

Makey Makey Activity

In this activity, children will work on their understanding of inputs (ways to get data into a computer) and outputs (ways to see the computer has followed an instruction). They will use a Makey Makey to turn all sorts of random objects (such as food, playdough etc.) into input devices to control a computer.

What do I need?

- Makey Makey kids x 5
- Laptops x 5
- sweets
- grapes
- playdough
- tin foil
- cardboard

Teacher Background Information - Why are we doing this?

From the KS2 National Curriculum:

- work with various forms of input and output

Children will frequently explain that computers are incredibly clever, when in actual fact they're just incredibly fast - which is not the same thing. For example, a computer only understands what a human has told it - there is no thinking involved. When looking at inputs, the computer does not know that this 'a' key on a keyboard is an 'a'. All it knows is 'if someone presses this key, put an 'a' on the screen'. This is an important distinction as it shows the computer is just following instructions and that we can put information into a computer in many different ways, but in the end it is all turned into electrical current - the computer does not speak 'English' or use our alphabet/words.

The Makey Makey allows children to control the computer using anything that conducts - most fruit and veg will work, sweets, playdough, tin foil etc. The user will hold a wire connected to 'ground' (or have it clipped to a tin foil bracelet) and then when they touch the other items (sweets, playdough etc.) they will complete the circuit and the action will be completed.

Setup

Watch: <https://www.youtube.com/watch?v=rfQqh7iCcOU> for examples of how it can be used! I would suggest having a quick example made up to show the children. This could use any of the equipment and one of these web apps: <http://makeymakey.com/apps/>

If the laptops take a while to log on, get them set up and logged on before the session and leave them logged on all afternoon. As things aren't being saved, it shouldn't matter that they're not on their own account.

What do I do?

5 minutes - introduce the task and explain they will be 'Hardware Heroes' and swap the computer's keyboard and mouse for different hardware...fruit! Explain what hardware is (physical parts of a computer) and inputs (ways to get information into a computer) and that we are going to use grapes and playdough to get information into our computer. Show example that you have set up and talk through a basic understanding of circuits.

10 minutes - children work together in groups (6s?) to come up with how they want to control the computer. They can try lots of different activities, but must settle on one before the time is up to show it off!

5 minutes - children show their hardware inventions to the others in the group and have a go at each other's.

