

Name: Date:

What we are expecting you to know and do!

Modelling task – Personal budget

Applications:

You should be familiar with the use of at least one of the following software applications:

- Spreadsheets
- Simulations

Skills:

You should be able to demonstrate the following ICT skills.

- Investigate existing spreadsheet models and/or simulations.
- Help make decisions.
- Be aware of the consequences of choices made.

Hardware including:

- Input/output devices – keyboard, mouse, interactive whiteboard, graphics slate/tablet;
- Storage media – hard copy (print out), hard disk (HDD), floppy disk, CD, memory cards/sticks

You should know:

- the uses, advantages and disadvantages of modelling techniques;
- how to use ICT based models or simulations to help you make decisions;
- make changes and be aware of the consequences of your choices.

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Modelling task: Personal budget

Your parents agree to raise your pocket money to £50.00 a week. They have said that you must keep a record of what you spend the money on. You use a computer system to work out where your money went at the end of each week.

1. What type of application could you use to record how you spend your money?

.....

2. What are the names of two applications that you could use here at school?

.....

.....

Label the following:

- formatting bar
- formula bar
- table
- name box

Name this application:

.....

	A	B	C	D	E
1	Your name				
2					
3		How many?	How much?	Total	
4	Bus fares			£0.00	
5	Lunches			£0.00	
6	Cinema			£0.00	
7	Chocolate bars			£0.00	
8	Leisure Centre			£0.00	
9	Magazines			£0.00	
10					
11		Total expenditure		£0.00	
12					
13		Pocket money available		£50.00	
14					
15		Money left at end of week		£50.00	
16					
17	Task number:				
18					

Modelling task: Personal budget



You will need to use the following file for this work:
'OCR coursework modelling task.xls'

Changes to make to the file:

1. Put your name in the cell A1 where it says 'Your name'.

2. Save your changes using the following filename: mt budget

Use your initials!

Do you want to make any colour changes to the text or cell colours?

You now need to add the data to the cells to be able to complete this work.

You need to put the cost of the school bus, school lunches, the magazines, etc. into the table. You will also need to add how many of each of these things you buy. As you do this, notice how the application adds the total up for you.

3. Save your work. Update the file already saved.

Changes to make before you continue:

Add the number 1 to cell B17. This is task 1.

Task 1:

There is no school on Monday of this week because it is a bank holiday so you will only need to pay bus fares for four days.

Change your spreadsheet to show this.

Print out a copy of your work.



Changes to make before you continue:

Add the number 2 to cell B17. This is task 2.

Task 2:

As there is no school on Monday of this week, you will only need to pay for four school lunches.

Change your spreadsheet to show this.

Print out a copy of your work.



Task 3:

As you have made some changes you will need to save your work. We want to keep the original file so save your work as:

Use your initials



mt week1

Task 4:

Look at your prints for task 1 and task 2. Look at the changes that have been made.

1. What has happened to the total price of the bus fares? (see task 1)

.....
.....
.....

2. What has happened to the total price of the lunches? (see task 2)

.....
.....
.....

3. What has happened to the total money left at the end of the week?
(see task 2)

.....
.....
.....

You think that you can now afford to buy one more chocolate bar or go to the cinema twice but you are not sure which is the better choice to make. Use the spreadsheet to help you decide.

Which choice would give you the most money left at the end of the week?

Changes to make before you continue:

Load your original spreadsheet called 'budget'
Change cell B17 to '5a'. This is task 5a.

Task 5a:

Change the number of visits to the cinema to 2. Look carefully at the changes.

Print out the spreadsheet.

Close the spreadsheet without saving any changes.

Changes to make before you continue:

Load your original spreadsheet 'budget'
Change cell B17 to '5b'. This is task 5b.

Task 5b:

Change the number of chocolate bars to 6. Look carefully at the changes.

Print out the spreadsheet.

Task 6

Look at your prints for task 5a and task 5b. Look at the changes that have been made.

1. Which of the two changes gives the bigger total?

Task 5a

Task 5b

2. Which of the two changes is the better choice for you?

Task 5a

Task 5b

Give reasons for your choice:

.....

.....

.....

.....

Task 7

Describe an advantage or disadvantage of using this application to do these tasks:

.....

.....

.....

.....

Modelling task 2 - personal budget

Mark scheme

Criteria	Activity	Evidence	Mark	Mark Awarded
Change data in a spreadsheet Task 1 (p4)	Pupil changes data correctly	Hard copy of work showing the change of cell B2 from 10 to 8	1	
Change data in a spreadsheet Task 2 (p4)	Pupil changes data correctly	Hard copy of work showing change of cell B3 from 5 to 4	1	

Store work Task 3 (p5)	Pupil saves work	Teacher observation of activity	1	
Retrieve work Task 5a (p6)	Pupil retrieves work	Teacher observation of activity	1	
Describe the effect of variable changes Task 4 (p5)	Pupil describes the effect of variables being changed correctly	Written statement One mark for writing what happened to the total prices and one for writing what happened to the total amount left. (Print out of spreadsheet)	2	

Make decisions using models Task 6 (p7)	Pupil states which alteration gives the bigger total price and which is better	Statement of which alteration gives the bigger total price (cinema)	1	
		Statement from pupil of which alteration is better (changing number of chocolate bars)	1	
Make decisions using models Task 6 (p7)	Pupil states what has happened as a result of the alteration	Statement saying that there will be an overspend if pupil goes to the cinema twice	1	
Evaluate Task 6 (p7)	Pupil describes an advantage or disadvantage	Statement on final hard copy	1	
		Total	10	

When evaluating, it is not essential that comparisons are used. Examples of acceptable statements would be, 'this was a good application to use because it's easy to change things', or 'menus are easy to use, quicker than doing by hand'.

Unacceptable statements are to do with 'enjoyment' or 'effort'.