

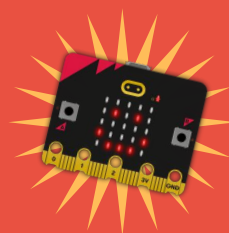


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REACH FOR THE STARS!

Summer School Programme


micro:bit



UK Research
and Innovation



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Activity 1

Jump to the moon

Count steps as you jump!



All Astronauts need to be fit!

To prepare for your mission, you will need to make sure that you have warmed up properly. Your Micro:bit will set you a task to do this properly.

You can do this by either jumping, skipping, doing star jumps or jogging on the spot.

instructions

1. Press button A to start and the message 'Start' will be displayed.
2. Jump or skip for 30 seconds.
3. The message 'Rest' will be displayed.
4. Rest for 60 seconds.
5. The program will repeat this 3 times.



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Activity 2

Building an astronaut core

Create a 'beep' test.



Not only do Astronauts have to be fit, but they also have to be quick! Your Micro:bit will set you a challenge to see how many bases you can reach in 2 minutes (120 seconds).

Every time you reach a base, you will need to press button B to make it count towards your final score!

instructions

1. Set up two bases. Press button A to start and the message 'Hello get ready to run' will be displayed.
2. Run between the bases, and each time you get to a base; press button B to add to your score.
3. The timer will run for 120 seconds.

Base 1



Base 2



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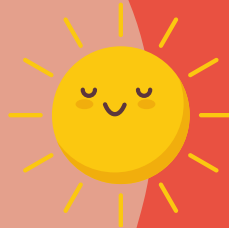
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Activity 3

Beep for safety



Detect how strong the sun is by creating a sensor.

When you are exploring different planets, you need to make sure you are safe and not exposed to too much UV light.

Your Micro:bit will be able to guide you by showing how much light you are exposed to!

instructions

1. Take your Micro:bit into bright light or sunshine.
A picture of the Sun will be displayed if it is too bright.
2. Take your Micro:bit into the shade.
A picture of a cloud will be displayed.
3. Take your Micro:bit into a dark area (or cover it with something) and the screen will clear.



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Activity 4

Mission Control

Explore the immediate environment and report back to base.



When you are exploring a different planet, you need to be able to report the things you find. Your Micro:bit can send signals to base and report every time you find something new.

instructions

1. Assign one person to **base commander** and receive your report. Every time you find a new plant or flower press **button A** to send your report back to base.
2. If you find an animal or an insect press **button B**.
3. When you have finished exploring, press **button A & B at the same time**.
4. Return to base and see how many things you have found. Now **swap places** and try again.

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Activity 5

Speed of light

Create a way of measuring and recording reaction times.

Not only do astronauts have to be quick; they also have to be able to keep a steady hand.

Each time you lose your balance, the Micro:bit will detect this, show you a symbol and you will lose a point. See how far you can get before you lose all your points!

instructions

1. Plan a course with obstacles in the way, (such as trees) or if indoors; cushions/furniture.
2. Navigate the course, trying to keep the Micro:bit level so that it doesn't get shaken, tip left, right, up or down or turn over. Each time it does, then you will lose a point!



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