

**DESIGNING AND PLANNING**

		Page
<b>A</b>	<b>Introduction</b>	
1	• What is your task about?	
2	• What questions are you going to investigate?	
<b>B</b>	<b>Hypotheses</b>	
1	• What are the hypotheses you will be testing?	
2	• Why do you think your hypotheses are true?	
<b>C</b>	<b>Plan of Action - Data Collection</b>	
1	• What data will you need to collect?	
2	• Why will the data be useful?	
3	• How much data will you collect?	
4	• Will you need to take a sample from the population? • If so, how will you do it?	
5	• Will you be using primary or secondary data?	
6	• If you are using primary data, how will <i>you</i> collect it?	
7	• Will you need a questionnaire or data collection sheet?	
8	• Will you use a pilot test for your data collection sheet or questionnaire?	
9	• If you are using secondary data, where will you get the data from?	
10	• How can you make sure that your data is reliable and not biased?	
11	• Will you have any qualitative data?	
12	• Will your quantitative data be discrete or continuous?	
13	• How will you record the data you collect?	
14	• Do you expect to have any problems when you are collecting your data? • If so, what do you plan to do about it?	
<b>D</b>	<b>Plan of Action - Processing and Representing Data</b>	
1	• Will you need to group your data and if so how will you group it?	
2	• What will you do about any incorrect or incomplete data?	
3	• What data tables are you planning to create? • What do you hope they will show?	
4	• What statistical calculations are you planning to do? • Are you planning to do the calculations: - yourself, - using the statistical functions on a calculator, - using a spreadsheet, - using a software package? • What do you hope the results of your calculations will show?	
5	• What statistical diagrams, charts and graphs are you planning to draw? • Are you planning to draw them by hand or using ICT? • What do you hope each diagram, chart and graph will show?	

**COLLECTING, PROCESSING AND REPRESENTING THE DATA**

Page

<b>E Data Collection</b>		
<b>1</b>	<ul style="list-style-type: none"> <li>For your questionnaire or data collection sheet have you included:                             <ul style="list-style-type: none"> <li>the draft version you used in your pilot test?</li> <li>the final version used to gather your data?</li> </ul> </li> </ul>	
<b>2</b>	<ul style="list-style-type: none"> <li>Have you collected all the data you planned to collect?</li> </ul>	
<b>3</b>	<ul style="list-style-type: none"> <li>Did you experience any problems collecting your data?</li> <li>If so, what did you do about it?</li> </ul>	
<b>4</b>	<ul style="list-style-type: none"> <li>Have you included your data:                             <ul style="list-style-type: none"> <li>in its original form</li> <li>in a summary table?</li> </ul> </li> </ul>	
<b>5</b>	<ul style="list-style-type: none"> <li>Have your tables got clear headings?</li> </ul>	
<b>6</b>	<ul style="list-style-type: none"> <li>Have you described what each table shows?</li> <li>Does this evidence support your original hypotheses?</li> </ul>	
<b>F Data Processing</b>		
<b>1</b>	<ul style="list-style-type: none"> <li>Have you carried out all the calculations in your plan? If not, why not?</li> </ul>	
<b>2</b>	<ul style="list-style-type: none"> <li>Have you checked that the results of your calculations are                             <ul style="list-style-type: none"> <li>accurate,</li> <li>reasonable in the context of your investigation,</li> <li>rounded sensibly in the context of your investigation?</li> </ul> </li> </ul>	
<b>3</b>	<ul style="list-style-type: none"> <li>Have you used the correct statistical term with each calculation?</li> </ul>	
<b>4</b>	<ul style="list-style-type: none"> <li>Have you included any other calculations that were not in your original plan? If so, why did you include them and what do they show?</li> </ul>	
<b>5</b>	<ul style="list-style-type: none"> <li>Have you presented a summary of all your results?</li> </ul>	
<b>6</b>	<ul style="list-style-type: none"> <li>Have you described what each result shows?</li> <li>Does the evidence provide more support for your original hypotheses?</li> </ul>	
<b>G Data Representation</b>		
<b>1</b>	<ul style="list-style-type: none"> <li>Have you included all the diagrams, charts and graphs in your plan? If not, why not?</li> </ul>	
<b>2</b>	<ul style="list-style-type: none"> <li>For each diagram, chart and graph, have you:                             <ul style="list-style-type: none"> <li>drawn it neatly and accurately,</li> <li>included a title,</li> <li>labelled all your axes, bars, sectors, etc.</li> <li>provided a key if necessary?</li> </ul> </li> </ul>	
<b>3</b>	<ul style="list-style-type: none"> <li>Have you included any other diagrams, charts or graphs that were not in your original plan? If so, why did you include them and what do they show?</li> </ul>	
<b>4</b>	<ul style="list-style-type: none"> <li>Have you explained what each table, diagram, chart and graph shows?</li> <li>Does this evidence provide more support for your original hypotheses?</li> </ul>	

**INTERPRETING AND DISCUSSING THE DATA**

		Page
<b>H</b>	<b>Overall Summary and Interpretation</b>	
<b>1</b>	<ul style="list-style-type: none"> <li>• Have you written comments linking your data tables, calculation results and statistical diagrams?</li> <li>• Have you related these to the original hypotheses?</li> </ul>	
<b>2</b>	<ul style="list-style-type: none"> <li>• Does the overall evidence support your original hypotheses?</li> </ul>	
<b>3</b>	<ul style="list-style-type: none"> <li>• Was your sample large enough to represent the population fairly?</li> <li>• Was the data that you collected representative of the population from which it was taken?</li> </ul>	
<b>4</b>	<ul style="list-style-type: none"> <li>• As a result of your findings, did you change or add to your original hypotheses at any stage in your investigation?</li> </ul>	
<b>5</b>	<ul style="list-style-type: none"> <li>• If someone else carried out the same investigation, would you expect his or her findings to be similar to yours?</li> </ul>	
<b>6</b>	<ul style="list-style-type: none"> <li>• If you were going to do the investigation again, what things would you do differently?</li> </ul>	
<b>7</b>	<ul style="list-style-type: none"> <li>• How could your investigation be developed further?</li> </ul>	
<b>8</b>	<ul style="list-style-type: none"> <li>• If someone else read your report would they find it easy to understand:               <ul style="list-style-type: none"> <li>- what your investigation was about,</li> <li>- what you did,</li> <li>- what your tables, statistical diagrams and calculations show,</li> <li>- what you found out overall,</li> <li>- any difficulties you had with the investigation,</li> <li>- what could be done to take the investigation further?</li> </ul> </li> </ul>	
<b>9</b>	<ul style="list-style-type: none"> <li>• If someone else read your report would they find any:               <ul style="list-style-type: none"> <li>- irrelevant statistical calculations,</li> <li>- irrelevant statistical diagrams,</li> <li>- inappropriate conclusions?</li> </ul> </li> </ul>	