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| St Joseph’s College GeelongVCE ComputingUnit 1 Outcome 1 Data and graphic solutions**Name:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_~ Student Workbook ~ |

**Acquire, secure and interpret data, and design and develop a graphic solution that communicates the findings of an investigation.**

Add your name to this file and save it as: ***U1O1\_SAT\_Lastname\_Firstname***

***Period 1 – Part 1***

### Topic: Phone apps usage

Many people like to use apps on their phones. You have been asked to investigate the most frequently used phone apps by staff and students at your school.

### The topic of inquiry

1. Describe the topic you are going to investigate and the sample group for your research. (2 marks)

1. What is your main focus question? (1 mark)

My focus question is:

1. What are two other related questions you will gather data about? (2 marks)

Other issues which may be related to this is are:

1. **Method of data collection**
2. Describe the method to be used to collect the data. (2 marks)

### Describe how you will legally and ethically acquire the data from your primary source. (3 marks)

### Provide a copy of the Participation Information Statement and the consent form. (5 marks)

1. Describe two ways you will ensure the privacy of the participants? (2 marks)
2. Where will any original or manipulated data be stored? (2 marks)
3. How will you ensure the security of the data? (2 marks)

**END PART 1**

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***Periods 2-3***

1. Draw up a table showing the questions, the data type (quantitative or qualitative) and how the choice will be made on the form. Use the following table as a guide: (15 marks)

|  |  |  |
| --- | --- | --- |
| *Question* | *Data type* | *How the choice is made in the form* |
| What is your gender?What is your favourite primary colour? | QuantitativeQuantitative | Pull down list - Choose between ‘male’, ‘female’ or ‘intersex’Multiple choice buttons - Choose between 8 primary colours |

**SJC VCE Computing Research Project - Phone App Usage**

|  |  |  |
| --- | --- | --- |
| *Question* | *Data type* | *How the choice is made in the form* |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

**Marking Criteria:**

Suitability of questions – 5

Data type – 5

Description of question response method – 5

1. Create the survey in Google Forms – send to your teacher (10 marks)

**Marking Criteria:**

Consent section – 1

Logical organisation of pages - 4

Clarity of questions and use of validation techniques in questions – 5

**END PART 2**

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***SEND YOUR GOOGLE FORM TO YOUR TEACHER***

***Period 4 – Part 3***

1. **Data Collection**
2. Provide a screen shot of a sample of your data (1 mark)

***Periods 4-6***

### Results – Analyse your data; describe conclusions

1. Use Excel to select and apply functions, formats, conventions, data validation and testing techniques to manipulate your data to help identify any patterns. (20 marks)

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**Marking Criteria:**

Addition of an index column - 1

Use of formulas and functions - 5

Manipulation of data to produce summary tables - 5

Chart production including formats and conventions - 9

1. Copy and paste your summary tables. (1 mark)
2. Copy and paste any charts you developed. (1 mark)
3. Briefly describe your conclusions. (3 marks)

**END PART 3**

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***Upload the excel file to Assessment Tasks***

***Period 7 – Part 4***

1. **Infographic Production**

Select and apply appropriate design tools to represent the functionality and appearance of your inquiry.

1. Draw some annotated sketches of what elements your Infographic should display to help you develop your infographic solution. Hand in to your teacher. (7 marks)

**Marking Criteria:**

Message development – 2

Layout features – 3

Annotations - 2

**END PART 4**

***Hand in your annotated sketches to your teacher***

***Periods 8-9 – Part 5***

1. Develop your final graphic solution – save this as a pdf – ***U1O1\_Infographic\_ Lastname\_Firstname*** (20 marks)

**Marking Criteria:**

Functionality: accuracy of data depiction, clear message, readability – 8

Appearance: alignment, repetition, contrast, space, balance – 10

Referencing: reference of data sources, images and text – 2

1. Paste an image of your final graphic solution below. (1 mark)

**END PART 5**

***Upload this word file to Assessment Tasks***

***Upload a pdf of your Infographic Solution to Assessment Tasks***

**Submission Requirements**

* This file: U1O1\_SAT\_Lastname\_Firstname
* Your survey in Google Forms
* Your Excel file: U1O1\_Analysis\_ Lastname\_Firstname
* Annotated sketches
* A pdf of your final graphic solution: U1O1\_Infographic\_ Lastname\_Firstname

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### Suggested marking scheme

|  |  |  |
| --- | --- | --- |
|  | **Outcome** | **Mark** |
| **Frame an investigation inquiry**1. **The topic of inquiry**
 |  |
|  | 1. Describe the topic you are going to investigate
 | 2 |
|  | 1. What is your main focus question?
 | 1 |
|  | 1. What are two other related questions you will gather data about?
 | 2 |
| **Identify, legally and ethically acquire, and reference data and information from primary sources**1. **Method of data collection**
 |  |
|  | 1. Describe the method to be used to collect the data
 | 2 |
|  | 1. Describe how you will legally and ethically acquire the data from your primary source.
 | 3 |
|  | 1. Provide a copy of the Participation Information Statement and the consent form
 | 5 |
| **Devise and implement controls and techniques to minimise risks to the security and privacy of data and information** |  |
|  | 1. Describe two ways you will ensure the privacy of the participants?
 | 2 |
|  | 1. Where will any original or manipulated data be stored?
 | 2 |
|  | 1. How will you ensure the security of the data
 | 2 |
|  | 1. Draw up a table showing the questions, the data type (quantitative or qualitative) and how the choice will be made on the form
 | 15 |
|  | 1. Create the survey in Google Forms – send to your teacher
 | 10 |
| **Interpret selected data, identifying relationships and patterns**1. **Data Collection**
 | 0 |
|  | 1. Provide a screen shot of a sample of your data
 | 1 |
| 1. **Results – Analyse your data; describe conclusions**
 |  |
|  | 1. Select and apply functions, formats, conventions, data validation and testing techniques to manipulate your data to help identify any patterns. Save this file as: ***U1O1\_Analysis\_Lastname\_Firstname***
 | 20 |
|  | 1. Copy and paste your summary tables
 | 1 |
|  | 1. Copy and paste any charts you developed
 | 1 |
|  | 1. Briefly describe your conclusions.
 | 3 |
| **Select and apply appropriate design tools to represent the functionality and appearance of graphic solutions for particular purposes**1. **Infographic Production**
 |  |
|  | 1. Draw some annotated sketches of what elements your Infographic should display to help you develop your infographic solution
 | 7 |
| **Use software, and select and apply functions, formats, conventions, data validation and testing techniques to efficiently manipulate data and create graphic solutions** |  |
|  | 1. Develop your final graphic solution – save this as a pdf – ***U1O1\_Infographic\_ Lastname\_Firstname***
 | 20 |
|  | 1. Paste an image of your final graphic solution
 | 1 |
| **TOTAL** | 100 |