The Fish Dish (<http://www.pi-supply.com/product/fish-dish-raspberry-pi-led-buzzer-board>) is a little circuit board which is simple to build by yourself and ideal for children learning about the GPIO. Children please ask adults to help with the soldering Iron. I by accident partly melted the connector, but it still works fine.

The circuit board has three LEDs, one buzzer and a switch. There is a Python program available off the internet, but for children Scratch is better. I only had normal Scratch on my Pi, but it will not use the GPIO pins. I downloaded Scratch GPIO 5 from the internet for my Raspberry Pi [http://cymplecy.wordpress.com/scratchgpio/scratch-raspberrypi-gpio/](%20http:/cymplecy.wordpress.com/scratchgpio/scratch-raspberrypi-gpio/). This put a new Scratch on my desktop.

I could not copy the pin numbers from the Python program as they are different in Scratch GPIO and the ‘allon’ command only turned on two LEDs and not the buzzer. I tried all the pins and worked out that if you turn them on then the ‘allon’ command works. I made a simple program that turned all on and then all off when the button was pushed. I also ran a scratch program and the Python program at the same time, which was interesting as you can see what happens when two programs think they are controlling the same thing.

There are also some left over pins to add extra LEDs and I later added a red LED and 1k resistor on pin 13.

If you add on a circuit to the pins that have the LEDs on then the LEDs tell you if your program works, so if your circuit does not work you can find the problem. I used a 1k resistor for my external circuit and perhaps the resistors on the Fish Dish could be 1k as well.

The Berryclip <https://www.modmypi.com/berry-clip-raspberry-pi-add-on-board> is very nearly the same as the Fish Dish but you cannot add extra LEDs. But it is £3 cheaper and it comes with more LEDs.

I recommend the Fish Dish for Children aged 6+ who are learning about Scratch GPIO, but it should cost less.

By Andrew Suttle (aged 8)