[](https://www.knowitallninja.com/)Hardware’s Effect on Game Development 1

# Task 1

The CPU will perform all of the calculations in your game, while the GPU renders your game graphics. Watch this video that explains the difference between a CPU and a GPU and how they affect video games.

https://www.youtube.com/watch?v=n4GymdCrXmU

Summarise the role of these devices below.

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# Task 2

The CPU, RAM and Storage are all closely related in the running of software like video games. Draw a diagram that explains the role of each of these devices when loading and running a game.

# Task 3

(a) The hardware requirements of video games have changed significantly over the years with the demands on the hardware getting larger and larger. Research the requirements for the CPU, Graphics Card, RAM & Storage for the two games in the table below.

|  |  |  |
| --- | --- | --- |
| Hardware | Half Life 2 | Far Cry 5 |
| CPU | Pentium 4 or Athlon XP. | Intel Core i7-4770 @ 3.4 GHz or AMD |
| Graphics Card | **DirectX** 9 level **Graphics Card** | Nvidia GeForce GTX 970 or AMD R9 290X (4GB VRAM with Shader Model 5.0 or better) |
| RAM | 1 GB. | 8GB |
| Storage | 4.5 GB | Hard disk **space required**: 30GB |

(b) Research how much it would cost to purchase components that meet these two games specifications. How much cheaper are the components for Half Life 2 and do you think they would have been much more expensive when the game was released in 2004? Have you heard of Moore’s Law and how does this relate?

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