GEORGES RIVER COLLEGE - OATLEY SENIOR HIGH SCHOOL

ASSESSMENT TASK

Subject: Science

Course: HSC Earth & Environmental Science

Task Number: 1   of   4

Marks: 64

Weighting: 25%

Date: 19/02/2018 (Monday week 4) by 3:00pm.

Outcomes to be assessed

H11 justifies the appropriateness of a particular investigation plan
H12 evaluates ways in which accuracy and reliability could be improved
H13 uses terminology and reporting styles appropriately and successfully communicate information and understanding
H14 assesses the validity of conclusions from gathered data and information.

Topic: Open-ended Investigation – Option 9.5: Introduced Species

Your task is in two parts:

PART A: Collect, identify and account for the presence of weeds in the local area. The collection will be presented as a herbarium (pressed samples in a book).

PART B: Carry out a first-hand investigation by visiting a local environment, to describe ONE abiotic component of the environment that is affected by a named weed species.

Each part has the same value.

Dot Points:

- *identify data sources, choose resources, plan and perform a first-hand investigation by visiting a local environment and identifying, classifying and accounting for the presence of non-indigenous flora and fauna*
- *perform a first-hand investigation by visiting a local environment, to identify and distinguish between biotic and abiotic components of the environment that may have been affected by introduced species*

NB: In the event of a missed or late task, assessment rules apply.

Criteria:
Marks will be awarded for :
- **summarising, collating and acknowledging information from a range of sources**
- **planning and performing a first hand investigation**
- **gathering, presenting and analysing data**
- **evaluating accuracy and reliability of the investigation**
- **using appropriate scientific terminology and reporting styles to communication information**

Part A Weed Collection

Marking Criteria	Level of Achievement			
	ELEMENTARY	**SATISFACTORY**	**HIGH**	**EXCELLENT**
Evidence of research	Presents some evidence	Present incomplete evidence of appropriate research	Present significant evidence of appropriate research	
Mark	1	2	3	
Samples of different weeds	Provides few samples	Provides some (10) samples	Provides a range of 15 weeds	Presents a range of 20+ weeds
Mark	1	2	3	4 - 5
Sample presentation	Inappropriately preserved specimens	Poorly preserved specimens	Some appropriately preserved specimens	All specimens appropriately preserved
Mark		1	2	3
Describe samples and observations	Attempts to describe some specimens	Describes specimens superficially OR describes some specimens accurately	Describes most specimens accurately but ideas not communicated correctly	Describes specimens accurately and concisely.
Mark	1	2	3	4
Plant identification	Identifies few weeds (<5) with common name and scientific name	Identifies some weeds (10) with common name and scientific name	Identifies many weeds (15) with common name and scientific name	Identifies all weeds (20) with common name and scientific name
Mark	1	2	3 - 4	5 - 6
Accounts for presence of weed local environment	Outlines reasons for the presence of some weeds in local environment	Outlines reasons for the presence of 10 weeds in local environment	Outlines reasons for the presence of 15 weeds in local environment	Outlines reasons for the presence of 20 weeds in local environment
Mark	1	2 - 3	4	5 - 6
Bibliography	References few suitable sources, not correctly formatted.	References a range of suitable sources, not correctly formatted OR an inadequate range of sources correctly formatted.	References a range of suitable sources, correctly formatted	
Mark	1	2	3	
Carries out risk assessment and identifies safe practices	Prepares an incomplete or poorly formatted risk assessment	Prepares a complete & poorly formatted risk assessment		
Mark	1	2		
			Part A total	**/32**

Part B Abiotic Impact of a weed species PLAN

Marking Criteria	Level of Achievement			
	ELEMENTARY	**SATISFACTORY**	**HIGH**	**EXCELLENT**
Hypothesis and aim	Correct hypothesis OR aim	Correct hypothesis and aim		
Mark	1	2		
Dependent and independent variables.	Identifies dependent or independent variables correctly	Identifies dependent and independent variables correctly		
Mark	1	2		
Controlled variables	Identifies some variables to be kept constant	Identifies all variables to be kept constant		
Mark	1	2		
Control	No control	Includes a suitable control		
Mark	0	1		
Procedure	Inappropriate or inadequate method	Outlines incomplete method with data collection strategies	Describes a method with questionable validity and/or reliability	Describes a logical procedure for valid and reliable data to be collected.
Mark	0	1	2	3 - 4
Evidence of planning	Identifies rejected strategies	Outlines strategies considered in planning and outlines why they were rejected.	Explains strategies considered in planning and explains why they were rejected.	
Mark	0	1	2	
			Part B Plan Total	**/13**

Part B Abiotic Impact of a weed species REPORT

Marking Criteria	Level of Achievement			
	ELEMENTARY	**SATISFACTORY**	**HIGH**	**EXCELLENT**
Evidence of investigation	Brief, superficial or inappropriate evidence of carrying out investigation	Some evidence (photographs, log book entries) but unconvincing and incomplete	Some convincing documentation (photographs, log book, data) of appropriate data collection in the investigation	Excellent documentation (photographs, log book, data) of all data collection in multiple samples
Mark	0	1 - 2	3 - 4	5
Experimental results	Presents non-scientific results that are superficial or subjective.	Presents some data in appropriate formats, but incomplete	Presents all measurements, observations in clearly recorded suitable format with errors.	Presents all measurements, observations in clearly recorded suitable format including multiple samples.
Mark	1	2	3	4
Report presentation	Uses inappropriate text types for report and inappropriate units for quantities	Uses correct text types for report and appropriate units for quantities		
Mark	0	1		
Analysing information - trends	Incorrect description of trends	Identifies some patterns in the data	Outlines relationships and patterns in the data as well as contradictions.	
Mark	0	1	2	
Analysing information - hypothesis	Inappropriate conclusion drawn	States that data supports or refutes hypothesis	Explains why data shows patterns seen in the results	
Mark	0	1	2	
Discussion of validity, reliability and accuracy	Addresses validity or accuracy or reliability but uses terms not fully understood.	Demonstrates understanding of accuracy, reliability and validity but incomplete assessment in 2 areas.	Demonstrates understanding of accuracy, reliability and validity but incomplete assessment in one area.	Assesses accuracy, validity and reliability of first hand data correctly
Mark	1	2	3 - 4	5
			Part B report total	**/19**
			Part B total	**/32**
			Task total	**/64**