YEAR 7 FIELDWORK:

INVESTIGATING AN ENVIRONMENT

Grace Larobina, The Hills Grammar School



The following fieldwork activity was developed to investigate the physical environment of a location near the Hills Grammar School.

The aim of the fieldwork task was to introduce students to fieldwork by investigating the school campus.

http://1.bp.blogspot.com/-HSQ5ap96UPQ/Uah0vRMPXtl/AAAAAAAQv0/JUTC_VXcouQ/s1600/Screenshot_31_05_2013_10_51.png

Fieldwork activities engage students with their real world surroundings and develop practical investigation skills.

Developed for the current syllabus topic **Global environments**, this activity is easily adapted to the new Geography syllabus 7–10 Stage 4 *Landforms and Landscapes* and *Water in the World* as well as *Stage 5 Sustainable Biomes* and *Environmental Change and Management*.

Syllabus links

Fieldwork is an integral and mandatory part of the study of Geography as it facilitates an understanding of geographical processes and geographical inquiry.

Fieldwork involves observing, measuring, collecting and recording information outside the classroom. Fieldwork can be undertaken within the school grounds, around local neighbouring areas or at more distant locations.

Fieldwork enables students to:

- acquire knowledge about environments by observing, mapping, measuring and recording phenomena in the real world in a variety of places, including the school
- explore geographical processes that form and transform environments
- use a range of geographical tools to assist in the interpretation of, and decision-making about, geographical phenomena
- locate, select, organise and communicate geographical information
- explore different perspectives on geographical issues.

Students must undertake and participate in fieldwork in each Stage of learning.

Geography K–10 Syllabus 2015

NAME:_____

AIMS OF THE GEOGRAPHY FIELDWORK REPORT

- 1. Use a variety of *fieldwork methodologies* to collect data about THGS
- 2. Introduce students to new *Geographical concepts* as well as reinforce known concepts.
- 3. Develop *literacy skills* through the preparation of a fieldwork report.
- 4. Develop ICT skills converting statistical data into graphs.
- 5. Promote *active citizenship* and understanding of the processes occurring at our School



Fig. 1 Oblique Arial Photograph THGS, School Archives

FIELDWORK EQUIPMENT

Equipment includes:

- A trundle wheel to measure distance between observation points
- A compass to determine direction and orientate maps.
- A thermometer for temperature
- A clear grid to determine % tree cover / cloud cover
- A handheld GPS to determine latitude, longitude and altitude (elevation).
- A ruler to measure the size of leaf
- A digital camera (phone)

GEOGRAPHY TOOL BOX

- Clipboard, lead pencil, ruler, colour pencils/pens

FIELDWORK DATES

PART ONE: INTRODUCTION – ORIENTATION [5 MARKS] **INSTRUCTIONS** 1. Use a compass to determine NORTH

2. Orientate the map so the top of your map is facing NORTH



PART TWO: MEASURING THE LITHOSPHERE [29 Marks]

A. Comparing the Lithosphere

INSTRUCTIONS

- 1. Use a handheld GPS (Phone App) to complete the following table
- 2. Use a Trundle Wheel to measure distance

	STOP 1: Grass Area in front of MP1	STOP 2: Huts Technology Building	STOP 3: Bridge over Creek						
ALTITUDE	[1Mk]	[1Mk]	[1Mk]						
DISTANCE	NA (Start here)	[1Mk]	[1Mk]						
OBSERVATION	OBSERVATIONS of the lithosphere:								
Include references to: slope, visibility of rocks and pebbles, moisture on rocks/soil.									
Describe TWO ways in which the surroundings have changed between STOP 1 and STOP 3. [4Mks]									

Using the Topographic Map of O'Hara's Creek provided, construct a cross section between points B & C [10 Mks]



Using the cross section, describe TWO features of the topography of THGS. [4Mks]

B. Collect Soil Samples

INSTRUCTIONS

SAMPLE 2:

STOP 3 Bridge over Creek

- 1. Using the small bags provided & digging equipment, collect a soil sample from STOP 1 and STOP 3
- 2. Compare the sample in the box below. Look at colour, grain size and presence of plant matter.

SAMPLE 1: STOP 1 Grass Area in front of MP1

COLOUR		
GRAIN SIZE		

Compare the soil at STOP 1 and STOP 3.

PART THREE: MEASURING THE ATMOSPHERE & HYDROSPHERE

[19 Marks]

INSTRUCTIONS

1. Draw a Climate Graph using the Kenthurst statistics. 6 Mks

CLIMATE STATISTICS KENTHURST NSW

TEMP (C)	27	27	25	22	19	16	15	18	20	23	25	27
PRECIP (mm)	99	115	121	104	82	110	82	64	56	70	78	93
MONTH	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
SEASON	Sum	nmer		Autumn			Winter	~	Spring		Summer	



2. Identify the WETTEST Month	1 Mk
3. Calculate the Temperature Range	2 Mks
(Highest temperature minus the lowest temperature)	
4. Calculate rainfall for AUTUMN	2 Mks
(Add all the precipitation statistics for the summer months)	

5. Go to the BOM website http://www.bom.gov.au/ Find the Synoptic chart for today, paste this in the space provided.

2 Mks

PLACE SELECTED SYNOPTIC CHART HERE

6. Include the providence of this secondary data.

2 Mks

Date Retrieved	
Source	

7. Explain why we are experiencing todays weather by making reference to the synoptic chart you have included. Give TWO reasons.4 Mks

PART FOUR: MEASURING THE BIOSPHERE	[15Marks]
A. Determine the Canopy Cover	
INSTRUCTIONS	
At STOP 3, walk over to the Creek, take the clear grid sheet and hold it directly above your Determine how many of the grid squares are filled by the treetops. There are 25 squares of Multiply that number by 4 to give you a score out of 100. This gives you the % of sky cove tree tops (the canopy of the forest).	r head. on your grid. ered by
1. Calculate the tree cover as a %	2 Mks
B. Sketch and identify plant features	
1. Sketch the leaf and flower of ONE native shrub / wildflower in the space below	2 Mks
2. Annotate your drawing – Measure the size of leaf and flower and add to your diagram.	2 Mks



C. Draw a Vegetation Profile

INSTRUCTIONS

You will draw this profile looking at the plants identified (A-E) in the Maths Amphitheatre.

STEP 1: Estimate the height of the tallest tree _____

2 Mks

STEP 2: In the table below, draw each layer of plants checking to determine the average height of that layer before you draw. 4 Mks



F	PART FIVE: CITIZENSHIP	[12 Marks]
1.	Identify ONE way the School is sustainable 1 Mk	
2.	Take a photo that shows a sustainable strategy and insert in the space provided.	1 Mks
3.	Annotate the photo (write a brief description of THREE features describing how the strated makes our School sustainable)	gy 3 Mks

4. Explain **ONE** way in which strategy you photographed makes our School more sustainable. 4 Mks

5. Suggest **ONE** way that we can further protect our School environment in the future? Justify your answer.

3 Mks



MA	ARKING CRITERIA	Marks
A si	tudent performing at this grade typically:	
•	displays sophisticated skills to select, gather and organise complex geographical information and uses an extensive range of written and graphic forms to communicate it effectively.	65-80
•	exhibits extensive skills to select and proficiently apply geographical tools	05-00
•	demonstrates extensive knowledge and understanding of THGS environment.	
•	displays extensive knowledge of civics and analyses links between civics and informed and active citizenship in relation to geographical issues.	
A s	tudent performing at this grade typically:	
•	displays high level skills to select, gather, organise and communicate complex geographical information in a broad range of written and graphic forms.	49-64
•	exhibits high level skills to select and apply geographical tools.	
•	demonstrates high knowledge and understanding of THGS environment.	
•	displays thorough knowledge of civics and explains links between civics and informed and active citizenship in relation to geographical issues.	
A si	tudent performing at this grade typically:	
•	displays sound skills to select, gather, organise and communicate geographical information using a range of written and graphic forms.	
•	exhibits sound skills to select and apply geographical tools .	33-48
•	demonstrates some knowledge and understanding of THGS environment.	
•	displays broad knowledge of civics and describes links between civics and informed and active citizenship.	
A s	tudent performing at this grade typically:	
•	displays basic skills to select, gather, organise and communicate geographical information using a range of written and graphic forms.	47.00
•	exhibits some skills to select and apply geographical tools	17-32
•	demonstrates knowledge and understanding of THGS environment.	
•	displays some knowledge of civics and identifies links between civics and citizenship.	
A si	tudent performing at this grade typically:	
•	displays very limited skills to select, gather, organise and communicate geographical information using a limited range of written, oral and graphic forms.	
•	exhibits very limited skills to select and apply geographical tools	1–16
•	demonstrates some knowledge and understanding of THGS environment.	
•	identifies some aspects of civics and recognises some links between civics and citizenship.	

Teacher Feedback

Teacher_____