
Exemplar Materials: Unit 10 Numerical Modelling using Spreadsheets

Evaluation of my solution

Kids Planet needed the spreadsheet to:

- Record all the transactions that take place in the library.
- Record and display each month's data. Each monthly sheet needs details of the expenditures. The expenditures will have to be categorised.
- Summarise the year's data. The yearly sheet will give a summary of the breakdown of figures for each month. It will also give data on the income.
- Give the user up-to-date information in the middle of a month/year.
- Display the data in the form of a graph. Three graphs are needed. One is needed to show the library expenses by year, a second one will display data based on income and the third graph will show the balance of each month.
- Be user friendly. This means that menus and macros will be used to help to help the user input data, navigate the spreadsheet and display data.

The final spreadsheet will need to be saved as a template. One workbook will be used for each year.

My solution to the problem does:

- Include menus and macros. The user does not need to navigate to each month's worksheet by clicking on the worksheet tab. The first worksheet that displays gives the user a menu of buttons to allow the user to go to any month or to display a graph. On each month's worksheet there are buttons that either return the user to the first menu or they complete actions on the current worksheet. For example there is a button that allows the user to print out the month's figures.
- Record and display each month's data and the transactions. The user can enter transactions completed by Kids Planet. The user enters details that include the data, supplier, type of expenditure and the amount spent in that transaction. Each month's worksheet also gives a summary by category of the amount spent in that month.
- Record and display a summary of the year's data. This is also where the income is entered for each month. A user can see the up-to date information in the middle of a month because the worksheet automatically calculates the profit/loss when a new transaction is entered.
- Display the data as a graph because graphs are easier to read than the profit/loss tables. The graphs summarise the data.

Improvements to the solution

If I had more time I would let the user put the income for each month on that month's sheet. At the moment there is only a summary by category of each month's income. It would be good to see the individual hire charges as a transaction. I could also add more graphs.

Evaluation of my actions/role in completing the project

This project meant that I needed to know how to use and customise spreadsheets. I also needed to understand profit/loss tables.

I have used spreadsheets before and I knew how to put in simple calculations such as

=A1 + B1

or

=SUM(A1:A9).

I also knew how to change the type of font and to change the colour of the cells as well as create graphs.

Before we started the project my teacher taught us how to record macros. My teacher also taught us how to do data validation, conditional formatting and how to name cell ranges as well as how to use

more complicated functions. I have used all these techniques in my spreadsheet. I found it easy to learn these techniques and then incorporate them in my spreadsheet.

I did not know what a profit/loss table was. My teacher taught us about profit/loss tables and we looked at some examples so that we could understand the information that is put in the table.

To make the spreadsheet user friendly I needed to know how to add macros and menus. This was quite easy as I just had to ask the spreadsheet to record a macro, I then completed the keystrokes and asked the spreadsheet to stop recording once I had finished. I wanted to give my macros names like 'PrintSummary' rather than Macro1, Macro2 etc.. I taught myself to do this as I tried to enter a name when the dialog box came up.

On the negative side, I did not name as many cell ranges as I could have which makes a lot of my formulas difficult to read. The validation on my spreadsheet where the user enters the date of the transaction is also not easy to update. I have entered dates for 2005. If the user wants to use this spreadsheet in 2006 they will need to know how to update the data validation boxes.

I spent a lot of time setting up my monthly spreadsheets. I did not realise that I could copy sheets once I had set one up. Also every time I updated one spreadsheet I had to update each of them. I did not realise that I could update them all together by selecting them all. Because I set up 12 sheets that were all the same except for the month it meant that I wasted a lot of time and I did not complete my spreadsheet early enough to get user feedback.