Clock Face Designing: Software review

Anyone who has designed a clock face using a CAD system would know the problems of firstly deciding a diameter for the dial, then constructing the 12 x 30° hour positions (showing off using polar coordinates!) deciding on the hour text/graphics then trying to obtain the correct position and so on. Now this process has become a lot easier thanks to Ekits Clock Designer Software (version 4). This costs £14.95 for a single copy, £49.95 for a site licence version. See www.ekitsonline.com

What strikes us about this software is the ease at which its use would fit into a graphics lesson applying the principles of colour theory, for example, clock faces could be designed with an emphasis on primary, secondary or tertiary colours. Analogous, triad, warm and cool colours can all be explored using this software giving quick printouts of clock dials. Dials may then be discussed, compared and contrasted. Dials may be printed out (large (195 mm), medium (170 mm), cd size (120 mm) and custom size for graphics use, or for the actual manufacture of a clock in the craft workshop. A 12 page Macromedia Flash player file give details of how to build your clock is provided.

Figure 1 *- Design possibilities.*

Clock faces can be very quickly designed, printed and built using this software (Figure 2). They can be based on a library of backgrounds or by using your own photographs/illustrations (Figure 1).

The CD has two help guides available in pdf format, a 2 page 'quick start guide' and a 16 page 'User Guide'. Helpfully the software contains a series of printable pupil worksheets (Figure 3).

Version 4 of the software is available with 188 backgrounds, 29 pictures, 64 division styles and 150 number styles. This may be further enhanced with your own photographs and graphics.

Conclusion

This software provides cheap, quick and easy clock face designing for all pupils. Pupils can investigate colour theory but also manufacture a useful clock based on a quartz movement. Dials may be personalized using photographs of family, holidays or pets. Software already provides a useful range of background graphics and photographs. Supporting worksheets based upon the theme of 'time' for pupil use are available on the CD. The software has limited but useful configuration possibilities.

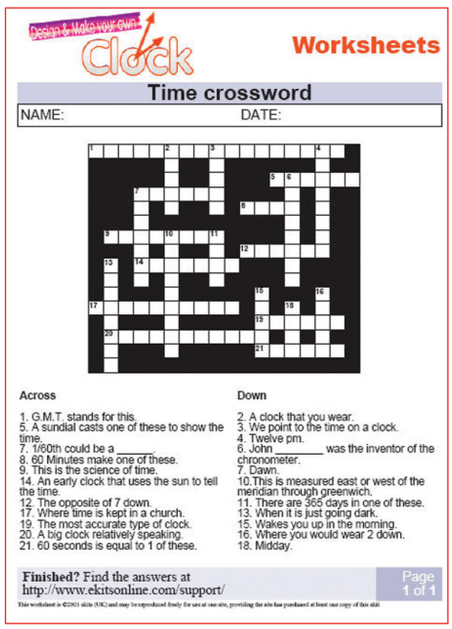


Figure 3 – Example of a worksheet.

Software runs on a Windows based PC with either Windows 2000/XP, a minimum of 64 Mb ram and 64 Mb free HD space. Software ran successfully on a Windows 7 platform.

The ability to save clock face designs is limited to an internal 'ekits clock file' format (.ekf), however, using the 'Windows' control icon on the design interface, then selecting 'file' the image can be exported as a bitmap (.bmp) file. The bitmap image displayed before saving does shows clock hands, but only the dial is saved as a bitmap file for further use or processing.

Links to Curriculum for Excellence Technologies – experiences and outcomes:

Early

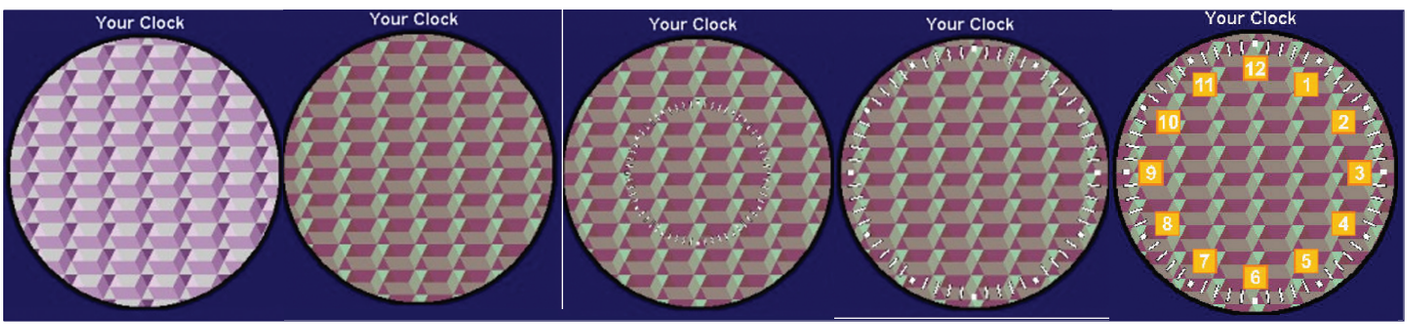
- 'I explore software and use what I learn to solve problems and present my ideas, thoughts, or information' **TCH 0-03a**

Figure 2 *- Make a clock – easy as 123.*

– Ekits Clock Designer Software (v.4)

The Design Sequence:

1. Add a Background (scale if necessary)
2. Modify Colour
3. Select Division Style
4. Scale divisions
5. Add and Scale the Number Style



First/Second

- I can create, capture and manipulate sounds, text and images to communicate experiences, ideas and information in creative and engaging ways. **TCH 1-04b / TCH 2-04b**
- I explore materials, tools and software to discover what they can do and how I can use them to help solve problems and construct 3D objects which may have moving parts. **TCH 1-12a**
- I can use drawing techniques, manually or electronically, to represent objects or ideas, enhancing them using effects such as light, shadow and textures **TCH 2-15a**

Third

- I enhance my learning by applying my ICT skills in different learning contexts across the curriculum **TCH 3-04a**
- By using problem-solving strategies and showing creativity in a design challenge, I can plan, develop, organise and evaluate the production of items which meet needs at home or in the world of work **TCH 3-14a**
- Having explored graphical techniques and their application, I can select, organise and represent information and ideas graphically **TCH 3-15a**

Fourth

- I can approach familiar and new situations with confidence when selecting and using appropriate software to solve increasingly complex problems or issues **TCH 4-03a**
- I can use ICT effectively in different learning contexts across the curriculum to access, select and present relevant information in a range of tasks **TCH 4-03b**
- Throughout my learning, I can make effective use of a computer system to process and organise information **TCH 4-04a**
- I can create graphics and animation using appropriate software which utilises my skills and knowledge of the application **TCH 4-09b**
- I can confidently apply preparation techniques and processes to manufacture items using specialist skills, materials, tools and software in my place of learning, at home or in the world of work. **TCH 4-13a**
- Showing creativity and innovation, I can design, plan and produce increasingly complex items which satisfy the needs of the user, at home or in the world of work **TCH 4-14a**
- When developing or enhancing representations of ideas or items, manually or electronically, I can apply my knowledge of colour theory, justifying the choices I make **TCH 4-15b**
- I can confidently use appropriate software to represent my ideas and items in the world around me, showing creativity, imagination or innovation **TCH 4-15c**
- I can understand and use computer aided design/ computer aided manufacture, exploring its applications **TCH 4-15d**

Know an exceptional science technician?

Congratulations to Rosemarie Hogg of Fortrose Academy who has won a Salters' National Award for Science Technicians. Rosemarie says she was "astonished" to learn that she had been chosen for the honour and continues, "As sole Science Technician, my job is enjoyable, varied and interesting – never boring! It is rewarding work and science staff have always been most appreciative of my efforts."

Nick Forwood of the Academy's physics department is certainly appreciative. "She is very unassuming and really feels that she is no different from many other science technicians," he tells us, "however, we all know differently! "

In 2011 The Salters' National Awards for Science Technicians enters its eight year and is now annual. The Awards are open to Science Technicians in schools and colleges catering for students 1) up to age 18, and 2) Science Technicians with five or more years experience.

The aim of the Awards is to acknowledge publicly the immense contribution that Science Technicians make to the well-being and success of schools and colleges and, in particular, to Science Departments. The Salters' Institute, who run the award scheme, hope very much that the Awards will heighten the awareness of the importance of Science Technicians to education in this country. The closing date for nominations is 1 March 2011. If you know a technician who fits their criteria then please nominate them for an Award. Further information and a nomination form can be obtained by visiting the Salters Institute website www.saltersinstitute.co.uk or by contacting the Publicity Co-ordinator on Tel: 020 7628 5962 ext. 260 or Email: publicity@salters.co.uk