

### Paper worksheets

Schools generally have large numbers of paper worksheets available for different subjects - some have been "bought in", others have been painstakingly created by teachers. There is no doubt that, used well, they can be a valuable educational tool, but pupils with writing difficulties and physical disabilities may find paper and pencil based worksheets impossible to use. This Guide offers suggestions for using a scanner and the Claris/AppleWorks database to create new worksheets that open up new opportunities (for all pupils, not just those with special needs). Lots of different types of pupils might be more motivated to fill in worksheets on computer, rather than on paper.

### Using a Scanner to get an Electronic Copy of a Worksheet

Since schools will have access to different scanners, each of which may be using different software it is not practical to give detailed instructions on how to scan a worksheet, but here are a few general points, applicable to all:

- Scan the whole page as a graphic - in other situations, it may be appropriate to just scan bits, e.g. pictures, but this is unnecessarily fiddly for the current task.
- Select the appropriate scanning option - if the worksheet is mostly made up of line drawings, and text, you should use a "line drawing" or "document" setting, which scans everything on the page as either black or white; if the worksheet has photographs or illustrations with colour or shades of grey, you should use a colour or grey scale setting.
- Choose the correct resolution (the number of dots required to make up a picture) - printers typically use at least 300 dots per inch (dpi) to make up a picture, but most computer screens have a resolution of only 72 dpi. Since the worksheet is going to be used on screen, there is no point in scanning the image at more than 72 or 75 dpi. If you scan at a high resolution you will produce very large files that take up lots of memory.
- Use a graphics program (most scanners come with one) to edit the scanned image - you might want to reposition images slightly, remove unwanted text, or simply get rid of a dirty fingerprint from the original worksheet.
- Remember to save the graphic in an appropriate format, e.g. TIFF or JPEG.

### Why Use the ClarisWorks / AppleWorks Database?

You are now going to use AppleWorks (formerly known as ClarisWorks) to create a new electronic worksheet. Your scanned image can be a background onto which you will place boxes to hold text - the answers to any questions the pupil has to answer. AppleWorks consists of a suite of programs, including a word processor, a database, a spreadsheet, a drawing program and a painting program. Many people would expect to use the word processor, or drawing package for the worksheet, but the database is actually the most flexible tool to use. It is very difficult to place a text box exactly where you want it with the word processor. This is easier with the drawing program, but



the database, though slightly more difficult to get the hang of, provides extra features that are very helpful. Firstly, if the sheet is going to be used by more than one pupil, it is very easy to create a new blank record for each pupil with a single click of a mouse, rather than having to remember to create the file as a template, load it and save it for each pupil, possibly ending up with lots of different files. Secondly, it is possible to create multiple-choice questions, with the pupil being asked to choose the correct answer from a number of options. Finally, (advanced manoeuvres!) if the teacher is comfortable with using the database there are many ways available to automatically "mark" the worksheet, produce mark sheets, look at the most frequently made errors and perform other analysis tasks.

## Worked Example

Here is an example of the creation of a worksheet from a basic paper template.

A basic worksheet with a map of Scotland has been scanned into the computer. In this case, existing "dots" and lines to represent towns have been edited out of the electronic map by using the "rubber" in a picture editing program.

Now load up **Claris/AppleWorks** and create a **new** document. Click to choose **Database**.

As soon as you select Database, you will be presented with a new screen, asking you to create Fields for your database. (A Field can be looked on as a box into which you want pupils to type an answer to a question.) For the moment, we will just create one - to hold the pupil's name.

Call it **Name**. Click on **Create**, then **Done**.

You will now be offered a blank page with the Name field, added.

Go to **Layout Menu** and select **Layout** to get a screen that you can use for editing, as shown.

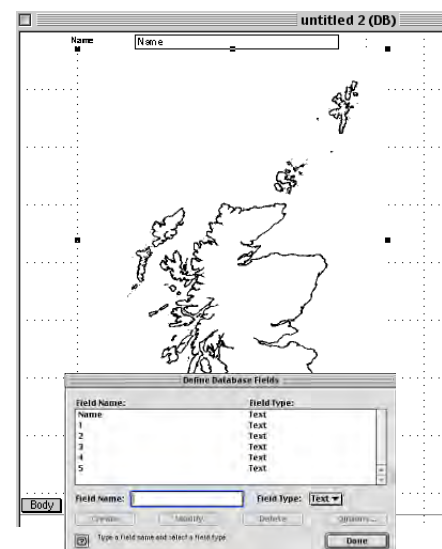
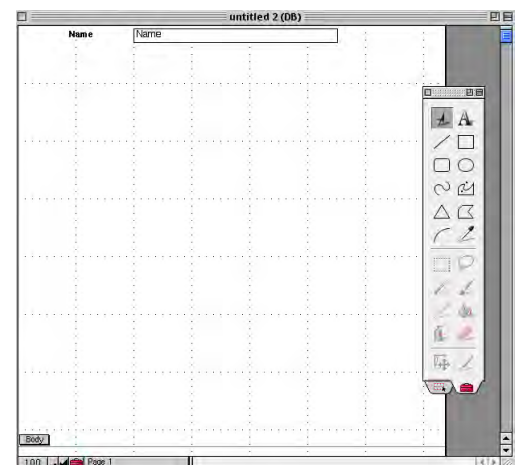
Then go to **File Menu** and **Page Setup**, select **A4**

Drag the "**Body**" Part label down to the bottom of the screen (but not the page - you need to leave a bit of space below the bottom of the screen) - it's easiest if everything is done within one "Part".

The next stage is to insert the picture (in this case, map) that was scanned earlier. Go to **File Menu**, select **Insert**, locate the image file with the map and click on **OK**. You may have to push the corners of the picture in to reduce the size of the picture slightly, to fit the page.

Now you can create fields to represent the town names that you wish to use. Go to **Layout Menu** and select **Define Fields**.

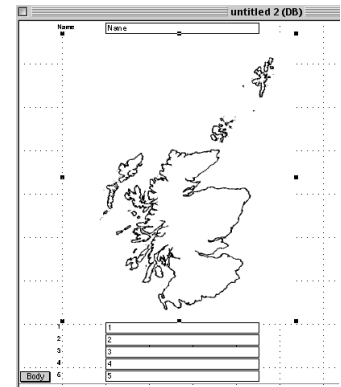
Create a separate field for each answer.



In this example, we have created five fields, named 1, 2, 3, 4, and 5, as shown below.

Depending on the exact context, you may wish to use more meaningful names for the fields (to remind yourself what each one is supposed to be!) When you have created all the fields you want, click on **Done**.

The new fields, which will represent the town names, appear at the bottom of the screen.



Select the text tool, and type in a title to the worksheet.



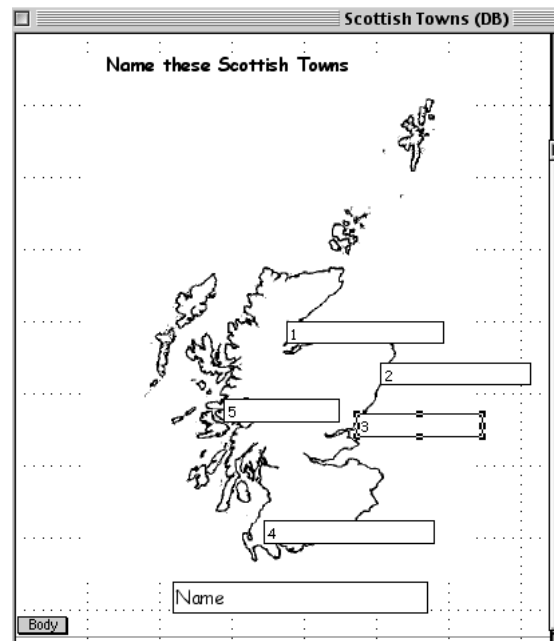
Hold down the shift key and click on the title and on each of the fields (boxes) you have created, until all are highlighted with little black squares at the corners. Then go to **Format** Menu, then **Font**, and select the font you want on the worksheet (Sassoon PrimaryInfant or Comic Sans are popular).

While all the boxes are still selected, go back to **Format** Menu and select **Size** - 18 or 24 pt look good. (You can also set a text colour and style in the same way, from this menu, if you like.)

Click and drag each field name and box to the appropriate locations on the map to represent the towns.

If you wish you could use the draw tool to create a circle, or square to represent the exact location of the town.

You may have to drag the corners of the boxes out a bit to accommodate the bigger size of text.



Finally, go to **Window** and select **Page View** to have only one page displayed at a time.

Remember to **Save** the worksheet once it is set up (**File** Menu, **Save As**, 'Scottish Towns1').

## Using the Worksheet

When you have finished creating the worksheet, go to **Layout** Menu and select **Browse**.

Create a blank worksheet for the pupil to use - go to **Edit** Menu and select **New Record**.

Pressing the **TAB** key puts the cursor into the first box ready for the pupil to type his/her answer in. Press the **TAB** key again to move from one box to the next.

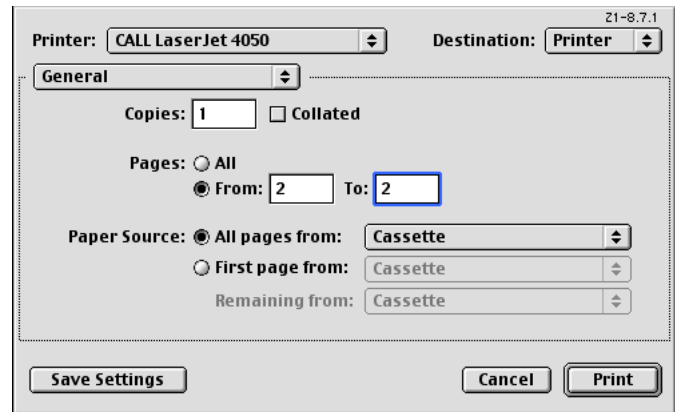
## Printing out the worksheet

When the pupil is finished, he or she can print out the completed worksheet in the usual way, by going to **File Menu**, then **Print**. Unless you set it up right, the database will print out the whole set of worksheets that are there - a blank first one (the set up record) and then however many other worksheets have been done before this pupil.

Therefore, when the Print window comes up, click in the 'From' button and put in the Record number shown at the left hand side (From 2-2, in this case).

Then click **OK** to print.

A new blank work sheet can be created repeatedly, for pupil after pupil to complete, by going back to the **Edit Menu** and selecting **New Record**.



This type of electronic worksheet can be used productively by all/any class members not just a pupil who has difficulty filling in a paper & pencil worksheet. Make sure each pupil puts their name on the new blank worksheet!

It is also easy to re-use this example to ask about different towns by editing the layout, moving the fields/boxes and accompanying dots to appropriate locations to represent a new set of towns. Remember to **Save** the new layout under a different name (e.g. 'Scottish towns2')

## Further Enhancements

The worksheet shown here is just one example. The same technique can be used in many ways, with or without pictures, using scanned paper work sheets as a basis, or making up your own.

For example, you could use a smaller picture as a prompt and set a series of questions to be answered instead of the 'labelling' task exemplified here. You could make a language exercise or a quiz in the form of a set of sentences that the pupil has to complete.

In this case, the best technique is to **Define the Fields** slightly differently when you set them up.

Once your page is started, go to **Layout Menu** and select **Define Fields**. Give the field a name (e.g. a keyword, click **Create**, then click the **Options** button.

In the window marked, **Options for Text Field**, **Automatically Enter**: type in the question or sentence you want the pupil to complete, with a capital letter at the beginning and a space at the end. Then **OK** and **Done**.



As before, type in a title to the worksheet, resize and colour the fields /boxes, and font as desired. Drag the boxes to where you want them. Or select them all, go to the **Arrange** Menu and select **Align Objects** to line the boxes up symmetrically.

You can combine pictures and question boxes.

When finished, select all boxes and set font size as before (**Format** Menu)  
Then **Layout** Menu, **Browse**, **Edit** Menu, **New Record**

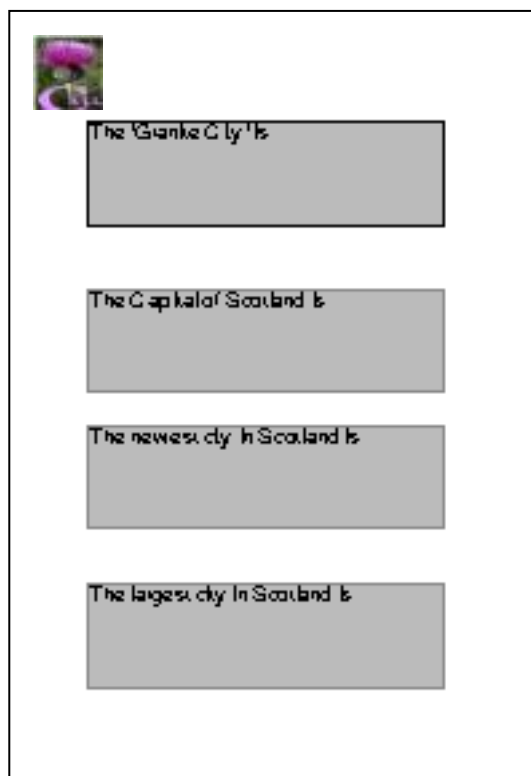
After the first record has had the cursor moved to the first field the cursor will always jump into the first box at the correct position for subsequent records.

### Coloured Answer Boxes

You can make the answer boxes coloured if you want.

Click on the box to select it, go to the **Window** menu and **Show Accents**. Choose **Fill** and the **paint** palette then choose a colour. The box will fill instantly.

Graphics can be added by using **File** and **Insert** as before whilst in the Layout mode.



The screenshot shows a worksheet layout within a rectangular border. In the top-left corner, there is a small square image of a purple flower. Below the image, there are four vertically stacked rectangular text boxes, each containing a question. The first box contains the text "The Granite City is" followed by a grey rectangular area for an answer. The second box contains "The Capital of Scotland is" followed by a grey rectangular area. The third box contains "The newest city in Scotland is" followed by a grey rectangular area. The fourth box contains "The largest city in Scotland is" followed by a grey rectangular area.