Wow...That's Helpful!
TechSoft are keenly aware that Design and Technology in Primary Schools brings an entirely new set of challenges. Software has to be easy to master and must quickly prove itself to be exciting and motivating, especially where content is taught within themes that have their own learning priorities. We have listened carefully to teachers and have taken a long hard look at our well-established Primary Design programme with a clear aim to make it the most helpful, versatile and easy-to-use drawing package you could wish for. The result is 2D Primary and we reckon it’s something with enough ‘wow’ to see it being used for Design and Technology and much more besides.

Drawing with Computers
Most simple ‘paint’ packages work by colouring dots (pixels) on the screen - this looks OK and you can print out the drawing, but that’s about all. 2D Primary is a ‘vector’ package and every line and shape you draw will have a unique mathematical identity defined in terms of coordinates and geometry. You won’t be aware of this when designing, but it means that drawings can be edited, dimensioned and output to a CAM machine. Printed copy will be exactly the right size and not scaled to fit the page. This is the way that most commercial Graphic and Computer Aided Design packages work, so 2D Primary is a great preparation for future learning and provides pupils and teachers with powerful new tools at KS2. The software uses a familiar Windows interface and is logical and easy to use, so pupils and teachers will quickly be up to speed.

Features
- A wide variety of drawing functions, lines, circles, shapes, tangents, polygons, etc.
- Great text facilities. Use any outline font, any size position or orientation, any colour including texture fills and drop shadows.
- Comprehensive transformation functions including, move, mirror, copy, rotate, re-size and distort.
- Easy to use grid function. Lock onto cm or mm grids for accurate drawing, change to an isometric grid for 3D effect.
- Attach tool to ‘snap-to’ circle centres, end points and intersections.
- Select from three levels of desktop to suit different ages and abilities.
- Comprehensive, quick and easy to use Zoom tools.
- Powerful editing functions including Edit and Add nodes to lines and shapes.
- Cut and paste facilities, allows you to link with most Windows packages.
- Import and Export files in most common formats (eg., jpeg, tiff, gif, wmf, emf, etc.).
- Clip and crop photo-images to shapes or ‘freehand’.
- Change photo-images to greyscale, monochrome or reduce image size.
- Output via Windows printer driver to any standard printer, or output directly to Roland SRM-20E, Stika or CAMM 1.
- Comprehensive fill tools including linear or circular graduated fills with any number of colours, and texture fills using bitmap files. Large selection of common texture fills supplied in a library.
- Total compatibility with 2D Design V2 to allow cross-phase working.

Drawing and Design
2D Primary can’t be beaten for making accurate project plans. These can include dimensions and can be ‘filled’ in flat colour, shaded (or graduated) colour, or even photo-images of the material they will be made from. Plans can be printed onto label paper to make accurate templates, or pages can be bordered, titled and printed onto regular paper as a record for design folders. 2D Primary makes a great graphic design tool as well. Text, photographs and accurate drawings can all be combined making it ideal for presentation pages, or for creating posters and leaflets. We’ve been careful not to overload the software with too many tools but have included simple ways to change photo-images and trim them to size and shape.

Not Just For D&T
You don’t need to be aware of the geometry working for you under the surface of 2D Primary, to be able to create accurate drawings, but it is there and if you want to focus on numeracy then why not? Many Primary schools find it the ideal package to support pupil’s learning in mathematics; shape, space, pattern, size and number. Using 2D Primary to design presentation pages could, of course, be used anywhere in the curriculum.

Computerised Manufacture
Using 2D Primary for CAM (Computer Aided Manufacture) takes you onto another level – not only can you draw things, you can make them too!
Knife Cutting
Lines drawn in 2D Primary are more than just images – in ‘computer-speak’ they are called vectors. These show you what you have drawn but also contain coordinates to ‘steer’ a CNC machine. A simple Stika machine (see page 33) makes a great starting point for proper CNC work. A Stika uses a tiny blade to cut a vast range of ‘applied media’ to make, for example, stickers, badges, or iron-on logos. The process is simple, safe and output is direct from the 2D Primary drawing.

Milling/Engraving
CNC milling and engraving machines work in the same way as knife-cutters but use a rotating ‘bit’ (rather like a drill) to cut and remove solid material. For an introduction to CNC machining, the Roland SRM-20E (see page 65) is the ideal choice for most Primary schools. Using the same 2D Primary software, the SRM-20E will happily cut out shapes in light modelling materials to make, for example, accurate parts for projects, stamps, badges and moulds. The SRM-20E is safe and simple to use.

Print and Cut
At its simplest, the Roland CAMM 1 GS-24E (see page 34) is a super-fast, super large Stika. It is therefore useful for enterprise projects, but there’s more to it than that! The GS-24E has an optical registration feature that allows the cut path to be aligned with printed graphics. It also has sufficient power to cut thin card. This means that stickers and card packaging nets can be printed using a regular printer and then cut-out to professional standards using the GS-24E.

Software Information

Site Licence
A Site Licence allows a school to install the software on any number of computers on the school site.

Student Licence
A Student Licence allows a school to distribute a special non-output version of the software to students and teachers for home use. Students will be able to save work for output back at school. Schools may choose to charge a nominal amount per student, to recoup the cost.

Minimum Hardware Requirements

Ordering
In order to avoid software theft, the software is encrypted with the name of the licensed user, typically the name of a person, or the name of an individual establishment.

When ordering please state:
a) Name of licensed user/site (max 28 characters, including spaces).
b) Address for site licence if appropriate.

Prices £*

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<td>TS112</td>
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Version 1 to Version 2 Upgrade Prices:

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CAM Machines (controlled by the software):

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<td>TP-CADCAM-PRI2</td>
<td>Primary CAD/CAM Package (includes 2D Primary Software Site Licence, Stika SV-8E Knife Cutter, SRM-20E CNC Miller &amp; Training Packs)</td>
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* 2D Primary is only available at this special low price to schools teaching students of year 6 and below. All other establishments must pay the full price of £175 for a single license, £425 for a site license.