

NCEA Level One Achievement Standard 1.5.

AS 91011 Version 3: Conduct Geographic Research, with Direction.

Credits: 4.

"GO WITH THE FLOW!"

Student Instructions Sheet

This assessment activity requires you to research and present information investigating traffic patterns around St Margaret's College.

Your findings will be presented in the form of a written Geographic Research Report, where you will be required to:

- 1) *Identify an aim of the research.*
- 2) *Collect and record traffic data on both Papanui Road and Winchester Street to answer two research questions:*
 - *What traffic patterns are there (number of vehicles, type of vehicles, travel direction of vehicles) on the roads surveyed and why do these patterns occur?*
 - *What factors in your survey location have an effect on the flow and movement of traffic?*
- 3) *Present survey results using appropriate geographic methods.*
- 4) *Describe and relate your findings to selected Important Geographic Concepts using appropriate geographic terminology.*
- 5) *Provide conclusion(s).*
- 6) *Evaluate the research process and findings.*

Sections of this investigation will be completed co-operatively, but the final write up and presentation will be completed individually. Use the pages in this booklet as the base for the presentation of your Geographic Research Report. Use the Google Doc platform provided for you on Google Classroom.

You will be required to sign a declaration of the authenticity of your completed assessment work.

You will have approximately 6 periods of class time plus homework.

The due date of this research assessment will be discussed and notified via Google Classroom.

Achievement Criteria

Achievement	Achievement with Merit	Achievement with Excellence
<ul style="list-style-type: none">• Conduct geographic research, with direction.	<ul style="list-style-type: none">• Conduct in-depth geographic research, with direction.	<ul style="list-style-type: none">• Conduct comprehensive geographic research, with direction.

TASK 1:

- a) IDENTIFYING A GEOGRAPHIC RESEARCH AIM.
- b) SITE DESCRIPTION. (MAPS AND PHOTOGRAPHS)

Time allocation: 3 lessons and homework.

Group activity:

- 1a) In your groups, read through this assessment activity and identify what would be a suitable aim for this geographic research.
You may write this in hypothesis form if you wish.
This needs to be written clearly into your completed Geographic Research Report.

Aim of the geographic research:

Field Work Activities: Warning!

DO NOT at any time go on or near the road to collect data.

Stay on the footpath at all times!

Inappropriate or dangerous behaviour will result in you being ineligible to complete the remainder of this assessment activity.



- 1b) In your allocated groups, you are to carry out a fieldwork investigation, completing tasks, which will enable you to create two annotated site descriptions (maps) of the study areas (Winchester Street and Papanui Road) labelling selected features.

Use the photocopied pages provided, to complete your **draft** site maps/sketches.

Include the following data on your draft site map sketches:

- i) Features of the road that affect traffic movement:
(Use at least a 20m zone either side of the main entrance of the school to collect your data).
- *Number of lanes.*
 - *What location(s)/features the road leads to.*
 - *Parking conditions/restrictions.*
 - *Location of side roads.*
 - *Intersections.*
 - *Traffic lights.*
 - *Bus stops.*
 - *Business/commercial ventures on the street frontage.*
- ii) An Orientation/Northpoint to show direction. (Compasses/Apps will be provided).
- iii) A tape measure will be available to use for measurements. This will be needed to create your linear and ratio scale in order to show accurate distance on your completed maps.
- iv) Take photographs if you can, or complete an internet search for photographs of factors that have an impact on traffic flow through your research area.
If you cannot take or source photographs, field sketches will be acceptable.

Each member of the group must present in their completed Geographic Research Report, comprehensive and accurate sketch maps, locating and labelling the features listed above (Task 1b). These draft sketch maps will help you to complete this task.

Make certain that you take comprehensive site notes that can be used to help you complete this activity. You may share this information within your group.

Remember to also take photographs of the factors that have an impact on traffic flows at this time.

1b) Site Description Sketch Maps/Site Notes: Draft.

Location:

Location:

Now, you will need to use your site description drafts to present appropriately annotated maps of the two survey areas.

You will use your site photographs/field sketches to help with your research analysis and make conclusions.

Individual activity:

1c)

Presentation of the Site Description Maps: (Factors influencing traffic flow.)

i) Using your site description data (Task 1b) draw scale maps of your survey areas presenting features of the sites that affect traffic flow.

Include the following (or anything else you think is relevant.)

- *Number of lanes.*
- *What location(s)/features the road leads to.*
- *Parking conditions/restrictions.*
- *Location of side roads.*
- *Intersections.*
- *Traffic lights.*
- *Bus stops.*
- *Business/commercial ventures on the street frontage.*

ii) Make sure your maps are accurately presented using all expected geographic conventions (rules and expectations).

Scan or photograph the completed maps and include these in your Geographic Research Report.

Presentation of the Site Description Photographs: (Factors influencing traffic flow.)

iv) Present appropriately in your Geographic Research Report, your photographic data/field sketches.

Include detailed annotation and geographic conventions.

You may need to scan or photograph these for inclusion in your report as well.

TASK 2:

COLLECTING INFORMATION: *Time allocation: 2 lessons and homework.*

Now you have familiarised yourself with the study areas, you will need to collect data in the field which will allow you to test your research aim(s).

Group activity:

a) *Gathering primary information: Traffic data.*

- You will have two class periods to gather data from both sites on two different days.
- Spend 10 minutes at each site collecting information using the tally sheet provided.
- In your group, devise a way to record the travel direction of each vehicle counted.
- Make certain that all group members have the same and accurate information.
- You should be able to do this during the class periods allocated for this task.
- You may share information via Google Docs.

b) *After the traffic surveying has been completed:*

- You will now need to collate (count up) all of the results from each of your survey questions in order to present them in tables and graphs (Task 3b).

TASK 2:
COLLECTING INFORMATION:

Tally Sheet Day One: Date: _____

Vehicle Type	Papanui Road Time:	Sub Total	Winchester Street Time:	Sub Total	Day One Total
Trucks					
Cars/4WD					
Vans/Ute					
Buses					
Motorbikes					
Bicycles					
Total					
Site Notes:					

TASK 2:
COLLECTING INFORMATION:

Tally Sheet Day Two: Date: _____

Vehicle Type	Papanui Road Time:	Sub Total	Winchester Street Time:	Sub Total	Day One Total
Trucks					
Cars/4WD					
Vans/Ute					
Buses					
Motorbikes					
Bicycles					
Total					
Site Notes:					

TASK 3: PRESENTATION AND DESCRIPTION OF RESEARCH FINDINGS INCORPORATING A GEOGRAPHIC CONCEPT.

Individual activity:

Now that you have presented your spatial-visual data following geographic conventions, you have to describe what you have found.

Task 3a) Describing the spatial-visual data: Maps and photographs.

- i) Write a comprehensive (SEEL structure) description of the research findings (factors influencing traffic flow) illustrated in your two site description **maps**.

Show how these findings are geographic, by incorporating an important geographic concept into your answer. A list of some geographic concepts has been provided by your teacher in this booklet.

Use appropriate geographic terminology.

- ii) Write a comprehensive (SEEL structure) description of the research findings (factors influencing traffic flow) illustrated in your site **photographs** at both locations.

Show how these findings are geographic, by incorporating an important geographic concept into your answer. A list of some geographic concepts has been provided by your teacher in this booklet.

Use appropriate geographic terminology.

- iii) Include these tasks within your completed Geographic Research Report. You may need to scan or take a photograph of these for inclusion.

Task 3b) Presentation, Analysis and Description of the Traffic Survey Results:

Now it is time to present, analyse and describe your traffic survey findings (traffic patterns). You will do so firstly in table form, then present your findings as a graph, then finally analysing the table and graph to describe your results geographically in a SEEL paragraph.

Steps:

- a) Table: Fill in the table and follow geographic conventions.
- b) Graph: Create a graph(s) following geographic conventions.
- c) Analyse: Study and examine in detail your table and graphs in order to discover more about them, and your research findings.
- d) SEEL paragraph description: Describe fully what you have found using a geographic concept and appropriate geographic terminology.

Task 1: Vehicle Volumes by Specific Location:

- i) Complete the **table** below using the data from your traffic survey results.

Transfer this into your completed Geographic Research Report following geographic conventions.

You may modify this table to better suit your research results or aim if you wish.

Table 1: _____

Location/Day:	Total Number of Vehicles	Percentage of Total Vehicle Traffic
Papanui Rd (Day 1)		
Papanui Rd (Day 2)		
Total Papanui Road (Day 1 + Day 2)		
Winchester St (Day 1)		
Winchester St (Day 2)		
Total Winchester Street (Day 1 + Day 2)		
Total Vehicles Both Locations Day 1 + Day 2		100%

- ii) Using geographic conventions, construct an appropriate **graph(s)** (Graph 1) in your Research Report, which illustrates the data in Table 1.
- iii) Underneath your graph, write a comprehensive analysis (**SEEL paragraph**) describing the research findings (traffic patterns) found in Table 1/Graph 1.

Show how these findings are geographic, by incorporating an important geographic concept into your answer. A list of some possible concepts has been provided by your teacher.

Use appropriate geographic terminology in your answer.

Task 2: Vehicle Direction of Travel:

- (i) Complete the **table** below using the data from your traffic survey results.

Transfer this into your completed Geographic Research Report following geographic conventions.

You may modify this table to better suit your research results or aim(s) if you wish.

Table 2: _____

Location	Direction (A) Day 1+2 Total Number	Direction (B) Day 1+2 Total Number	Total Number (A+B)	% Direction (A)	% Direction (B)
Papanui Rd					
Winchester St					
Total Both Locations					

- ii) Using geographic conventions, construct an appropriate **graph(s)** (Graph 2) in your Research Report, which illustrates the data in Table 2.
- iii) Write a comprehensive analysis (**SEEL paragraph**) describing the research findings (traffic patterns) found in Table 2/Graph 2 about total vehicle numbers and direction of travel at each location.

Show how these findings are geographic, by incorporating an important geographic concept into your answer. A list of some possible concepts has been provided by your teacher.

Use appropriate geographic terminology in your answer.

Task 3: Vehicle Type Percentages Day One vs Day Two, by Location.

- i) Complete the **table** below using the data from your traffic survey results.

Calculate each vehicle type as a percentage of the total number of vehicles and add to Table 3 below.

Transfer this into your completed Geographic Research Report.

You may modify this table to better suit your research results or aim if you wish.

Table 3: _____

Papanui Road				
Vehicle Type	Total Number Day 1	Day 1 %	Total Number Day 2	Day 2 %
Trucks				
Cars				
Vans/Utes				
Buses				
Motorbikes				
Bicycles				
Other				
Total:				
Winchester Street				
Vehicle Type	Total Number Day 1	Day 1 %	Total Number Day 2	Day 2 %
Trucks				
Cars				
Vans/Utes				
Buses				
Motorbikes				
Bicycles				
Other				
Total:				

- ii) Using geographic conventions, construct one or two **graphs**, (Graph 3) which illustrate the data in Table 3.

- iii) Underneath your graph, write a comprehensive analysis (**SEEL paragraph**) describing the research findings (traffic patterns) found in Table 3/Graph3.

Show how these findings are geographic, by incorporating an important geographic concept into your answer. A list of some possible concepts has been provided by your teacher.

Use appropriate geographic terminology in your answer.

TASK 4:

MAKING CONCLUSION(S) FROM THE RESEARCH.

Individual activity:

4a)

From the **maps, photographs, tables, graphs**, and analysis (**SEEL paragraphs**) of your geographic research results (factors influencing traffic flow and traffic patterns), write a detailed conclusion(s) that relates to the aim(s) of your research which you devised in Task 1.

Aim(s) of the geographic research (Go back to this for reference):

You **must** use specific geographic data presented in this research to substantiate statements made in your conclusion(s).

Write your answers into your Geographic Research Report under the Heading “Making Conclusions from the Research” or similar.

Use appropriate geographic terminology in your answer.

TASK 5: EVALUATION OF THE RESEARCH PROCESS AND FINDINGS.

Individual activity:

Note:

- The research **process** is the way(s) in which you went about conducting your research investigation. (Methodology.)
- The research **findings** are the results that you found and presented.

Task:

In your completed Research Report, complete the following evaluation questions in detail.

5a) **Research Process Strength:**

- Describe one strength of the research process (methodology) in detail.
- State how the strength you describe has made the research better.
- How does this strength help to give your specific conclusion(s) reliability?
- *Use specific examples from your research findings in your answer and appropriate geographic terminology.*

5b) **Research Process Weakness:**

- Describe one weakness of the research process (methodology) in detail.
- State how the weakness you describe has affected the quality/validity of your research.
- How could this weakness be overcome if you were to repeat this research investigation?
- *Use specific examples from your research findings in your answer and appropriate geographic terminology.*

5c) **Accuracy and Validity of the Research Findings:**

- Comprehensively evaluate the findings of your research.
- To what extent are your research findings valid/accurate?
- Would you rewrite your research aim? If yes, why and what to? If not, why not?
- *Use specific examples from your research findings in your answer and appropriate geographic terminology.*

APPENDIX:

IMPORTANT GEOGRAPHIC CONCEPTS:

PATTERNS:

Phenomena which are inter-related form patterns in space. Such patterns can be identified and interpreted.

PROCESSES:

Some processes encourage concentration, some encourage dispersal.

ACCESSIBILITY:

Location and distance affect accessibility, which is a measure of the ease of movement of people, objects and ideas.

INTERACTION:

Elements of an environment affect each other and this is interaction.

SYSTEMS:

A system is a set of natural and/or cultural phenomena, which are linked together and interact with one another to form a whole.

Note: Your teacher can provide you with a more comprehensive list of IGCs if you require it.

GEOGRAPHIC RESEARCH REPORT CHECKLIST:

Geographic Research Report Requirement:	✓
Geographic Research Aim	
Site Description Sketch Maps	
Annotated Photographs/Field Sketches of Survey Sites	
Data Gathering Tally Sheets	
Tables, Graphs (Research Findings).	
SEEL Analysis of Research Findings and IGCs	
Conclusion(s) from the Research.	
Evaluation of the Research Process and Findings.	
Declaration of Authenticity.	

DECLARATION OF AUTHENTICITY:

Submit this page to your teacher on completion of your assessment activity.

Achievement Standard 1.5 (AS 91011 Version 3).
Conduct Geographic Research With Direction
“GO WITH THE FLOW”.
4 Credits.

Date Due: _____

In undertaking this work the following people have assisted me in preparing for this assessment:

Declaration:

I _____ state that the assessment work contained in this report is all my own.

Turnitin report submitted: Yes: _____ No: _____

Signature of student: _____

ASSESSMENT RECORD: To be completed after grading.

Grade Awarded: (Highlighted).

Achievement Criteria:

Achievement	Achievement with Merit	Achievement with Excellence
<ul style="list-style-type: none">Conduct geographic research, with direction.	<ul style="list-style-type: none">Conduct in-depth geographic research, with direction.	<ul style="list-style-type: none">Conduct comprehensive geographic research, with direction.

Date: _____

I have seen the graded assignment and accept the grade awarded.

Student signature: _____

Teacher signature: _____