Jam beginner activities

RASPBERRY JAM
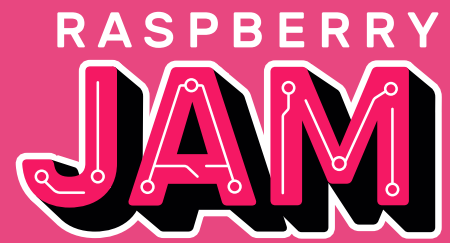
Here are some short activities which are ideal for beginners at your Raspberry Jam event. The worksheets are included here, and you'll also find them at **rpf.io/jamws** where you can browse them online or print the PDFs. The online versions are available in multiple (spoken) languages.

Make sure you have an up-to-date Raspbian image with Mu installed.

```
sudo apt install mu-editor
```

Worksheets

Traffic lights

Learn to control LEDs and code a traffic lights sequence using Scratch, EduBlocks and Python.

Hardware	Software setup
pi-stop or 3 LEDs, resistors and jumper cables	For EduBlocks see **edublocks.org**

You will need:

Traffic lights controller GUI

Create a traffic lights controller GUI (graphical user interface) using Python.

Hardware	Software setup
pi-stop or 3 LEDs, resistors and jumper cables	`sudo pip3 install guizero`

You will need:

Interactive traffic lights

Use LEDs, a button and a buzzer to program an interactive traffic lights sequence with Python.

Hardware	Software setup
pi-stop or 3 LEDs, resistors and jumper cables	None
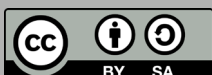
You will need:

Minecraft TNT

Navigate the world of Minecraft Pi, learn to create with code and blow things up with TNT.

Hardware	Software setup
None	None

Sense HAT random sparkles

Make your Sense HAT shine with pride.

Hardware	Software setup
Sense HAT (or use the emulator)	None

Sense HAT smile

Learn to read sensor data from the Sense HAT using Python, and how to use pixel art on the Sense HAT's pixel display.

Hardware	Software setup
Sense HAT	`wget rpf.io/shfaces -O mu_code/faces.py`

Sense HAT cheerlights
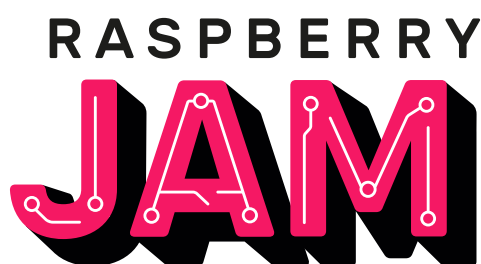
Tweet a colour to light up your Sense HAT!

Hardware	Software setup

Sense HAT (or use the emulator)	```cd mu_code```
	```wget rpf.io/shcheer -O cheerlights.py```
	```wget rpf.io/shcheerauth -O auth.py```
	
	Add Twitter API keys to `auth.py` - **see rpf.io/shch**

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