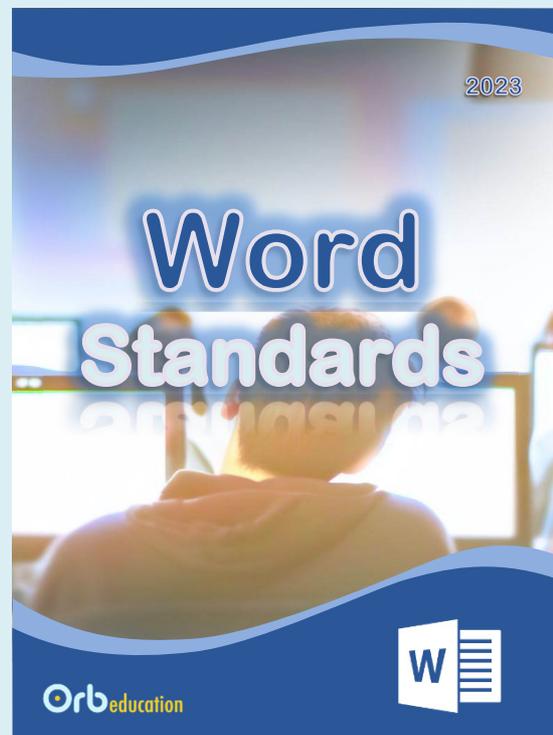
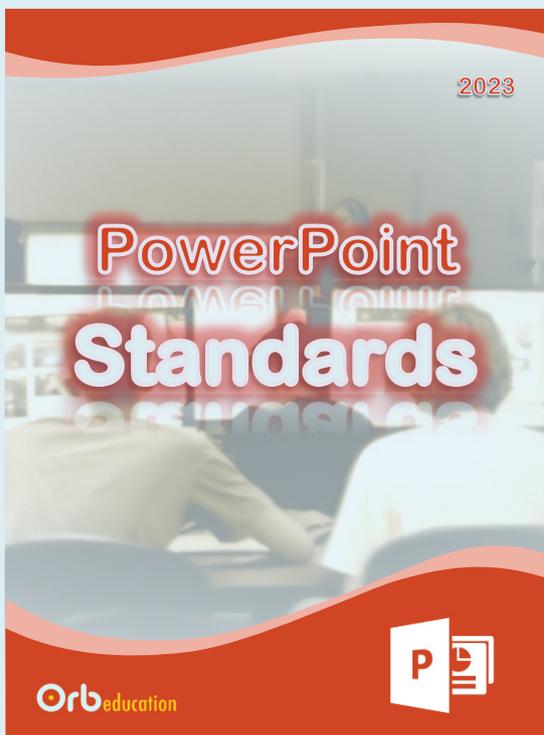




Office Standards 2023



2023

Excel Standards

 **orb**education





<input type="checkbox"/>	1. Basic Skills 1
<input type="checkbox"/>	2. Basic Skills 2
<input type="checkbox"/>	3. Formatting
<input type="checkbox"/>	4. Sorting
<input type="checkbox"/>	5. Filtering
<input type="checkbox"/>	6. Validation
<input type="checkbox"/>	7. References
<input type="checkbox"/>	8. Using References
<input type="checkbox"/>	9. Charts and Graphs
<input type="checkbox"/>	10. Formatting Charts
<input type="checkbox"/>	11. IF Function
<input type="checkbox"/>	12. COUNTIF Function
<input type="checkbox"/>	13. Conditional Formatting



Task 1 – Building a spreadsheet

The data below shows the scores for 8 students in English, Maths and Science tests. Your task is to complete the calculated values using functions. You will then format the spreadsheet and create some charts.

a. Open a new workbook in Excel and copy the data on the right. Save as 'ES - Tests'.

b. Use the MAX, MIN and AVERAGE functions to complete cells E2, F2 and G2 respectively. Format the average to a single decimal place.

c. Select these three cells then use the fill handle to complete all the calculations in the range E3:G9.

d. Make cell B10 active. Use the AutoSum facility to calculate the average score in the English test. Fill across cells C10 and D10.

e. Use any method to find each student's total score in column H. These cells should display the sum of the three values in columns B, C and D.

f. Insert two rows at the top of the spreadsheet and enter the title 'Test Scores' into the new cell A1. Make the title dark blue, size 14, Arial Black text. Increase the height of the first row to 35 pixels.

g. Format your data with bold and italics, as we have on the right.

h. Select fill colours and borders to improve the presentation of your data.

i. Create a column chart showing the English test scores for each student. You should select the range A3:B11 which includes both the names and the scores. Format your chart.

j. Create a line chart displaying Erin's three test scores. Begin by selecting the range A3:D3, then holding down the Ctrl key and selecting the range A8:D8.

Note: This chart might be a bit meaningless but it's good practice.

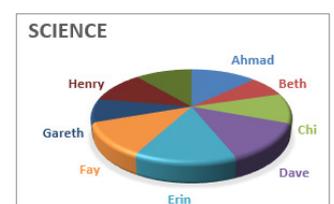
k. Create a pie chart displaying the Science results. See if you can work out how to include the labels as shown on the right. Don't worry if you can't.

Note: Again, in reality this is poor way to represent this data. We are practicing skills.

l. Save your work.

	A	B	C	D	E	F	G	H
1	Student	English	Maths	Science	Max	Min	Ave	Total
2	Ahmad	72	82	79				
3	Beth	58	46	45				
4	Chi	65	68	64				
5	Dave	88	79	81				
6	Erin	90	82	85				
7	Fay	63	69	72				
8	Gareth	44	48	50				
9	Henry	75	69	68				
10	Average							

	A	B	C	D	E	F	G	H
1	Test Scores							
2								
3		English	Maths	Science	Max	Min	Ave	Total
4	Ahmad	72	82	79	82	72	77.7	233
5	Beth	58	46	45	58	45	49.7	149
6	Chi	65	68	64	68	64	65.7	197
7	Dave	88	79	81	88	79	82.7	248
8	Erin	90	82	85	90	82	85.7	257
9	Fay	63	69	72	72	63	68.0	204
10	Gareth	44	48	50	50	44	47.3	142
11	Henry	75	69	68	75	68	70.7	212
12	Average	69.4	67.9	68.0				205.25





Validation is used to control the data that can be entered into a cell. For instance, you may allow only the following:

- Whole numbers between 1 and 100
- Dates after 2008
- Text of 15 characters or less
- Decimals over 1.0

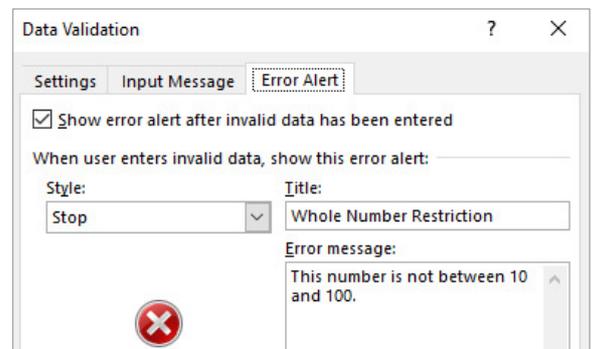
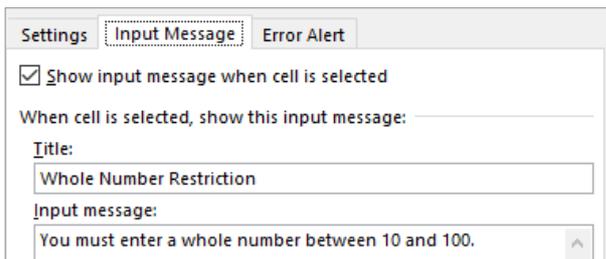
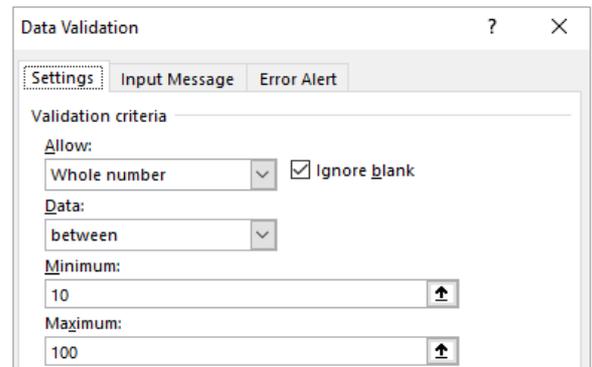
In Excel, an alert is shown when the user tries to enter a value outside the limits. The following styles of alert are available:

- **Stop** The value will not be accepted. The user will have to change it.
- **Warning** A warning will be displayed and the user has the option of changing the value or continuing.
- **Information** The user is informed that the value is outside the limits, but no change is requested.

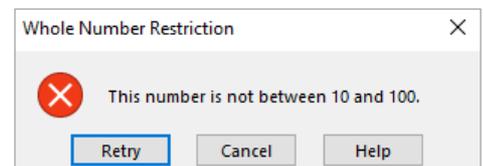
Task 1 – Validating whole numbers

- Open a new workbook in Excel and save as 'ES – Validation'. Copy the spreadsheet on the right.
- Make cell A2 active and click on 'Data Tools / Data / Data Validation'.
- Set up the options as shown on the right. These will allow only whole numbers between 10 and 100.
- Click on the **Input Message** tab and enter the *Title* and *Input message* as below.

	A	B	C	D
1	Number	Decimal	Date	Text Length



- Click on the **Error Alert** tab. Make sure the style is set as **Stop** and enter the *Title* and *Error message* shown on the right. Click **OK**.
- Test your validation by entering a range of values or text into cell A2 (e.g. 0, 50, 150, 5.5, 12/12/22, 'hello' etc).





Task 2 – Other validations

- a. Create a **Decimal** validation in cell **B2**. Use the following criteria:

<i>Minimum number</i>	1.5
<i>Maximum number</i>	5.5
<i>Titles</i>	'Decimal Restriction'
<i>Input message</i>	'You must enter a decimal number between 1.5 and 5.5.'
<i>Error alert style</i>	Warning
<i>Error message</i>	'This is not a decimal number between 1.5 and 5.5.'

- b. Create a **Date** validation in cell **C2**. Use the following criteria:

<i>Earliest date</i>	3/3/23
<i>Latest date</i>	4/4/24
<i>Titles</i>	'Date Restriction'
<i>Input message</i>	'You must enter a date between 3/3/23 and 4/4/24.'
<i>Error alert style</i>	Information
<i>Error message</i>	'This is not a date between 3/3/23 and 4/4/24.'

- c. Create a **Text length** validation in cell **D2**. Use the following criteria:

<i>Minimum characters</i>	6
<i>Maximum characters</i>	12
<i>Titles</i>	'Text Restriction'
<i>Input message</i>	'You must enter text between 6 and 12 characters in length.'
<i>Error alert style</i>	Stop
<i>Error message</i>	'This is not text between 6 and 12 characters in length.'

Task 3 – Validation questions

- a. Click on each of the cells which have validation rules set and try entering a range of values. When and where do the following objects appear?

- i. Input message title _____
- ii. Input message _____
- iii. Error alert title _____
- iv. Error alert _____



It is sometimes desirable to display different values or text in a cell depending on some condition. For example, you may want to ask a question then display the comment 'Right' if the answer entered is correct, or 'Wrong' if it is not. We can use the IF function to decide which comment is displayed. The IF function works like this:

IF the answer is correct

THEN display the word 'Right'

ELSE display the word 'Wrong'

Task 1 – Using the IF function

- Open a new workbook in Excel and save as 'ES - IF Function'.
- Copy the spreadsheet on the right. Note the following:

	A	B	C	D	E	F	G
1		Multiplication					
2							
3		Box 1		Box 2	=	Answer	
4		5	x	2			Incorrect
5							

- If you try and type the = sign on its own, then the spreadsheet will think you are starting a formula. It is necessary to type the text as '=
- Just type the word 'Incorrect' into cell **G4** at first and format it. We will add the formula next.

- Select cell **G4**. This is where the 'Right' and 'Wrong' text will be displayed. Click on 'Formulas / Function Library / Logical' and select the **IF** function.
- Enter the data as shown on the right and click **OK**.
- Test your spreadsheet by entering different values into cells **B4**, **D4** and **F4**.

Function Arguments

IF

Logical_test	F4=B4*D4	= FALSE
Value_if_true	"Correct"	= "Correct"
Value_if_false	"Incorrect"	= "Incorrect"

Box 1		Box 2		Answer	
17	x	3	=	51	Correct

- Click back on cell **G4** and look at the text version of the function that you created in the formula bar. This could have been typed directly.

```
=IF( F4=B4*D4, "Correct", "Incorrect" )
```

What does the formula mean?

= IF (F8 = B8 * D8 , "Correct" , "Incorrect")

↑

All formulas start with an equals sign

↑

IF ...

↑

... the value in F8 equals B8 multiplied by D8 ...

↑

... THEN ...

↑

... display the word 'Correct' ...

↑

... ELSE ...

↑

... display the word 'Incorrect'

2023

Access Standards

 orbeducation





<input type="checkbox"/>	1. Basic Skills 1
<input type="checkbox"/>	2. Basic Skills 2
<input type="checkbox"/>	3. Data Issues
<input type="checkbox"/>	4. Queries
<input type="checkbox"/>	5. Query Criteria
<input type="checkbox"/>	6. Wildcards
<input type="checkbox"/>	7. Select SQL
<input type="checkbox"/>	8. Exporting Data
<input type="checkbox"/>	9. Lookup Columns
<input type="checkbox"/>	10. Subdatasheets
<input type="checkbox"/>	11. Further Reports
<input type="checkbox"/>	12. Images
<input type="checkbox"/>	13. Formats and Input Masks
<input type="checkbox"/>	14. Validation



Queries are used to retrieve or manipulate the data in our database tables. At this stage, we will only be using SELECT queries which are essentially filters that you can edit. Data can be retrieved and displayed based on criteria such as:

- Fields and Tables** The fields that should be displayed and the tables they are present in.
- Records** Records can be filtered by date, the text they contain, numbers over a set amount etc.
- Order** The records can be placed in a particular order.

When a query is executed, the results appear in a datasheet. This is a filtered display of data – the actual tables have not been changed in any way. The tasks below use a query builder to produce queries.

Task 1 – Building a query

A database holding information about members of a bowling club was created in a previous task. Either create a copy of this file as your starting point or create a new database and table for the data below. Name the database 'AS – Queries' and the table 'Members'.

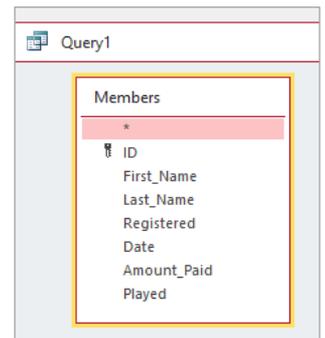
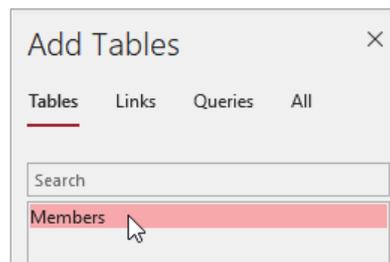
ID	First_Name	Last_Name	Registered	Date	Amount_Paid	Played
1	Sarah	Johns	Yes	01-Mar-23	\$50.00	5
2	Charles	Collins	No		\$40.00	4
3	Richard	Chew	Yes	01-Mar-23	\$50.00	5
4	Paul	Logan	Yes	05-Apr-23	\$50.00	5
5	Gareth	Jones	No		\$30.00	4
6	Amelia	McDermott	Yes	01-Mar-23	\$30.00	3
7	Lisa	Holmes	Yes	05-Apr-23	\$50.00	5
8	Mark	Stone	Yes	08-Mar-23	\$40.00	4

Our first query will display the results on the right. Three fields have been selected for the datasheet. Only people who have played 5 games are visible and the data is sorted by last name, ascending.

First_Name	Last_Name	Played
Richard	Chew	5
Lisa	Holmes	5
Sarah	Johns	5
Paul	Logan	5

- Open your database and click on 'Create / Queries / Query Design'.
- In the **Add Tables** panel on the right, select the *Members* table and click the **Add Selected Tables** button (or simply double-click on the table name to add it to the query).

A small box showing the fields in your table will appear in the query builder window.

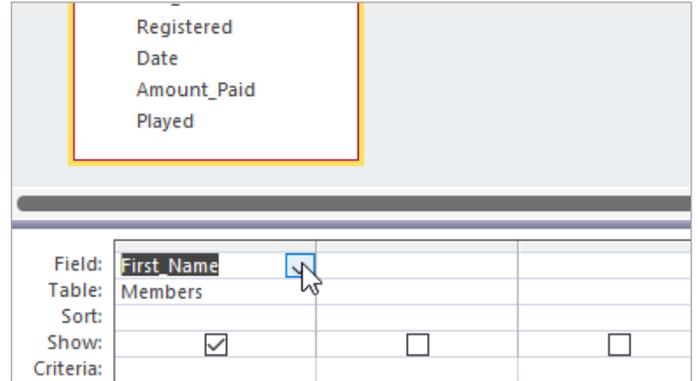


- Resize the small box so that all the field names can be viewed.

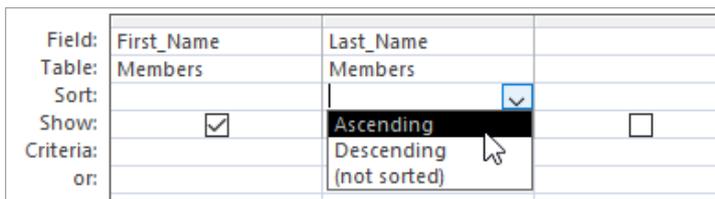


Task 1 – Building a query (cont.)

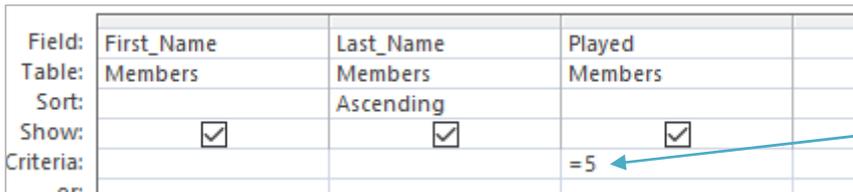
d. Working in the lower half of the window, select the *First_Name* field from the drop-down list in the first column (as on the right). This field will be displayed in the first column of the results datasheet.



e. Select the *Last_Name* field from the second column. Click on the **Sort** box and select *Ascending* from the choices (as below). This sorted field will be displayed in the second column of the results datasheet.



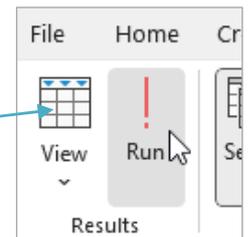
f. Select *Played* in the third column. In the *Criteria* box type '=5'. This will return only records for the people who have played 5 games.



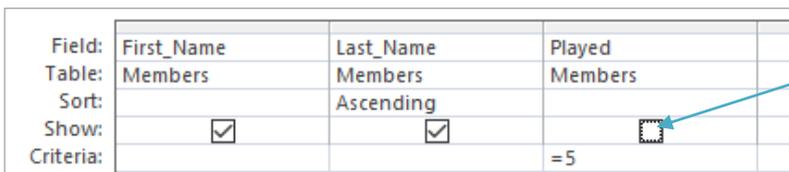
Type '=5' in the *Criteria* box

g. Run the query by selecting '**Query Design / Results / Run**' (although clicking on the *Datasheet View* icon will do the same thing in this case). How many records and fields are returned?

Use this icon to switch between *Datasheet View* and *Query Design View*.

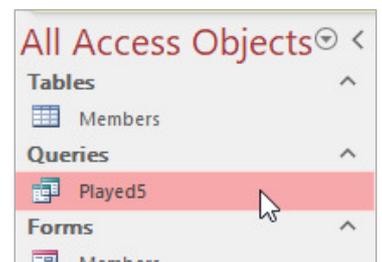


h. Return to *Design View* and remove the check from the **Show** box in the *Played* column. How many records and fields are returned now?



Remove the check from the *Show* box in the *played* column.

i. Close the query and name it '*Played5*'. The query will be added to the *Navigation Pane* on the left and can be opened and edited at any time.





Subdatasheets allow you to expand a table to display more information about a certain record. For example, you may have a table of volleyball teams. You can then expand any of the records so that the players in the team are displayed. The information about the players is stored in a second, linked table.

ID	TeamID	TeamName
1	Team1	Allstars
2	Team2	Bananas
3	Team3	Croonies

ID	TeamID	TeamName	Click to Add																
1	Team1	Allstars																	
<table border="1"> <thead> <tr> <th>ID</th> <th>PlayerID</th> <th>FirstName</th> <th>LastName</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Player1</td> <td>Andy</td> <td>Allbright</td> </tr> <tr> <td>2</td> <td>Player2</td> <td>Amy</td> <td>Anderson</td> </tr> <tr> <td colspan="4">* (New)</td> </tr> </tbody> </table>				ID	PlayerID	FirstName	LastName	1	Player1	Andy	Allbright	2	Player2	Amy	Anderson	* (New)			
ID	PlayerID	FirstName	LastName																
1	Player1	Andy	Allbright																
2	Player2	Amy	Anderson																
* (New)																			
2	Team2	Bananas																	
3	Team3	Croonies																	

Data from a second *Players* table

Subdatasheets enable you to view other relevant data in the same window. They can also reduce the amount of repeated information in the database, making the updating of records easier and less prone to errors.

For subdatasheets to function correctly there must be a field that connects the two tables. In our example, each team in the *Teams* table has a *TeamID*. The *Players* table is also given a *TeamID* field and each player is assigned one of the *TeamID* codes. The two tables can then be joined using this field.

Task 1 – Creating a subdatasheet

- Create a database named 'AS – Subdatasheets1'
- Create a table as shown on the right. Name the table *Teams*.
- Create a second table called *Players* as shown on the right. Notice that both tables have a field called *TeamID*. This will be used to link the tables together.

ID	TeamID	Team_Name
1	Team1	Allstars
2	Team2	Bananas
3	Team3	Croonies

ID	TeamID	First_Name	Last_Name
1	Team1	Andy	Allbright
2	Team1	Amy	Anderson
3	Team2	Ben	Bellamy
4	Team2	Bridget	Bardot
5	Team3	Carl	Cuthbertson
6	Team3	Cindy	Carlton

- Open the *Teams* table in *Design View* and click on 'Table Design / Show/Hide / Property Sheet'. The *Property Sheet* opens in a panel on the right.





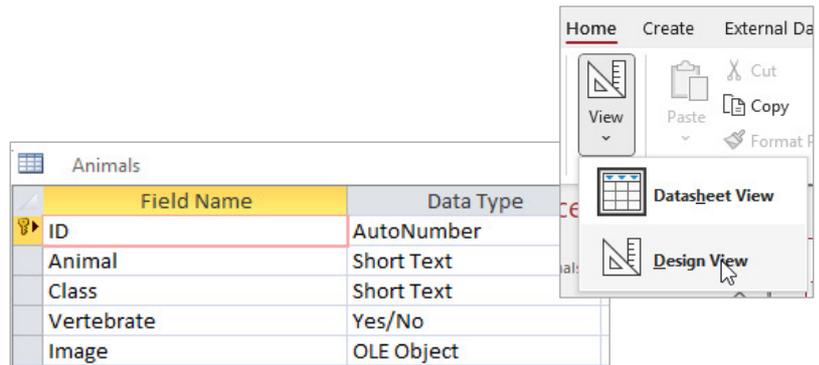
It is possible to store and view images in an Access database. You may, for example, wish to create an address book with a photo alongside each person's details. In this task, we will insert the images into a table so that they can be viewed in a form or report.

Note: *In practice, this is not actually a very good method of storing images. The database file can grow very large and may become unstable. Better solutions involve storing image files outside the database and linking to them from the table. This option is covered in the extension task.*

Task 1 – Creating a field for the images

We will create a table with information about animals and add pictures from the web.

- a. Create a database named 'AS - Images'.
- b. Switch the table to *Design View* and add the fields shown. The images will be of the data type *OLE Object*.



- c. Return to *Datasheet View* and enter some data. Leave the *Image* field blank for now. You may choose your own animals.
- d. Open your web browser and find a small picture for your first record.

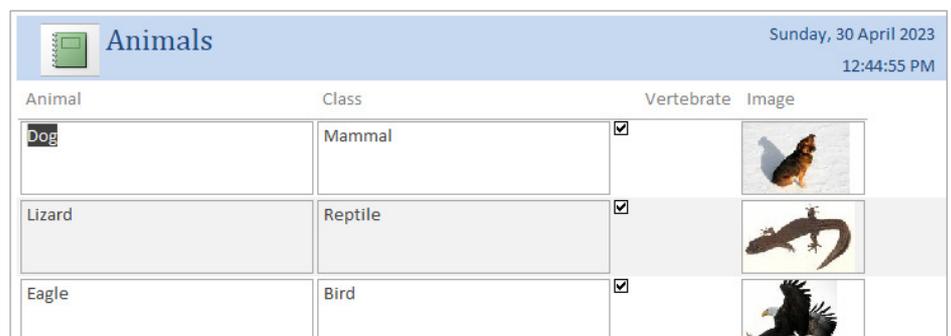
ID	Animal	Class	Vertebrate	Image
1	Dog	Mammal	<input checked="" type="checkbox"/>	
2	Lizard	Reptile	<input checked="" type="checkbox"/>	
3	Eagle	Bird	<input checked="" type="checkbox"/>	
4	Crab	Crustacean	<input type="checkbox"/>	
5	Spider	Arachnid	<input type="checkbox"/>	

- e. Right click on the picture and select **Copy Image** (or the equivalent in your browser).
- f. Return to Access and place the cursor in the first *Image* field. Right click and select **Paste**. Your datasheet will simply show the word *Picture*.
- g. Repeat for the other animals.

ID	Animal	Class	Vertebrate	Image
1	Dog	Mammal	<input checked="" type="checkbox"/>	Picture
2	Lizard	Reptile	<input checked="" type="checkbox"/>	Picture
3	Eagle	Bird	<input checked="" type="checkbox"/>	Picture

Task 2 – Viewing the images in a report

Now the images have been inserted into a table, you can view them in a form or report. Produce a simple report for the *Animals* table. Display all fields except the *ID* field.



2023

Word Standards

Orbeducation





<input type="checkbox"/>	1. Basic Skills 1
<input type="checkbox"/>	2. Basic Skills 2
<input type="checkbox"/>	3. Indents and Margins
<input type="checkbox"/>	4. Paragraphs
<input type="checkbox"/>	5. Tabs
<input type="checkbox"/>	6. Bullets and Numbering
<input type="checkbox"/>	7. Tables - Designing
<input type="checkbox"/>	8. Tables - Text and Alignment
<input type="checkbox"/>	9. Tables – Borders and Shading
<input type="checkbox"/>	10. Text Effects
<input type="checkbox"/>	11. Subscripts and Superscripts
<input type="checkbox"/>	12. Pictures
<input type="checkbox"/>	13. Shapes



Task 1 – Typing text

- a. Open a new blank document in the application Microsoft Word. The flashing bar is called the *cursor*.
- b. Type Passages 1 and 2 exactly as they appear below, completing the sentences using the following words.

delete galleries underlined caps lock backspace shift
word-wrap arrow space live preview italic bold enter

Passage 1

Typing

This is normal text, typed using the letter keys, punctuation keys and the _____ bar.

This is a new paragraph, created by pressing the _____ key. When you reach the end of a line you should keep on typing. This paragraph flows from one line to the next automatically. This effect is known as _____.

This is a new line but not a new paragraph, achieved by pressing the _____ and enter keys together.

THESE ARE UPPER CASE LETTERS, CREATED WITH THE **SHIFT** OR _____ KEYS.

Editing

If we make a mistake, we can place the cursor at the end of the text then delete it using the _____ key. We can also place the cursor before the text and delete it with the _____ key. We can place the cursor using the mouse or the _____ keys.

Formatting

We can create bold text by selecting words or sentences, then clicking on the _____ icon in the *Formatting toolbar*.

This is bold, italic, underlined text.

You can easily create bold text by pressing the **Control** and letter **B** keys together (**Ctrl + B**)

The shortcut for _____ text is 'Ctrl + I'

The shortcut for _____ text is 'Ctrl + U'

Font

This text should be typed using Arial size 10 font.

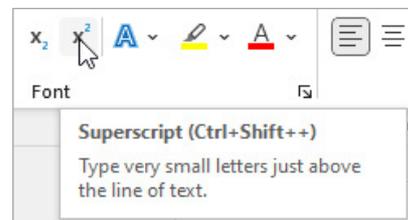
This text should be typed using Verdana size 12 bold.



In this section we will look at how to use the following font effects:

- Subscripts₁ (below the line)
- Superscripts² (above the line)

You can set subscripts and superscripts using the icons in the 'Home / Font' group. However, we are going to speed things up by learning the shortcuts. These are much quicker when you have lots of tricky formatting to cover.



Task 1 – Subscripts and superscripts

- Open a new page in Microsoft Word and save as 'WS - Subscripts'. Add your headings and start a new paragraph.
- Type the word 'Subscripts' then press the **CTRL** and = keys together ('CTRL + ='). The cursor should now be smaller and slightly lower. Type a number '1'. It should appear as a subscript.
- Press 'CTRL + =' again to return to normal font. Continue the sentence with the words 'and superscripts'.
- Press 'CTRL + Shift + ='. The cursor should now be smaller and slightly higher. Type a number '2' as a superscript.
- Press 'CTRL + Shift + =' again to return to normal font and finish the sentence as shown below.

Subscripts₁ and superscripts² are used for references, as well as mathematical and chemical equations.

Task 2 – Subscripts and superscripts practice

Start a new paragraph and type the equations and expressions below.

- $4\text{Ag} + \text{O}_2 \rightarrow 2\text{Ag}_2\text{O}$
- $4\text{Fe} + 3\text{O}_2 \rightarrow 2\text{Fe}_2\text{O}_3$
- $2\text{H}_2 + \text{O}_2 \rightarrow 2\text{H}_2\text{O}$
- $\text{Mg}_{(s)} \rightarrow \text{Mg}^{2+}_{(aq)} + 2\text{e}^-$
- $\text{SO}_4^{2-} + 4\text{H}^+ + 2\text{e}^- \rightarrow \text{SO}_2 + 2\text{H}_2\text{O}$
- $a^2 = b^2 + c^2 - 2bc \cdot \cos A$
- 1.036×10^7
- $15_{\text{base}10} = 1111_{\text{base}2}$

HINT: Type --> with no spaces and it should change to an arrow. If this doesn't work, then click 'Insert / Symbol' and select an arrow.



In this section, we will look at some of tools available for the organisation of pictures in your document. These include:

- Inserting clipart and other pictures
- Positioning pictures on the page
- Changing the appearance of pictures

Task 1 – Inserting, resizing, rotating and cropping pictures

- Open a new page in Microsoft Word and save as 'WS - Pictures'. Add your titles and start a new paragraph.
- Click 'Insert / Illustrations / Pictures' and select **Online Pictures**. Search for a subject of your choice (we asked for 'Animals').
- Double-click on a picture to insert it.
- Resize your picture by clicking once on it then dragging the handles that appear in the corners and on the edges.
- Rotate the image using the handle at the top.
- You may crop pictures if there are sections around the edge that you would prefer to hide. Select your picture and click '**Picture Format / Size / Crop**' (or right click and select **Crop**). Move the crop handles towards the centre, reducing the amount of the image that is visible. Click outside the image or press **Enter** to apply the crop.

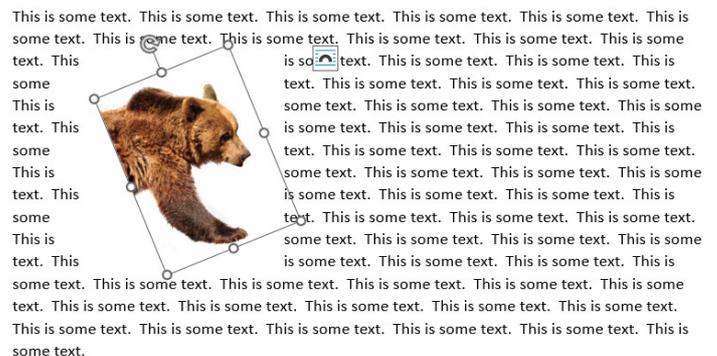


Expert advice: When cropping, the hidden parts of the image remain intact. The file will therefore be larger than necessary in size. The advantage is that you can 'uncrop' your image later if required.

Task 2 – Positioning pictures in text

Without any other content on the page, there is limited scope to drag your image around by default.

- Using lots of copy and paste, create a paragraph of text. Try dropping the image in various places over the top of the words. Find out how the text behaves.
- Try positioning the picture using the nine options under the '**Picture Format / Arrange / Position**' icon.



2023

PowerPoint

LONGER HOUR

Standards

ORANGE SLIDE

 **orb**education





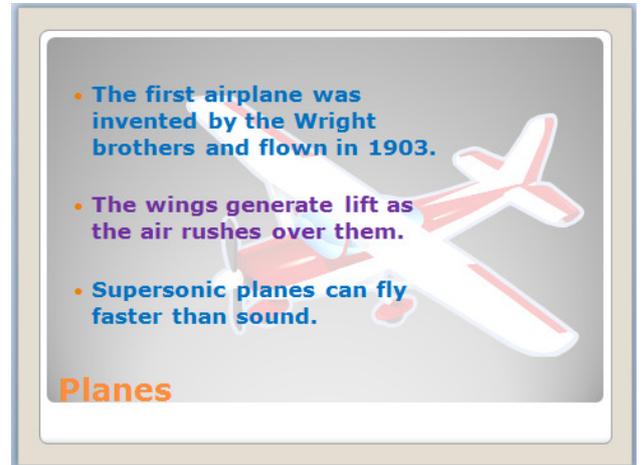
<input type="checkbox"/>	1. Basic Skills 1
<input type="checkbox"/>	2. Basic Skills 2
<input type="checkbox"/>	3. Further Animation
<input type="checkbox"/>	4. Tables
<input type="checkbox"/>	5. Charts
<input type="checkbox"/>	6. Inserting Spreadsheets
<input type="checkbox"/>	7. Advanced Animation
<input type="checkbox"/>	8. Slide Master
<input type="checkbox"/>	9. Advanced Colour
<input type="checkbox"/>	10. Action Buttons



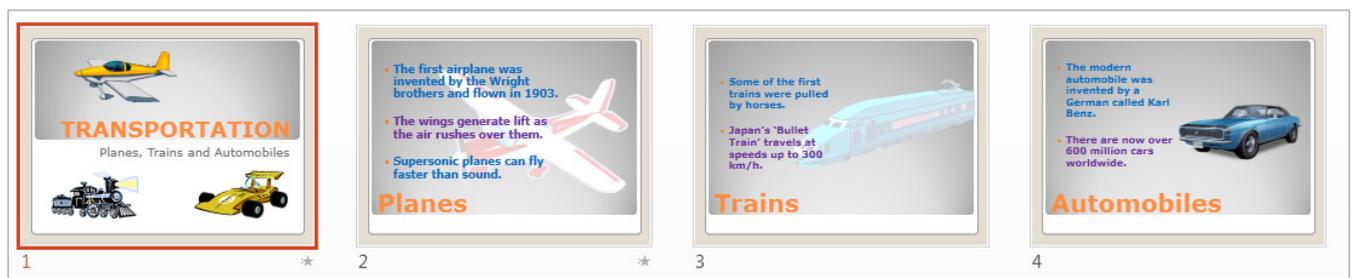
Task 1 – Create a full presentation

In this task you will create a presentation with at least three slides. Your presentation can be about any subject that you are interested in, for example a sport, a hobby or a pop group.

Note: Don't take too much time looking for the perfect picture or detailed facts. The aim here is to demonstrate your PowerPoint skills before moving on to new advanced ideas.



- a. Open a new PowerPoint presentation and set the slide size to *Standard (4:3)* (in the **Design** tab).
- b. Select a suitable theme.
- c. Create a title page with a strong, bold title. Include two or three pictures that are introduced through different animations chosen from the *Animation* gallery. Use the *Animation Options* to fine tune your animations (e.g. we have the plane flying in from the right).
- d. Create a second page using the *Two Content* layout. Give the page a title and write two or three facts. Animate the text.
- e. Insert a picture, change it to *Washout* and place it behind some of the text. Make sure that the text can still be easily read.
- f. Select a slide transition and apply it to all slides.
- g. Create two or three other slides. You may make changes such as increasing the size of the title but apply these changes throughout. Any changes to the theme should be applied to all slides so that you produce a professional looking presentation.
- h. Check your spelling and grammar.
- i. Save your presentation as '**PS – Basics**'. Also save it as a *PowerPoint Show* so that it opens directly.





It is possible to present data from Excel in a PowerPoint presentation. Although displaying data is quite straightforward, there are several subtly different results depending on how you go about the task. We will look at the various ways in which spreadsheets can be introduced into your presentation.

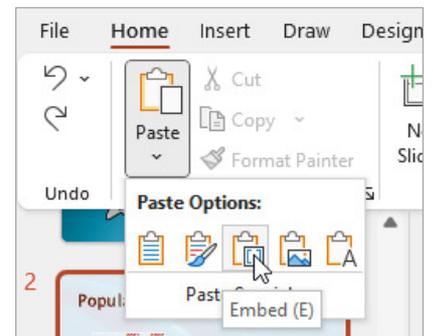
Task 1 – Pasting data as a table

- a. Open your **PowerPoint Standards** presentation and add a new slide with the *Title Only* layout (not a *Title Slide*).
- b. Type 'Population Growth' in the placeholder. Format the text if you like.
- c. Open Microsoft Excel and copy the data on the right. Save the file as '**Inserting Spreadsheets**' in the same folder as your presentation.
- d. Select and copy the 12 cells of data (i.e. the range A1:C4). Use '**Home / Clipboard / Copy**' or '**Ctrl + C**'.
- e. Return to your new PowerPoint slide and click on '**Home / Clipboard / Paste**' (or '**Ctrl + V**'). PowerPoint will create a table for the data (you may need to change the text colour if the data is not visible in the table). Right click on the data to convince yourself that this is a simple table and not an embedded spreadsheet.
- f. Format and resize the table to suit.
- g. Move the table to the top left of the slide. Insert a text box below with the words '1. Simple Paste' (see the picture lower down this page).

	A	B	C
1		2021	2022
2	birth	45	58
3	death	32	49
4	growth	13	9

Task 2 – Inserting an embedded spreadsheet

- a. Copy the data from your spreadsheet again. Click on the arrow below the '**Home / Clipboard / Paste**' icon and select **Embed**.
- b. Double-click on the new table. You should find that it opens a small Excel spreadsheet in the slide. This is in fact an embedded spreadsheet. You may edit the data here. Close the spreadsheet window again.
- c. Right click on the table and select '**Worksheet Object / Open**' to view the data in Excel. Format the cells then close Excel to view the changes in your presentation.
- d. Move the table to the top centre of the slide and label it as on the right.



	2021	2022
birth	45	58
death	32	49
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	2021	2022
birth	45	58
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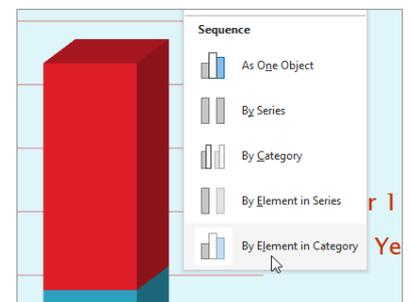
1. Simple Paste
2. Embedded



PowerPoint offers lots of possibilities for animating objects within slides. We will investigate some more of these below. As these are actually large topics in themselves, we will only touch on them here.

Task 1 – Animating a chart

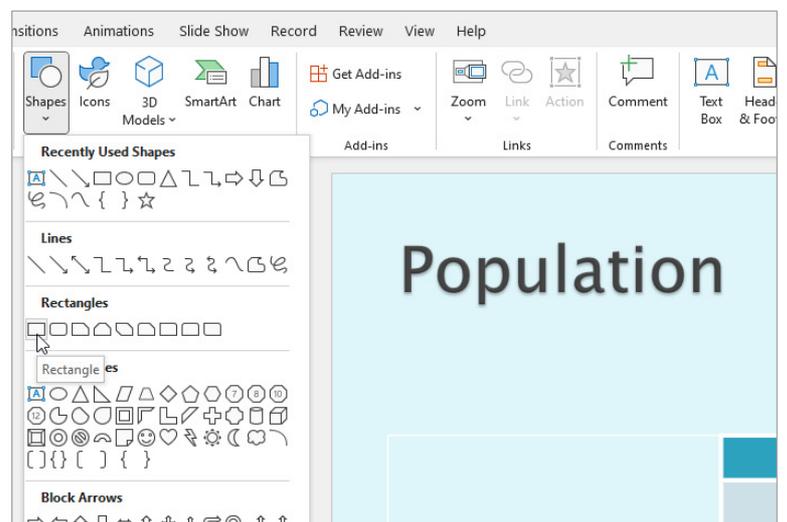
- Open your 'PowerPoint Standards' presentation and select the page titled *Population Chart*.
- Select the chart. Click 'Animations / Advanced Animation / Add Animation' and select **Wipe** from the *Entrance* group.
- Click 'Animations / Advanced Animation / Effect Options' and select **By Element in Category** (see right).
- Select 'Slide Show / Start Slide Show / From Current Slide'. Click the mouse to see how the chart elements are introduced.
- Explore the other possibilities with chart animation.



Task 2 – Animating drawing objects

In PowerPoint, you can use the 'Insert / Illustrations / Shapes' menu to add lines, arrows, text boxes and other simple objects to your slides.

- Select the slide titled *Population* which contains the first table created.
- We want to highlight the differences in population between males and females. Click on 'Insert / Illustrations / Shapes' and select the *Rounded Rectangle*. Draw a shape that surrounds the number 63.
- With the new shape selected, click 'Shape Format / Shape Styles / Shape Fill' and select **No Fill**.
- Click 'Shape Format / Shape Styles / Shape Outline' and select a **Red** colour.
- Hold down the **Shift** key and use the arrow keys to resize the box until it is a suitable size.
- Hold down the **Ctrl** key and use the arrow keys to nudge the box into position neatly around the number.
- Copy and paste the rectangle. Place the new shape over the number 78.



Age
0-1 Years
63
78



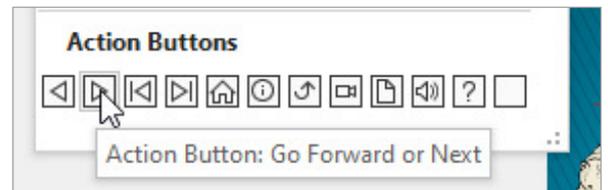
You may save a PowerPoint to be *Browsed at a kiosk*. This type of presentation is designed to display a slide show at a kiosk in a public place. No menus are available. This is to prevent the user from exiting the presentation and using the computer for other purposes. On a personal computer, the presentation will continue until the **Escape** key is pressed.

As there are no menus, a kiosk presentation uses *Action Buttons* for navigation. Action Buttons are usually activated through a touchscreen, although you can also use your mouse when working on the presentation. The kiosk itself will generally have no keyboard so the action buttons are the only way to navigate the presentation. You must therefore be careful not to allow the user to get stuck on a slide. With this in mind, we will be adding our Action Buttons to the *Slide Master*.

Task 1 – Adding action buttons to a presentation

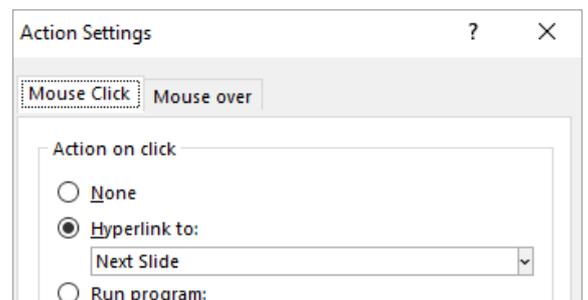
a. Open your 'PowerPoint Standards' file and navigate to the *Concourse Slide Master*.

b. Click 'Insert / Illustrations / Shapes' and select the second **Action Button** (*Go Forward or Next*). The cursor should change to a cross.



c. Insert the Action Button by drawing a rectangle on the screen. The *Action Settings* window will open when you release the mouse.

The effects of clicking on or passing the mouse pointer over the button can be set. In this case, the action is predefined and no changes are necessary; it will move the presentation onto the next slide when the mouse is clicked. Click **OK**.



d. Using a similar method, add buttons for *Previous*, *Beginning* and *End*.

e. Hold down the **Shift** key and select all four buttons.

f. Open the **Shape Format** tab and use the tools in the *Size* group to set a height of **1cm** and a width of **1.5cm**.

g. With the buttons still selected, click '**Shape Format / Arrange / Align**' and select **Top**.

h. Use the left and right arrow keys to move the buttons alongside each other. Select all the buttons again then click '**Shape Format / Arrange / Align**' and select **Distribute Horizontally**.

i. Group the buttons by selecting them all then clicking '**Shape Format / Arrange / Align**' and selecting **Group**. Move the buttons to a suitable location on the slide, possibly above the line in the bottom right corner.

If you wish, you may use some of the options in the **Shape Format** tab to change the design of the buttons.

