



Merchant Venturers School of Engineering  
Outreach Programme

# **How Computers Work**

## **Preparation Notes for Teachers**

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## **Workshop Summary Notes**

- This workshop is intended to be a whole day activity (though a half-day version is also possible).
- The workshops are intended for years 2 to 8.
- The content is intended to be learnt in groups of three, but works for groups of 2-4.
- Each student is assigned to a component - CPU, ALU/Memory and Display.
- No programming, software or hardware knowledge is required.
- This document includes some notes about what you need to do to prepare for us to come and run the workshop.

# 1 Guide

The following notes are guidelines for the things we have thought of or know from experience need to be prepared before we arrive to run the workshop. Please use these notes as an addition to any guidelines and preparation you would normally follow.

**Resources needed** Internet connection (wired or WiFi); A projector and ability to connect our laptop (VGA or standard fullsize HDMI port).

**Useful resources** If you have any old computers we can take apart to show kids the components, that is really helpful. We try to gather some of this and bring it along too but we don't have much "expendable" equipment.

**Website Access** Please ensure your IT administrator has unblocked our Github site: <https://github.com/MVSE-Outreach/> on the internet connection.

**Students with special needs** We are happy to accommodate students who have special educational needs or disabilities. If you can, please make us aware of any students in the group who might need extra attention and any additional information that will help us make the workshop as enjoyable and successful as possible for them.

**DBS Checks** Your school or organisation may require valid DBS checks (previously called CRB checks) for our volunteers. Please let us know if this is the case so we complete the process. All of our volunteers are current members of the University of Bristol.

**Name List and Contact Information** We would very much like to be able to keep in touch with students to encourage them to attend our other free, open outreach events (such as Digimakers). If possible, please supply us with a list of the names of students and their parent's contact information so that we may follow up with them after the last workshop. We never send spam and we'll only contact parents to let them know about our other outreach events that are available to them.