Grade 2 Science - Air and Water in the Environment

Water Use & Conservation Technologies

Introduction - water use

Discussion

What are some ways you use water in your daily life?

Why is it important to take care of our water?

How can you use less water at home or school?
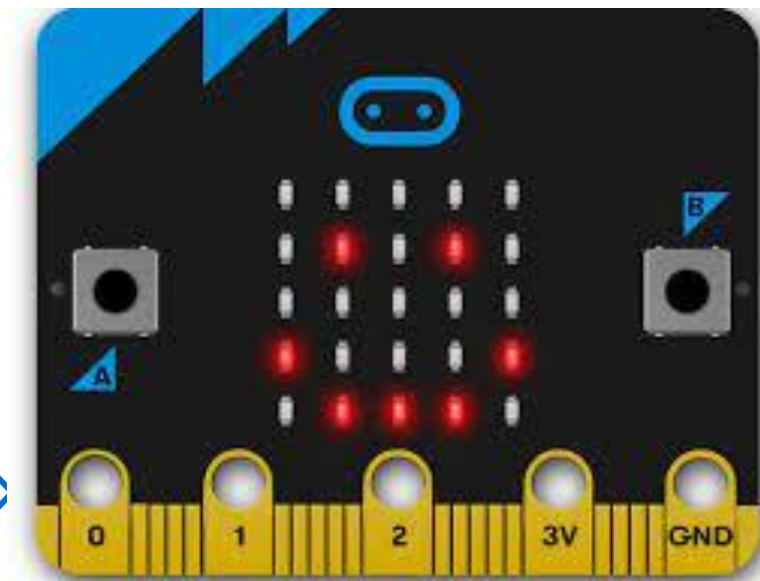
Watch This Video!

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Introducing Micro:bits

Want to learn more?

1. Micro:bit introductory lessons "First Steps"

2. Teacher-Made Micro:bit guide & science lessons

3. Make Code - try out a few tutorials!
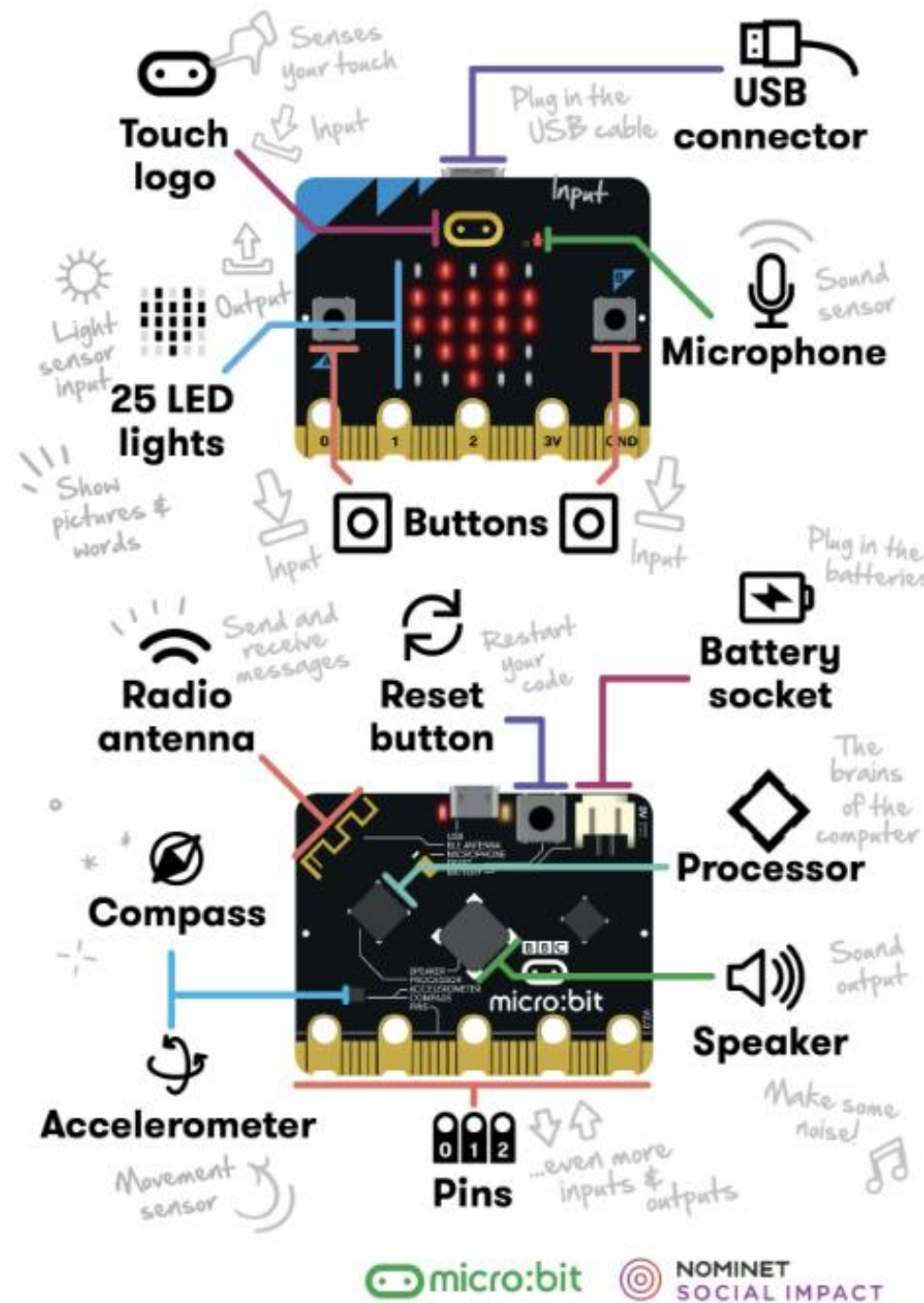
Watch This Video!

Introducing Miro:bits

Computational thinking
- Inputs & outputs

Action: Water Use & Conservation Device
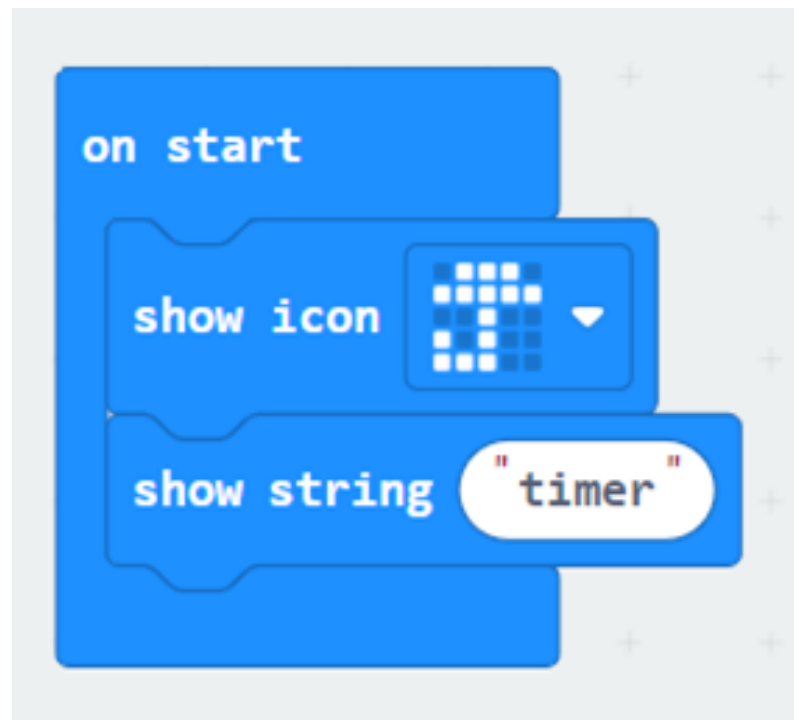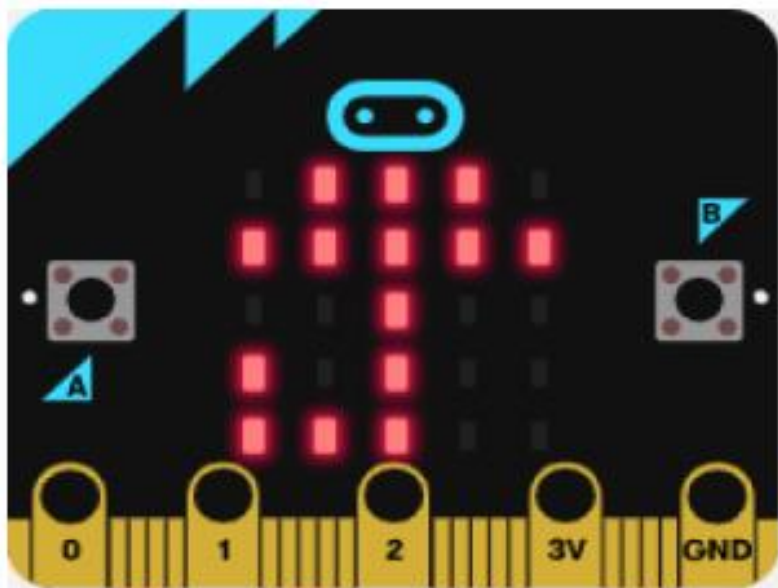
Water use timer

- How can a timer help you use less water?

- What are some examples of ways you can use a water timer? (Kitchen, bathroom, yard, etc.)
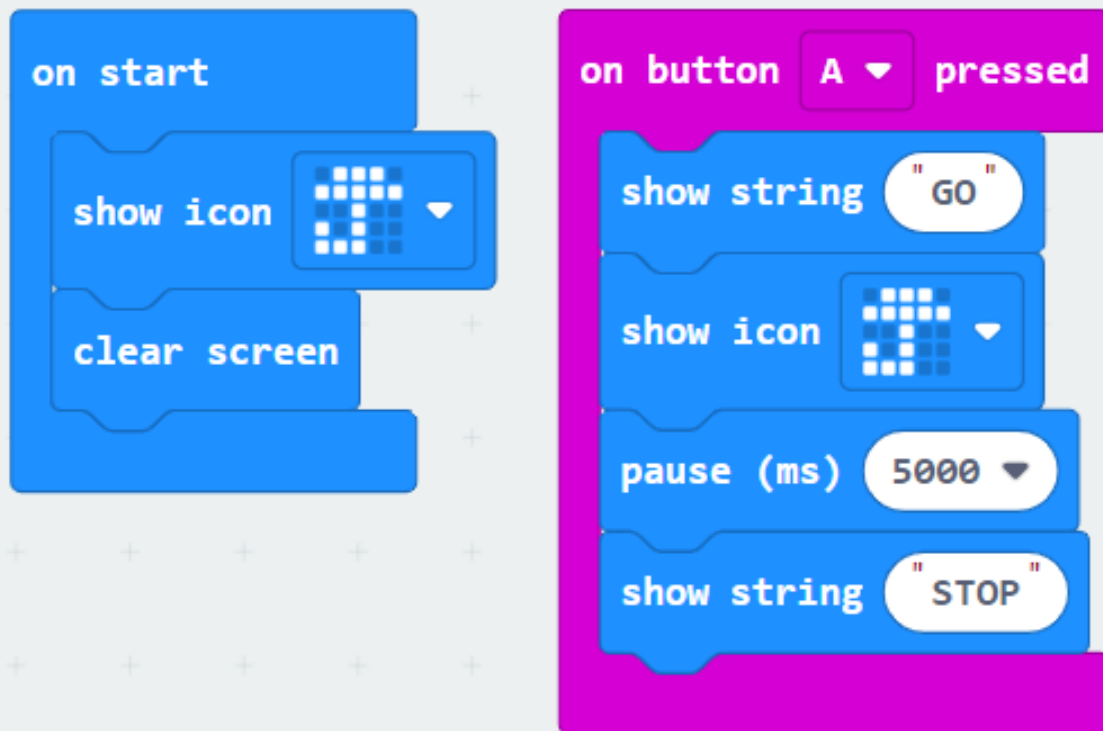

LET'S BUILD A WATER TIMER!

1. TIMER IMAGE

Try out this simple code in MAKECODE!

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2. WATER COUNTDOWN TIMER

= **5 seconds**

You can change the time:

- **20 000 = 20s (wash your hands)**
- **300 000 = 5 minutes (shower)**
- **Other?**

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3. WATER TIMER ALARM V2

Works with V2 micro:bits only

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DEBUGGING
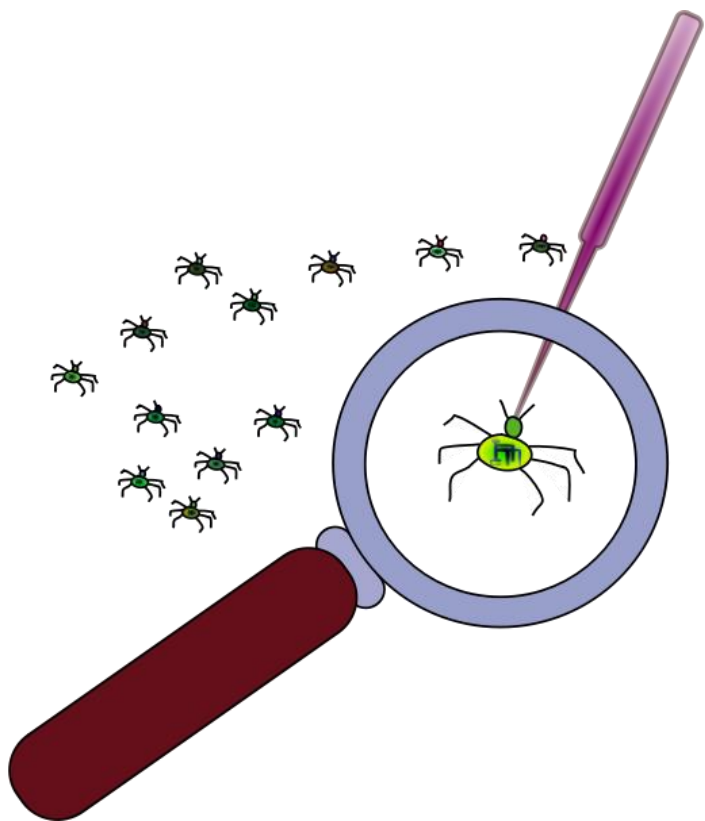
It doesn't work!

- A Micro:bit is only as good as the code! Go through it carefully and even restart from scratch if you have to.

- Think like a machine. Take it one step at a time and test out each step separately as you go

- Ask a classmate or teacher for help.

- When it doubt, look it up online!
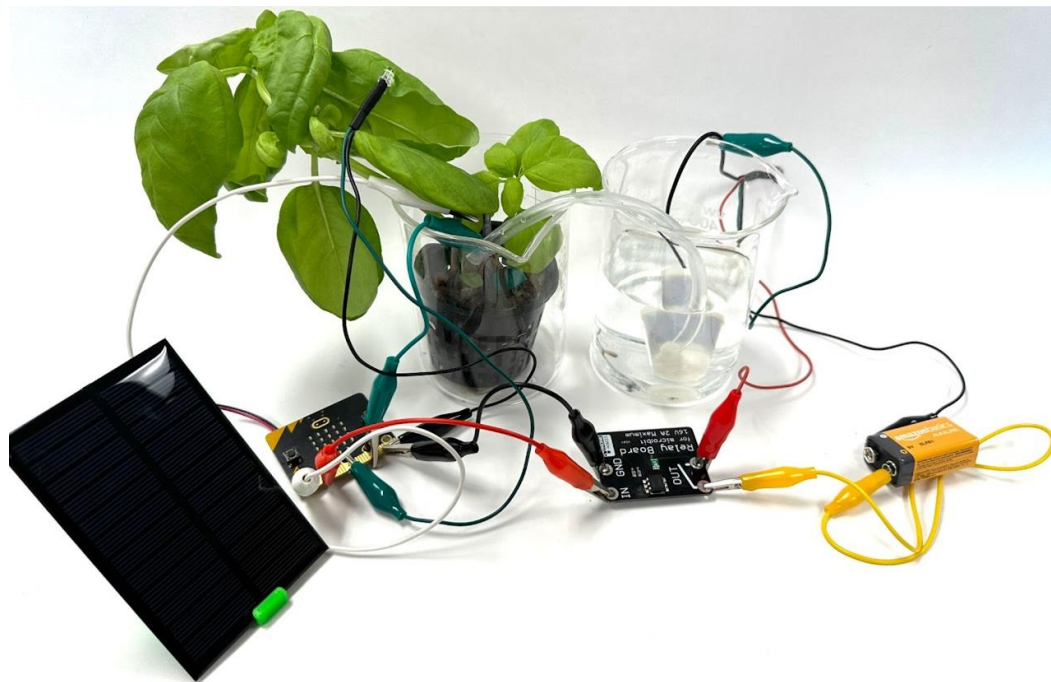
Consolidation

REFLECTION

- Why is it important to use less water?

- What are other ways that you can reduce water use?

- What were some of the challenges in building and coding a micro:bit system?

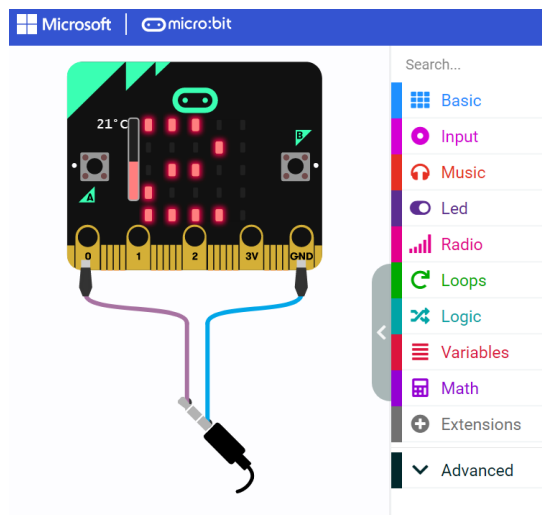- If you could build ANYTHING to help save water, what would it be?
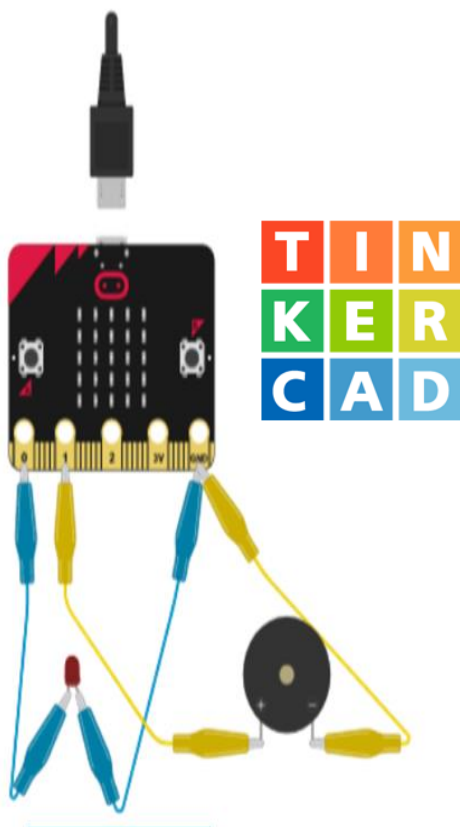
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Extension – Automatic water pump

You can code a micro:bit to turn water off and on automatically!

How can this help you reduce your water use?

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Accomodations

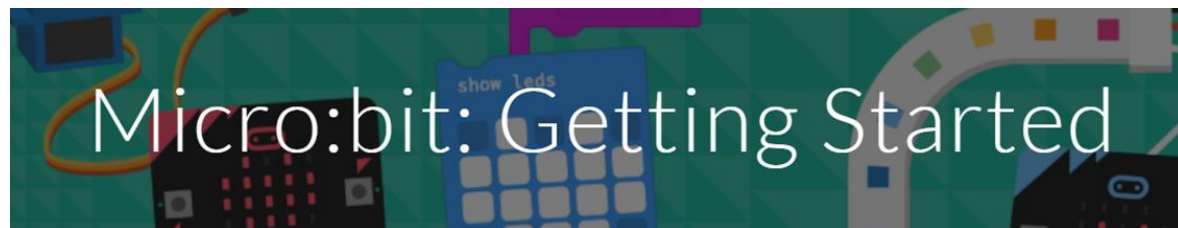## No micro:bit? No problem!

- You can still build, test, and debug using MakeCode!

- You can also build virtual Micro:bits in Tinkercad too!

TINKER CAD

Microsoft · micro:bit

21°C

Search...

Basic
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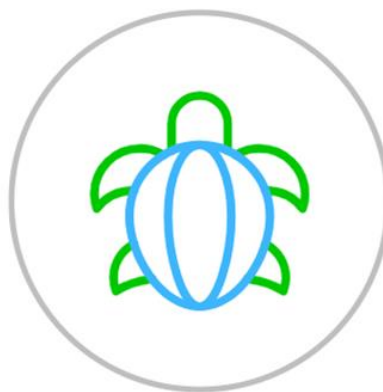
Additional Resources

BLACK GOLD SCHOOL DISTRICT MICRO:BITS!

MICRO:BIT DO YOUR :BIT
UN Sustainable Development Goals

micro:Bit Countdown Timer

MICRO;BIT LESSONS & Saving Sea Creatures

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