Analysis of the scientific properties of the various robot components

How the robot “thinks”, communicates, avoids injuring human beings and what damage to the environment such robots may be causing

The EV3 Mindstorms robot “thinks” using the microprocessor (also known as a central processing unit or CPU) provided in the kit. This component acts as the “brain” of the machine. It is there to “execute and manage” (Techopedia, 2019) the tasks that it has been programmed to do. It computes the information that it receives from the various other components to logically modify its actions to accomplish the given tasks. CPUs are normally made from silicon microchips, as this material is an excellent semi-conductor once a small amount of impurities are introduced to allow electrons to flow into them (How It Works Team, 2012). These chips contain millions of transistors, which act like switches. They receive electrical signals which “tell them whether to conduct or insulate” (Coolman, R. 2014) which Allows or stops the flow of electricity through a circuit. The CPU communicates with the other components through a data bus, in this case a set of wires connecting the components to the CPU (Techopedia, 2019).

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