

Essential software for secondary mathematics teachers

In considering how the mathematics classroom functions we also put together our list of essential software, much of which is free (indicated by * below), all of which can be found by an internet search.

Essential software for teachers (in alphabetical order where * indicates from Internet)

This is based on a PC but most have equivalents available for a MAC.

- acrobat reader* to read pdf files
- adobe (or another) SVG viewer* to view population pyramids
- Bowland mathematics materials (from DVD or Internet, but latter will take much longer to install)
- digital image manipulator such as picasa*
- drawing program for mathematical diagrams, equation-editor for writing equations in a word processor such as FX-maths pack
- EXP Maths 7, 8 and 9 (short programs that cover most of KS3 material)
- Flash*, java*, shockwave* that allow applets and internet-based programs to be used on the computer (free, but need to be installed and regularly up-dated)
- Formulator Tarsia* to create and use your own 'jigsaws'
- Free Mind* 'mapping' software to be used for topic and lesson planning (from National Curriculum website)
- geometry program such as Geometer's SketchPad, Cabri-géomètre or Geogebra*
- Google earth*
- graph drawing package such as Omnigraph, Autograph, Geogebra*
- graphic calculator emulator to match graphic calculators in use
- interactive whiteboard software (free with interactive whiteboard)
- Internet browser (plus anti-virus, firewall, anti-spy-ware software)
- Mathematica player* to run Wolfram demonstration project files
- media player such as Real player*, windows media player* to play video clips from Teachers.TV or YouTube
- sound and audio editor such as audacity*
- spreadsheet such as Excel, Geogebra* (available 2009) or Open Office*
- Testbase for assessment examples (similar for GCSE and A level)
- Teacher tube* access
- Teachers.TV access
- virtual manipulatives (these are usually Flash programs and java applets that can be accessed from the internet, with the reference to the program or applet stored in the IWB file)
- word processor such as Word or Open Office*
- YouTube* access

Note that video retrieval websites such as Teacher tube and YouTube are not allowed routinely in many schools, however we are aware that a number of schools allow (some) staff access to these websites so that they can use worthwhile material (though it is possible to download relevant files and play them through a media player).

It is also possible that some mathematics departments might want pupils to make use of programming software such as Flash (which is not free if you want to have pupils use it), Logo (there are a variety of variations some of which are free) and others – one of the research team had pupils using Flash in this way.