OurKidsCode
FAMILY CODING CLUBS

Frustration

Design and make a buzz wire loop game of concentration and steady hand.

The idea is to move a hoop from one end to the other of a curving wire without touching the wire.

What you need

- ☐ String – one or two metres
- ☐ Metal gardening wire - 50cm
- ☐ Wire cutters
- ☐ Modelling clay
- ☐ Crocodile clips
- ☐ Micro:bit v2

ourkidscode.ie/frustration

1 Set up

- Explain being positive to new members
- Look at project and agree jobs

2 Warm up

Two people, called Holders, stretch a long piece of string taut between them.

A third person makes a Circle around one end of the string using two hands.

Gripping the string tight between them, the Holders try to walk the length of the string through the Circle, standing still, without touching it – if it does the Circle squeaks! A fourth person, Counter, counts down a life, from nine, with each touch. The game is over when the Holders get to the end or have no lives.

Make it harder with a smaller circle!

3 Create - code

```
on button A ▼ pressed
    set lives ▼ to 9
    show number lives ▼
```

```
on pin P0 ▼ pressed
    if   lives ▼ > ▼ 0   then
        play sad ▼ until done ▼
        set lives ▼ to   lives ▼ - ▼ 1
        show number lives ▼
    else                              ⊖
        play hello ▼ until done ▼
        show string "Game over!"
    ⊕
```

Connect to the MakeCode website: **makecode.microbit.org**

1. Click on 'New Project'.
2. Name it 'Frustration'.
3. Find the pieces in the middle column under Input, Variables, Basic, Logic, Music and Math.

You can make the game harder by reducing the lives from 9 to 3.

Reviewer job

Test the program

On the picture of a Micro:bit on the left of the screen, click the button just above the **A** to reset the game – 9 should show.
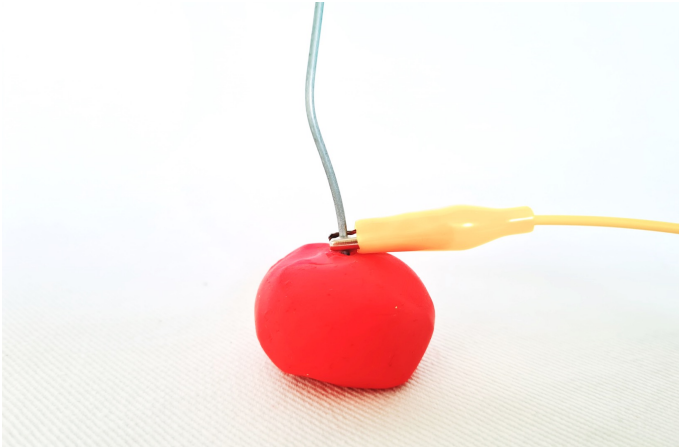
Click Pin0 nine times to test touching the wire – after using up nine lives, it should show 'Game over'.

1. Cut the gardening wire into 30cm and 20 cm lengths

2. Bend the 30cm piece of wire to make a smoothly curved path with several bends.

3. Stick two pieces of modelling clay to the table to support the wire.

4. Push each end of the wire into the pieces of modelling clay.

5. Attach a crocodile clip from the GND hole on the Micro:bit to one end of the wire.
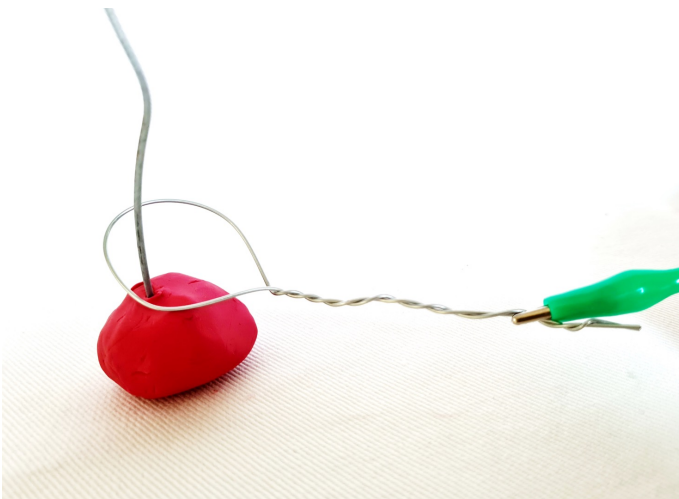
6. Make a hoop with the 20cm piece of wire by twisting ends together and insert one end of the curved wire into the hoop before replacing in the clay.

7. Attach another crocodile clip from the pin 0 hole on the Micro:bit to the handle of the hoop.

3 Create - make

Maker job

You can make the game harder by making the hoop smaller.

Help: It may help to add a handle with modelling clay or tape to prevent conduction through your body making a circuit!

Reviewer job

Once the code is downloaded, test the game by moving the hoop along the curved wire and touching enough times to lose!

4 Share

Play with what you have made.

Show it off to everyone else!

Look at everyone else's work and ask how it went for them.

5 Reflect

Please **fill in the reaction form** once for each person:

ourkidscode.ie/reaction

Discuss with everyone in the room what you felt and what could you do in future.

Did you have fun?

Learn anything? More confident?

Think you and your family might like to do more?

6 Plan

At the end of every MeetUp, families plan the next one by choosing a project to work on and deciding who will do which tasks to organise it.

Make some notes here.

You will find these useful documents on our website:

- Running a MeetUp
- MeetUp Checklist
- Being a positive club
- Forming a family team
- Choosing Projects
- Choosing a Warm Up

ourkidscode.ie/run-a-club/

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