

# Model Assignment

## Issued January 2008

OCR Level 2 Nationals in ICT

Unit 6: Spreadsheets: Design and use

**Please note:**

This OCR model assignment may be used to provide evidence for the unit above. Alternatively, centres may wish to adapt this assignment or devise their own assignment for the purposes of assessment. It is the centre's responsibility to ensure that any adaptations made to this assignment allow candidates to meet all the assessment objectives and provide sufficient opportunity for candidates to demonstrate achievement across the full range of grades.

**The scheme codes for these qualifications are:**

OCR Level 2 National First Award in ICT	06324
OCR Level 2 National Award in ICT	06325
OCR Level 2 National First Certificate in ICT	06299
OCR Level 2 National Certificate in ICT	06276

**The QCA Accreditation Number for this unit is:**

Unit 6: Spreadsheets design and use	Y/500/2226
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This OCR model assignment remains live for the life of these qualifications.

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# Contents

	Page number(s)
<b>TUTOR INFORMATION</b> <b>Guidance for centres</b> This section provides general guidance to centre staff on the preparation and completion of the assignment.	3 - 12 <b>4 - 5</b>
<b>Notes for tutors</b> This section provides additional guidance and support to centre staff for each task. It is not intended for use by candidates.	<b>6 - 10</b>
<b>Spreadsheet Design Template</b> This template may be issued to candidates	<b>11-12</b>
<b>CANDIDATE INFORMATION</b> <b>(This section must be photocopied for each candidate)</b> <b>General information for candidates</b> This section provides candidates with general information on completion of the assignment in a question and answer format.	13 – 33 <b>14</b>
<b>Scenario</b> This section contains the scenario which candidates will need to be familiar with in order to complete the tasks.	<b>15-17</b>
<b>Tasks</b> This section contains all the tasks candidates must complete before submission for assessment.	<b>18 - 26</b>
<b>Candidate checklist</b> This checklist is provided to assist candidates in ensuring that they have completed and submitted evidence for all tasks.	<b>27 - 33</b>

# Model Assignment: Tutor Information

OCR Level 2 Nationals in ICT

Unit 6: Spreadsheets – design and use

# Guidance For Centres

## 1 General

- 1.1 OCR model assignments are issued free to centres on approval and are available to download from our website: [www.ocr.org.uk](http://www.ocr.org.uk).
- 1.2 Centres may choose to:
  - use OCR model assignments for formal summative assessment of candidates
  - tailor OCR model assignments for formal summative assessment of candidates
  - use OCR model assignments as a benchmark for devising their own assignment.
- 1.3 This assignment has been designed to meet the full assessment requirements of the unit. Candidates will need to take part in a planned learning programme that covers the underpinning knowledge and skills of the unit.

## 2 Before carrying out the assignment

- 2.1 Candidates should be provided with a copy of the *Candidate Information* section of this booklet.
- 2.2 Candidates may carry out preparations prior to undertaking the tasks; there is no time limit for this.

## 3 When completing the assignment

- 3.1 Candidates should be allowed sufficient time to complete all of the tasks. The amount of time may vary depending on the nature of the tasks and the ability of individual candidates. It is suggested that evidence is produced in several sessions.
- 3.2 Each candidate must produce individual and authentic evidence for each task within the assignment.
- 3.3 Centre staff may give support and guidance to candidates. This support and guidance should focus on checking that candidates understand what is expected of them. It is not acceptable for tutors to provide model answers or to work through answers in detail.
- 3.4 Candidates may use information from any relevant source to help them with producing evidence for the tasks.
- 3.5 It is acknowledged that candidates in their responses may refer to situations in the scenario but as the scenario is fictitious this does not break any rules of confidentiality.

However, candidates must be guided on the use of information from other sources to ensure that confidentiality is maintained at all times.

#### **4 After completing the assignment**

- 4.1 Candidates' evidence is assessed by the centre's assessor against the qualification specification contained in the Centre Handbook. When grading candidates' work centres **must** use the grading descriptors in the unit. For further information about assessment please refer to the section on Assessment and Moderation in the Centre Handbook.
- 4.2 Assessors' decisions should be quality assured across the centre through internal moderation. For further information about internal moderation please refer to the section on Assessment and Moderation in the Centre Handbook.

#### **5 Presentation of work**

- 5.1 Candidates may use the *Candidate Checklist* provided to ensure that they submit evidence for ALL tasks. They can do this by using the *Candidate Checklist* as a contents page inserting references/page numbers in the boxes provided.
- 5.2 Centres may wish to discourage candidates from excessive use of plastic wallets for presentation of their evidence as this may hinder the assessment process. Instead centres may wish to encourage candidates to present their work so that it is easily accessible, eg spiral bound, stapled booklet, treasury tag.

#### **6 Acceptable evidence**

- 6.1 For guidance on generation and collection of evidence please refer to the section on Assessment and Moderation in the Centre Handbook.

#### **7 Reworking the assignment**

- 7.1 If candidates do not meet the minimum PASS requirements for the assessment objectives, further work will be required.
- 7.2 Tutors may give feedback to candidates to support and guide them in producing evidence to the required standard.

# Notes For Tutors

## Introduction to the Tasks

The tasks have been designed to enable candidates to demonstrate their knowledge and understanding of how to design, create and use spreadsheets. It is assumed that candidates will have acquired these skills before starting this assignment.

The scenario sets out the user requirements which are to keep records of stock and sales, and to analyse this data. Merit and Distinction candidates also need to create an invoice in order to demonstrate the use of multiple sheets and a wider range of formulas and formatting features.

The basis of the scenario is a company that wishes to keep records of sales and income for four years. Because the assignment might be started in any year the labels are currently given as 'current', 'year 1', 'year 2' and 'year 3'. Teachers may wish to change these labels to:

- 'Current': the current year (eg 2008)
- 'Year 3': last year (eg (2007)
- 'Year 2': two years ago (eg 2006)
- 'Year 1': three years ago. (eg 2005)

The tasks have been designed so that all of the assessment objectives in Unit 6 are addressed.

The final spreadsheet file may be used for assessment purposes, although this cannot be the only form of evidence as there are also requirements for written designs, printouts and explanations of some of the activities, eg modelling and macros. Candidates may need to provide supplementary evidence e.g. screenshots and/or cell references showing where certain features have been used. References could be written in the relevant box on the candidate checklist. E.g.

Evidence provided (please ✓):	Ref/Page no(s)
<input type="checkbox"/> electronic file	<i>ChinaFriends.xls</i> <i>(Sheet 2, cell B3)</i>

**These guidance notes should be used in conjunction with the unit specification and Centre Handbook.**

# The Tasks

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## Task 1: Design the spreadsheet

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### Assessment Objective 1 is assessed in this task

Assessment Objective 1 requires candidates to produce a **design**. Credit should not be given in this assessment objective to completed spreadsheets. Whilst any form of hand-drawn or word-processed design is acceptable, a design template that can either be used electronically or written on by hand is provided with this assignment, and tutors may wish to make this available to candidates.

Candidates will need to be familiar with the spreadsheet package they will be using before they begin this task. This will allow them to include such details as formulas and formatting in their designs.

It is anticipated that teachers will discuss the user needs with candidates, so that different ideas can be considered. Candidates might be reminded about different functions and their uses, and about other spreadsheet features available to them. However, Assessment Objective 1 requires candidates to design their own spreadsheet, so the work for this task must be their own.

It is expected that different candidates will come up with different solutions. Some may choose to put all the information about each year together, whilst others might decide to put prices, sales and takings together. Some may choose to put the summary table on the same sheet as the main data, whilst others might move this to a separate sheet.

Designing the single sheet in parts A and B of this task, which offer opportunities at least for the use of \*, +, SUM and a rounding function, meets the requirements for a Pass in this assessment objective. The additional Merit/Distinction requirement to calculate the % increase offers the opportunity also to use /. There is also a requirement for Merit/Distinction candidates to plan some conditional formatting and validation.

Designs should include:

- the basic layout of the spreadsheet
- formulas to be used
- formatting.

Part C allows candidates to add the design of another sheet, enabling access to Merit and Distinction grades for Assessment Objective 1.

Candidates might benefit from seeing the layout of some real invoices first.

Designing the invoice offers opportunities for the use of, at least, -, a date function, IF statements and lookup formulas, which satisfies the Distinction requirements when considered alongside the design for part A. It also offers more opportunities for formatting.

Higher levels are awarded in this assessment objective for

- more complex solutions
- a greater range of functions
- appropriateness of the designs

- more detailed designs.

To complete this task candidates should check that their designs cover all the Pass criteria listed in part D.

## Task 2: Create the spreadsheet and make it easy to use

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### **Assessment Objective 2 is assessed in this task**

If candidates have created detailed designs in Task 1, then parts A and B of this task should be quite straightforward. Candidates will simply transfer their designs onto a spreadsheet.

Although there is no specific reference in the criteria to testing, it is important that candidates do test their sheet to make sure that it works, as they can only pass Assessment Objective 2 if they create a **functional** spreadsheet, ie one that works. There is no need for candidates to create any evidence of drafts or of testing, providing they evidence a working solution.

The majority of evidence will be provided by either the final file or printouts of the sheet(s) created, in data and formula views. Additional evidence might be needed to evidence, for example, worksheet protection and conditional formatting, which cannot be seen easily.

Parts B-E of this task offer further opportunities for candidates to create evidence of useful column headings, explanatory text, cell comments and validation. It also addresses the specific requirement of Assessment Objective 2 that the solution will include some help for the user.



## Task 3: Sort and filter data

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### Assessment Objective 3 is assessed in this task.

This task requires candidates to sort and filter the main stock sheet. To achieve Pass level in this assessment objective, candidates need to sort data using one field and filter data using one field.

For Merit level, they must sort data using at least two fields and filter data using at least two fields.

For Distinction level, they must also customise at least one filter.

## Task 4: Carry out modelling activities

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### Assessment Objective 4 is assessed in this task.

This task requires candidates to use their spreadsheet for modelling, by changing data and noting the results. To achieve Pass or Merit level it is sufficient to change values to obtain predictions of what would happen, whilst for a Distinction it is also necessary to use the sheet to make decisions. This can be done by trial and error – there is no requirement to use tools such as Goal Seek.

For part C it is expected that candidates will use the total amount including VAT and delivery. However candidates should not be penalised if they interpret the situation in a different way as it is the modelling that is being assessed.

For higher levels candidates should write about their investigations and the results they find.

## Task 5: Create graphs and charts

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### Assessment Objective 5 is assessed in this task.

Assessment Objective 5 requires candidates to create graphs/charts using the data in their spreadsheet. Although to achieve Pass these may not be the most suitable, for higher grades it is expected that candidates will choose the most appropriate type of graph. Therefore this task does **not** specify the type of chart to use for each part of the task. However, candidates are instructed that it is necessary to create at least **two** different types of graph/chart.

Candidates should be taught how to highlight non-contiguous data using **ctrl**, as it is likely that at least some of the data required will not be in adjacent columns. Alternatively this might be another opportunity for candidates to evidence their ability to hide and show columns.

For Merit level all graphs/charts must be given appropriate titles and labels. Additionally, candidates must produce at least one of each type of graph/chart from bar/column, pie and line. One of these must compare values from more than one set of data.

Distinction level should be awarded where the criteria to achieve Merit level have been met and **all** charts chosen are appropriate and well-labelled, showing the required data clearly.

If candidates find that they have not used the required variety of chart types, they can choose to chart other data from their sheet but they should ensure that the purpose of the chart is clearly stated, so that the appropriateness of the choices can be judged.

## Task 6: Create macros

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### **Assessment Objective 6 is assessed in this task.**

To gain a Pass in this assessment objective, candidates must create a simple macro, automating at least one task. They must enable this macro to be run by either a keyboard shortcut or a button (on the worksheet or on a toolbar). They must also access the macro code and print it out.

Merit and Distinction level candidates must automate a sequence of at least two tasks, with Distinction level candidates creating two separate macros. Merit and Distinction level candidates must also set their macro(s) to run by **both** a keyboard shortcut **and** a button, although they can choose whether the button is to be on the worksheet or on a toolbar. They must also write about (each of) their macro(s) – describing what it does and how it can be run. This may be as a short comment on the code printout.

For Distinction level candidates must also annotate their printouts to show the function of at least three **different** items of macro code. These must be active instructions rather than the header, comments or End Macro statement. The three items of code might all be from the same macro, or they may be taken from both macros, so long as they are all different.

Although the functionality of the macro(s) could be assessed by looking at the spreadsheet file itself, this objective requires candidates to actually print out the macro code.

It is likely that candidates, having been taught to use macros, will have their own ideas about suitable tasks for macros. However, examples are suggested in the task, which meet the requirements for the different levels.

# Spreadsheet Design Template – Task 1

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# Model Assignment: Candidate Information

OCR Level 2 Nationals in ICT

Unit 6: Spreadsheets – design and use

CANDIDATE NAME: \_\_\_\_\_

# General Information for Candidates

Q *Do I have to pass this assignment?*

A Yes. You must pass this assignment to achieve the full qualification.

Q *What help will I get?*

A Your tutor will help you when completing the OCR model assignment and will make sure that you know what resources/facilities you need and are allowed to use.

Q *What if I don't understand something?*

A It is your responsibility to read the assignment carefully and make sure you understand what you need to do and what you should hand in. If you are not sure, check with your tutor.

Q *Can I copy other people's work?*

A No. The work that you produce must be your own work and you may be asked to sign a declaration to say that the work is your own. You should never copy the work of other candidates or allow others to copy your work. Any information that you use from other sources, eg books, newspapers, professional journals, the Internet, must be clearly identified and not presented as your own work.

Q *Can I work in a group?*

A Yes. However, if you work in a group at any stage you must still produce work that shows your individual contribution.

Q *How should I present my work?*

A You can present your work in a variety of ways, eg hand-written, word-processed, on video. However, what you choose should be appropriate to the task(s). For some work, eg presentations, coaching sessions, role-play, work experience, you will need to provide proof that you completed the task(s). A witness statement or observation sheet could be used for this. If you are unsure, check with your tutor.

Q *When I have finished, what do I need to hand in?*

A You need to hand in the work that you have completed for each task. Do not include any draft work or handouts unless these are asked for. When you hand in your work make sure that it is labelled, titled and in the correct order for assessing.

Q *How will my work be assessed?*

A Your work will be marked by an assessor in your centre. The assessor will mark the work using the assessment objectives and the grade descriptors in the qualification specification.

# Scenario

This scenario must be read before starting the tasks on pages 16 - 24.

## China Friends Ltd

China Friends is a small business that sells china models by post. Their current collection is shown in the table below.

Stock Code	Range	Description	Current Price (ex VAT)
CCB1	Cute & Cuddly	Bunny	£6.69
FFC1	Furry Friends	Cat	£7.19
FFC2	Furry Friends	Cat and kittens	£12.49
FFC3	Furry Friends	Cat with ball	£8.39
AFC1	Animal Farm	Cow	£7.99
AFC2	Animal Farm	Cow and calf	£13.99
WSE1	Wildlife Safari	Elephant	£9.99
WSE2	Wildlife Safari	Elephant group	£17.59
WSL2	Wildlife Safari	Female lion	£7.99
CCT3	Cute & Cuddly	Group of teddies	£6.99
WSH1	Wildlife Safari	Hippopotamus	£8.99
CCK1	Cute & Cuddly	Kitten	£7.19
FFD1	Furry Friends	Labrador	£6.89
WSL1	Wildlife Safari	Male lion	£7.89
CCP1	Cute & Cuddly	Panda	£5.19
AFP1	Animal Farm	Pig and piglets	£14.39
FFD2	Furry Friends	Puppies	£12.99
FFD3	Furry Friends	Scottie	£5.99
AFS1	Animal Farm	Sheep	£8.89
AFS2	Animal Farm	Sheep and sheepdog	£15.89
CCT1	Cute & Cuddly	Teddy	£7.09
WST2	Wildlife Safari	Tiger (lying)	£7.99
WST1	Wildlife Safari	Tiger (standing)	£8.09
CCT2	Cute & Cuddly	Two teddies	£6.79

VAT is currently 17.5% of the cost of goods, although that might change in the future

The company updates its prices each year and keeps records of sales of each item. Prices and sales of these items for the last three years are shown below (Year 3 = last year, year 2 = the year before and year 1 = the year before that).

	Year 1		Year 2		Year 3	
Stock Code	Price (ex VAT)	Sales	Price (ex VAT)	Sales	Price (ex VAT)	Sales
CCB1	£6.39	178	£6.59	177	£6.69	176
FFC1	£6.49	184	£6.79	179	£6.99	184
FFC2	£11.99	226	£12.39	231	£12.39	232
FFC3	£7.99	366	£8.19	344	£8.39	366
AFC1	£7.49	74	£7.49	82	£7.69	89
AFC2	£12.29	101	£12.79	111	£13.39	117
WSE1	£9.59	189	£9.69	184	£9.89	165
WSE2	£16.49	138	£17.29	126	£17.49	129
WSL2	£7.79	189	£7.79	209	£7.99	185
CCT3	£6.89	118	£6.89	118	£6.99	112
WSH1	£8.49	193	£8.79	172	£8.89	161
CCK1	£6.59	239	£6.79	251	£6.99	250
FFD1	£6.59	182	£6.79	189	£6.89	203
WSL1	£7.39	195	£7.69	186	£7.69	167
CCP1	£4.79	67	£4.89	65	£4.99	69
AFP1	£13.79	178	£13.79	174	£14.39	185
FFD2	£12.39	281	£12.89	306	£12.99	287
FFD3	£5.79	137	£5.89	121	£5.89	107
AFS1	£8.39	60	£8.49	63	£8.69	61
AFS2	£14.79	123	£15.29	113	£15.79	125
CCT1	£6.59	271	£6.59	268	£6.79	276
WST2	£7.49	206	£7.79	194	£7.79	215
WST1	£7.79	138	£7.99	138	£7.99	141
CCT2	£6.69	278	£6.69	288	£6.79	256

VAT is currently 17.5% of the cost of goods, although that might change in the future.

China Friends would like a spreadsheet for their stock records. This should have space for the three years' prices and sales shown above, plus this year's prices and space to add this year's sales at the end of the year. They hope that this will allow them to update the figures at the end of each year, so that it will always show the last three full years' sales, with room for data about the current year. They are considering expanding their ranges in the future, so they would like space for 30 different stock items.

Your spreadsheet should calculate:

- the total number of each item sold over the four years
- the total number of items sold each year
- the amount (£) taken in sales for each item, for each year



- the total amount (£) taken in sales for each item, over the four years
- the total amount (£) taken in sales each year
- the total amount (£) taken in sales over the four years.

The company would also like a summary table showing the ranges (Animal Farm, Cute & Cuddly, Furry Friends, and Wildlife Safari) with:

- the total number of items sold in each range, for each year from year 1 to year 3
- the increase or decrease in sales for each range, from year 1 to year 3
- the total amount (£) taken in sales for each range, for each year from year 1 to year 3
- the increase or decrease in the amount taken (£) for each range, from year 1 to year 3, rounded down to the next whole £.

China Friends would like the spreadsheet to allow them to:

- sort and search the stock list to find, for example, sales figures for a particular range or to show the list in order of sales in a particular year
- use the spreadsheet to help them predict future income
- produce some charts and graphs for their annual report – for example, to show the sales of different models in each range during the year, and to compare sales of goods in different ranges over the last few years.

China Friends wants the spreadsheet to be easy to use, as their staff have little or no experience of the use of spreadsheet software, although they are confident in their use of computers.

China Friends would also like the spreadsheet to have additional features but these are not essential:

- the calculation of the **percentage** increase or decrease in overall takings (£) from year 1 to year 3
- an easy way to see at a glance whether the sales of particular ranges have gone up or down. For example, this might be shown by making sales that have increased from the previous year appear in blue and sales that have decreased appear in red.
- an easy way of creating invoices for customers showing:
  - the date
  - a space to enter the customer's name and address
  - the stock code, range, description, price, number required and VAT for each item purchased
  - the total cost of all the items purchased, the total VAT and the total cost with VAT
  - a discount of 5% for all orders with a total value (including VAT) of over £50
  - a delivery charge of £5.00 per order
  - the final total.

As much as possible should be calculated automatically.

The invoice should be well-presented and should have space for 10 different items. It will be printed on company headed paper, so there is no need to include the company logo or contact details, but you should leave 4cm blank at the top of the page.

When China Friends receive enquiries over the telephone, customers often have a maximum price they are prepared to pay. The company would like to be able to use the spreadsheet to model the total price for different choices.

# Tasks

## Task 1: Design the spreadsheet

### Assessment Objective 1

In this task you will produce designs for a spreadsheet to meet China Friends' requirements.

You must refer to the scenario, on pages 15-18.

To achieve Pass level you need only complete parts **A**, **B** and **D** of this task.

- A** Create a design for a spreadsheet that will meet China Friends' requirements for the stock records and summary sheet, as detailed on pages 15-17. This should show the layout and any formulas that you will use.

There is no need to copy all the data for every item of stock, prices and sales, but you must indicate clearly what will be entered where. If you will be using similar formulas down a column or across a row there is no need to write out every formula in full, providing you make it clear what the formula will be and which cells it will be entered into.

*(You can choose to create your design by hand, using pencil and paper, or you might like to use a word processor. You must **not** use a spreadsheet, as this must clearly be a **design**. A blank spreadsheet planning sheet is provided for you to use if you wish. Use a separate planning sheet for each spreadsheet worksheet you need.)*

- B** Think carefully about any formatting that you will need to apply. You need to show these details in your design work, either by annotating your planning sheet or by writing about any particular formatting features you will use, giving exact details of the cells that will be formatted.

You need to show, for example:

- the format of the contents of the cells
- any font styles to be applied
- text and background colours
- cell borders
- any cells that are to be merged
- direction of any text that is to be rotated.

To achieve higher levels you also need to show:

- how colour and borders can be used to distinguish between different types of cell, eg cells to input data, cells which automatically calculate
- any conditional formatting you will set
- any cells where validation can be set to help reduce input errors.

*(Add the details of formatting to the planning sheets you produced in Part A. If necessary you can add extra explanation of your formatting using an extra page.)*

- C** To achieve higher levels you need to design more than one sheet, using a wider range of functions.

Read through the company's requirements for the layout and contents of the invoice. You will find this on page 17.

Create a design for the invoice sheet. Show any text that needs to be entered, where the user will enter details of customer's choices and any formulas you will need.

Add details of any formatting you will need.

To achieve Distinction level you must also:

- consider how you can enter the VAT rate so that the user can easily change this in the future, should this become necessary.
- look for any information that the user could add using data from a drop-down list. You need to plan where this data will be entered. You will probably plan to hide these cells, so that the list is not immediately visible on the invoice.

*(Create this design by hand, with pencil and paper, or using a word processor, as in Part A.)*

**D** The level you are awarded for this assessment objective will depend on the detail of your design and the range of formulas you have included. If you have not used enough different formulas then you need to consider ways of improving or adding to your design to make sure you have included what you need. If you have included sufficient features in your design then you need do nothing more here. Check your design(s) against the following list and make any improvements that are needed:

- formulas using at least **two** of +, -, \* and / [all four are needed for higher levels]
- formulas using brackets **()** [Distinction only]
- functions from at least **two** of the categories shown below [**three** to achieve Merit, **four** to achieve Distinction]
  - arithmetic and statistical functions such as SUM, AVERAGE, MAX, MIN, MEDIAN, MODE, COUNT, COUNTIF, SUMIF
  - mathematical/trigonometric functions, eg SIN, COS, TAN, LOG, POWER, RAND
  - rounding functions, such as INTEGER, ROUNDUP and ROUNDDOWN, TRUNC
  - logical functions, such as IF, AND, OR and NOT, including nested IF statements [IF must be used to achieve Merit or Distinction]
  - lookup functions, such as VLOOKUP, HLOOKUP, MATCH
  - reference functions, such as ROW, COLUMN
  - text functions, such as LEFT, MID, RIGHT, LEN, VALUE, TEXT, CONCATENATE, FIND
  - date and time functions, such as TODAY, NOW, YEAR, MONTH, DAY
- formulas using absolute cell referencing [Distinction only]

*(You may not need to create any additional evidence for this task. If you do need to add anything you should simply be improving the design(s) already created)*

## Task 2: Create the spreadsheet and make it easy to use

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### Assessment Objective 2

In this task you will use your designs to create the spreadsheet for China Friends.

To achieve Pass level you need only complete parts **A**, **B** and **C** of this task.

- A** Use your spreadsheet software to create the sheet(s) you have designed. Take care to follow your designs in detail, including layout, formulas and formatting.

Enter in all the data you have been given. You have not yet been given any data for sales this year, so you must leave these cells blank.

You may find that some of your formulas don't work at first. If so, you need to make any adjustments that are necessary to make sure that your final spreadsheet does work.

*(Evidence could be an electronic file or a printout of each sheet showing the formulas. If printing, preview pages before printing so that you can set the page orientation, margins and scale to fit the sheets on the page in the best way possible.)*

- B** The grade you are awarded for this assessment objective will depend on the range of formatting features you have used.

Check that you have used all of the following features. If necessary add some more formatting to your sheet:

- text colours
- background colours
- cell borders
- adjust row height or column width
- merge cells
- set the direction of text in a cell.

To achieve higher levels:

- hide and show rows and columns
- set some text to wrap in a cell
- conditional formatting.

*(Evidence could be an electronic file or a printout of each sheet showing the formulas. If there are features you have used that cannot be easily seen, for example, hiding/showing rows/columns and conditional formatting, you should include a screenshot as evidence of the feature you have used.)*

- C** You need to include at least **one** example of help for the user. For example:

- an instruction or explanation for the user somewhere on your sheet(s)
- one or more cell comments

- validation and/or drop-down lists to make entering data easier and to help prevent data entry errors. This might include helpful input and error messages.

*(This might be evidenced using screenshot(s).)*

**D** To achieve Merit level you must include both of the following:

- at least one cell comment
- validation for at least one cell.

*(This might be evidenced using screenshots.)*

**E** To achieve Distinction level you must:

- include sufficient help to enable a beginner to use your spreadsheet with ease
- use more than one suitable cell comment
- include helpful input and error messages in your validation settings
- set some cells for input from a drop-down list
- use worksheet protection to prevent users changing or deleting formulas by mistake.

*(This might be evidenced using screenshots. )*

### Task 3: Sort and Filter data

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#### Assessment Objective 3

In this task you will sort and filter data in your spreadsheet.

To achieve Pass level you need only complete parts **A** and **B** of this task.

**A** China Friends would like to see the information in their stock list in order of sales last year, so that they can see the items that have sold the most at the top of the list.

Sort the list to show the stock items in the required order and print it out.

*(The evidence for this task will be the printout.)*

**B** The company would like to show the stock list for each range separately.

Filter the list to show only the items from the Cute & Cuddly range, then print out the list.

*(The evidence for this task will be the printout.)*

**C** To achieve higher levels you also need to:

- sort the stock list in alphabetical order of range, with the items in each range in increasing order of current price. Print out this list.
- filter the stock list to show just those items from the Wildlife Safari range with a current price of £7.99 (excluding VAT). Print out this list.

*(The evidence for this task will be the printouts.)*

**D** To achieve Distinction level you also need to:

- filter the stock list to show only those items from the Cute & Cuddly range, with a current price of less than £7 (excluding VAT). Print out this list.

*(The evidence for this task will be the printout.)*

## Task 4: Carry out modelling activities

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### Assessment Objective 4

China Friends set targets for the sales of all their items. This year they have a special advertising campaign promoting the Wildlife Safari range.

To achieve Pass level you need only complete parts **A** and **B** of this task.

**A** Use your spreadsheet to predict the total takings for this year, assuming sales remain the same as last year.

For higher levels you need to write about your investigation, describing what you did and the results you found.

*(Evidence for this task will be a printout or screenshot showing the predicted takings. For higher levels you may either annotate this printout or word-process your description.)*

**B** Use your spreadsheet to predict the total takings, if the advertising campaign manages to increase sales of all of the Wildlife Safari items by 10 each.

For higher levels you need to write about your investigation, describing what you did and the results you found.

*(Evidence for this task will be a printout or screenshot showing the predicted takings. For higher levels you may either annotate this printout or word-process your description.)*

**C** To achieve Distinction level you also need to carry out additional modelling:

- A customer contacts China Friends wanting to buy a selection of items from the Furry Friends range. The customer wishes to spend between £30-£35 altogether and does not want to buy more than one of the same item.

Use your spreadsheet to find at least two possible selections that the customer can buy. Write about your investigation, describing what you did and the results you found.

- Another customer contacts China Friends to say that he wishes to buy a gift for a person who is leaving work for a new job. He has collected £50 from colleagues and wishes to spend within £2.50 of this total.

Use your spreadsheet to find at least two suggestions of items this customer could buy. Write about your investigation, describing what you did and the results you found.

*(Evidence for this task will be either annotated printouts or word-processed descriptions with screenshots.)*

## Task 5: Create graphs and charts

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### Assessment Objective 5

China Friends wants you to produce some graphs/charts for their annual report. You need to choose at least **two** different types of chart from the following list:

- a pie chart
- a bar (column) chart
- a line graph.

To achieve Pass level you need only complete part **A** of this task.

**A** Create **two** different types of chart using the summary table.

- One type of chart/graph to show the numbers of each range sold in year 1.
- A different type of chart/graph to show the proportion of the amount taken (£) that came from each range in year 1.

For higher levels you need to make sure that you give all your graphs/charts appropriate titles and labels, to show the data as clearly as possible.

To achieve Distinction level you need to think carefully about the type of chart that will best show the information required.

*(Evidence for this task will be the electronic file or printouts of the charts.)*

**B** Create a chart/graph that shows how the sales in each range have changed from years 1 to 3. This should allow the viewer to see clearly how each range has performed over the three years, and to compare the performance of the different ranges. This should be a different type of chart from those used in part A.

*(Evidence for this task will be the electronic file or printouts of the charts.)*

## Task 6: Create macros

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### Assessment Objective 6

At the end of the year the staff at China Friends will need to update the spreadsheet with the final sales figures for the year.

To achieve Pass level you need only complete part **A**.

To achieve Merit level you need only complete part **B**.

To achieve Distinction level you need to complete parts **B**, **C** and **D**.

**A** To achieve Pass level you need to:

- create a macro that will automate a task to make things easier for your user. For example, it could move the insertion point to the correct cell, ready to enter the sales



figures. You need to make sure that this macro can be run by either a keyboard shortcut or by a button on the sheet or on the toolbar.

- print out the code for this macro.

*(Evidence for this task must include the printout of the macro code. If you choose to run it from a button rather than from a keyboard shortcut you will need additional evidence such as the electronic file or a screenshot.)*

**B** To achieve Merit or Distinction level you need to:

- create a macro that will automate a sequence of at least **two** tasks. For example, you could create a macro that will save your spreadsheet, then print out the invoice. You need to make sure that this macro can be run by both a keyboard shortcut and a button on the sheet or on the toolbar
- print out the code for this macro
- write about what the macro does and how it can be run.

*(Evidence for this task must include the printout of the macro code. You can write your description on this printout or add a separate word-processed sheet. Evidence of the button will be either the electronic file or a screenshot.)*

**C** To achieve Distinction level you **also** need to:

- create a second macro that will automate a sequence of at least **two** tasks. For example, you might create a macro that will reset the invoice sheet ready for entering details of a new customer. Again you need to make sure that this macro can be run by both a keyboard shortcut and a button on the sheet or on the toolbar.
- print out the code for this macro
- write about what the macro does and how it can be run.

*(Evidence for this task must include the printout of the macro code. You can write your description on this printout or add a separate word-processed sheet. Evidence of the button will be either the electronic file or a screenshot.)*

**D** To achieve Distinction level you **also** need to:

- annotate the code for your two macros, clearly identifying what at least **three** items of code do. These should be instructions, not the lines at the top/bottom of the code telling you the name of the macro, details of when it was recorded, where it ends etc.

*(Evidence will be the annotations on the printouts of your macro code.)*

# Model Assignment: Candidate Checklist

OCR Level 2 Nationals in ICT

Unit 6: Spreadsheets - design and use

CANDIDATE NAME:

<b>For task 1 (AO1) have you:</b>	Completed (✓)
<b>A</b> created a <b>design</b> for the spreadsheet,?	
<b>Evidence provided (please ✓):</b>	Ref/Page no(s)
<input type="checkbox"/> planning sheet(s)	
<input type="checkbox"/> or other (please give details) _____	

<b>For task 1 (AO1) have you:</b>	Completed (✓)
<b>B</b> added details of formatting?	
<b>Evidence provided (please ✓):</b>	Ref/Page no(s)
<input type="checkbox"/> planning sheet(s)	
<input type="checkbox"/> or other (please give details) _____	

<b>For task 1 (AO1) have you:</b>	Completed (✓)
<b>C</b> created a <b>design</b> for the invoice sheet (Merit and Distinction only)	
<b>Evidence provided (please ✓):</b>	Ref/Page no(s)
<input type="checkbox"/> planning sheet(s)	
<input type="checkbox"/> or other (please give details) _____	

<b>For task 1 (AO1) have you:</b>	Completed (✓)
<b>D</b> checked that you have used enough different types of function in your designs?	
<b>Evidence provided (please ✓):</b>	Ref/Page no(s)
<input type="checkbox"/> planning sheet(s)	
<input type="checkbox"/> or other (please give details) _____	

<b>For task 2 (AO2) have you:</b>	Completed (✓)
<b>A</b> created a spreadsheet that works?	
<b>Evidence provided (please ✓):</b>	Ref/Page no(s)
<input type="checkbox"/> electronic file	
<input type="checkbox"/> printouts of each sheet showing formulas	
<input type="checkbox"/> or other (please give details) _____	

<b>For task 2 (AO2) have you:</b>	Completed (✓)
<b>B</b> added a range of formatting to your spreadsheet?	
<b>Evidence provided (please ✓):</b>	Ref/Page no(s)
<input type="checkbox"/> electronic file	
<input type="checkbox"/> printouts of each sheet	
<input type="checkbox"/> screenshots	
<input type="checkbox"/> or other (please give details) _____	

<b>For task 2 (AO2) have you:</b>	Completed (✓)
<b>C</b> added one item of help for the user?	
<b>Evidence provided (please ✓):</b>	Ref/Page no(s)
<input type="checkbox"/> electronic file	
<input type="checkbox"/> printouts of your spreadsheet	
<input type="checkbox"/> screenshots	
<input type="checkbox"/> or other (please give details) _____	

For task 2 (AO2) have you:	Completed (✓)
<b>D</b> added a cell comment and some validation? (Merit and Distinction only)	
Evidence provided (please ✓):	Ref/Page no(s)
<input type="checkbox"/> electronic file	
<input type="checkbox"/> printouts of your spreadsheet	
<input type="checkbox"/> screenshots	
<input type="checkbox"/> or other (please give details) _____	

For task 2 (AO2) have you:	Completed (✓)
<b>E</b> added sufficient help for a beginner to use your sheet with ease? (Distinction only)	
Evidence provided (please ✓):	Ref/Page no(s)
<input type="checkbox"/> electronic file	
<input type="checkbox"/> printouts of your spreadsheet	
<input type="checkbox"/> screenshots	
<input type="checkbox"/> or other (please give details) _____	

For task 3 (AO3) have you:	Completed (✓)
<b>A</b> sorted the stock list in order of sales last year?	
Evidence provided (please ✓):	Ref/Page no(s)
<input type="checkbox"/> a printout of the sorted list	
<input type="checkbox"/> or other (please give details) _____	

<b>For task 3 (AO3) have you:</b>	Completed (✓)
<b>B</b> filtered the stock list to show only the items from the Cute & Cuddly range?	
<b>Evidence provided (please ✓):</b>	Ref/Page no(s)
<input type="checkbox"/> a printout of the filtered list	
<input type="checkbox"/> or other (please give details) _____	

<b>For task 3 (AO3) have you:</b>	Completed (✓)
<b>C</b> sorted the stock list in alphabetical order of range, then with the items in each range in increasing order of current price? (Merit and Distinction only)	
filtered the stock list to show only those items from the Wildlife safari range with a current price of £7.99? (Merit and Distinction only)	
<b>Evidence provided (please ✓):</b>	Ref/Page no(s)
<input type="checkbox"/> a printout of each list	
<input type="checkbox"/> or other (please give details) _____	

<b>For task 3 (AO3) have you:</b>	Completed (✓)
<b>D</b> filtered the list to show only those items from the Cute & Cuddly range, with a current price of less than £7? (Distinction only)	
<b>Evidence provided (please ✓):</b>	Ref/Page no(s)
<input type="checkbox"/> a printout of the list	
<input type="checkbox"/> or other (please give details) _____	

For task 4 (AO4) have you:	Completed (✓)
<b>A</b> predicted the total takings for this year?	
written about your investigation? (Merit and Distinction only)	
Evidence provided (please ✓):	Ref/Page no(s)
<input type="checkbox"/> a printout of the sheet showing the changed data and results	
<input type="checkbox"/> written explanation (Merit and Distinction only)	
<input type="checkbox"/> or other (please give details) _____	

For task 4 (AO4) have you:	Completed (✓)
<b>B</b> predicted the total takings for this year, assuming sales of Wildlife Safari items increase?	
written about your investigation? (Merit and Distinction only)	
Evidence provided (please ✓):	Ref/Page no(s)
<input type="checkbox"/> a printout of the sheet showing the changed data and results	
<input type="checkbox"/> written explanation (Merit and Distinction only)	
<input type="checkbox"/> or other (please give details) _____	

For task 4 (AO4) have you:	Completed (✓)
<b>C</b> found at least two possible selections for the first customer? (Distinction only)	
found at least two suggestions for the second customer? (Distinction only)	
written about each of your investigations? (Distinction only)	
Evidence provided (please ✓):	Ref/Page no(s)
<input type="checkbox"/> printouts of the sheet showing the changed data and results	
<input type="checkbox"/> written explanations	
<input type="checkbox"/> or other (please give details) _____	

For task 5 (AO5) have you:	Completed (✓)
<b>A</b> created at least <b>two</b> different types of chart?	
Evidence provided (please ✓):	Ref/Page no(s)
<input type="checkbox"/> printout of each chart	
<input type="checkbox"/> electronic file	
<input type="checkbox"/> or other (please give details) _____	

For task 5 (AO5) have you:	Completed (✓)
<b>B</b> created a chart that compares the sales in each range over years 1 to 3? (Merit and Distinction only)	
Evidence provided (please ✓):	Ref/Page no(s)
<input type="checkbox"/> printout of the chart	
<input type="checkbox"/> electronic file	
<input type="checkbox"/> or other (please give details) _____	

For task 6 (AO6) have you:	Completed (✓)
<b>A</b> created a macro to automate a task? (Pass only)	
Evidence provided (please ✓):	Ref/Page no(s)
<input type="checkbox"/> a printout of the code for the macro	
<input type="checkbox"/> electronic file	
<input type="checkbox"/> screenshot	
<input type="checkbox"/> or other (please give details) _____	



<b>For task 6 (AO6) have you:</b>	Completed (✓)
<b>B</b> created a macro to automate at least <b>two</b> tasks and written about it? (Merit and Distinction only)	
<b>Evidence provided (please ✓):</b>	Ref/Page no(s)
<input type="checkbox"/> a printout of the code for the macro	
<input type="checkbox"/> word-processed description	
<input type="checkbox"/> electronic file	
<input type="checkbox"/> screenshot	
<input type="checkbox"/> or other (please give details) _____	

<b>For task 6 (AO6) have you:</b>	Completed (✓)
<b>C</b> created <b>another</b> macro to automate at least <b>two</b> tasks and written about it? (Merit and Distinction only)	
<b>Evidence provided (please ✓):</b>	Ref/Page no(s)
<input type="checkbox"/> a printout of the code for the macro	
<input type="checkbox"/> word-processed description	
<input type="checkbox"/> electronic file	
<input type="checkbox"/> screenshot	
<input type="checkbox"/> or other (please give details) _____	

<b>For task 6 (AO6) have you:</b>	Completed (✓)
<b>D</b> annotated your macro code to show the function of at least <b>three</b> different items of code? (Distinction only)	
<b>Evidence provided (please ✓):</b>	Ref/Page no(s)
<input type="checkbox"/> annotated macro code	