Clean Water & Sanitation

Measuring Our Climate

The Ocean & River Cleanup

Close the Tap on Plastic in Water – River System Cleanup (start at 7:20)

Start point 7min 20 sec https://youtu.be/KyZArQMFhQ4?t=441

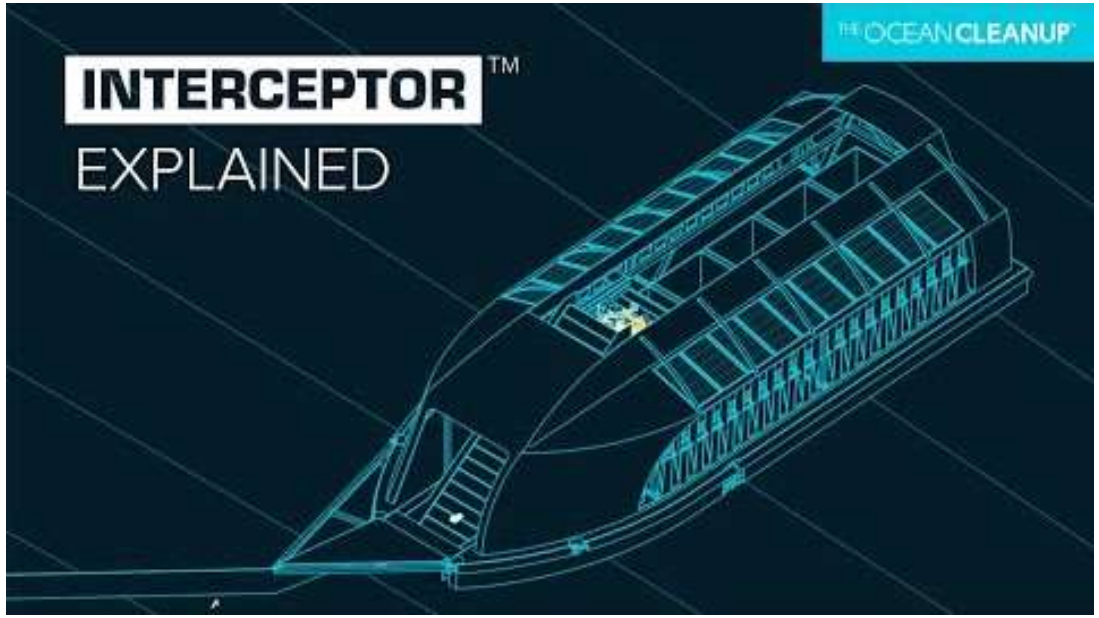
Full video https://youtu.be/KyZArQMFhQ4

The Ocean Cleanup

The Ocean Cleanup

Oceans

Rivers



https://youtu.be/bm1rH70wfJo

Kids, Play, Water Pumps, Clean Water

- Play Pumps learning from failure and ensuring proper input from the communities
- A plan failed and setting revised goals
- http://www.playpumps.co.za/
- Play pumps International | National Geographic
- Troubled Water

https://youtu.be/cv1V5gV_nRQ

The Sustainable Development Goals Explained: Clean Water and Sanitation

https://youtu.be/LCKsU4bPFOQ

Thomas & Friends on Clean Water & Sanitation

https://youtu.be/SIhBFl-eaYI

https://youtu.be/Cm7Ra5fbDic

Ambitious, but not rocket science: SDG #6

Freight Farms Reducing water use for agriculture in arctic and deserts

- Growcer
- Freight Farm Site
- Crop Box

- Arctic Growing Systems
- Urban Growing Systems
- Desert Growing Sytems

- Growcer Photos

https://youtu.be/cC3dHdW6h-s

Global Goals

https://www.globalgoals.org/6-clean-water-and-sanitation

Lazy Person's Guide To Saving The World

Ensure Access to Clean Water and Sanitation for All

World's Largest Lesson Goal 6

Goal 6 targets by 2030

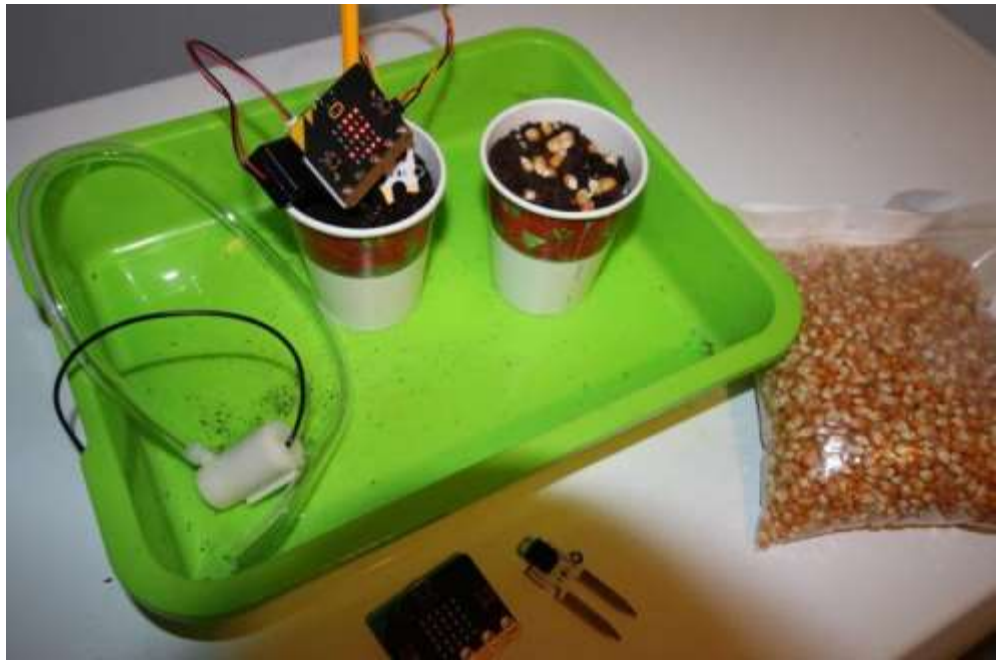
- **6.1** By 2030, achieve universal and equitable access to safe and affordable drinking water for all
- **6.2** By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations
- **6.3** By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally
- **6.4** By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity
- **6.5** By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate
- **6.6** By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes
- **6.A** By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies
- **6.B** Support and strengthen the participation of local communities in improving water and sanitation management

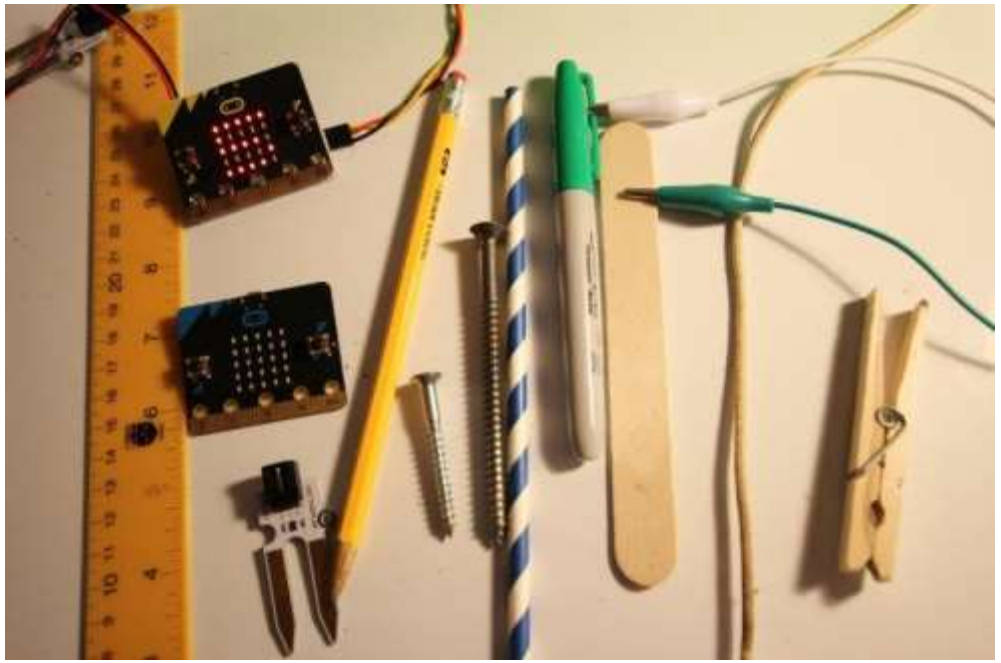
- https://sdgs.un.org/goals/goal6

Micro bit – some possibilities

1. Measure moisture of soil and water plants
2. Measure amount of sunlight/temperature and open/close vents in a greenhouse
3. See if light beam is broken over river to indicate plastic floating down river. Measure light to see if tank is full on river cleanup boat
4. Measure water level at the end of a well drill to see if well dig is successful
5. Water sensor down stream from a reservoir dam to indicate water level
6. Light sensor on side of water sample to indicate water clarity

Water Sensor



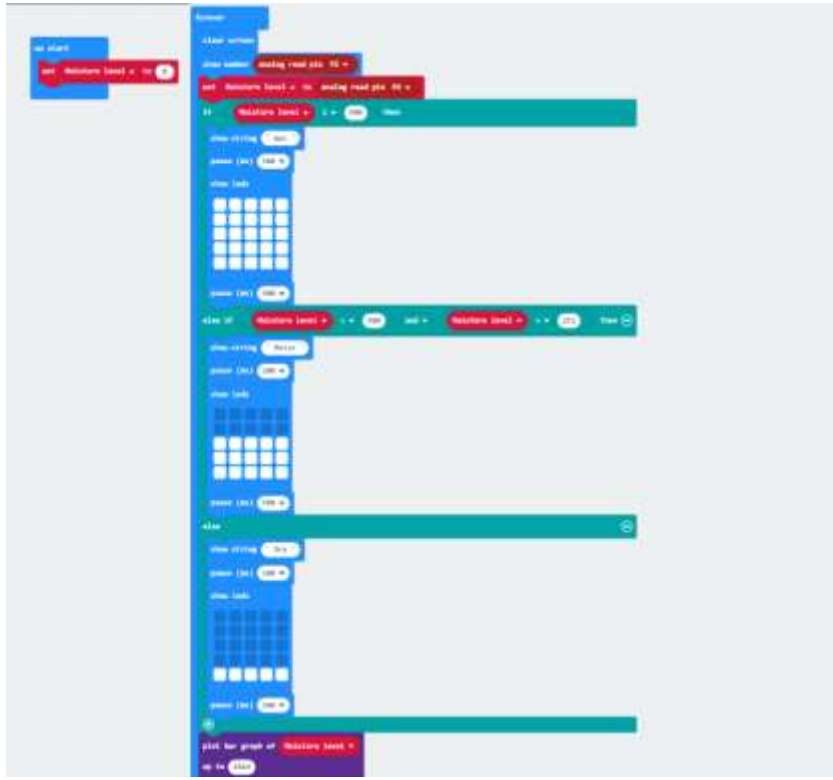


Moisture Sensor for Plants

- How does the type of material used for the sensor impact readings (conductive / not conductive)
- As the moisture level increases more lines appear on the screen.
- Measures three tiers of soil moisture: wet, moist, or dry

Link to code

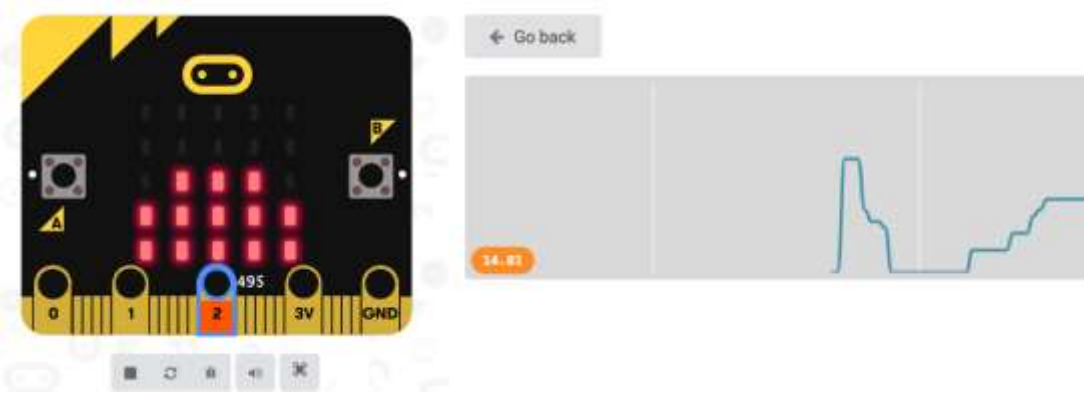
https://makecode.microbit.org/_Y2KT9xFHhbA0

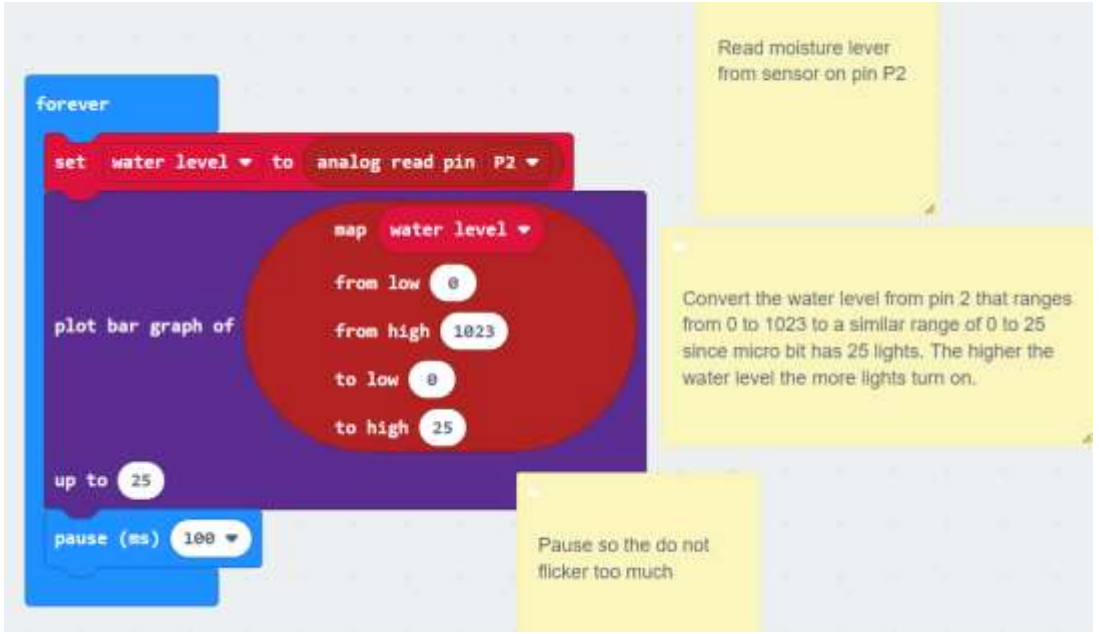


Water sensor for well

Attach sensor to straw, drill in soil to find a water source

https://makecode.microbit.org/_ifHHVrMckdye





Clean Water

Ontario Clean Water Agency http://www.ocwa.com/

Water First https://waterfirst.ngo/

David Suzuki Foundation – Drinking Water Advisories
https://davidsuzuki.org/project/drinking-water-advisories/

Drinking Water Ontario https://www.ontario.ca/page/drinking-water

Resources from Coding Change

LESSON PLAN

POWERPOINT SLIDES