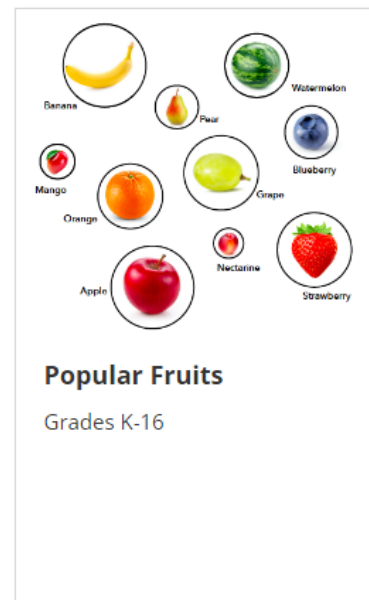
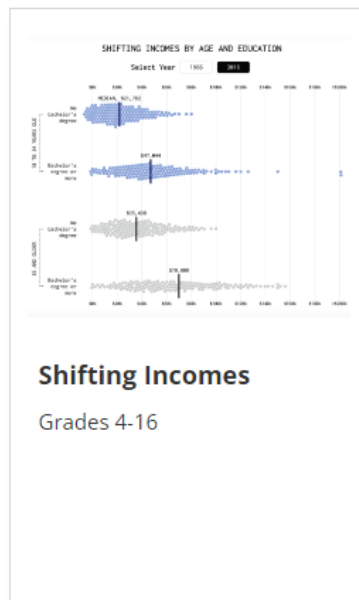
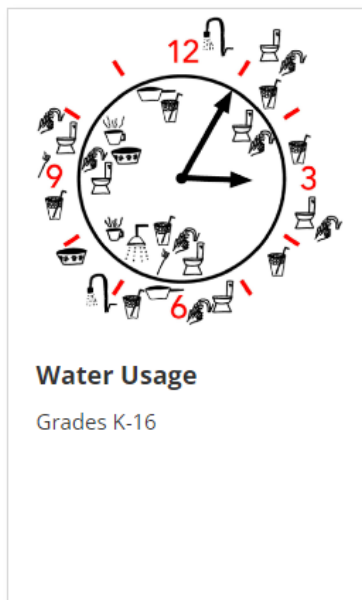
DOWNLOAD MIDDLE/HIGH LESSON: CAN THEY SAY THAT?



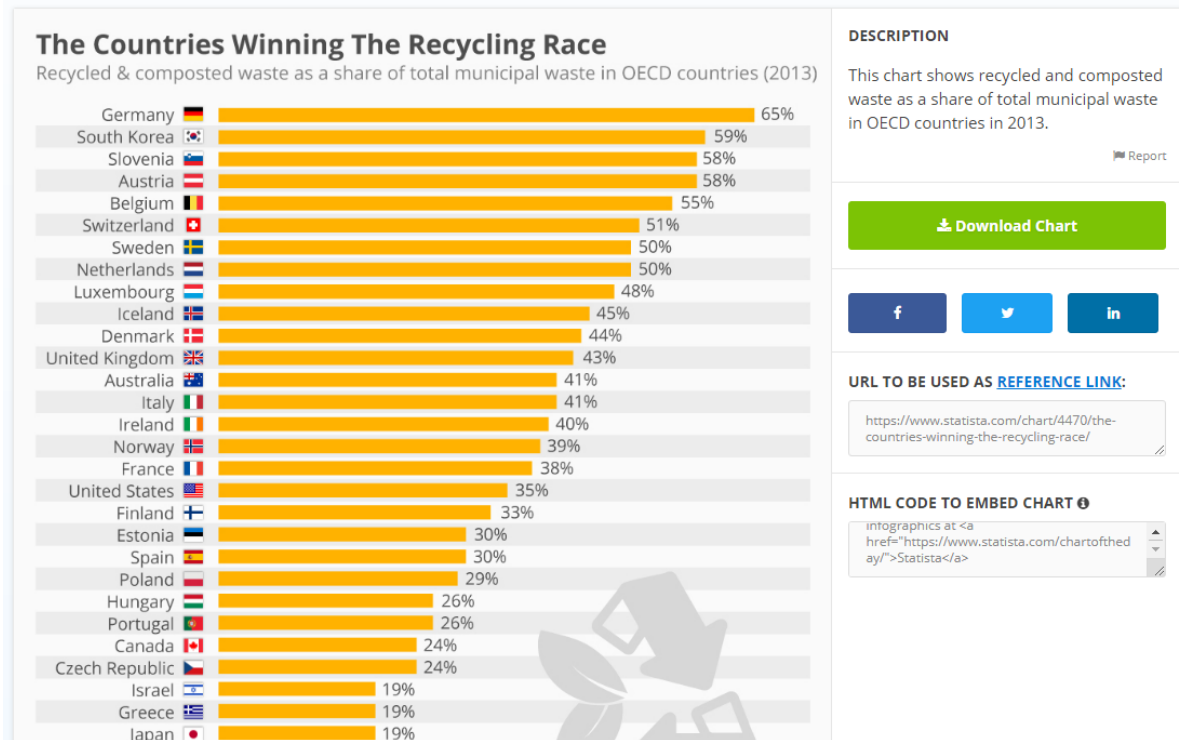
3. Look at an example of a Data Talk in a classroom. Follow this link to a **3 minute video example**: <https://www.youcubed.org/resources/what-do-you-notice-what-do-you-wonder/>



4. Try out some Data Talk resources with your students. Follow this link to find some visualization of datasets: <https://www.youcubed.org/resource/data-talks/>



Often you can download the data visualization from a statistics website (at the national or international level). As an example follow this link: <https://www.statista.com/chart/4470/the-countries-winning-the-recycling-race/>



5. Get to the real science data and discuss the provided data visualization with your students. You can follow this link <https://hive.oewf.org/cloud/index.php/s/dMnnQQsPqpeyRRn> to get some real data from our latest experiments in the Negev desert, Israel during the AMADEE-20 mission (simulation of a human / robotic Mars exploration).

## AMADEE-20 MARS SIMULATION

Between 04-31Oct2021, the Austrian Space Forum – in cooperation with the Israel Space Agency as the host agency and D-MARS – conducted an integrated Mars analog field mission in the Negev Desert in Israel – the AMADEE-20 Mars simulation. The expedition was carried out in a Martian terrestrial analog and directed by a dedicated Mission Support Center in Austria. A small field crew of highly trained analog astronauts with spacesuit simulators conducted experiments preparing for future human and robotic Mars exploration missions.

Simulating Mars Human-robotic surface activities in terrestrial analogs has evolved into an efficient tool for developing exploration mission architectures. They facilitate to understand the advantages and limitations of future Human planetary missions, becoming an added value for the development of remote science operations, helping to understand the constraints and opportunities of the technology and workflows.



## Scientific experiments

<b>ACT</b> Goldsmiths University of London, UK	+
<b>AEROSCAN</b> DOME Drone Operations for Martian Environment, University of Houston, USA, Airvision srl, Italy	+
<b>AMAZE</b> Institute of Smart Systems, Univ. of Klagenfurt, Austria	+
<b>EXOSCOT</b> Graz University of Technology, Austria	+
<b>GEOS</b> Austrian Space Forum, Austria	+
<b>HUMAIN</b> Austrian Space Forum, Austria	+
<b>Interteam</b> Center of Applied Space Technology and Microgravity (ZARM)	+
<b>Marslock</b> Center of Applied Space Technology and Microgravity (ZARM)	+
<b>MEROP</b> University of Lisbon, Portugal	+
<b>MICROBIOME</b> Helmholtz Zentrum München, Research Unit for Comparative Microbiome Analysis Department of Dermatology and Allergology, Technical University of Munich, School of Medicine	+
<b>MICRO-POTENTIAL</b> Dead Sea and Arava Science Center, Israel, Tel Aviv University, Israel, Weizmann Institute of Science, Israel	+

Link: <https://oewf.org/en/amadee-20/>

