

IGCSE ICT

November 2010 – Database Exam Question

The Step by Step Solution

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2010 Database Task – Walkthrough

Q35 Using a suitable database package, import the file N10EKS.CSV

Assign the following data types to the fields:

Make	Text
Model	Text
Size	Numeric/1 decimal place
Price	Currency/2 decimal places
Skill Level	Text
Wind Condition	Text
Use	Text
Number	Numeric/Integer
Stock Item	Boolean/Logical

Make sure that you use these field names. You may add another field as a primary key field if your software requires this.

Save a screen shot showing the field names and data types used. Print a copy of this screen shot.

Make sure that your name, Centre number and candidate number are included on this printout.

**The solution to task 35 will be detailed
over the pages 2 - 10.**

Opening a Database - How to do it:

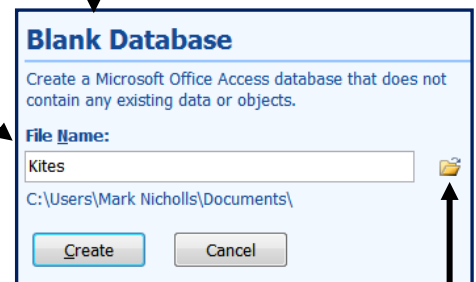
1. Open Microsoft Access by clicking:

- Start Button
- All Programs
- Microsoft Office
- Microsoft Access

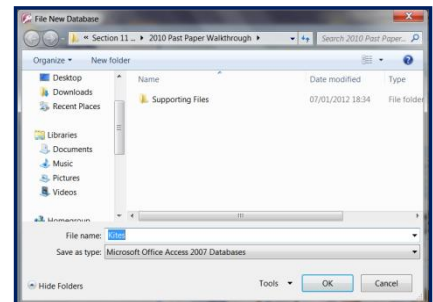


2. Click the **Office Button** followed by **New** to open the **Blank Database** pane on the right-hand side in the window.

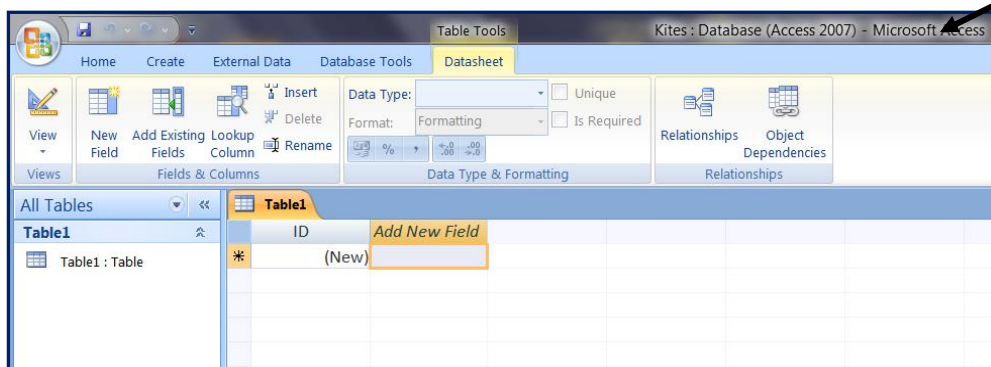
3. Enter a meaningful **File Name:** for the database. For example **'Kites'** would make sense as this is the type of information that the database will hold.



4. Click on the **Browse button** (yellow folder) and choose where you would like to save your database (Data Manipulation folder). Press **OK**.

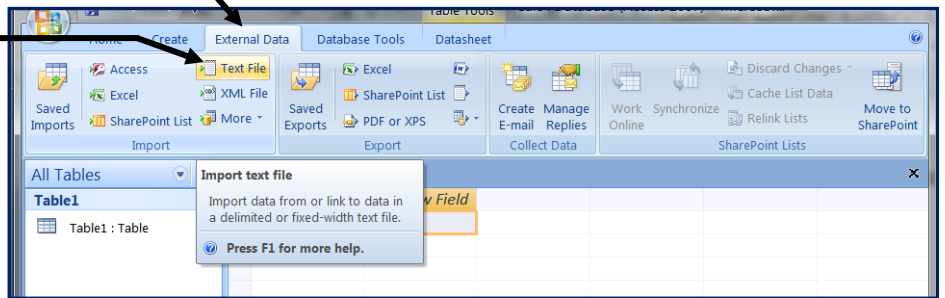


5. Click on **Create** and you will be presented with a new database similar to this:



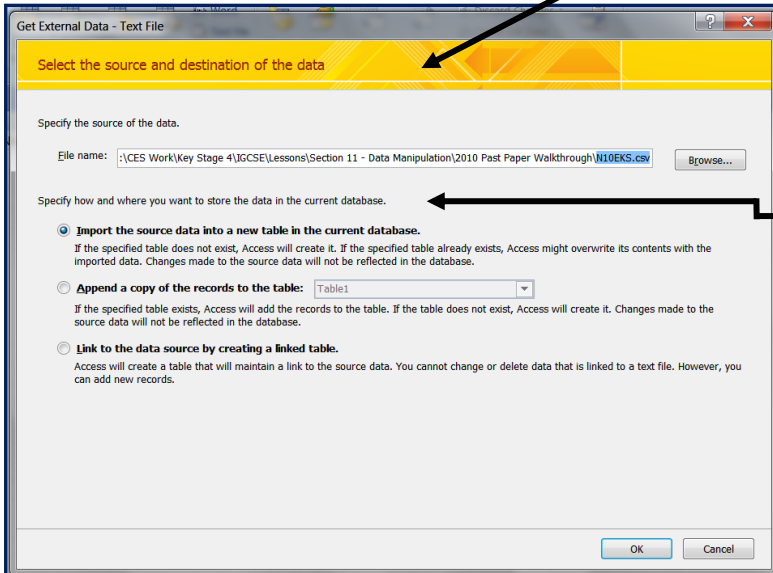
Importing the N10EKS - How to do it:

1. Copy the '2010 Past Paper Walkthrough' folder into your Data Manipulation folder.
2. Select the **External Data** tab then click on the **Import Text File** icon.



IMPORTANT NOTE: Files saved in .csv format are considered text files. Each data item is separated from the next by a comma.

3. This icon opens up the **Get External Data** window like this:



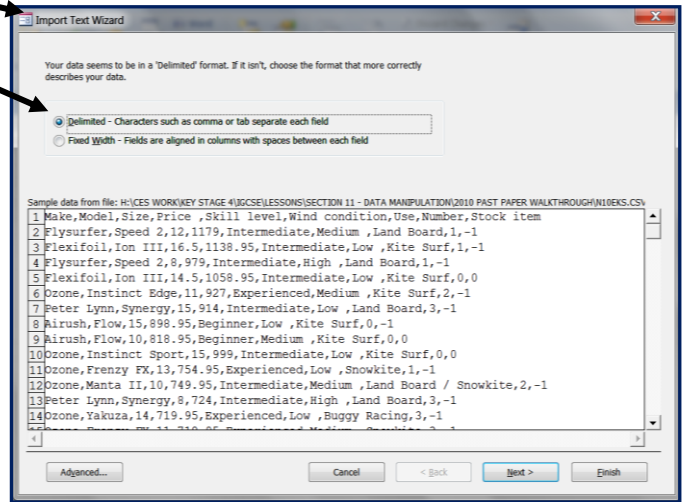
Use the **Browse...** button to find the file **'N10EKS.CSV'**.

NOTE: Ensure the top option button is selected. This ensures the data is saved in a new table.

Click on **OK**.

IMPORTANT NOTE: A large number of students perform poorly in this section of the exam because they select the bottom option instead of the top one.

4. The **Import Text Wizard** window will open.

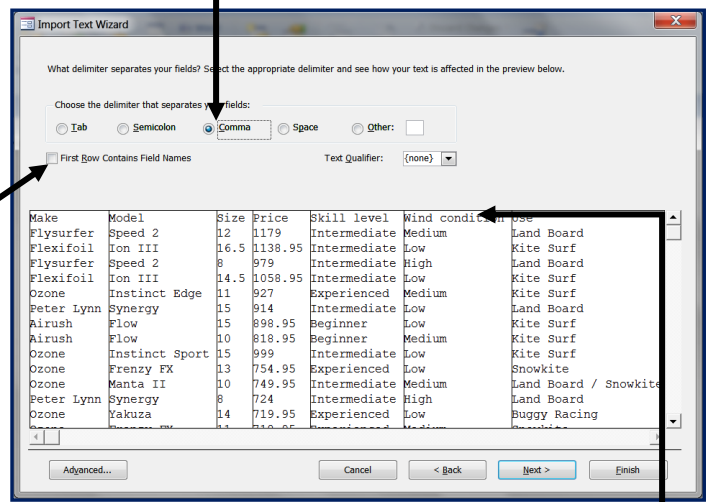


5. Select the **'Delimited'** option. This option is for **data that is separated by a comma** (as is the case in .csv files)

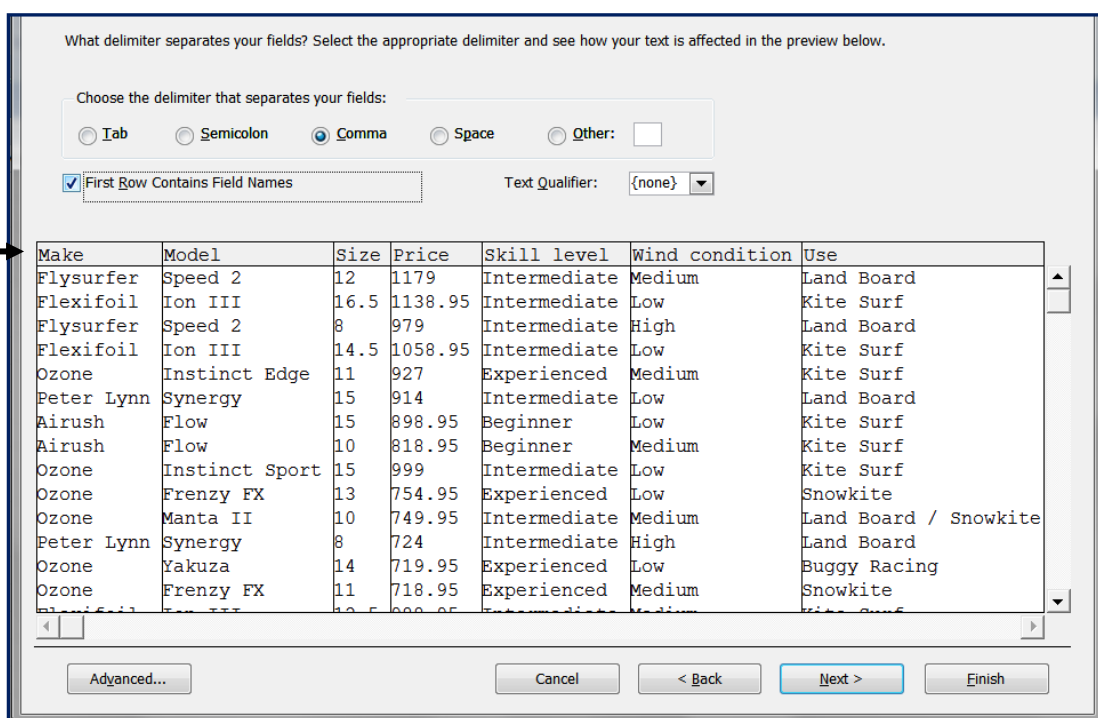
Click on **Next >**.

6. For the next part of the wizard make sure that the **Comma** option is selected using the option buttons.

Examine the first row of the data and decide if it contains the fieldnames that you need or if it contains the first row of data.



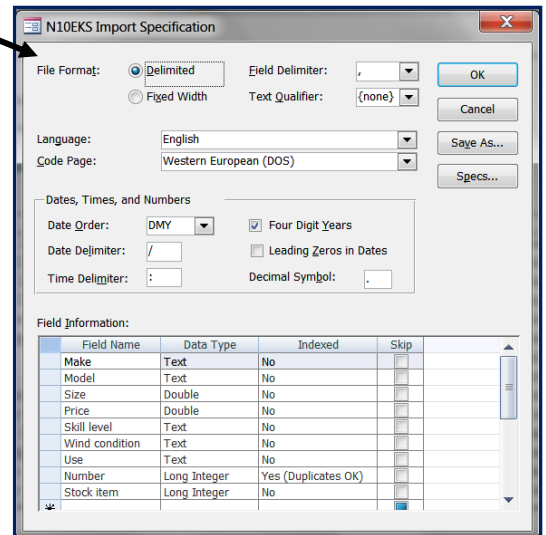
7. If the first row contains the fieldnames, click on the **First Row Contains FieldNames** tick box. As you tick the box the first row changes from **this** to **this**.



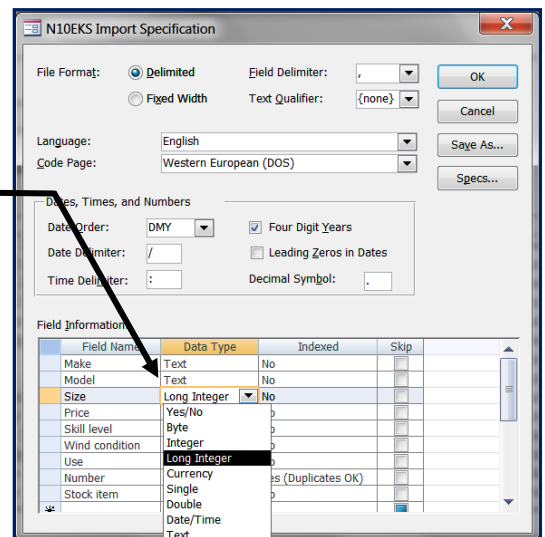
8. Click on **Advanced...** to open the **ImportSpecification** window.

Check that all **fieldnames** and **data types** match those specified in task 35. In this case the **Size, Price and Stock Item** fields are not correct. Make the following changes:

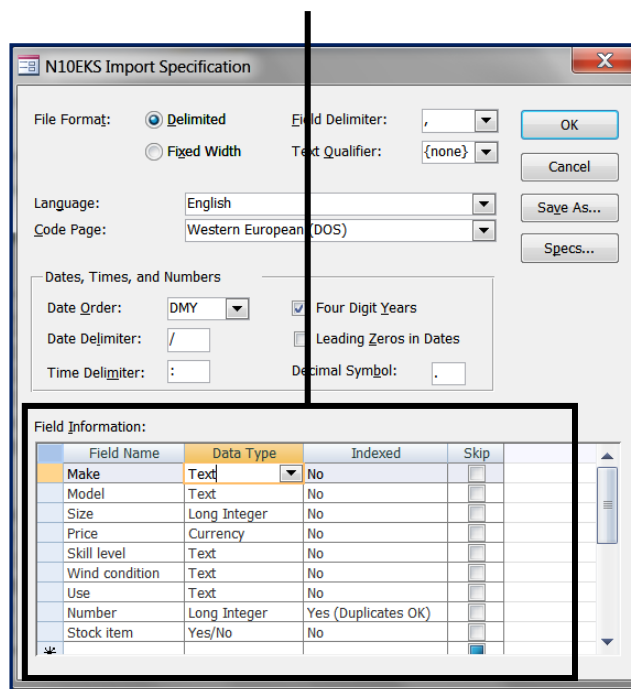
- ✚ **Size field** needs changing to **Long Integer**
- ✚ **Price field** needs changing to **Currency**
- ✚ **Stock Item** needs changing to **Boolean (Yes/No)**

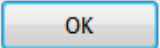


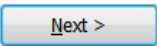
9. To make these changes, click on the **Data Type** cell for each of the fields and use the **drop-down list** to select the correct options as described in the list above.



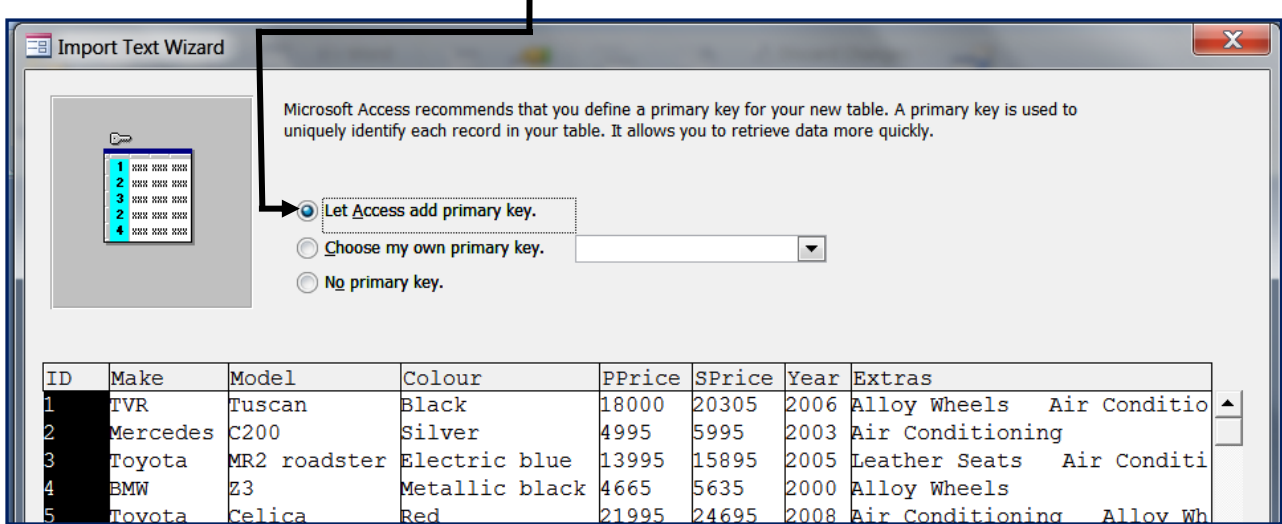
Your completed **fields and data types** list should look like the following screenshot.



When all of the changes have been made, click on .

10. Select  twice.

11. On the screen where Access is asking you about a **Primary Key** you should ensure that you select the option **'Let Access add primary key'**.

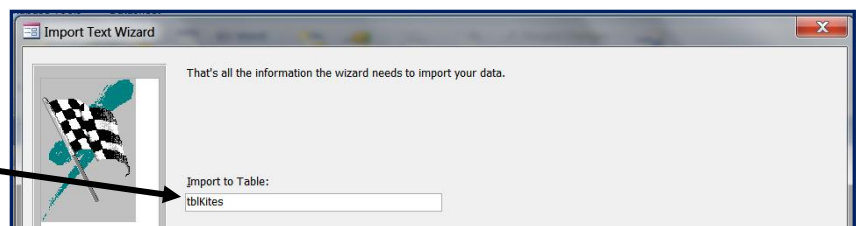


This adds a new field called **ID** to the table.

NOTE: Primary Keys ensure that each record can be uniquely identified.

12. Click on .

13. In the **Import to Table:** box enter **'tblKites'**.



NOTE: This is a meaningful table name. The 'tbl' shows you that it is a table and the 'Kites' gives an idea of what kind of data is being held.

14. Click on  to import the data and then  to close the wizard.

15. Double click on **tblKites** to display the imported information which should look like this:

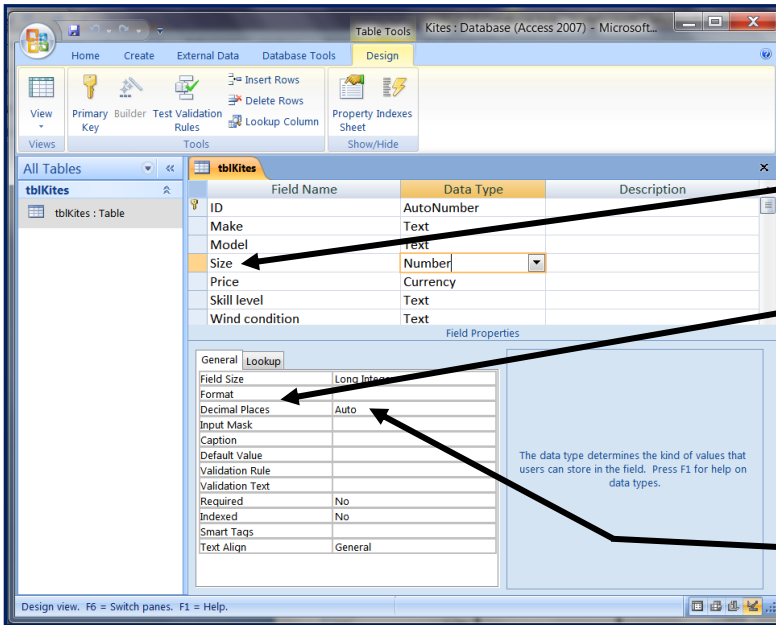
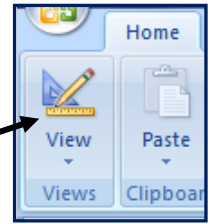
tblKites – containing the imported .csv data

ID	Make	Model	Size	Price	Skill level	Wind condition	Use
1	Flysurfer	Speed 2	12	\$1,179.00	Intermediate	Medium	Land Board
2	Flexifoil	Ion III	16	\$1,138.95	Intermediate	Low	Kite Surf
3	Flysurfer	Speed 2	8	\$979.00	Intermediate	Low	Land Board
4	Flexifoil	Ion III	14	\$1,058.95	Intermediate	Low	Kite Surf
5	Ozone	Instinct Edge	11	\$927.00	Experienced	Low	Kite Surf

Imported records

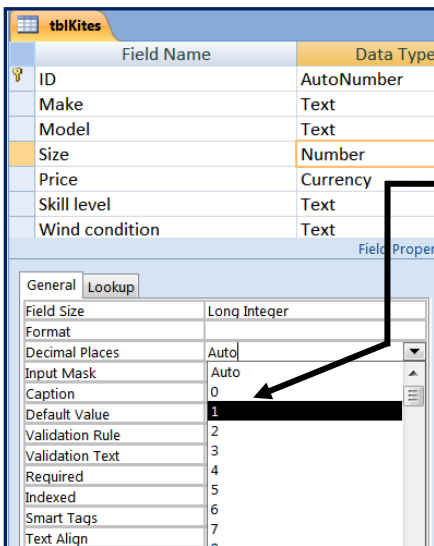
Amending Field Properties – how to do it:

1. Changes to the field types, or other properties, can be made from the **Home** tab. In the **Views section**, click on the **Design View** icon.



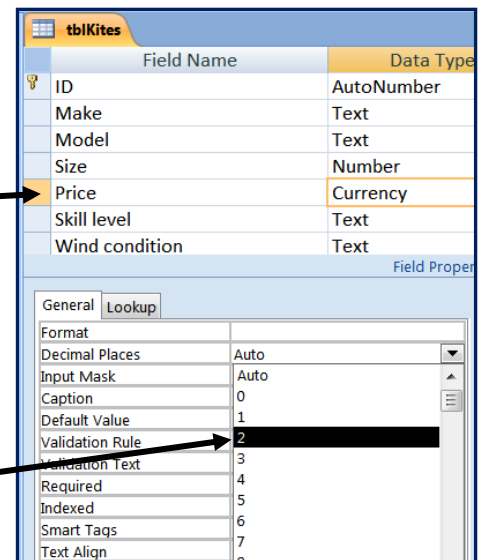
2. The task instructed you to set the **Sizefield** to **1 decimal place**. You can check this by clicking the left mouse button in the **Sizefield** and viewing the number of **Decimal Places** in the **General tab** at the bottom of the window.

As you can see this is not set to **1decimalplace** but set to **'Auto'**.



3. Click on the cell containing **'Auto'** and use the drop-down list to set this to **1 decimal place**.

Use the same method to set the **Price field** (which is currency data type) to **2 decimal places**.



4. To change the Boolean field so that it displays 'Yes' or 'No', click in the **Stock Item** field and in the **General** tab select the **Format** cell.

The screenshot shows the Microsoft Access interface for a table named 'tblKites'. A table with the following fields is visible:

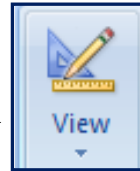
Field Name	Data Type
ID	AutoNumber
Make	Text
Model	Text
Size	Number
Price	Currency
Skill level	Text
Wind condition	Text
Use	Text
Number	Number
Stock item	Yes/No

Below the table is the 'Field Properties' window for the 'Stock item' field. The 'General' tab is active, and the 'Format' property is set to 'Yes/No'. Other properties include 'Caption' (True/False), 'Default Value' (Yes/No), 'Validation Rule' (On/Off), 'Validation Text', 'Indexed' (No), and 'Text Align' (General).

5. Use the drop-down list to select the **Yes/No option**.

6. Save the database for later use by clicking the  symbol.

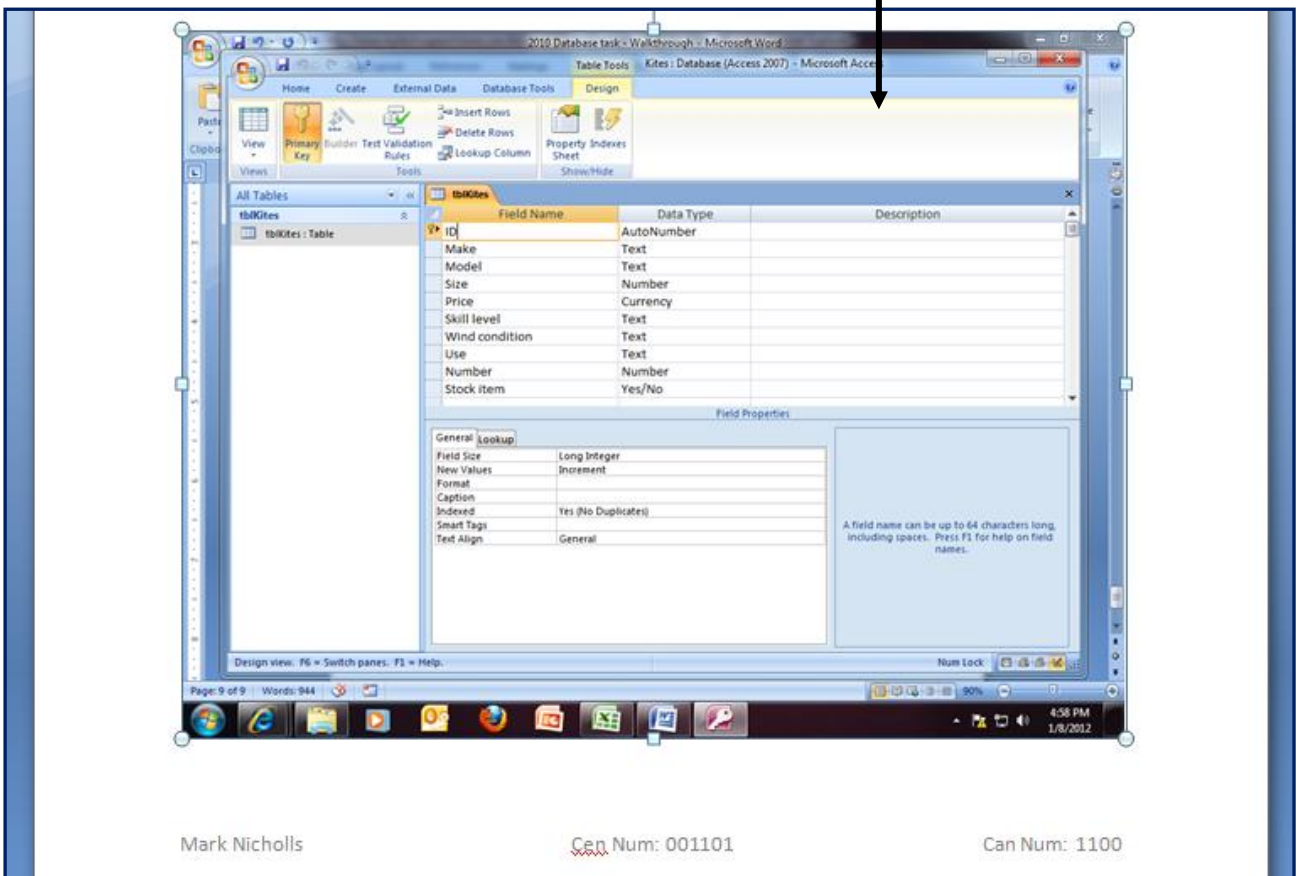
Taking a screenshot – how to do it:



1. Open your **Kites Table** in **Design View**.
2. The task asks you to take a **screenshot** of the **Field Names** and **Data Types** used within the table. To do this, simply press **PrtScn** on the keyboard.
3. Open up an **empty Microsoft Word document** and then click **Paste**.
4. Add your **Name**, **Centre Number** and **Candidate Number** to the **Footer**.



Your finished screenshot should look something like this:



5. Print a copy of your screenshot.

Q36 Insert the following three records:

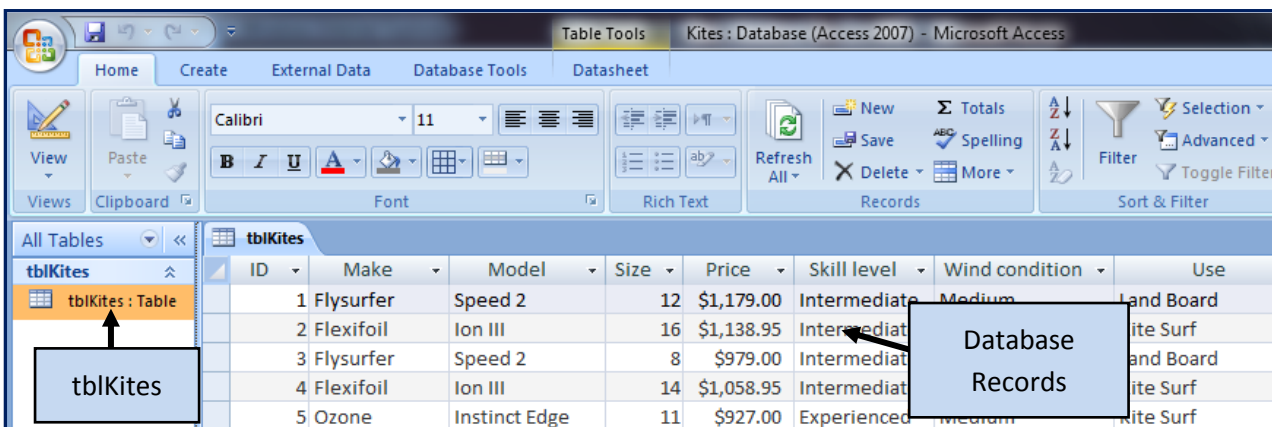
<i>Make</i>	<i>Model</i>	<i>Size</i>	<i>Price</i>	<i>Skill Level</i>	<i>Wind Condition</i>	<i>Use</i>	<i>Number</i>	<i>Stock Item</i>
Airush	Vapour	16	999	Beginner	Low	Kite Surf	1	Yes
Best	Nemesis	12	979	Beginner	Medium	Kite Surf	1	Yes
Airush	Flow	5	699	Beginner	High	Kite Surf	1	Yes

Check your data entry for errors.

Q37 Save the data.

Inserting new records - How to do it:

1. Double click on **tblKites** to view the records.



2. Scroll to the **bottom of the table** and look for the row which is marked with an **asterisk (*)**. The asterisk indicates that this row is where **new records** are input.

141	Ozone	Instinct Light	7	\$611.00	Beginner	Medium	Kite Surf	0	No
142	Peter Lynn	Hornet	8	\$224.95	Intermediate	Low	Buggy / Land Board	0	No
143	Peter Lynn	Reactor	4	\$219.95	Intermediate	Medium	Buggy	0	No
*	(New)								

New records inserted here

3. Enter the **3 new records** as specified in task 36.

143	Peter Lynn	Reactor	4	\$219.95	Intermediate	Medium	Buggy	0	No
144	Airush	Vapour	16	\$999.00	Beginner	Low	Kite Surf	1	Yes
145	Best	Nemesis	12	\$979.00	Beginner	Medium	Kite Surf	1	Yes
146	Airush	Flow	5	\$699.00	Beginner	High	Kite Surf	1	Yes
*	(New)								

Checking data entry - How to do it:

All this requires you to do is to **read through the new records** that you have entered and double check that they **match those stated in task 36**.

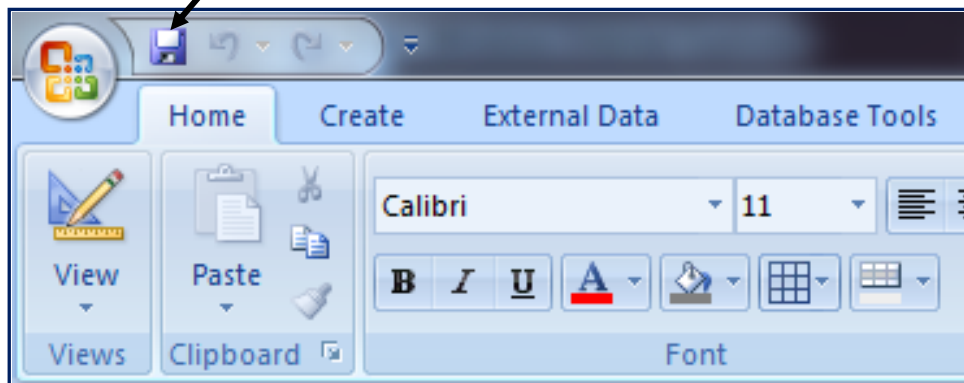
It is vital that your data entry is **EXACTLY** the same as the information stated in the question or you will run into problems when you come to search the database later in the exam.

Remember task 36 required you to add the following records:

<i>Make</i>	<i>Model</i>	<i>Size</i>	<i>Price</i>	<i>Skill Level</i>	<i>Wind Condition</i>	<i>Use</i>	<i>Number</i>	<i>Stock Item</i>
Airush	Vapour	16	999	Beginner	Low	Kite Surf	1	Yes
Best	Nemesis	12	979	Beginner	Medium	Kite Surf	1	Yes
Airush	Flow	5	699	Beginner	High	Kite Surf	1	Yes

Save the data – How to do it:

To save the new records in the table simply press the **Save button** which you can find to the right of the Office Button (top left of the screen).



Q38 Produce a **report** which:

- 1.** Contains a new field called **Order** which is **calculated at run-time**. This field will **calculate the Price multiplied by 3**
- 2.** Has the **Order** field set as **currency with 2 decimal places**
- 3.** Shows only the records where **Number is less than 2 and Stock item is Yes**
- 4.** Shows all the **fields** and their **labels in full**
- 5.** Fits on a **single page**
- 6.** Has a **page orientation** of **landscape**
- 7.** Sorts the data into **ascending order of Make** (with Airush at the top)
- 8.** **Calculate the total value of kites** to be ordered and:
 - Shows this total value at the **bottom of the Order column**
 - **Formats this total value to currency with no decimal places**
 - Has the label **'Total order value'** for the total value
- 9.** Include the heading **'Kites we need to restock'** at the **top of the page**
- 10.** Has your **Name, Centre Number** and **Candidate Number** on the **left footer of each page**.

This task is the most difficult of them all. It requires you to produce a **report**. However before you can make the report you must create something called a query.

What is a query?

A query is a way to **search through the data stored in the database** to produce meaningful results.

In this question the query needs to search the database in 2 ways:

- 1.** Search the information where **Number is less than 2 AND Stock Item is 'Yes'**.
- 2.** Includes a field called **'Order'** which is calculated at run-time and **multiplies the Price field by 3**.

What is a report?

A report is a method we use to **display our information in the clearest way possible**. Reports are essentially the **output** of the database.

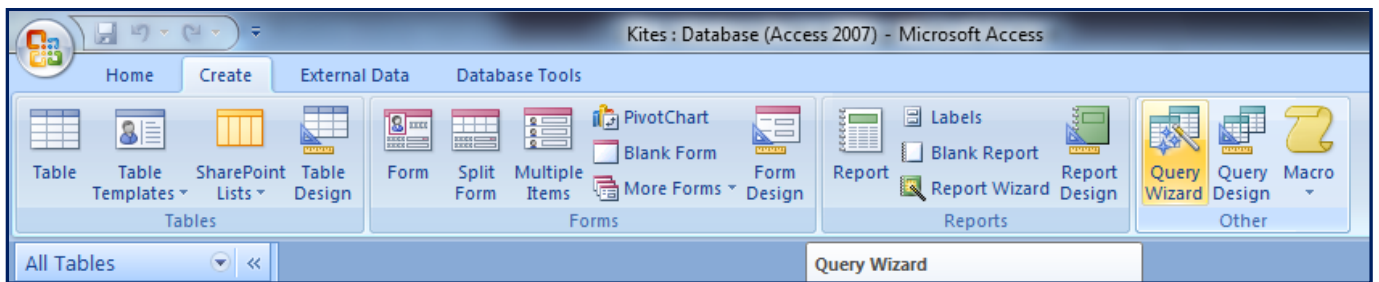
The report in this question only wants us to display information that meets certain criteria and, therefore, we also need to create a **query**.

NOTE: You **MUST** be able to determine the difference between a query and a report in this task. In short:

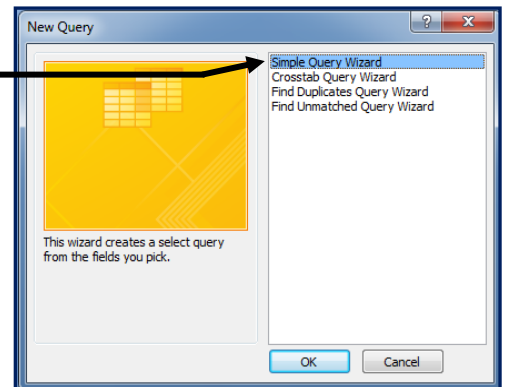
- Any tasks which sound like you need to **search for information** are tackled within the **query**.
- Any tasks which sound like they are talking about the **display of the information** should be tackled within the **report**.

Creating the query – How to do it:

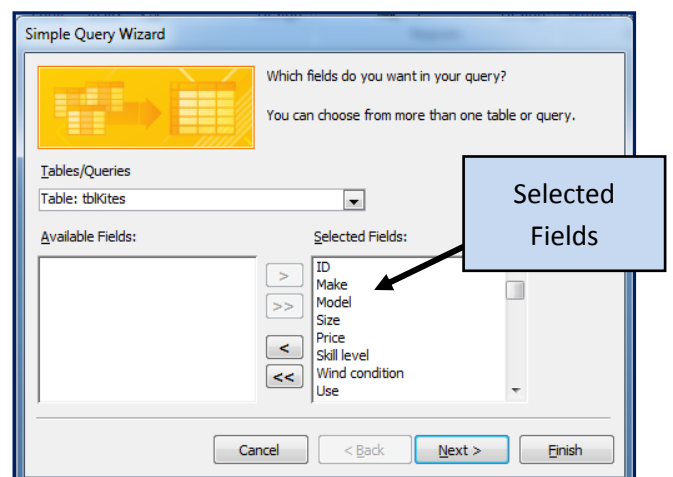
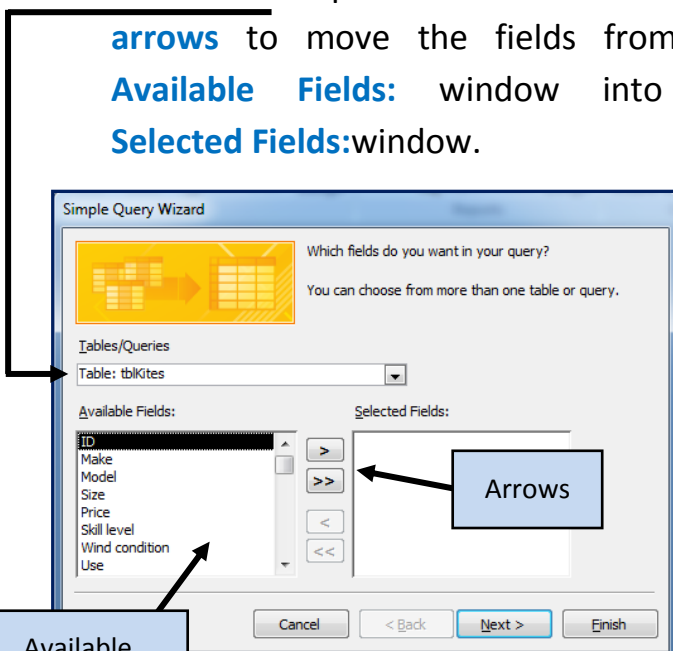
1. Click **Create** and then **Query Wizard**.



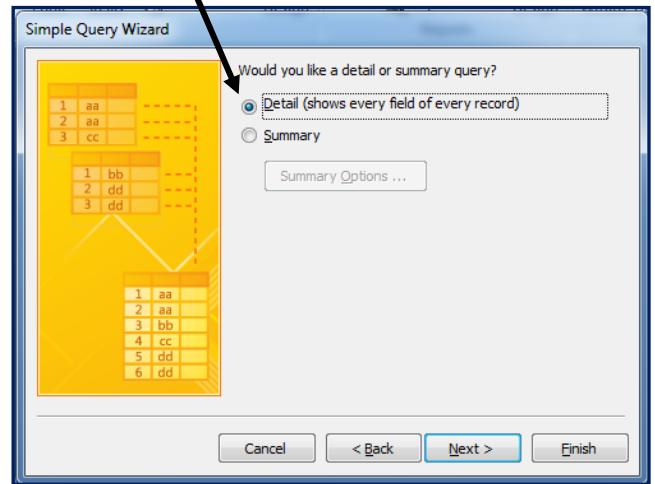
2. Select **Simple Query Wizard** then click **OK**.



3. On the next screen, you should make sure that **tblKites** option is selected. Use the **arrows** to move the fields from the **Available Fields:** window into the **Selected Fields:** window.



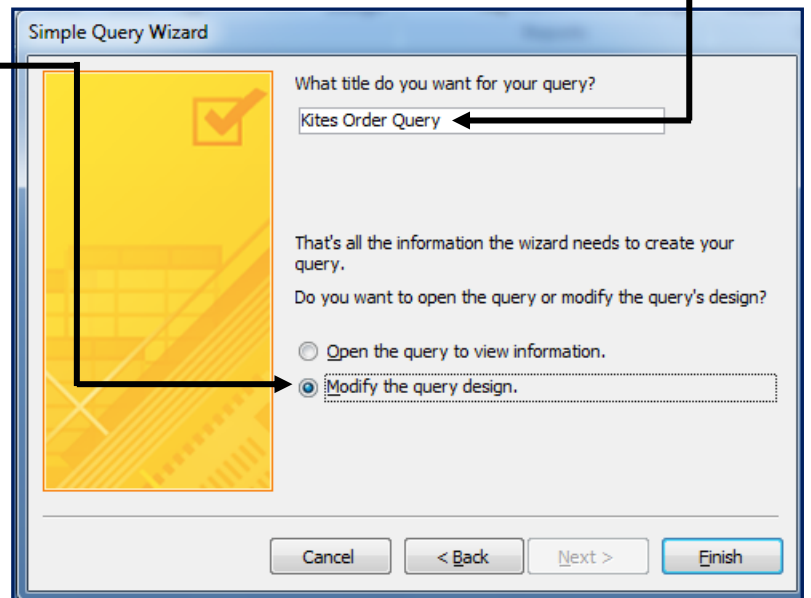
4. Select the **'Detail – show every field of every record'** option then press **Next**.
(If the task required a summary of data then you would choose 'Summary')



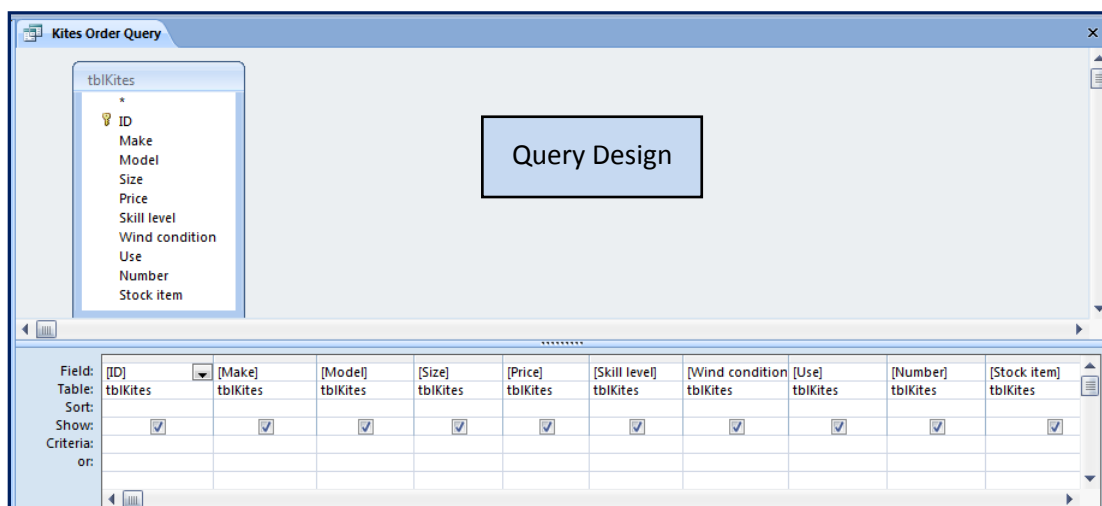
5. Choose a name which suits the task. I suggest **'Kites Order Query'**.

Select the **'Modify the Query Design'** option. This lets us create our searches.

Click **Finish**.



This takes us to the **Query Design screen** and from here we can tell Access which data we would like to search for:



Creating the Calculated Field 'Order' – How to do it:

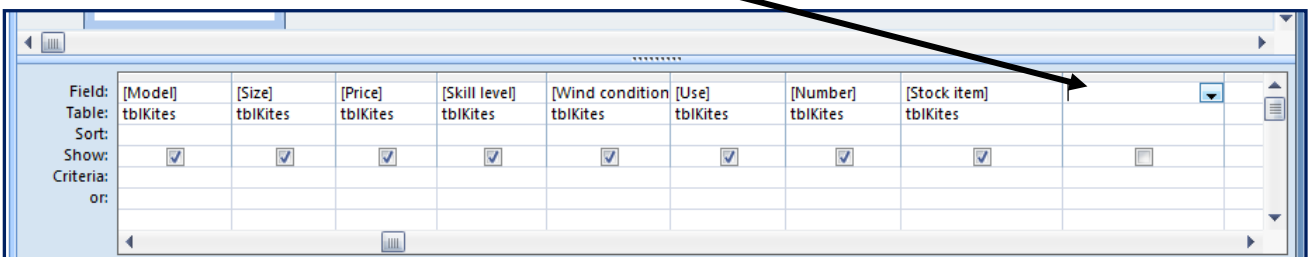
The problem: Produce a report which:

1. Contains a new field called **Order** which is **calculated at run-time**. This field will calculate the **Price multiplied by 3**

Calculated fields only work during run-time. This means that the calculation is made as the query is activated or ran.

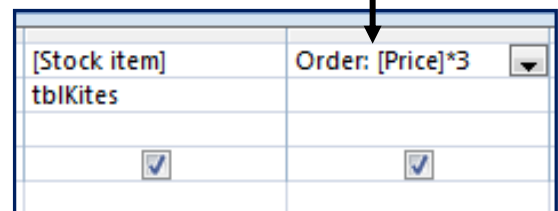
NOTE: It is important to understand that Calculated fields are ALWAYS created within queries..... nowhere else.

1. In query design view find the **Stock Item** field.
2. Click the mouse cursor into the **empty field** to the right of Stock Item.

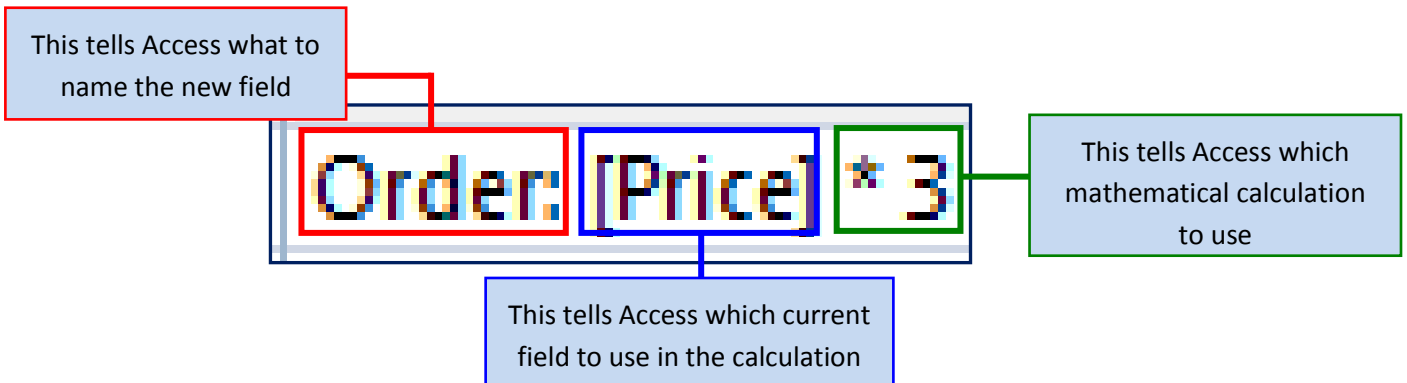


3. In the empty field type **Order: [Price] * 3**

This creates a new field called 'Order'.
The Order field will store the result of the [Price] field multiplied by 3.



Breakdown of what is happening here:



NOTE: It is essential that you follow the **correct syntax**. For example:

- Correct order
- Using a colon (:) after the new field name
- Using square brackets [] to surround the current field's name
- Using the correct mathematical symbol (see below)

Mathematical symbols are as follows:

* (multiply)	/ (divide)	- (subtract)	+ (add)
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4. Run the query by clicking the **Datasheet View** button.



Your query result will be displayed with a **calculated field** called **Order** that contains the **Price field multiplied by 3**.

ID	Make	Model	Size	Price	Skill level	Wind conditior	Use	Number	Stock iter	Order
1	Flysurfer	Speed 2	12	\$1,179.00	Intermediate	Medium	Land Board	1	Yes	\$3,537.00
2	Flexifoil	Ion III	16	\$1,138.95	Intermediate	Low	Kite Surf	1	Yes	\$3,416.85
3	Flysurfer	Speed 2	8	\$979.00	Intermediate	High	Land Board	1	Yes	\$2,937.00
4	Flexifoil	Ion III	14	\$1,058.95	Intermediate	Low	Kite Surf	0	No	\$3,176.85
5	Ozone	Instinct Edge	11	\$927.00	Experienced	Medium	Kite Surf	2	Yes	\$2,781.00
6	Peter Lynn	Synergy	15	\$914.00	Intermediate	Low	Land Board	3	Yes	\$2,742.00
7	Airush	Flow	15	\$898.95	Beginner	Low	Kite Surf	0	Yes	\$2,696.85
8	Airush	Flow	10	\$818.95	Beginner	Medium	Kite Surf	0	No	\$2,456.85
9	Ozone	Instinct Sport	15	\$999.00	Intermediate	Low	Kite Surf	0	No	\$2,997.00
10	Ozone	Frenzy FX	13	\$754.95	Experienced	Low	Snowkite	1	Yes	\$2,264.85
11	Ozone	Manta II	10	\$749.95	Intermediate	Medium	Land Board / Snowkite	2	Yes	\$2,249.85
12	Peter Lynn	Synergy	8	\$724.00	Intermediate	H			Yes	\$2,172.00

Order field multiplies the contents of the Price field and displays

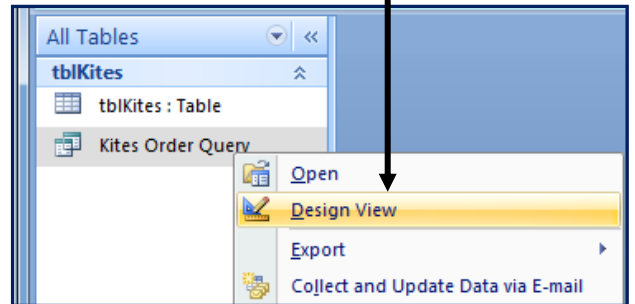
Setting the 'Order' field to currency and 2 decimal places –

How to do it:

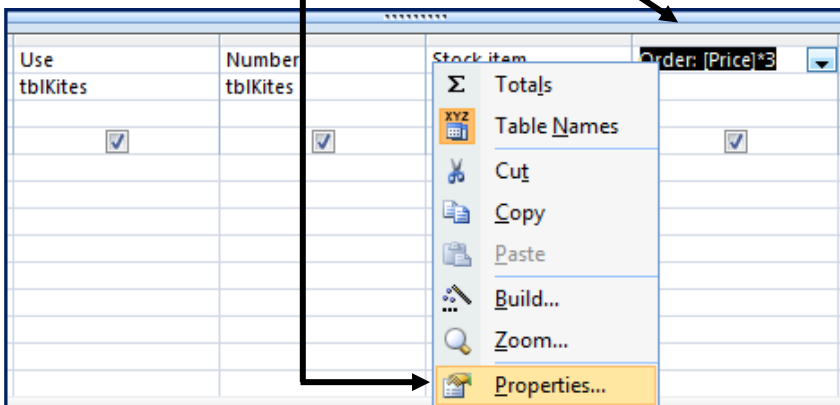
The Problem: Produce a report which:

- Has the Order field set as **currency with 2 decimal places**

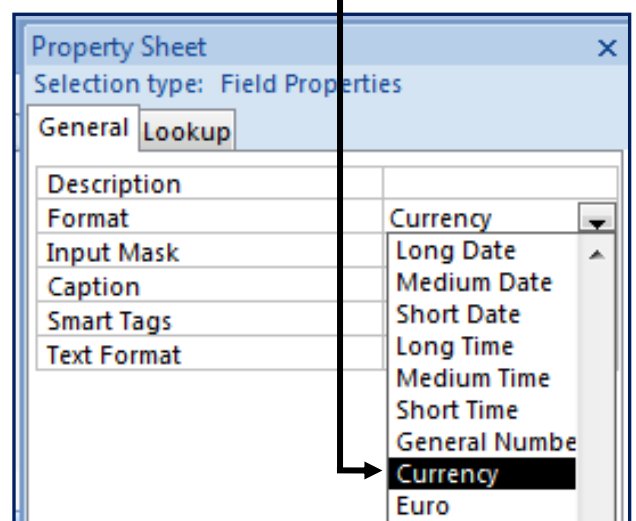
- Open the **Kites Order Query** in **Design View**. To do this, **right click the query** and then select **Design View**.



- Highlight the **Order** field then **right click** and select **Properties**.



- In the Properties Sheet change the **Format** to **Currency** by using the drop-down list.



- Run the query in **Datasheet View** and check to make sure that your **Order** field is set to **Currency**.

Wind condition	Use	Number	Stock item	Order
Medium	Land Board	1	Yes	\$3,537.00
Low	Kite Surf	1	Yes	\$3,416.85
High	Land Board	1	Yes	\$2,937.00
Low	Kite Surf	0	No	\$3,176.85

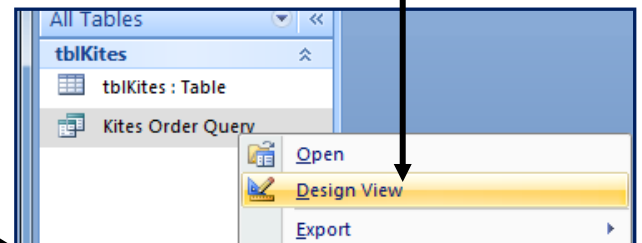
NOTE: Currency fields should be set to 2 decimal places by default.

Creating some query search criteria – How to do it:

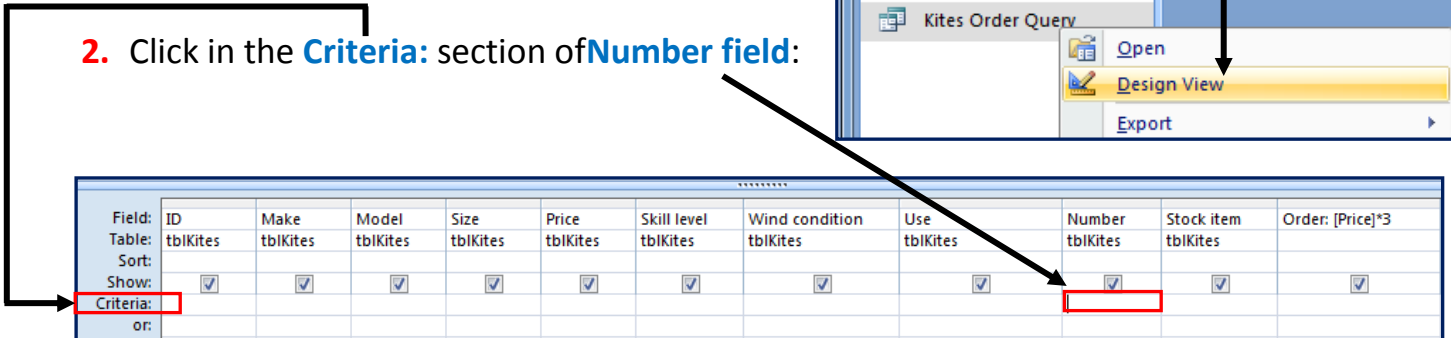
The Problem: Produce a report which:

- Shows only the records where **Number is less than 2** and **Stock item is Yes**

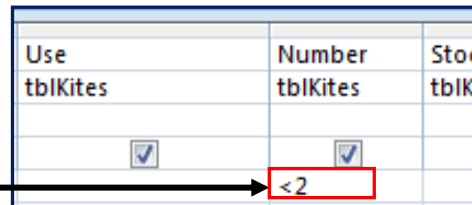
1. Open the **Kites Order Query** in **Design View**.



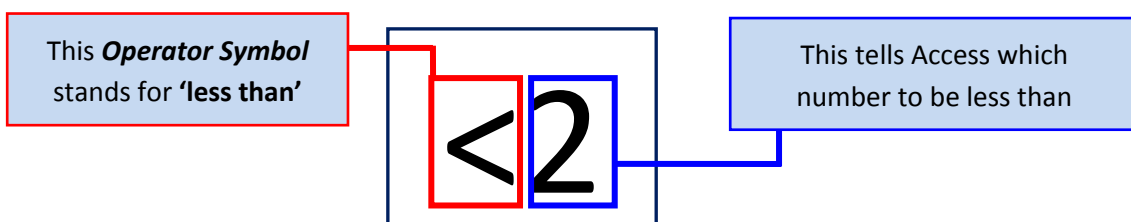
2. Click in the **Criteria:** section of **Number** field:



3. As the question requires us to search for only the records where the number is **less than 2** we need to type in **<2**



Breakdown of what is happening here:



NOTE: Operatorsymbols in the green cells can only be used on **Number Fields** or **Currency Fields**. Other operator symbols include:

> (More Than)	< (Less Than)	<= (Less Than or Equal to)
>= (More than or equal to)	Between And (Between 4 And 8 for example)	
= (Equal To)	OR (Low OR Medium OR High for example)	
LIKE * * (wordscontaining)	LIKE a* (starting with a)	LIKE *a (ending with a)

4. Click in the **Criteria:** section of the **Stock Item** field:

Field:	ID	Make	Model	Size	Price	Skill level	Wind condition	Use	Number	Stock item	Order: [Price]*3
Table:	tblKites	tblKites	tblKites	tblKites	tblKites	tblKites	tblKites	tblKites	tblKites	tblKites	
Sort:											
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:									<2		
or:											

5. The question wants us to search for records where **Stock Item is 'Yes'**. To do this simply type **Yes** into the criteria box.

	Number	Stock item
	tblKites	tblKites
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<2	Yes

6. Run the query in **Datasheet View** and check to make sure that the database has only returned records that match our criteria (**Number less than 2 and Stock Item of Yes**).

ID	Make	Model	Size	Price	Skill level	Wind condition	Use	Number	Stock item	Order
145	Best	Nemesis	12	\$979.00	Beginner	Medium	Kite Surf	1	Yes	\$2,937.00
146	Airush	Flow	5	\$699.00	Beginner	High	Kite Surf	1	Yes	\$2,097.00
1	Flysurfer	Speed 2	12	\$1,179.00	Intermediate	Medium	Land Board	1	Yes	\$3,537.00
2	Flexifoil	Ion III	16	\$1,138.95	Intermediate	Low	Kite Surf	1	Yes	\$3,416.85
3	Flysurfer	Speed 2	8	\$979.00	Intermediate	High	Land Board	1	Yes	\$2,937.00
7	Airush	Flow	15	\$898.95	Beginner	Low	Kite Surf	0	Yes	\$2,696.85
10	Ozone	Frenzy FX	13	\$754.95	Experienced	Low	Snowkite	1	Yes	\$2,264.85
16	Flysurfer	Pulse 2	6	\$699.99	Intermediate	High	Land Board	1	Yes	\$2,099.97
31	Flexifoil	Blade IV	6	\$409.00	Experienced	Low	Freestyle Buggy / Land	1	Yes	\$1,227.00
37	Flexifoil	Rage	2	\$180.00	Beginner	High	Buggy / Land Board	1	Yes	\$540.00
42	Flexifoil	Blurr	3	\$299.00	Intermediate	Medium	Buggy	1	Yes	\$897.00
49	Ozone	Yakuza	2	\$234.95	Experienced	High	Buggy Racing	1	Yes	\$704.85
50	Ozone	Instinct Light	3	\$481.00	Beginner	High	Kite Surf	1	Yes	\$1,443.00
53	Ozone	Cult	3	\$229.95	Beginner	Medium	Land Board	1	Yes	\$689.85
60	Peter Lynn	Hornet	6	\$224.95	Beginner	Low	Buggy / Land Board	0	Yes	\$674.85
62	Peter Lynn	Hornet	3	\$142.95	Beginner	High	Buggy / Land Board	0	Yes	\$428.85
109	Slingshot	Turbo 2	9	\$779.00	Intermediate	Medium	Kite Surf	1	Yes	\$2,337.00
144	Airush	Vapour	16	\$999.00	Beginner	Low	Kite Surf	1	Yes	\$2,997.00
*(New)										

All numbers are less than 2

All stock items are Yes

NOTE: All records that do not match our criteria are omitted from the search result

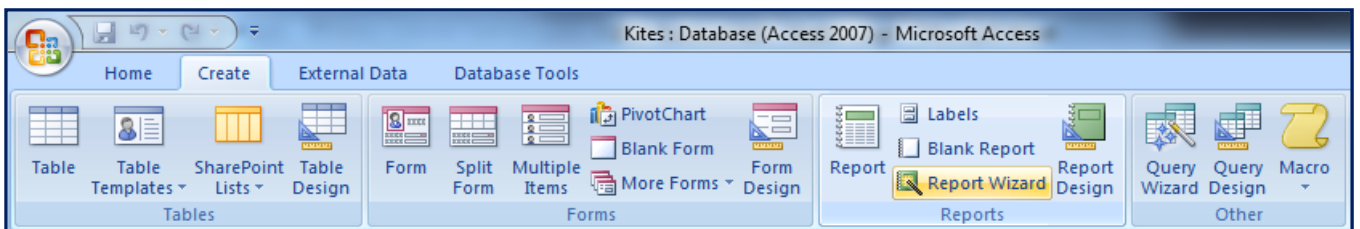
Creating the report using the Kite Order Query – How to do it:

The Problem: Produce a report which:

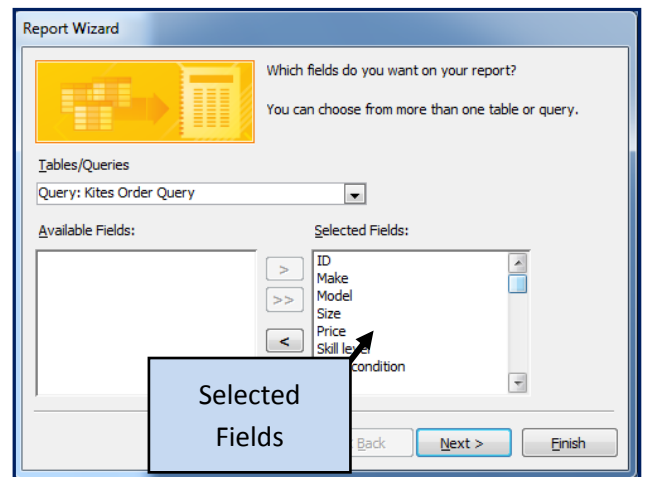
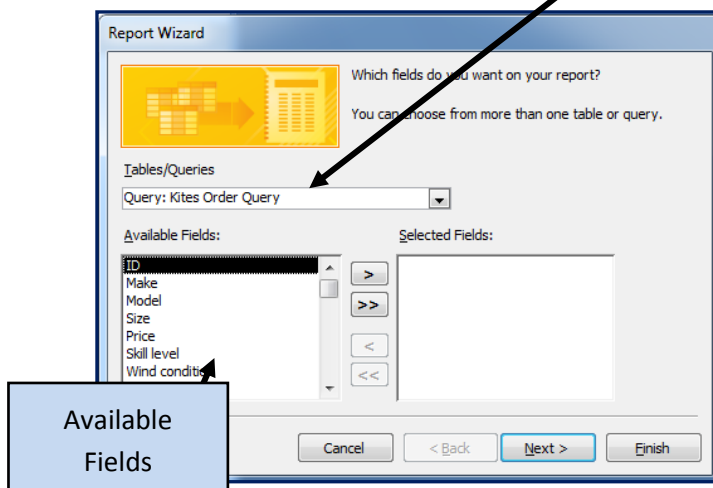
4. Shows all the **fields** and their **labels in full**
5. Fits on a **single page**
6. Has a **page orientation of landscape**
7. Sorts the data into **ascending order of Make** (with Airush at the top)

Once we have our completed query we can take this information and display it in the form of a report.

1. Click **Create** and then **Report Wizard**.



2. On the next screen, you should make sure that **Kites Order Query** option is selected.

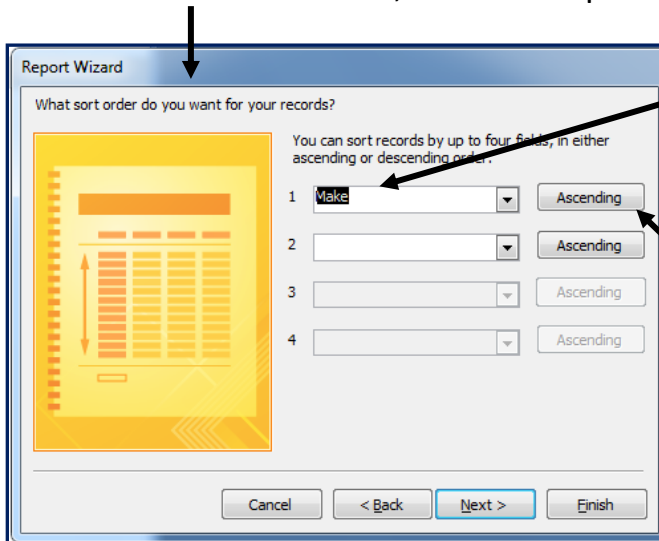


Use the **arrows** to move the fields from the **Available Fields:** window into the **Selected Fields:** window.

Press **Next** and the **Next** again.

Sorting data into ascending order of make:

3. In the **Sort Order** section, use the drop-down box to select the **Make Field**.



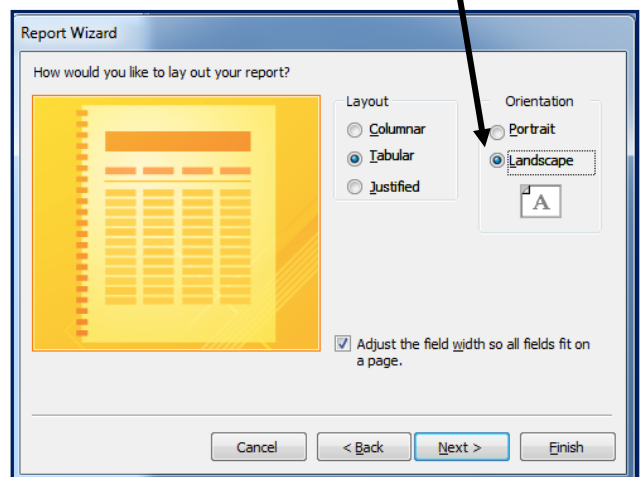
Make sure that it is set to **Ascending** (Low to High).

Click **Next**.

Landscape page orientation:

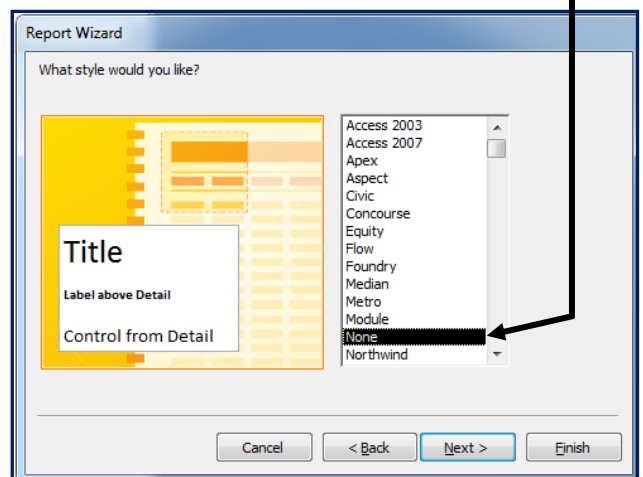
4. Set the **Page Orientation** to **Landscape** (Wide) and leave Layout as Tabular.

Click **Next**.



5. Choose a **Design** for your report (I chose **'None'** option as it is easier to re-design later)

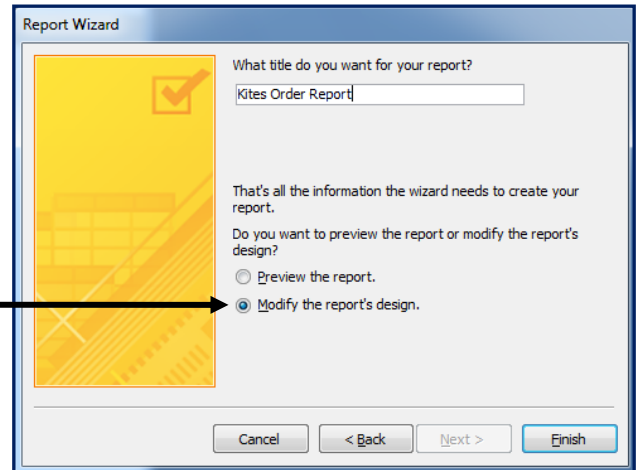
Click **Next**.



6. Choose a report name which suits the task (I chose **Kites Order Report**).

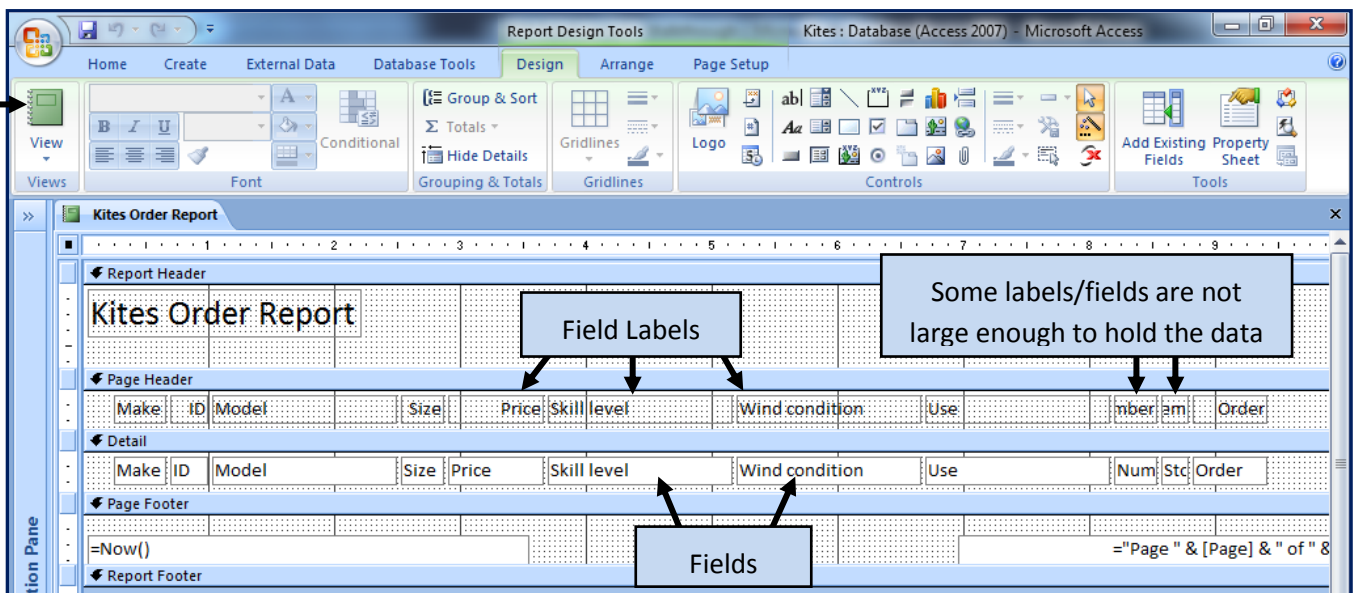
Select the **'Modify the Query Design'** option. This lets us customise our report.

Click **Finish**.



Showing all fields and labels and making sure the report fits onto a single page:

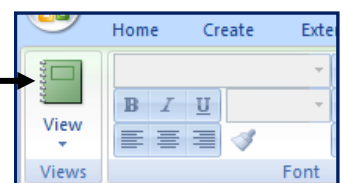
1. You should be in **Report Design View**. It looks like this:



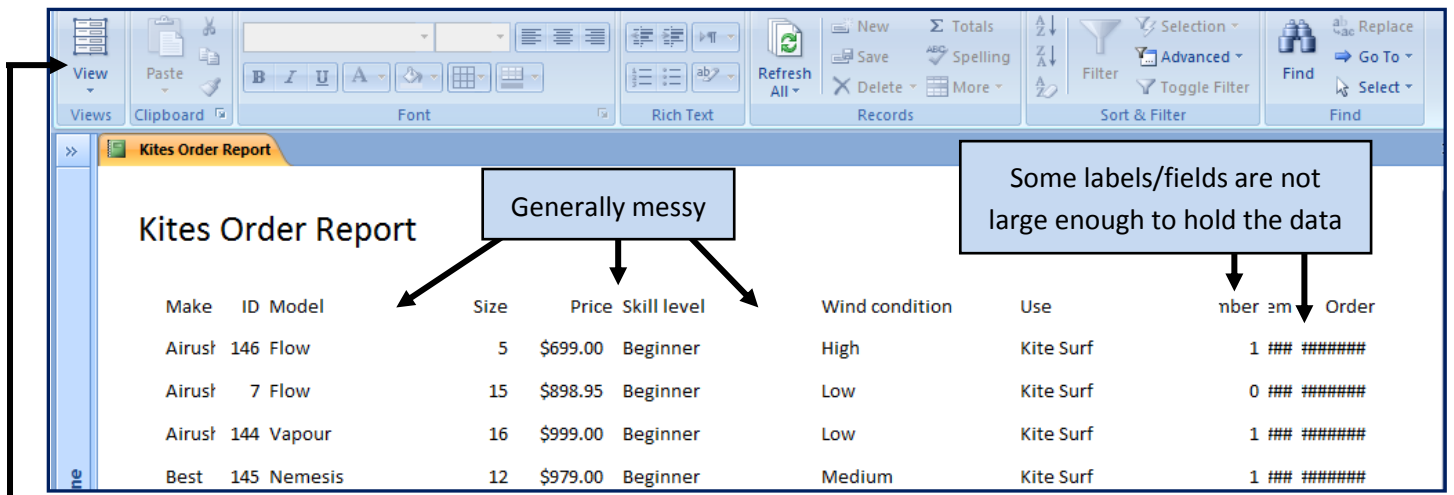
Clearly this report needs some work for the following reasons:

- It is messy
- The labels and fields are not large enough to display the information
- The report does not fit onto a page.

If I ran this report in **Report View** you will see what I mean.



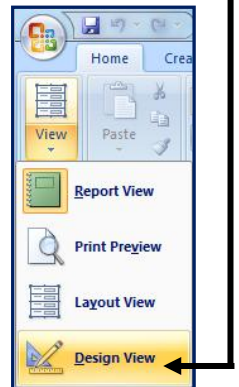
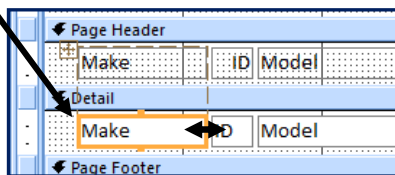
Report View:



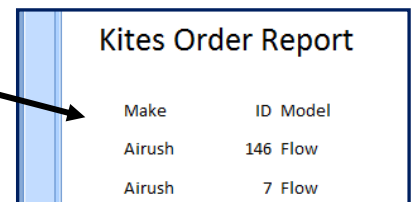
Resizing Fields

2. Click the drop down arrow on the **View** option and select **Design View**. This lets us make the required changes.

3. Click on the **Make field** and drag the handles out to create more space for the information.

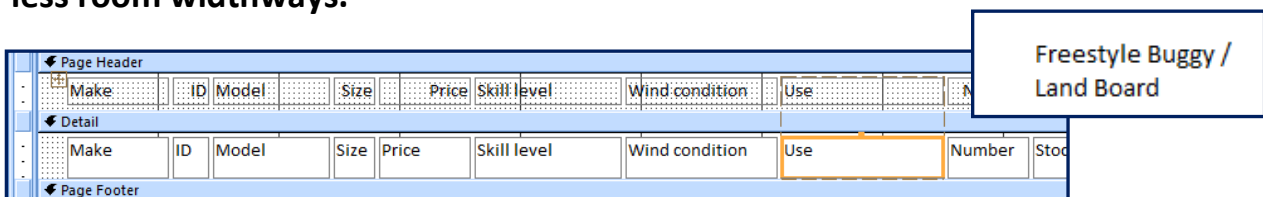


4. Click back on **Report View** to make sure that the field has been resized enough to hold all of the information. It looks okay.



5. Continue doing this until all of the fields are just the right size to hold the information. You may need to reduce the size of some of them if they are too large.

NOTE: Fields can also be resized to make them higher instead of wider. This is useful to force longer pieces of data onto a new line and, therefore, take up less room widthways.



Kites Order Report

Fields all large enough to hold the information

Make	ID	Model	Size	Price	Skill level	Wind condition	Use	Number	Stock item	Order
Airush	146	Flow	5	\$699.00	Beginner	High	Kite Surf	1	Yes	\$2,097.00
Airush	7	Flow	15	\$898.95	Beginner	Low	Kite Surf	0	Yes	\$2,696.85
Airush	144	Vapour	16	\$999.00	Beginner	Low	Kite Surf	1	Yes	\$2,997.00

Aligning Fields

Fields needs to be further apart

1. **ID**, **Model**, **Price** and **Skill Level** fields could benefit from being further apart. This will make them easier to read.

2. Move the cursor into the **Page Header** section and click on the **ID** label.

Kites Order Report

Page Header

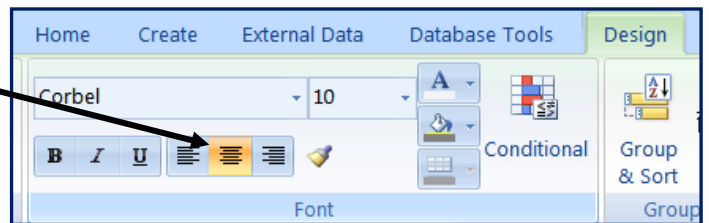
Make	ID	Model	Size	Price	Skill level	Wind condition	Use	Number	Stock item	Order
------	-----------	-------	------	-------	-------------	----------------	-----	--------	------------	-------

Detail

Make	ID	Model	Size	Price	Skill level	Wind condition	Use	Number	Stock item	Order
------	----	-------	------	-------	-------------	----------------	-----	--------	------------	-------

Page Footer

3. Centre the label using the **Centre Alignment** tool in the **Design** tab.



4. Repeat this for the **ID** field in the **Detail** section.

5. Use the same techniques to re-align the other problem areas in the report.

Kites Order Report

Much neater layout

Make	ID	Model	Size	Price	Skill level	Wind condition	Use	Number	Stock item	Order
Airush	146	Flow	5	\$699.00	Beginner	High	Kite Surf	1	Yes	\$2,097.00
Airush	7	Flow	15	\$898.95	Beginner	Low	Kite Surf	0	Yes	\$2,696.85
Airush	144	Vapour	16	\$999.00	Beginner	Low	Kite Surf	1	Yes	\$2,997.00

Calculating total value of kites on the report – How to do it:

The Problem: Produce a report which:

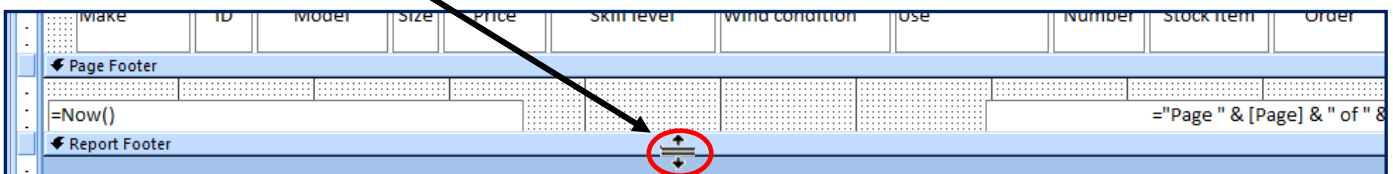
8. Calculate the total value of kites to be ordered and:
 - Shows this total at the bottom of the Order column
 - Formats this total value to currency with no decimal places
 - Has the label 'Total order value' for the total value.

To add a total to the report you will insert a text box into the Report Footer section.

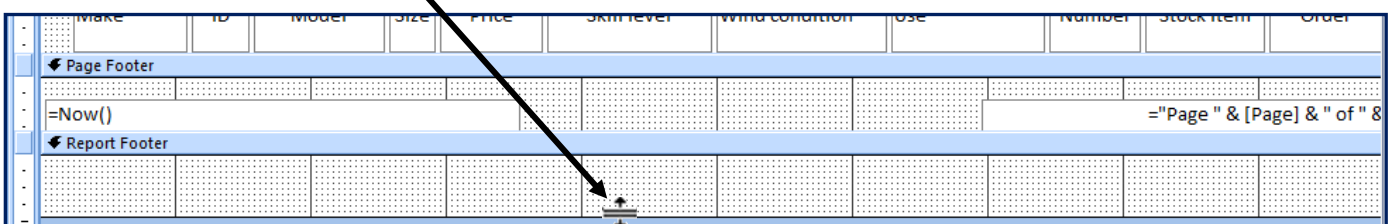
By default the Report Footer section is hidden from view and so you have to create some room for the text box.

Creating some room in the Report Footer.

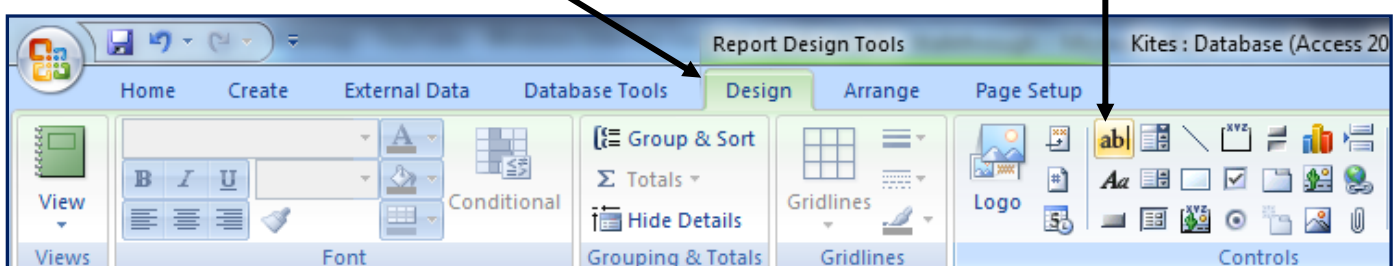
1. Position your cursor to the **bottom** of the **Report Footer** bar so that the cursor changes to an **arrow**.



2. Hold the left mouse button down and drag the Report Footer row down a little bit to make some room.



3. In the **Design** section click the **Text Box** option.



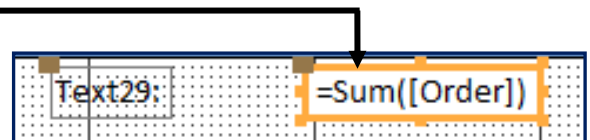
Calculating the total value of the kites to be ordered.

1. Draw the text box into the Report Footer underneath the Order field.

Report Header											
Order Report											
Page Header											
ID	Model	Size	Price	Skill level	Wind condition	Use	Number	Stock item	Order		
Detail											
ID	Model	Size	Price	Skill level	Wind condition	Use	Number	Stock item	Order		
Page Footer											
										="Page " & [Page] & " of " & [Pages]	
Report Footer											
										Text29:	Unbound

2. In the Unbound text box type **=SUM([Order])**

This adds up all of the values stored in the 'Order' field.
=SUM means **ADD TOGETHER**.



Breakdown of what is happening here:

This tells Access that we want to **add something** (or total)

=SUM ([Order])

This tells Access which field we want to total

NOTE: It is essential that you follow the **correct syntax**. For example:

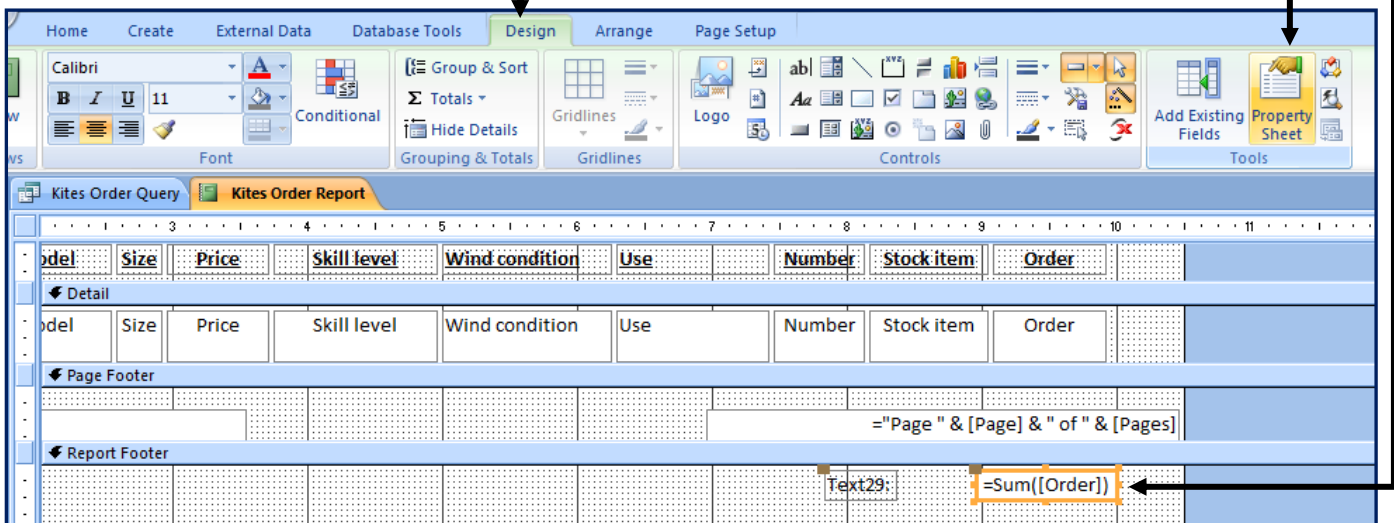
- Correct order
- Using an **=** sign in front of the calculation
- Using the **SUM** function if the task requires you to total something
- Using curved AND square brackets (**[]**) to surround the field's name

NOTE: In your exam you will be asked to use one of several possible types of calculation within your report:

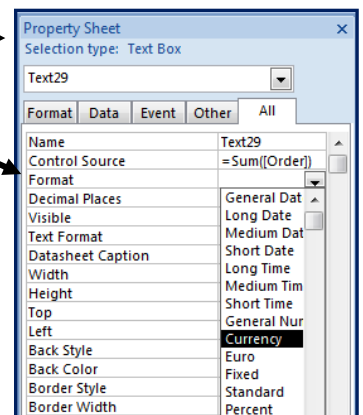
1. **=[SUM]** - Used if the question requires you to **total** a field
2. **=[COUNT]** - Used if the question requires you to **count** the number of records in a field.
3. **=[AVG]** - Used to calculate the **average value** of a field
4. **=[MAX]** - Used to find the **highest number** within a field
5. **=[MIN]** - Used to find the **lowest number** within a field

Formatting the total value to currency with no decimal places.

1. Make sure the report is open in **Design View**.
2. Click the **text box** which contains the **calculation**.
3. In the **Design** section click **Property Sheet**.

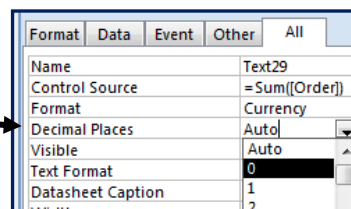


4. The **Property Sheet** for the text box will open. You should make sure that you are in the **'All'** section.



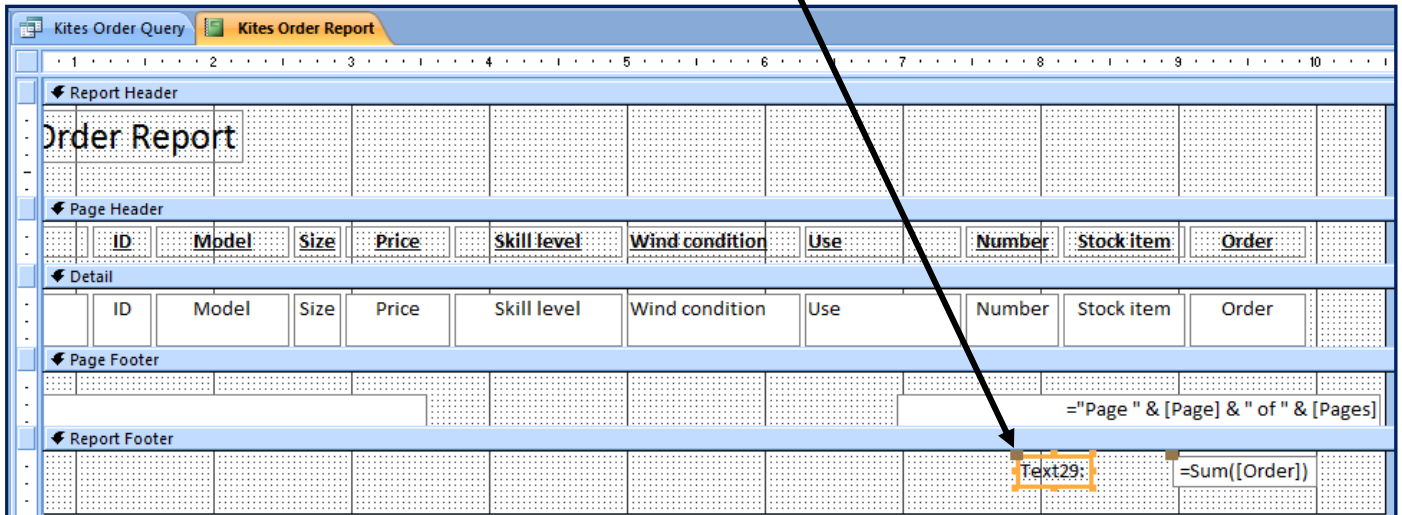
5. Find the **Format** setting and use the drop-down box to select **Currency**.

6. Use the **Decimal Places** setting to select **0**.

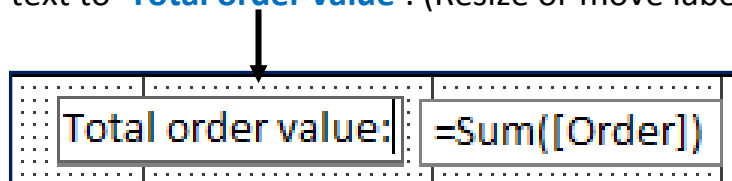


Adding the label 'Total order value'.

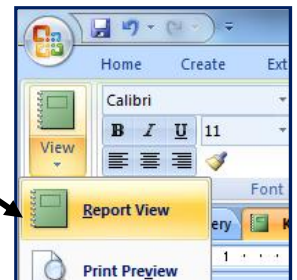
1. Close the Property Sheet and click in the **label** for your calculated field.



2. Change the text to **'Total order value'**. (Resize or move label if necessary)



3. Run the report in **Report View** and scroll to the bottom.



Your calculated field and label should appear. Notice how the **Order Total** has **no decimal places**:

Beginner	High	Buggy / Land Board	0	Yes	\$428.85
Intermediate	Medium	Kite Surf	1	Yes	\$2,337.00
Total order value:					\$33,926

Total Value Label

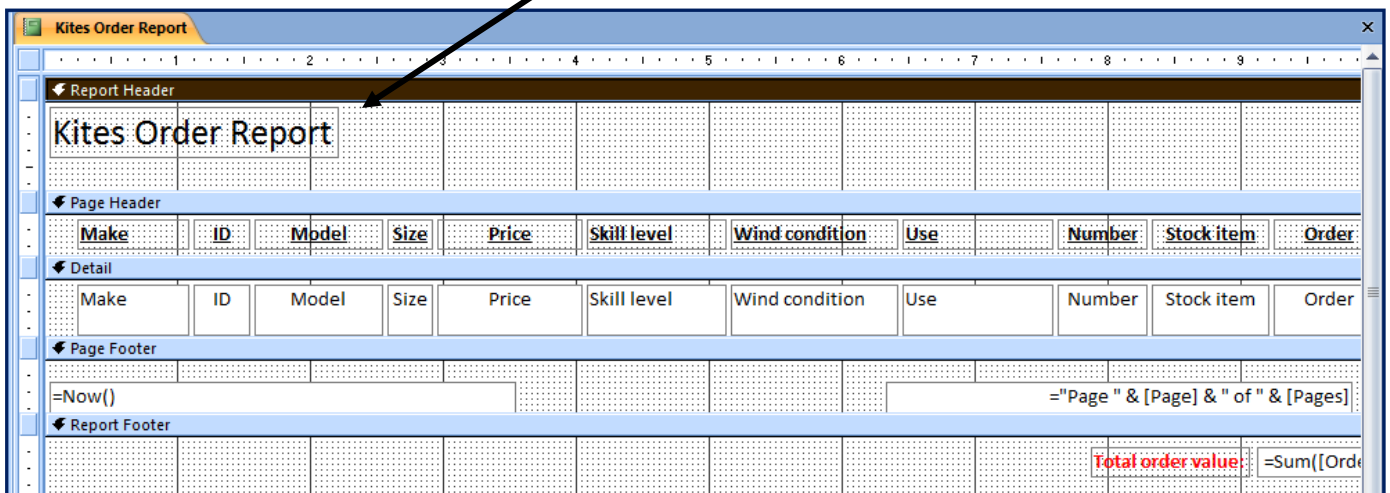
Total Value Calculation
(0 decimal places)

Changing the Report Heading to 'Kites we need to restock – How to do it:

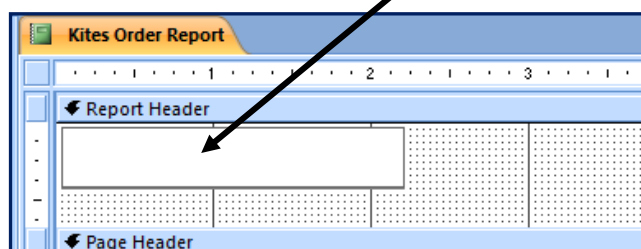
The Problem: Produce a report which:

9. Includes the heading **Kites we need to restock** at the top of the page.

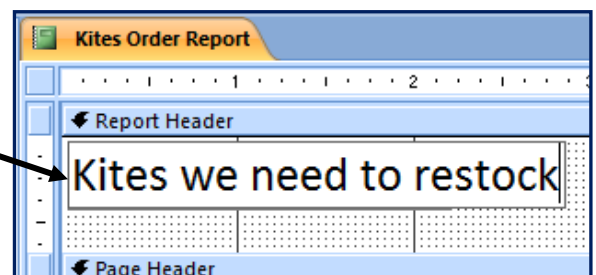
1. Make sure the report is open in **Design View**.
2. Move the cursor into the **Report Header** section.



3. Click in the heading (label) we currently have and **delete the contents**.



4. Type in the required text – '**Kites we need to restock**'.



5. Check in **Report View** that the new heading is:

- At the **top of the page**
- Is the **EXACT** words given in the question
- Is **spelt correctly**.

It should look like this:

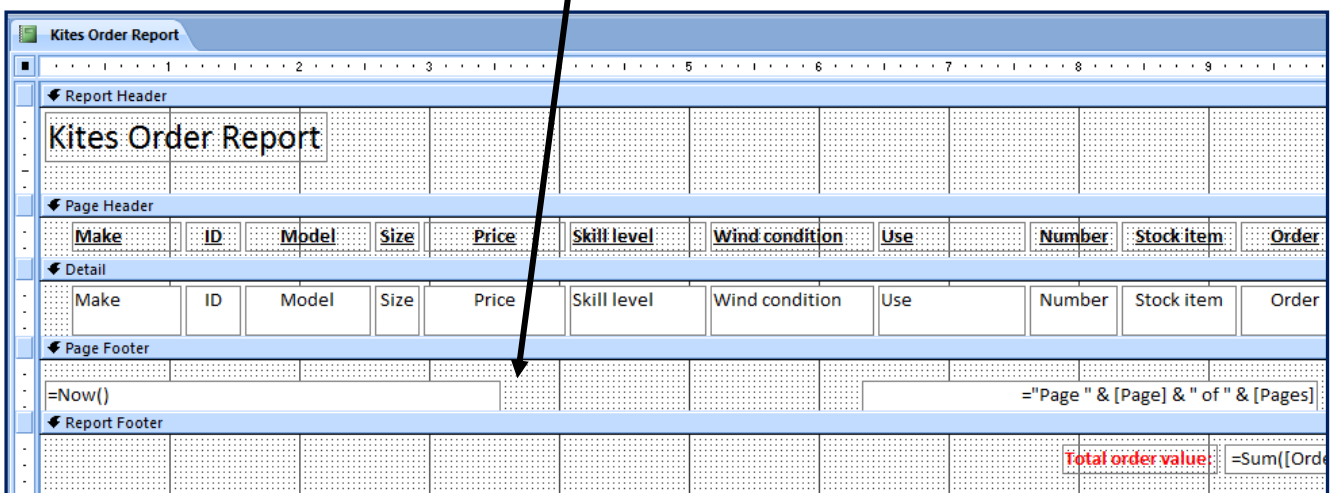
Make	ID	Model	Size	Price	Skill level	Wind condition	Use	Number	Stock item	Order
Airush	146	Flow	5	\$699.00	Beginner	High	Kite Surf	1	Yes	\$2,097.00
Airush	7	Flow	15	\$898.95	Beginner	Low	Kite Surf	0	Yes	\$2,696.85
Airush	144	Vapour	16	\$999.00	Beginner	Low	Kite Surf	1	Yes	\$2,997.00

Adding Name, Centre Number and Candidate Number – How to do it:

The Problem: Produce a report which:

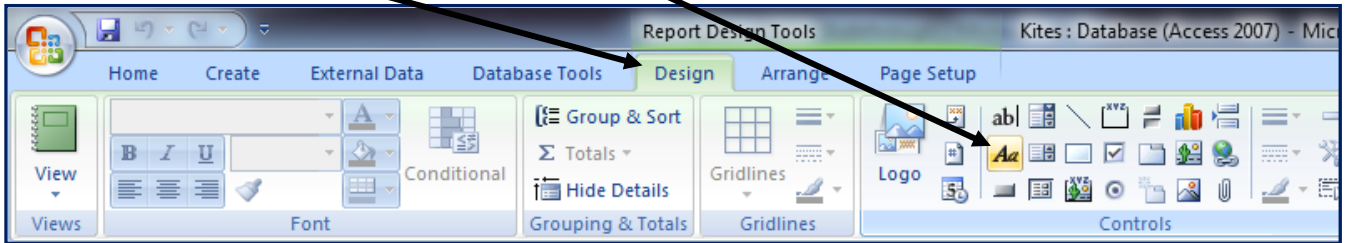
10. Has your name, Centre Number and Candidate number on the left footer of each page.

1. Make sure the report is open in **Design View**.
2. Move the cursor into the **PageFooter** section.

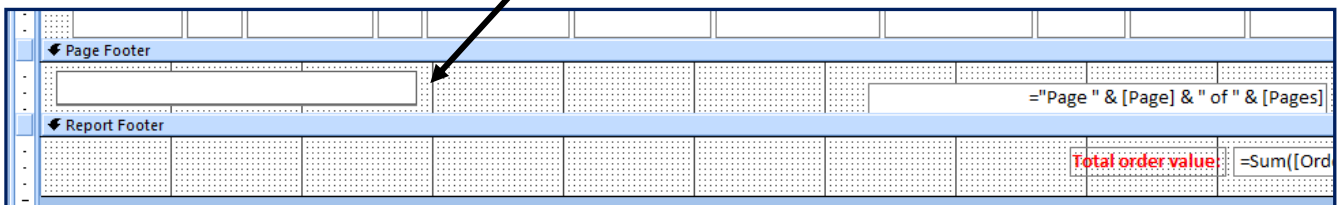


3. Delete the text box containing the formula =Now()

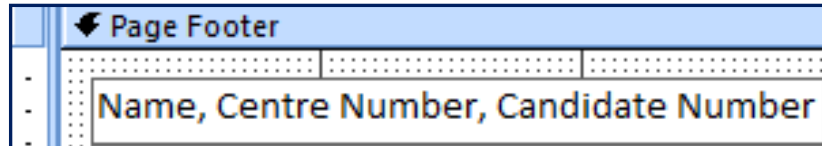
4. In the **Design** section click the **Label** tool.



5. Drag your label out in the **Page Footer** where the =Now() text box used to be.



6. Type your name, Centre Number and Candidate number into the label.



7. Use Report View and scroll to the bottom of the page to check that the required information is fully visible. It should look something like this:

Ozone	10	Frenzy FX	13	\$754.95	Experienced	Low	Snowkite	1	Yes	\$2,264.85
Peter Lynn	60	Hornet	6	\$224.95	Beginner	Low	Buggy / Land Board	0	Yes	\$674.85
Peter Lynn	62	Hornet	3	\$142.95	Beginner	High	Buggy / Land Board	0	Yes	\$428.85
Slingshot	109	Turbo 2	9	\$779.00	Intermediate	Medium	Kite Surf	1	Yes	\$2,337.00
									Total order value:	\$33,926
Name, Centre Number, Candidate Number										Page 1 of 1

Save and Print this report.

Q40 Produce **labels** from **all the data** which:

1. Fit **two side by side** on the page
2. Show only the records where **Use field** contains **Kite Surf**, the **Stock item field** is **Yes** and the **Skill level** is **not Beginner**
3. Shows **only** the fields **Make, Model, Size, Price** and **Wind Condition**, each on a separate line.
4. Displays the field name as well as the data
5. Are sorted into **ascending order of Size**
6. Include the heading **'Special offer for kite surfers'** at the top of each label
7. Has your **Name, Centre Number** and **Candidate Number** at the bottom of each label.

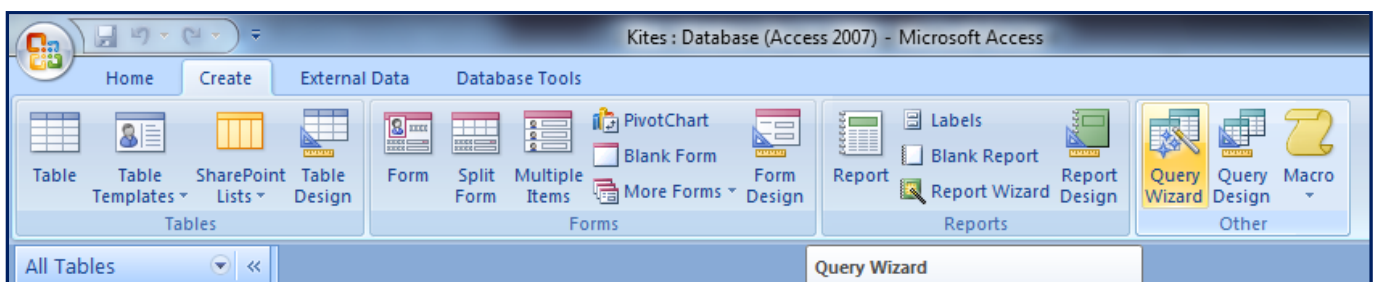
This task, again, requires you to **produce a query** that searches for the required records **described in task 2** of **Q39**.

The rest of Q39 can be tackled in the process of making the labels.

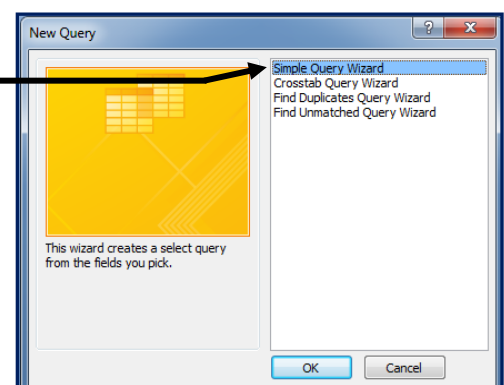
Creating the query – How to do it:

NOTE: The question clearly requires you to make the labels based on **all the data** so you should ensure that the query is sourcing **tblkites** and **not** your **Order query**.

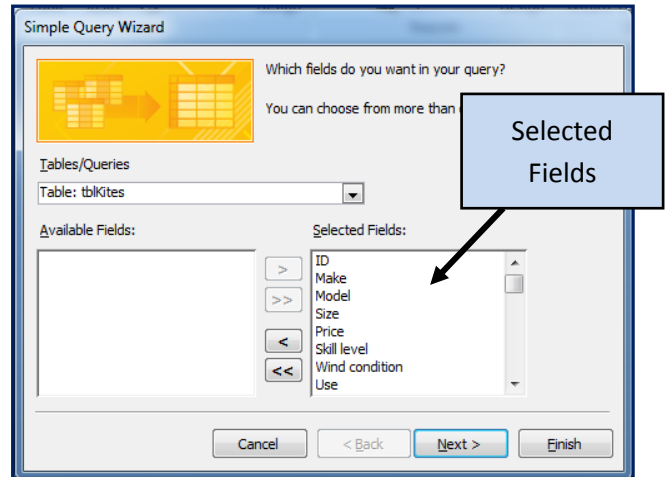
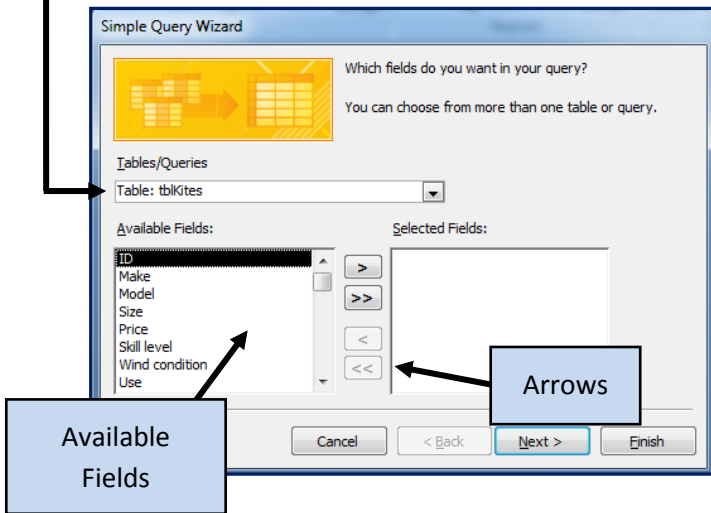
1. Click **Create** and then **Query Wizard**.



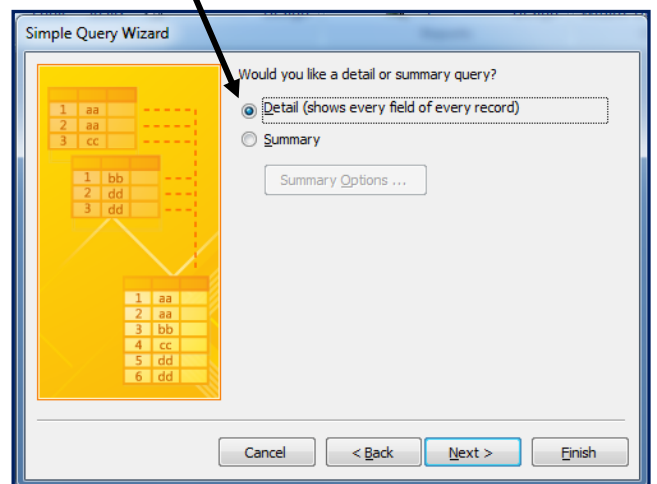
2. Select **Simple Query Wizard** then click **OK**.



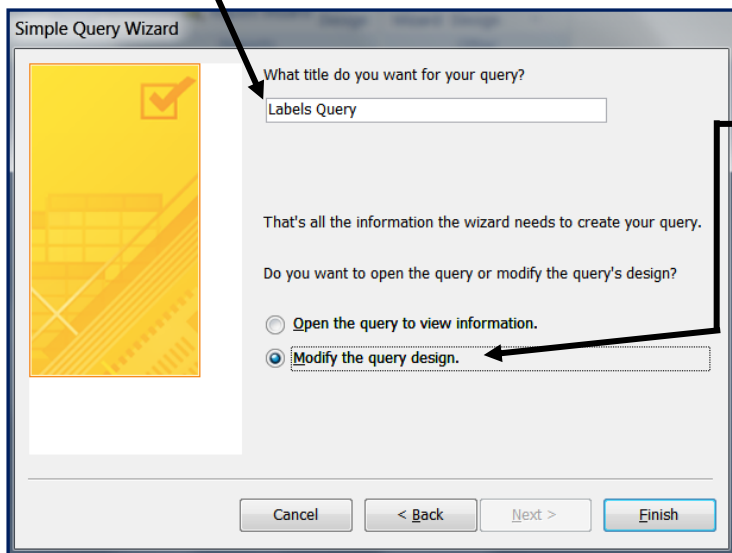
3. On the next screen, you should make sure that **tblKites** option is selected. Use the **arrows** to move the fields from the **Available Fields:** window into the **Selected Fields:** window.



4. Select the **'Detail – show every field of every record'** option then press **Next**. (If the task required a summary of data then you would choose 'Summary')



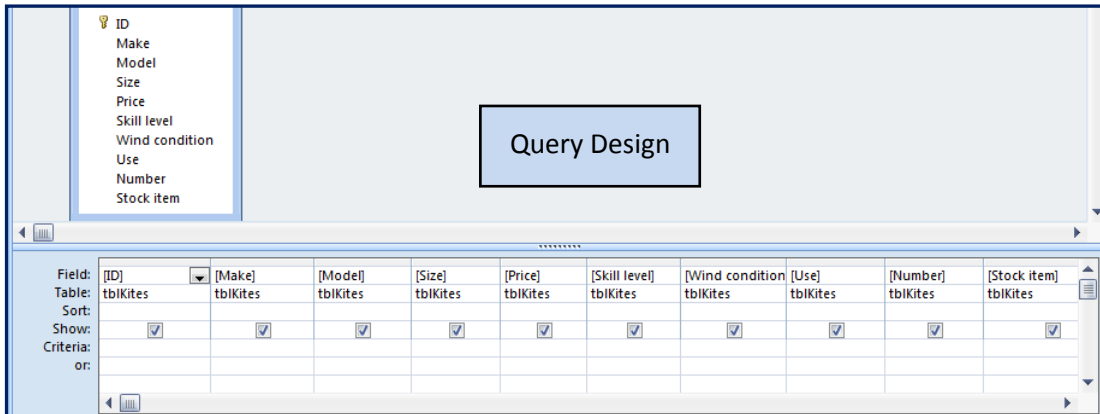
6. Choose a name which suits the task. I suggest **'Labels Query'**.



Select the **'Modify the Query Design'** option. This lets us create our searches.

Click **Finish**.

This takes us to the **Query Design screen** and from here we can tell Access which data we would like to search for:



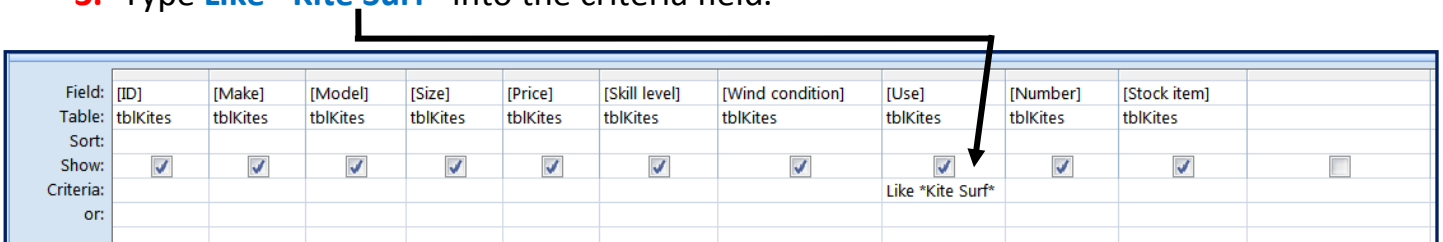
Specifying the query criteria – How to do it:

The problem: Produce labels from all the data which:

2. Show only the records where **Use** field contains **Kite Surf**, the **Stock item** field is **Yes** and the **Skill level** is **not Beginner**

Records containing the words Kite Surf

1. Open the **Labels Query** in **Design View**.
2. Click in the **Criteria:** section of the **Use** field.
3. Type **Like *Kite Surf*** into the criteria field.



NOTE: The **'Like * *'** criteria tells Access that you are performing a **wildcard search**. Any record containing the words **'Kite Surf'** will be returned.

Wildcard searches should be used as the criteria for any search questions that ask you to find records that **contain specific words**.

Records where Stock Item field is Yes

1. In the **Labels Query** click in the **Criteria:** section of the **Stock Item field**.
2. Type **Yes** into the **Stock Item** criteria field.

Field:	[ID]	[Make]	[Model]	[Size]	[Price]	[Skill level]	[Wind condition]	[Use]	[Number]	[Stock item]	
Table:	tblKites	tblKites	tblKites	tblKites	tblKites	tblKites	tblKites	tblKites	tblKites	tblKites	
Sort:											
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Criteria:								Like "**Kite Surf**"		Yes	
or:											

Records where Skill Level Item field is Not Beginner

1. In the **Labels Query** click in the **Criteria:** section of the **Skill Level field**.
2. Type **Not "Beginner"** into the **Skill Level** criteria field.

Field:	[ID]	[Make]	[Model]	[Size]	[Price]	[Skill level]	[Wind condition]	[Use]	[Number]	[Stock item]	
Table:	tblKites	tblKites	tblKites	tblKites	tblKites	tblKites	tblKites	tblKites	tblKites	tblKites	
Sort:											
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Criteria:						Not "Beginner"		Like "**Kite Surf**"		Yes	
or:											

NOTE: The **Not " "** criteria tell Access that you are looking for every other record apart from the word included within the **Not " "** criteria.

In this example there were 3 types of record held in the **Skill Level** field:

- **Beginner**
- **Intermediate**
- **Experienced**

Including **'Beginner'** within the **Not** criteria excludes it from the search and Access will only look for records containing **'Intermediate'** and **'Experienced'**.

3. Run the query by clicking the **Datasheet View** button.



Access will now search for the records that match all 3 of the search criteria that we have created. Your results should look like this:

ID	Make	Model	Size	Price	Skill level	Wind condition	Use	Number	Stock item
2	Flexifoil	Ion III	16	\$1,138.95	Intermediate	Low	Kite Surf	1	Yes
5	Ozone	Instinct Edge	11	\$927.00	Experienced	Medium	Kite Surf	2	Yes
70	Best	H.P Nemesis 13	14	\$1,069.00	Experienced	Low	Kite Surf	2	Yes
91	Slingshot	Rev	11	\$849.00	Intermediate	Medium	Kite Surf	2	Yes
109	Slingshot	Turbo 2	9	\$779.00	Intermediate	Medium	Kite Surf	1	Yes
130	Ozone	Instinct Light	9	\$651.00	Intermediate	Medium	Kite Surf	2	Yes
137	Peter Lynn	Vortex	8	\$561.99	Intermediate	High	Kite Surf	2	Yes
138	Ozone	Instinct Light	5	\$561.00	Intermediate	High	Kite Surf	2	Yes
*(New)									

Annotations for search criteria:

- Skill Level field does not contain 'Beginner'
- Use field contains the words 'Kite Surf'
- Stock Item = Yes

Creating the Labels – How to do it:

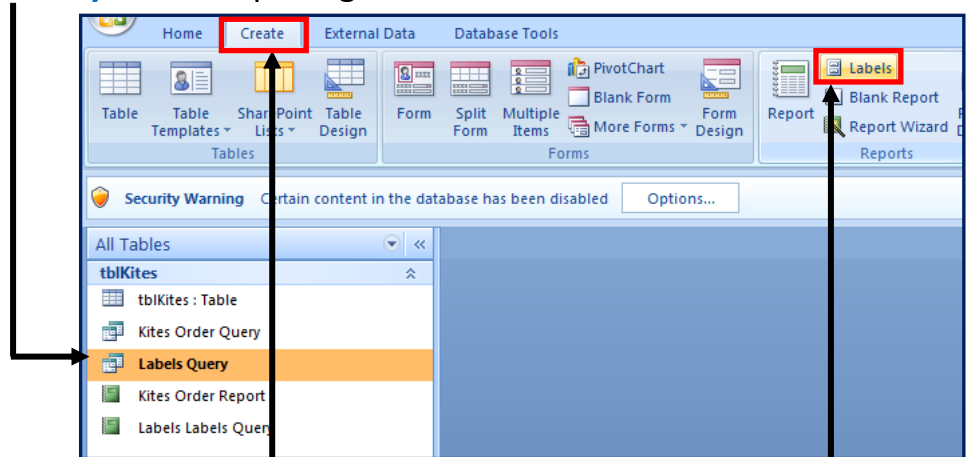
The problem: Produce labels from all the data which:

1. Fit **two side by side** on the page
3. Shows **only** the fields **Make, Model, Size, Price** and **Wind Condition**, each on a separate line.
4. Displays the field name as well as the data
5. Are sorted into **ascending order of Size**

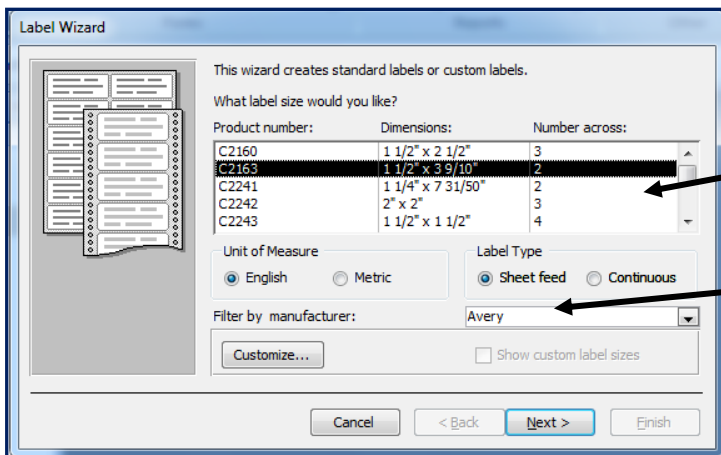
Labels are a special kind of report. They are designed to provide a short, summary of information and you are usually required to fit two labels side by side.

First steps in creating labels

1. Click on the **Labels Query** without opening it.



2. Click **Create** and then **Labels**.



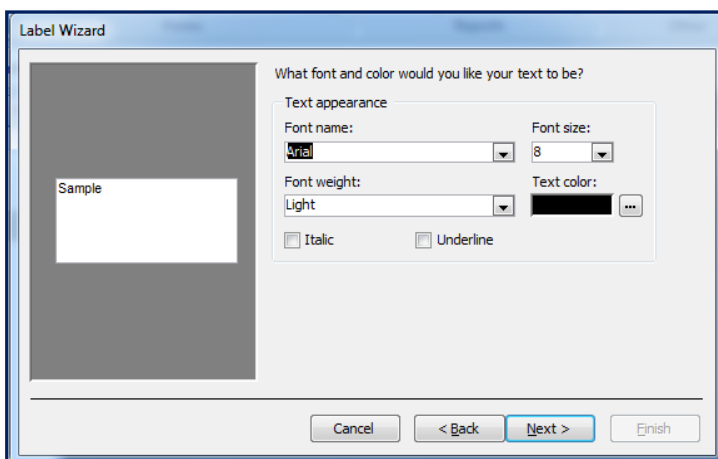
Fitting 2 labels side by side

1. The task asks you to fit two labels side by side so select an option where the **'number across'** is 2.

Label Type option should be **'Sheet Feed'**.

Click **Next**.

2. The next screen allows you choose font styles and sizes but the task does not specify any formatting so it would be advisable to leave this alone.



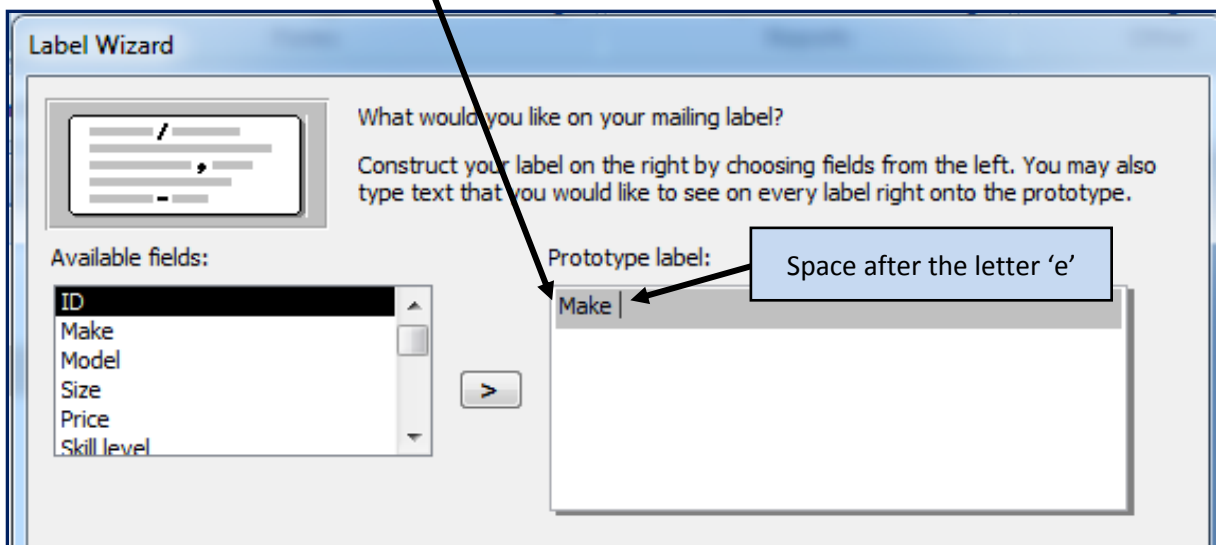
Click **Next**.

Showing the correct fields and field names

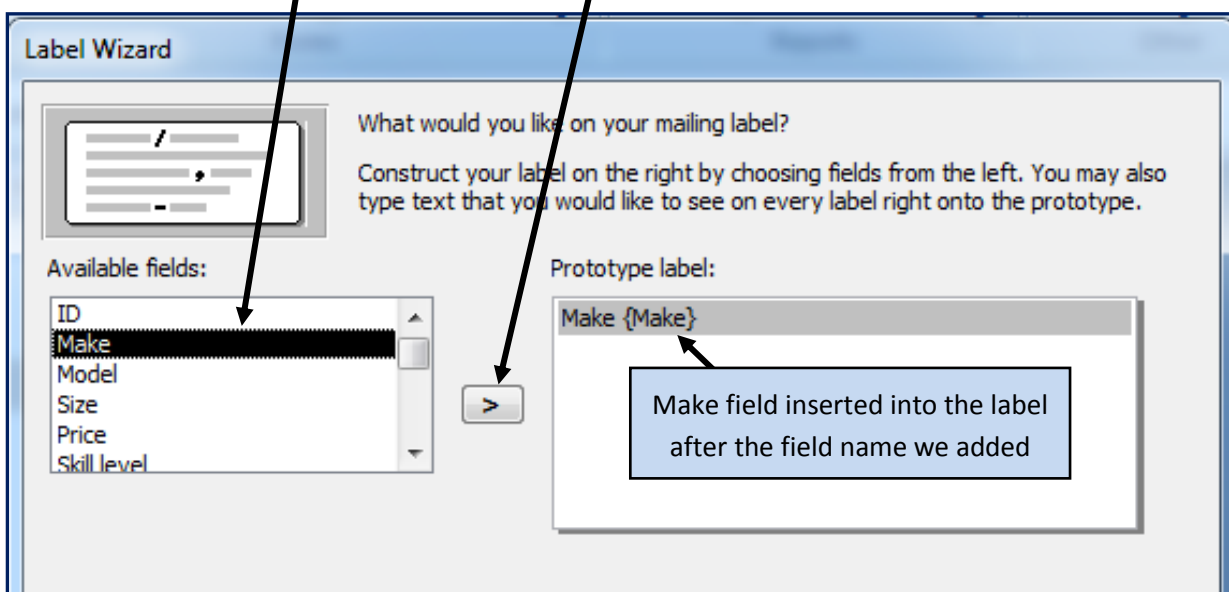
Tasks 3 and 4 require you to do 2 things:

- Only show the fields **Make**, **Model**, **Size**, **Price** and **Wind Condition** each on a separate line
- Show the **field names** as well as the **actual data**.

1. Type the field name **'Make'** into the **Prototype Label window** (with a space at the end of the letter 'e').

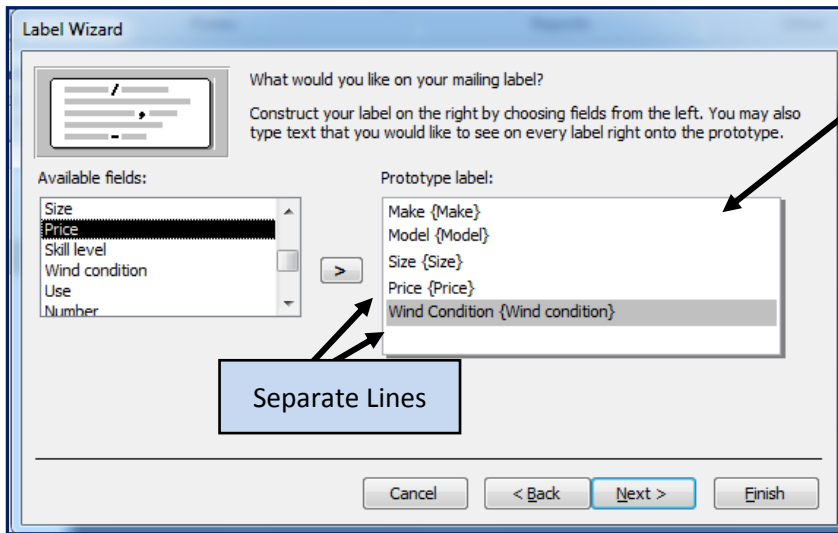


2. Click on the **Make field** and use the **arrow** to move it into the label.



3. Press enter to move the cursor to the line below.

4. Add the other necessary fields and field names in the same way (**Model, Size, Price, Wind Condition**).



Your label window should look like this:

Click **Next**

NOTE: If the task did not require the information to be on separate lines you would not have pressed enter after each field.

Sorting Size field into ascending order

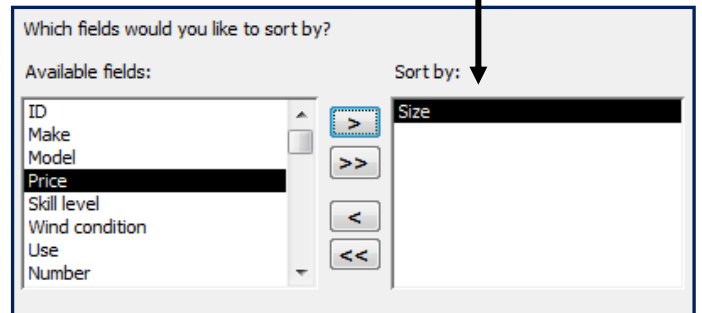
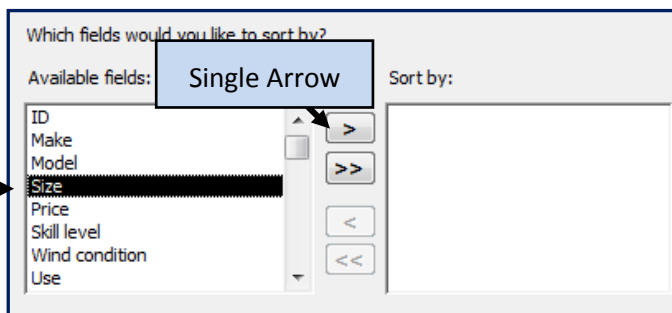
Task 5 needs you to **sort** the **Size field** into **Ascending Order**. Ascending means **'From low to high'**.

This means that the data will be sorted from the lowest kite size to the highest.

NOTE: Descending Order is the opposite – 'From high to low'.

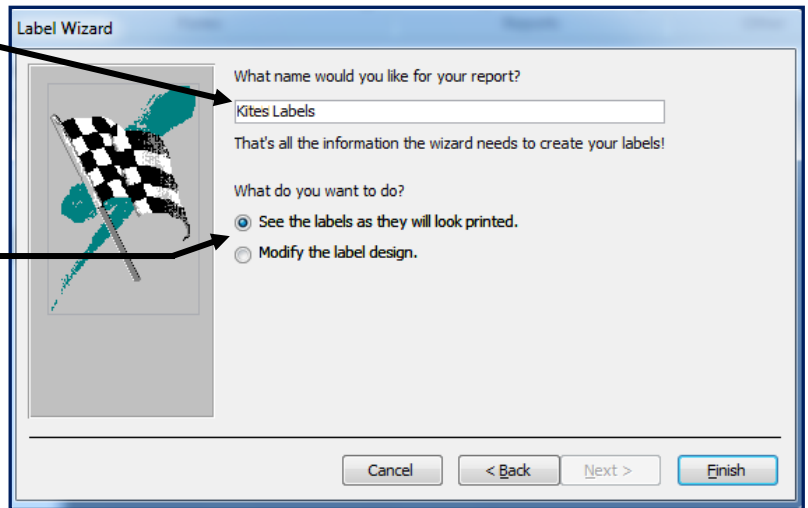
1. Click on the **Size field** and use the **single arrow** to move it into the **Sort By:** window.

By default, Access will sort the field into Ascending Order.

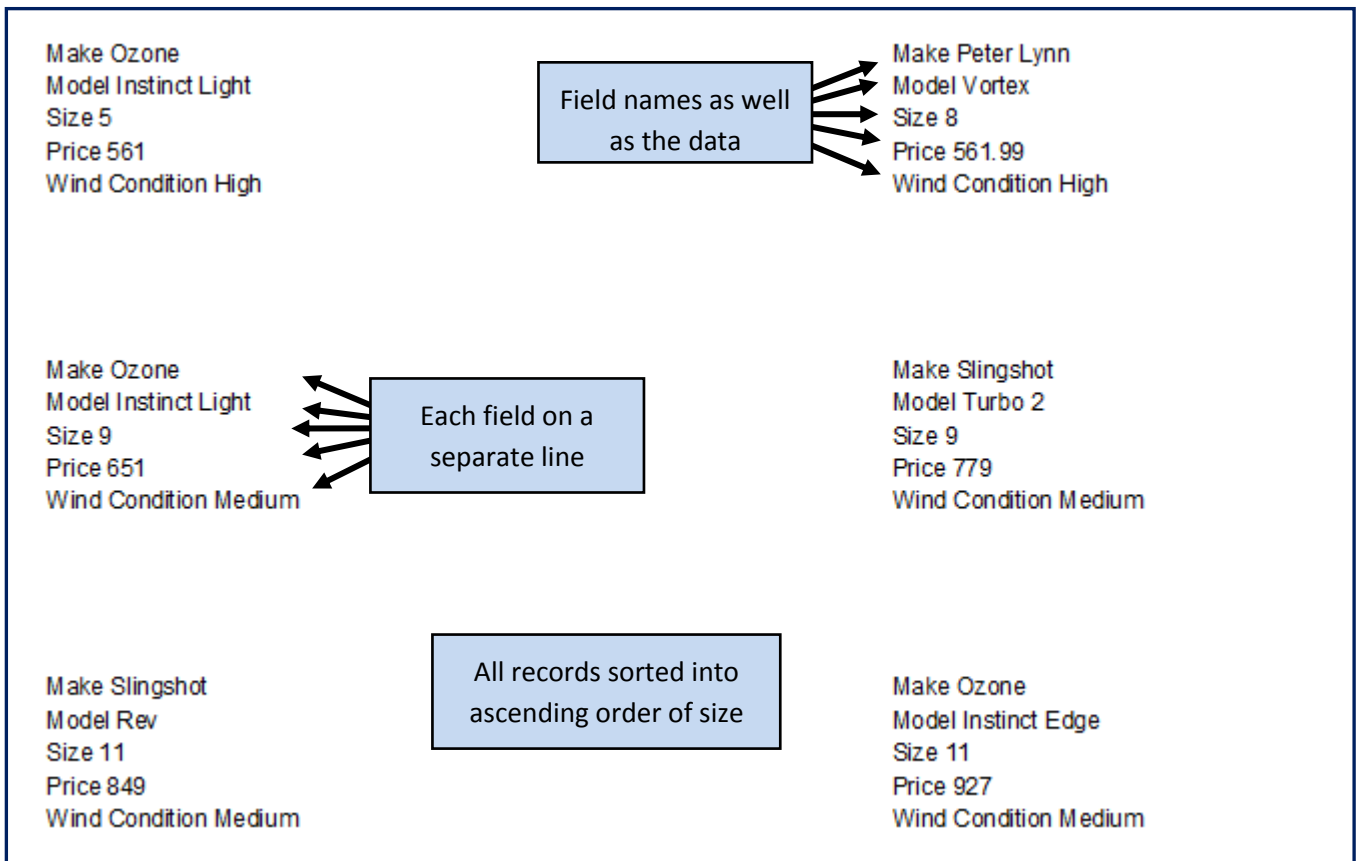


Click **Next**.

2. Choose a suitable name for the label (I suggest Kites Labels).
3. Select the option 'See the labels as they will look printed' and click Finish.



Your labels should look something like this:



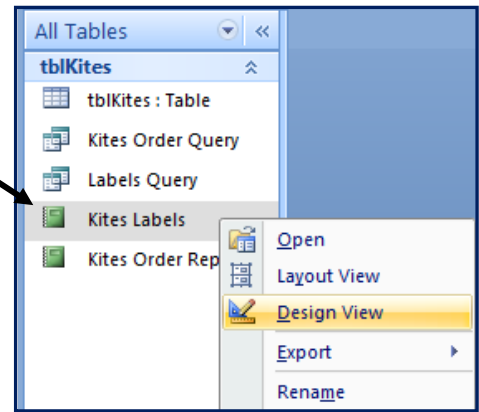
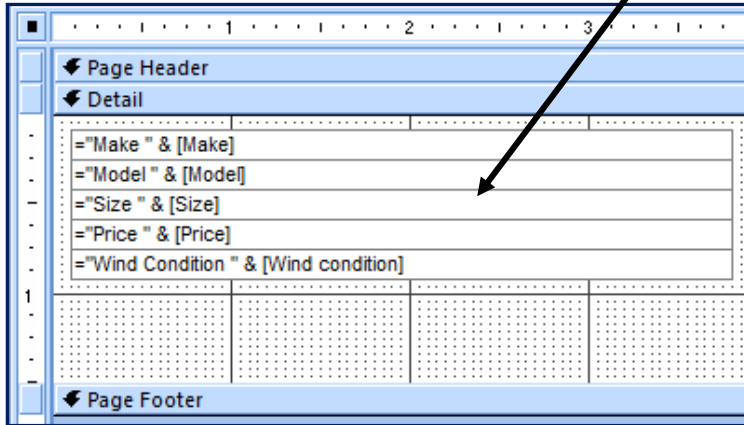
Amending the label's heading and footer – How to do it:

The problem: Produce labels from all the data which:

6. Include the heading 'Special offer for kite surfers' at the top of each label.
7. Have your name, Centre number and Candidate number at the bottom.

1. Right click your **Kites Labels Report** and select **Design View**.

Your label should be switched into **Design View**:



2. You should see 3 sections to the label (Page Header, Detail and Page Footer).

Page Header ➤ For information that you only want to display **ONCE** at the **top** of each page.

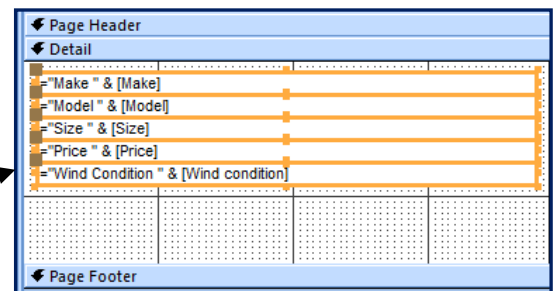
Page Footer ➤ For information that you only want to display **ONCE** at the **bottom** of each page.

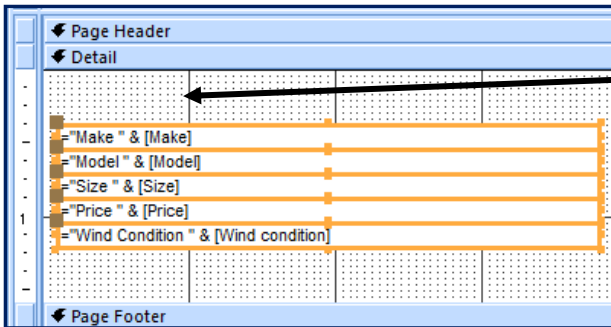
Detail ➤ For information that you want to display **over and over**. For example every piece of information should be displayed one after the other until we have nothing left to show.

Because our heading needs to be displayed at the top of **EACH** label we need to insert a label into the **Detail** section.

3. Before we can insert a heading at the top of each label we need to create some room.

Click and drag around each of the fields to select them.

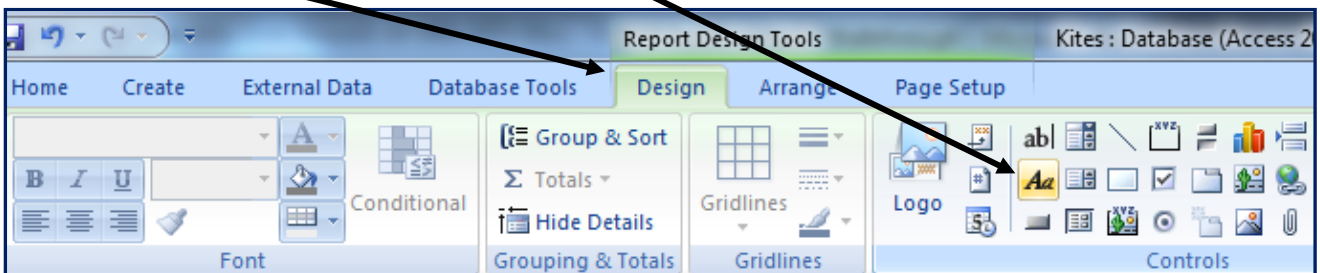




4. Drag the fields down a little bit to create some space at the top of the label.

NOTE: You can make the Detail section bigger by dragging the top of the Page Footer bar downwards.

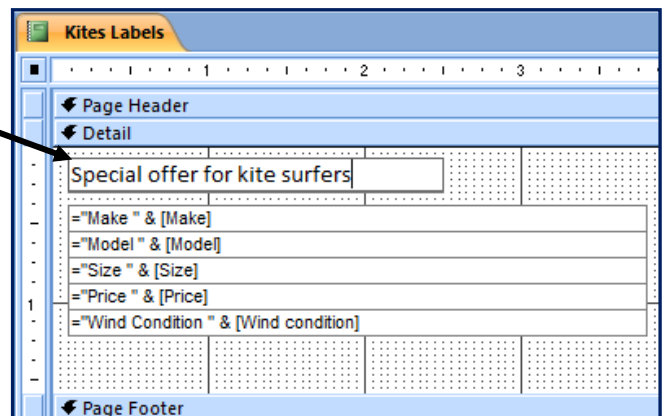
5. Click **Design** and then select the **Label** option.



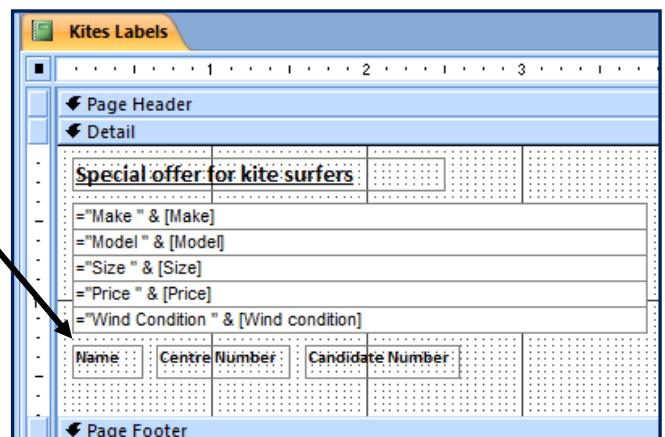
NOTE: Don't confuse the **Label tool** with the **Text Box tool**
ab| = Text Box Aa = Label Tool

6. Draw your label in the **Detail section**, just above the fields.

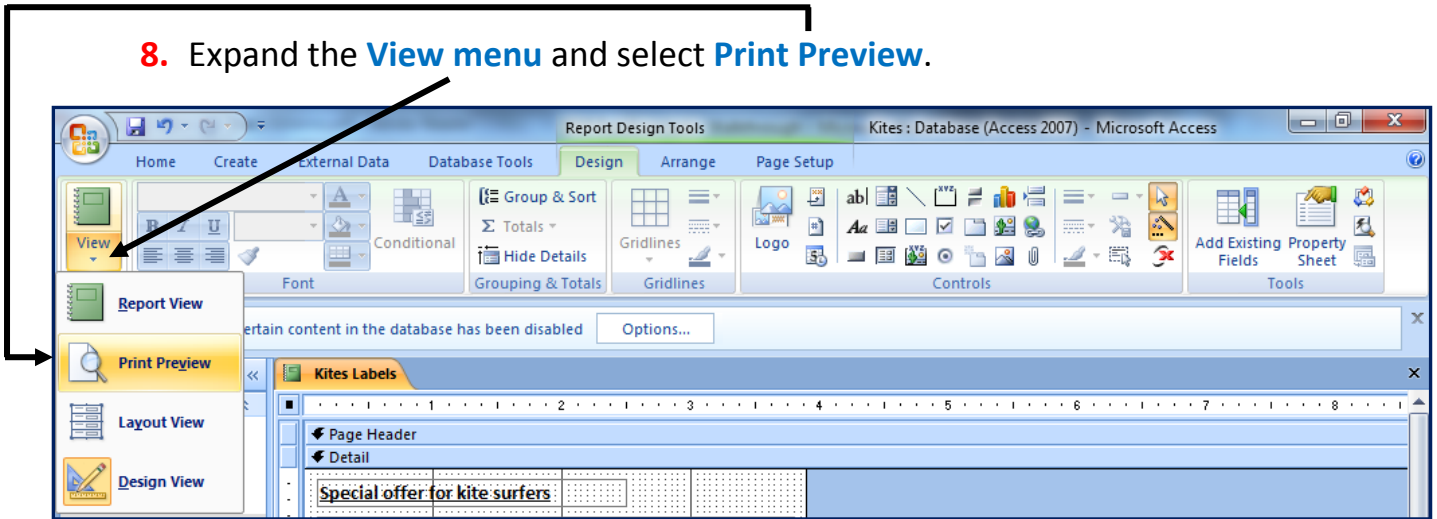
Type your heading into the label (**Special offer for kite surfers**).



7. Repeat this underneath the label with your **Name**, **Centrenumber** and **Candidate number**.



8. Expand the **View** menu and select **Print Preview**.



The final labels should look something like this:



Save and Print the Labels.

Q42 Produce an **extract** from **all the data** which:

1. Selects only:
 - Small kites of **less than size 3**
 - Those suitable for **beginners**
2. Shows **only** the fields **Make, Model, Size** and **Price**.
3. Sorts the kites into **ascending order of price**.

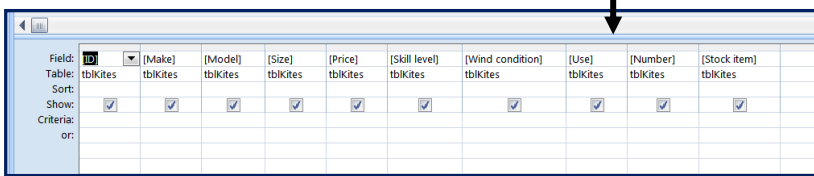
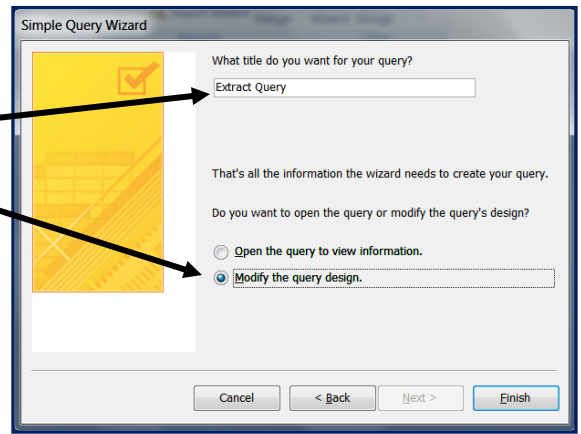
The first thing to note here is that the question **does not require you to produce a report**. An **extract of information** is purely a query.

Creating the query – How to do it:

NOTE: The question clearly requires you to create the extract based on **all the data** so you should ensure that the query is sourcing **tblkites** and **not your Order query**.

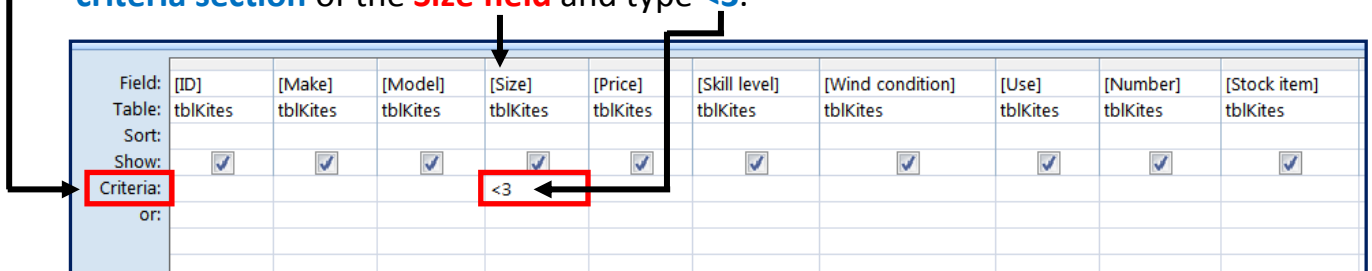
1. Create a query in the usual way making sure that you use the **tblkites table as the source** and not one of your queries.

2. Save the query with the name **'Extract Query'** and then open it in **design view**.



Adding criteria to select small kites and those suitable for beginners.

1. The question stated that kites of **less than size 3** should be queried so find the **criteria section** of the **Size field** and type **<3**.



2. Kites which are **suitable for beginners** should be queried so you should find the **criteria section** of the **Skill Level field** and type **Beginner** (Not Beginners).

Field:	[ID]	[Make]	[Model]	[Size]	[Price]	[Skill level]	[Wind condition]	[Use]	[Number]	[Stock item]
Table:	tblKites	tblKites	tblKites	tblKites	tblKites	tblKites	tblKites	tblKites	tblKites	tblKites
Sort:										
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:				<3		Beginner				
or:										

NOTE: To make sure you are typing the correct words in the query always check the data in the table to see how it is spelt or worded etc.

For example.. If we typed 'Beginners' into our query it would fail because there are no records named this in the Skill Level field. If we checked the table we would see that the records in this field are called 'Beginner'.

Showing only the Make, Model, Size and Price fields.

1. The question stated that only the **Make, Model, Size** and **Price** fields should be displayed in the query so we need to **'hide' the rest**.
2. Look for the **Show:** section of query Design View. You will see **check boxes with ticks in them**.

Field:	[ID]	[Make]
Table:	tblKites	tblKites
Sort:		
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:		

Tick = Show the field when the query is run.
No Tick = Do not show the field when the query is run.

3. To **hide the fields** we do not want to show just **un-tick the boxes** in the **Show:** section. (Make sure you leave ticks in the fields we need to show).

Field:	[ID]	[Make]	[Model]	[Size]	[Price]	[Skill level]	[Wind condition]	[Use]	[Number]	[Stock item]
Table:	tblKites	tblKites	tblKites	tblKites	tblKites	tblKites	tblKites	tblKites	tblKites	tblKites
Sort:										
Show:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Criteria:				<3		"Beginner"				
or:										

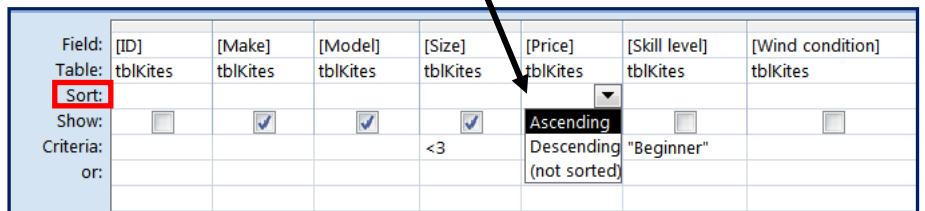
Removing ticks from the fields we do not want to show.

NOTE: Even though we have hidden the Skill Level field, the query criteria will still play its part and affect the results. We just won't display the contents of the Skill Level field.

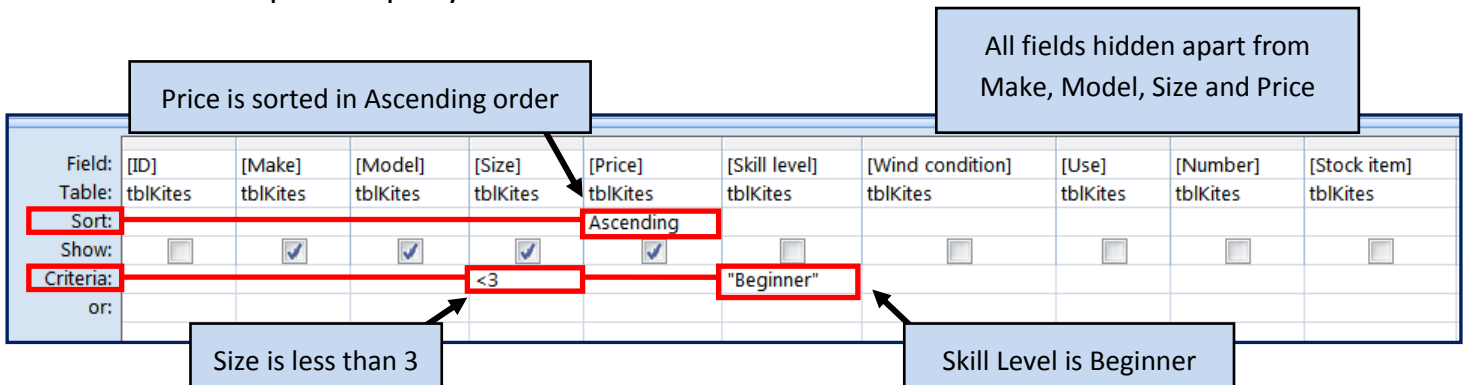
Sorting the query into ascending order of price.

1. The question stated that the kites should be sorted into **ascending order of price**. To do this you need to find the **Sort:** section of the **Price field**.

2. Click in the **Sort:** section of **Price** and use the drop-down box to select the **Ascending** option.



Your completed query should look like this:



Run the query in **Datasheet view**. It should look like this:



Q43 Save this data in a form which can be **imported** into the document that you saved in step 34.

Q44 Import this data into your document as a table after the paragraph which ends: **'Here are some small kites suitable for a beginner, some of which will still be suitable as you progress to intermediate skills'**.

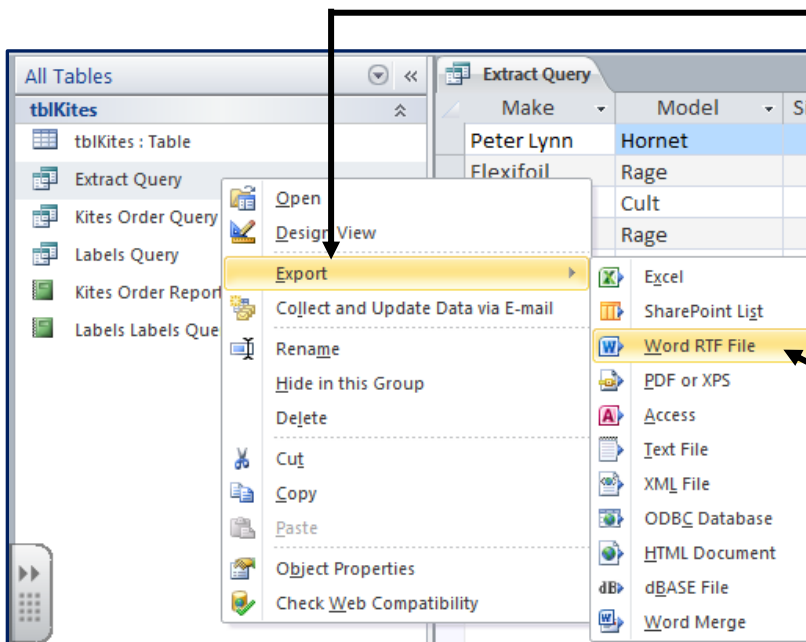
Make sure that all required fields and their labels are fully visible and that there is one blank line above and below the table.

Question 43 is asking you to save the data so that it can be used within a Word document.

Saving data for use in another document is known as **Exporting** data.

Exporting the data – How to do it:

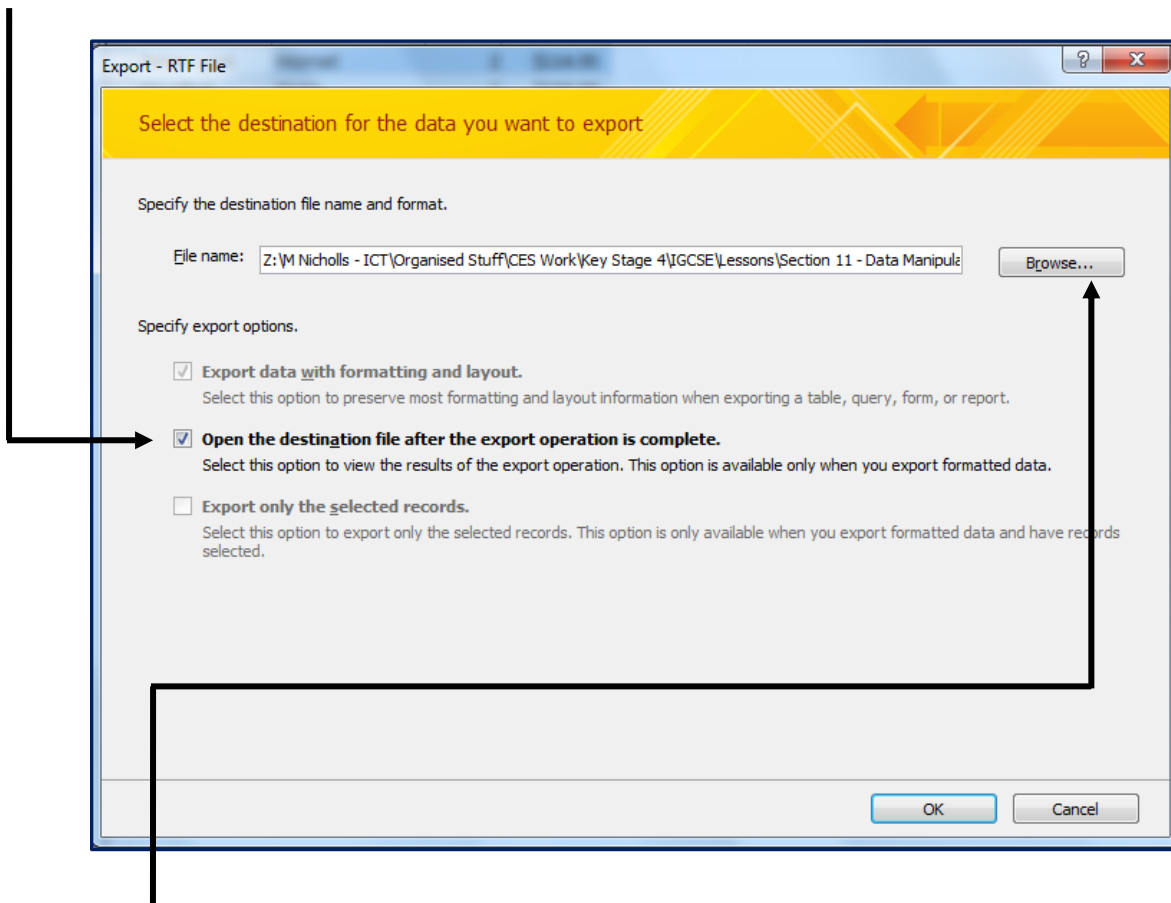
To export the extract of data created in Q42 you must **Right Click** the query.



From the menu choose **Export**.

As the data is going to end up in a Word document, the best format to export the data to is a **Word RTF file**.

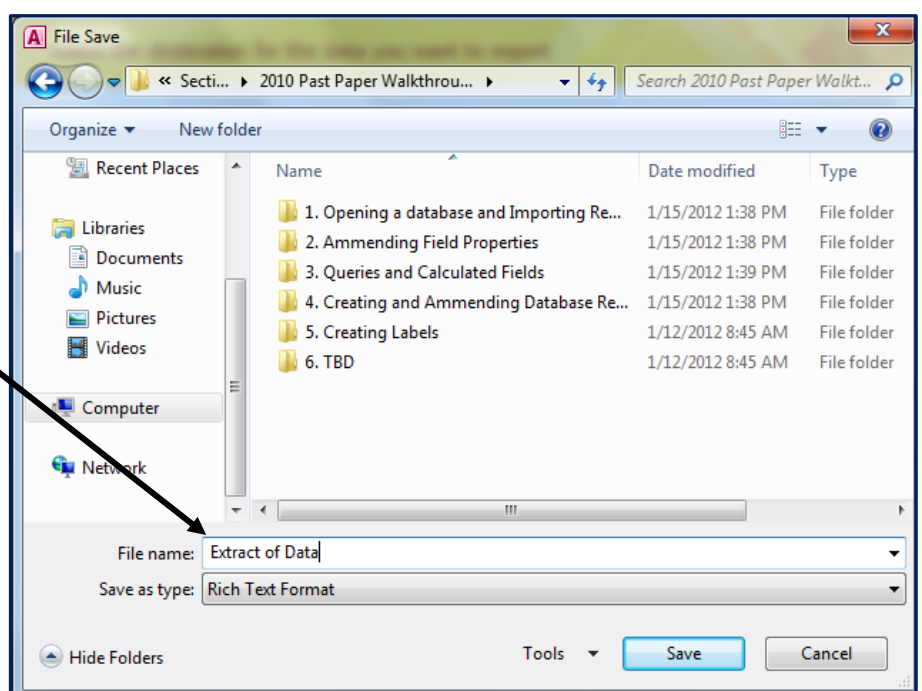
Click the check box which says **'Open the destination file after the export operation is complete'** (This lets you view the file when export is complete).



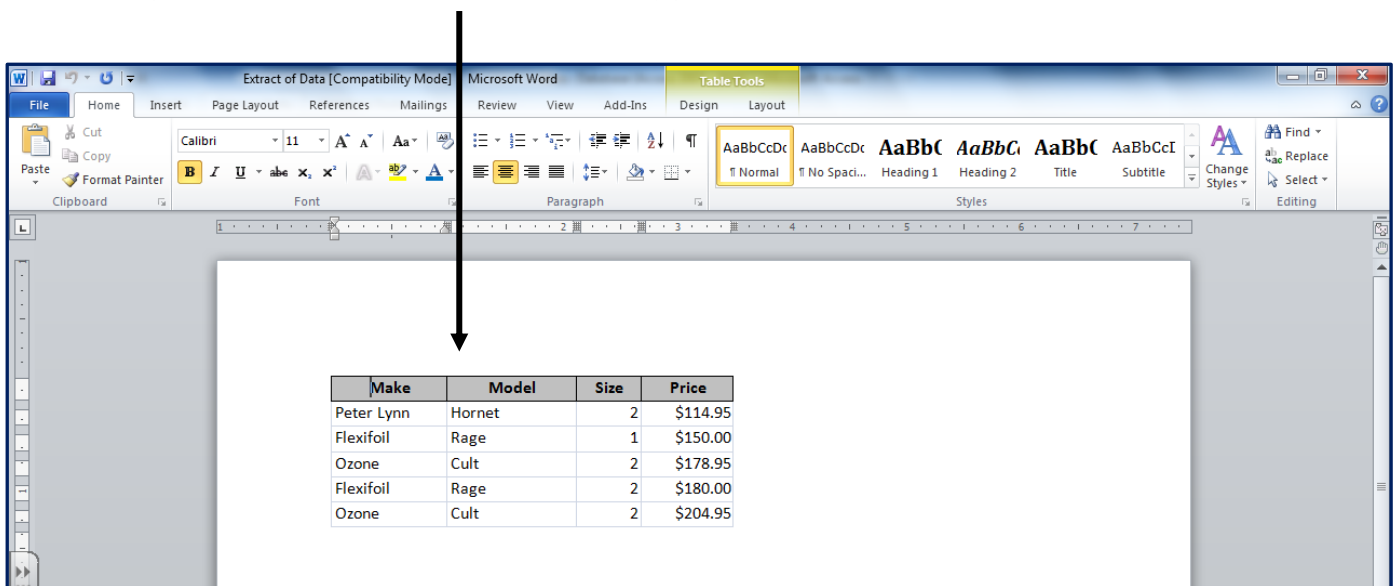
Click **Browse** to select a location to save the exported data and make sure to give it a descriptive name.

Ensure that the file type is set to **Rich Text Format** then click **Save**.

Click **OK**.



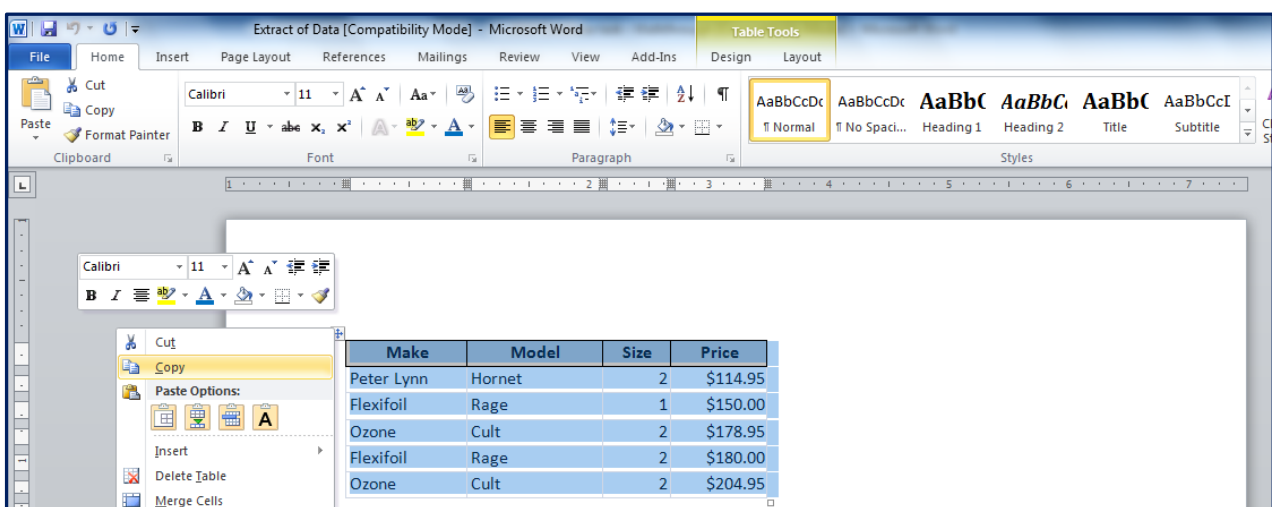
Your exported data (in RTF format) will appear.



Importing the data into the Kites Word document – How to do it:

This task is very easy. All you need to do is **copy and paste** the extracted data from the RTF file into your Kites Word document.

NOTE: Make sure you paste the table into the correct location. Read the instructions in the question carefully.



Extra Info: Summarising Data

Although this exam paper question did not ask you to summarise data, it is something that does appear in exams from time to time.

To practice this I have added an extra question to the 2010 exam paper:

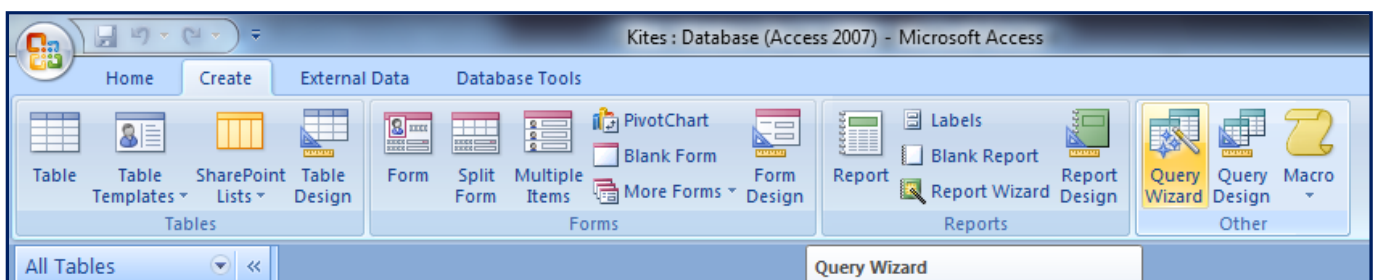
Q45 Produce a new report from **all the data** which:

- Shows a **summary** of only the **Make** and **Price** fields
- Performs a **count** of each **kite make**
- Calculates the **sum** of the **Price** field for each **kite make**
- Sorts the **Make** field into **ascending** order.

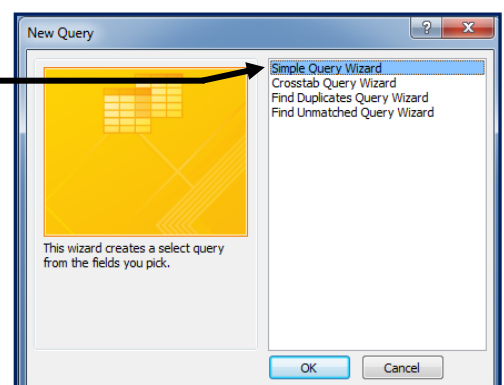
Summarising the data – How to do it:

NOTE: Summaries are a form of query. Like all queries, you should ensure that you source the tblkites data and not one of your other queries.

6. Click **Create** and then **Query Wizard**.

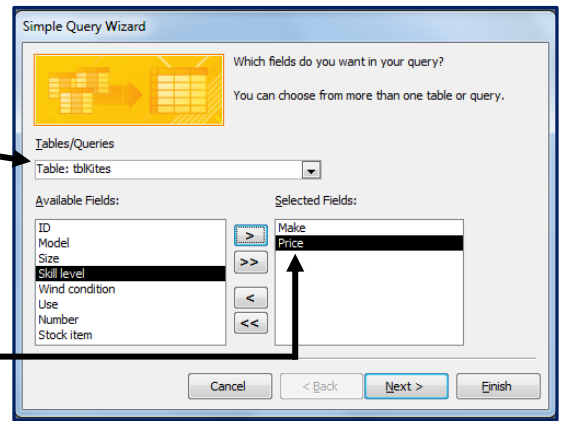


7. Select **Simple Query Wizard** then click **OK**.



8. Make sure that you are sourcing the data from the **kites table**.

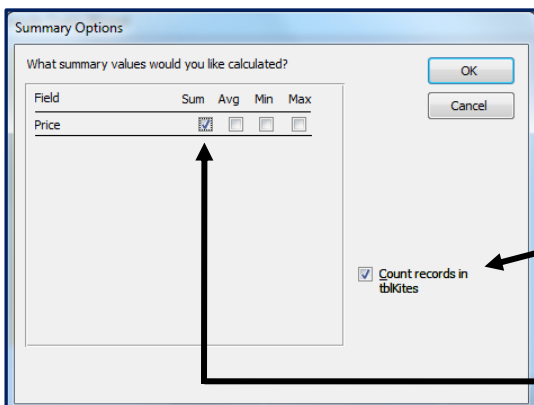
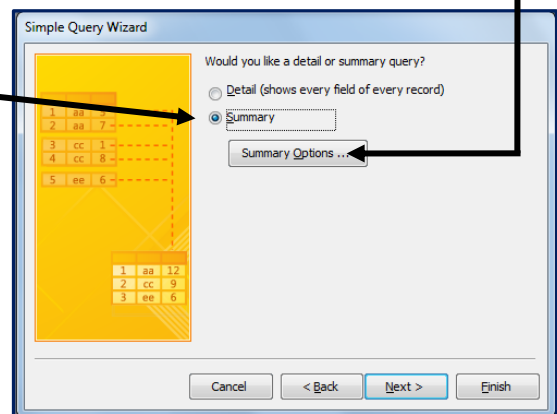
9. The question required the summary to be performed on only the **Make** and **Price** fields so move these into the **Selected Fields:** window.



Click Next.

10. Select **Summary** from the two options and then click **Summary Options**.

NOTE: For **ALL** other normal queries you would be sure to select the **Detail** option.
Summary option is only used where question needs you to summarise data.



6. To count each kite make click the **Count records in tblkites** tick box

7. To calculate the sum of the **Price** field tick the **Sum** tick box.

8. Click Ok then Next

9. Give the Summary Query a name (Summary will do just fine).

10. Click Finish

The Query will then summarise all the different Kite Makes with totals (Sums) for Price.

The Query will also Count how many times each Kite Make appears in the database.

The completed summary query should look like this:

Make	Sum Of Price	Count Of tblKites
Airush	\$10,057.50	12
Best	\$8,570.00	10
Flexifoil	\$13,470.45	24
Flysurfer	\$15,658.96	15
Ozone	\$26,835.45	47
Peter Lynn	\$8,983.35	21
Slingshot	\$13,713.00	17