

MANILLA CENTRAL SCHOOL - ASSESSMENT TASK

Year 11 2024
INVESTIGATING SCIENCE
M EAGLES



Task Number: 1
Weight: 40%

Notification Date: 1/5/2024
Due date: Friday 24th May 2024
Hand to Ms Eagles by 3.20pm

OUTCOMES

- INS11-1** develops and evaluates questions and hypotheses for scientific investigation
- INS11-3** conducts investigations to collect valid and reliable primary and secondary data and information
- INS11-5** analyses and evaluates primary and secondary data and information
- INS11-7** communicates scientific understanding using suitable language and terminology for a specific audience or purpose
- INS11-8** identifies that the collection of primary and secondary data initiates scientific investigations
- INS11-9** examines the use of inferences and generalisations in scientific investigations

TASK DESCRIPTION

Task Topic: Availability and drinkability of water
Task Type: Practical investigation and secondary research

INTRODUCTION

One major issue facing the world is the availability of suitable drinking water. There are many factors that affect what makes water palatable. Australia is an arid environment where potable water is a valued commodity. Survival in the environment requires a person to have the knowhow to find water, food and shelter. As part of your coursework, you have been studying water quality and drinkability.

TASK INSTRUCTIONS

TASK 1

Your task is to compare several provided water samples.
For each sample you will be required to test the following:

- pH
- turbidity
- nitrates
- nitrites
- dissolved solids
- ammonia

You must undertake quantitative data analysis of three water samples. Make sure you include repetition and average the results. Data must be presented in a table.

Using your results, assess the suitability of each water sample for drinkability and determine the water sample most suited for drinking. In this assessment you must include an:

- introduction
- results
- discussion of results
- an assessment of the three water samples in terms of drinkability

TASK 2

Your task is to create a 'map' of water in the local region. Your map needs to have:

- scale
- key
- all natural water sources (rivers/creeks, dams, lakes)
- indicator of water being permanent/seasonal

As part of your map, you need to include details of the secondary sources and the research that were used in developing your map. Your map can take many forms and it is your choice how you present the map and research.

Teacher's signature: _____ Ms M Eagles

Head Teacher's signature _____ Ms M Eagles

Deputy Principal's signature: _____ Mrs R Ferguson

MARKING GUIDELINES

TASK 1

Introduction <ul style="list-style-type: none"> • what makes water drinkable/palatable? 	/3
Results <ul style="list-style-type: none"> • results tabulated with appropriate columns/rows, headings, labels, units • repetition of testing • results averaged 	/5
Discussion <ul style="list-style-type: none"> • all results discussed in detail including pH, turbidity, nitrates, nitrites, dissolved solids and ammonia 	/12
Conclusion <ul style="list-style-type: none"> • assessment of quality of all water samples makes a judgement of which water sample is most suitable and includes 3 supporting statements that utilises this analysis 	/5
Total	/25

TASK 2

Map <ul style="list-style-type: none"> • scale • key • water sources evident • visual communication 	/2 /4 /3 /3
Explanation <ul style="list-style-type: none"> • written explanation of map including how your research has helped design your map 	/4
Research <ul style="list-style-type: none"> • references/bibliography for both tasks 	/4
Total	/20

Overall Total		Task Rank		Cumulative Rank	
----------------------	--	------------------	--	------------------------	--

Comment

Teacher signature _____

Date _____