OurKidsCode
FAMILY CODING CLUBS

1 Setup
2 Warm up
3 Create
4 Share
5 Reflect
6 Plan

Rock-Paper-Scissors

Make and code a wrist computer wearable game.

What you need:

- Scissors
- Duct tape
- Velcro
- Stickers & pens
- Micro:Bit
- Laptop & Mouse

ourkidscode.ie/
rock-paper-scissors

Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin

Rialtas na hÉireann
Government of Ireland

Taighde Éireann
Research Ireland

Be positive

1. What did you feel about the Taster session?

2. How can we create a positive atmosphere again this time?

3. Write some words or draw some pictures in the bubbles.
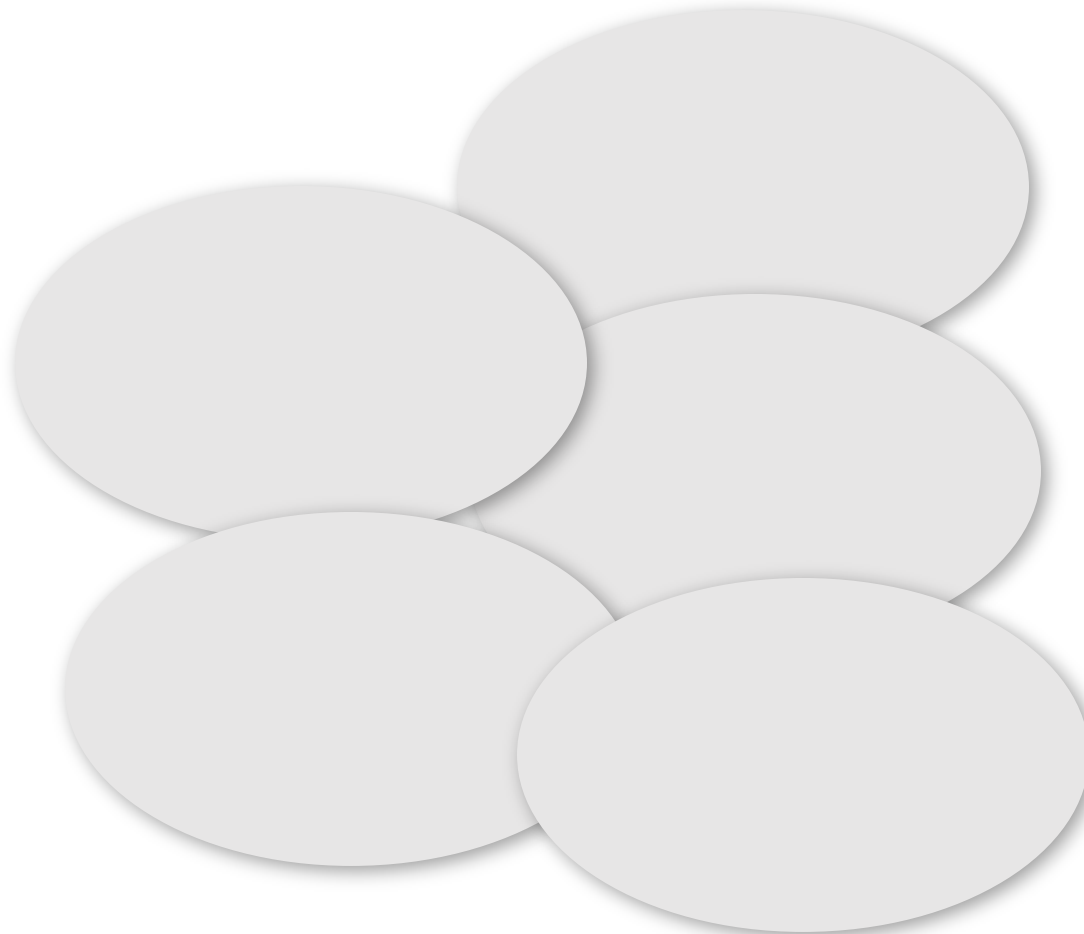
1 Setup

Discuss what jobs you will do in your team

An **organiser** sees that everyone is involved, writes down an agreed plan of what to do in what order, checks that it's working, changes it as needed and makes sure that you all start and stop at the right time.

The task for a **designer** is to draw & note down the team's agreement on what the challenge is and on how you will make it look and work.

A **coder** operates the computer to place blocks together to make the sequence of steps that make it work.

A **maker** cuts materials, fixes together and decorates.

A **reviewer** checks that all is good by asking:

1. Does it look right?

2. Is it working?

3. Are there steps missing?

Have a competition

All families should practice **Rock-Paper-Scissors** first to be sure they know the rules and how to decide the winner.

Then, each person finds an opponent and plays a game of **Rock-Paper-Scissors**.

If you lose, congratulate your opponent and watch the rest of the competition, shouting your support for the winner.

If you win, find someone else who won and play again.

Keep going until there is only one person left - they're the overall winner. **Congratulate them**!

What's the idea?

Playing the game ensures players know the game, so when families attempt to write the computer program, they can fix errors.

By running the tournament, everyone is on their feet, active and losing inhibitions before settling down to more serious collaborative work.

You'll need to look for more projects in the future, and it is helpful if you can also identify a relevant warm up activity – to have fun, but also to prepare for coding and crafting.

Scissors
beats paper

Paper
beats rock

Rock
beats scissors
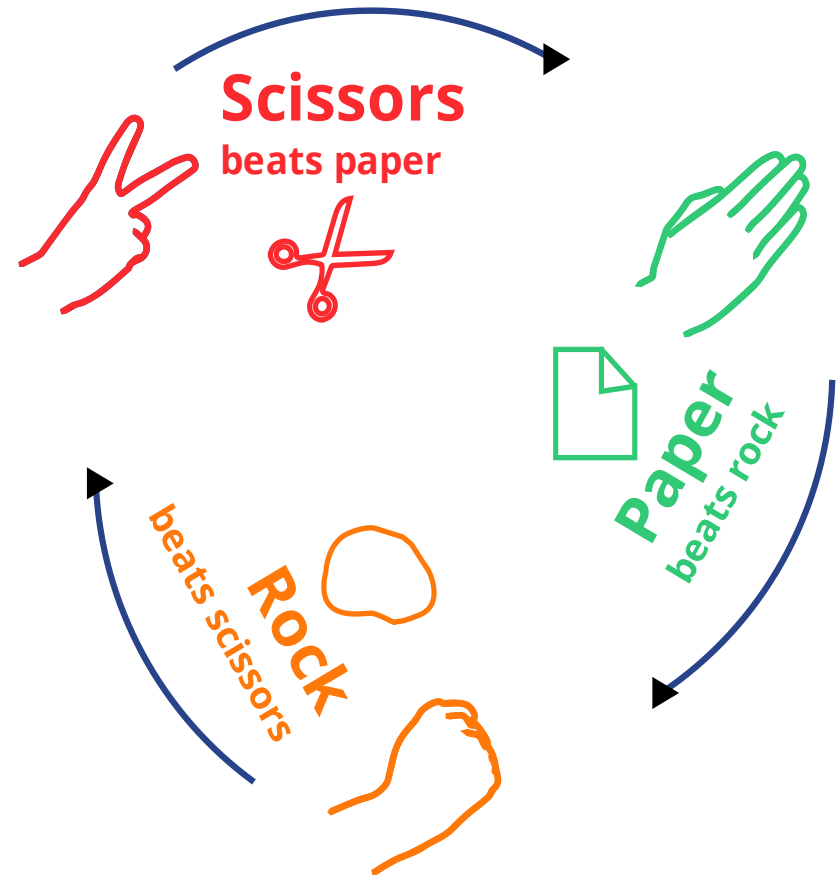
The rules of Rock-Paper-Scissors

1. Measure & cut

a piece of duct tape twice as long as you need to go around your wrist, plus enough to overlap by a few centimetres. **Fold** the duct tape in half, sticky sides together, to make the wristband. **Trim** the wristband to the length you need if it's too long.

2. Put one kind of **Velcro** on each

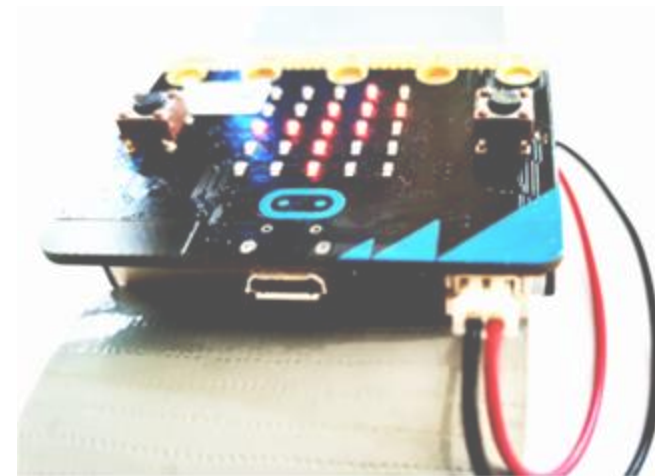end of the wristband, so that they **face each other** and close the wristband when you overlap the ends.

3. **Wrap** the battery pack in duct

tape, sticky side out.

Stick the battery pack to the middle of the wristband.

4. **Attach** the Micro:Bit to the sticky

tape on top of the battery pack.

3 Create - make
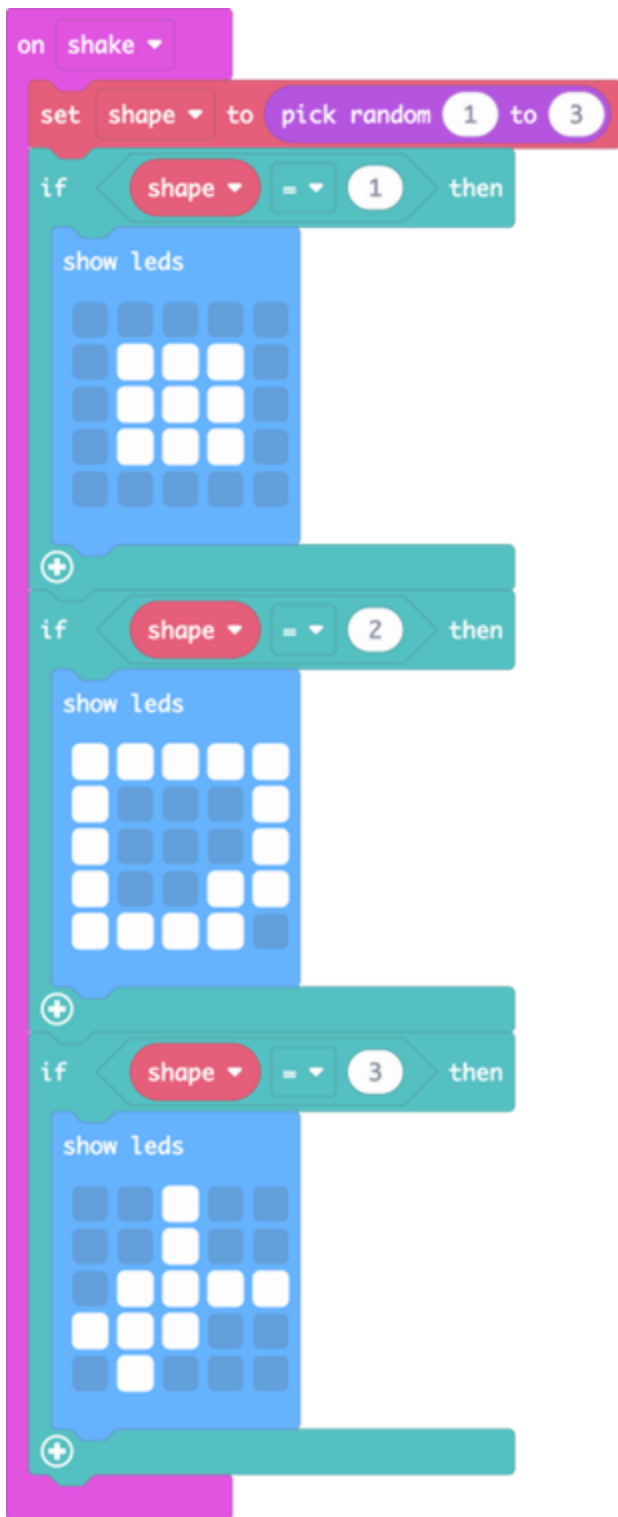
5. **Plug** the battery pack into the Micro:Bit

Help: Watch the making video at:

ourkidscode.ie/rock-paper-scissors

Reviewer job

Test the finished wristband by attaching it to your wrist to see if it fits everyone comfortably.

Then try shaking it to see that the battery and Micro:Bit doesn't fall off.

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

2. Click on '**New Project**'.

3. Name it '**RPS**'.

4. Make a program that looks like the one to the left of this page.

5. The pieces are in the middle column sorted by colour: Basic, Input, Logic, Variables and Math.

6. Drag them to the right to make the program.

Reviewer job

Test the program

Click on the button '**Shake**' on the picture of a Micro:Bit on the left of the screen. Sometimes the same shape will come up again, making it look like it is stuck!

Download

Test on the Micro:Bit itself by connecting it and click '**Download**'.

3 Create - code

Help:

- Watch the coding video at: ourkidscode.ie/rock-paper-scissors

- To make the variable '**shape**' click the '**Variables**' section and click the button '**Make a variable...**' and call it '**shape**'.

- The '**if**' piece has '**true**' when you get it from the middle column '**Logic**' section.
  You need to replace it with a '**0 = 0**' piece, also from '**Logic**'.

See this picture and note the red dots which should appear as you drag the '**0 = 0**' piece into position:

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:

contact@ourkidscode.ie

You will find these useful documents on our website:

- Start a club guide
- Running a MeetUp
- MeetUp checklist
- Being a team player
- Forming a family team
- Choosing a project

ourkidscode.ie/rock-paper-scissors

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