



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.
- The workshops are intended for grades 1-8.
- The content is intended to be learnt in groups of three, but can be adapted to work as an individual activity or in groups of 2-4.
- Each student is assigned to a component - CPU, ALU/Memory and Display.
- No programming 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	Computers with internet connection, a projector, Little Man Computer Simulator (use Rivens Java applet in preference to Atkinson version), old computers to take apart OR hardware such as processors, memory chips .
Logging on	If you have enough PCs/Macs for the whole group, please ensure the children are logged on before we begin the session.
Provision of laptops	If you do not have enough PCs/Macs for the whole group, please let us know in advance. We may be able to provide laptops in order to run the session. If we provide laptops, we will need to allow at least an additional 15 minutes for handing them out and logging everybody on / getting set up.
Software Installation	???? No additional software is required for this workshop - just a web browser!
Website Access	Please ensure your IT administrator has unblocked the Scratch website and our Github site: https://github.com/MVSE-Outreach/ The easiest way to test this is to get a student (not a teacher) to open the websites and attempt to browse them.
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.