



## RaspberryPi Hardware Platform and connections

**Activity:** Work the following exercises as directed by your tutor:

### Purpose of this Activity

This activity aims to give you an understanding of how to connect and use the RaspberryPi platform and the major components.

### Learning Outcome

- To be able to connect RaspberryPi to a screen/keyboard system
- To be able to connect Gertboard to RaspberryPi
- To be to enumerate and explain the major components of a RaspberryPi platform

### Task 1

Draw a top-view and bottom-view of a map of the hardware interface of the RaspberryPi. The hardware interface of the RaspberryPi consists of nine basic parts. Identify them and write a 2-3 lines explanation for each one of them.

*Note: you can use Microsoft Word, any other software package or pencil/paper. It is your choice.*

### Task 2

Identify the peripherals that are required in order to connect the Pi with the external world. Write a 2-3 lines explanation for each one of them with a corresponding picture if possible.

### Task 3

Give a definition and explain SD cards. Write a set of instructions installing an operating system on an empty SD card. Keep the answer to this answer as you are going to follow these instructions later on.

### Extension Activity

By using information from the internet, can you find instructions on how to connect a RaspberryPi directly to a laptop? This is called “headless” connection and is used when you don’t have available screen/keyboard devices. For the time being, write a guide of around one page of how to do this and we ll implement this at a later stage.