



## Year 10 Science

# Task 1: Student Research Project (SRP)

**Due Date:** Tuesday 24th March 2026 at 3:00pm, Week 9

**Task Distributed:** 18<sup>th</sup> February 2026

**Unit:** Biology, Chemistry and Physics

**Task Type:** Student Research Project    **Task Weighting:** 20%

**Outcomes:** SC5-4WS, SC5-5WS, SC5-6WS, SC5-7WS, SC5-8WS and SC5-9WS

### Task Description

Begin your assignment with the following steps.

1. Think of a question that can be answered by doing experiments. Choose a question you are interested in.
2. Complete the STUDENT RESEARCH PROJECT PROPOSAL PLAN attached at the end of this document. The proposal is worth 4 marks and should outline your plan for this project.
3. Make sure that you and your carer sign the parent/guardian acknowledgement at the bottom of the sheet.
4. Research existing knowledge related to your chosen topic of investigation. Knowing as much as you can about the concept will help you understand your experimental process better.
5. Write a few paragraphs to summarise what is currently known about the topic or question you are attempting to answer.
6. Once you have gathered your information you must perform an experiment to test your idea using the scientific method to complete your report. Follow the "Report Scaffold" closely to ensure all necessary parts are included and use the supplied marking criteria to see what needs to be done in each part to score well during the marking process.
7. You will need to correctly reference any sources you use, at the end of your report.
8. You will need to refer to the **Google Classrooms page** to find a scaffold of a scientific report, how to write a logbook, how to write a bibliography correctly and a copy of your proposal plan.

- **Please note: No experiments on growing bacteria, mould or any other pathogen.**

### NESA Glossary of Key Words

Understand the verb associated with the task. These verbs will provide an understanding of the detail needed to successfully answer the question.

- DISCUSS:** Identify issues and provide points for and/or against
- EXPLAIN:** Relate cause and effect; make the relationships between things evident; provide why and/or how.
- INVESTIGATE:** Plan, inquire into and draw conclusions about

## Details of Submission

You must submit **BOTH** your **logbook** (Diary Entry Booklet) as well as your **FINAL SCIENTIFIC REPORT**.

Your final report should be an **A4 document**, approximately **4 to 6 pages and in size 12 font** (including *tables*, *graphs* and *diagrams*).

You need to submit your final scientific report and logbook in the **GOOGLE CLASSROOM ASSIGNMENT SUBMISSION BOX** by the due date. It will be marked and returned on **GOOGLE CLASSROOM**.

## Teacher Feedback and Student Self-Reflection

- The task will typically be returned to students within 4 weeks of the due date.
- At this time feedback including information on how to improve will be provided through mechanisms such as marking criteria, and/or written comments.
- Students can clarify or seek further feedback by the speaker with their teacher or the assessment marker.
- You will also receive feedback on your literacy performance based on the criteria in the school's literacy marking rubric. The marks achieved for literacy will account for between 10% – 20% of the maximum task value.

Upon return of the task, students will also be expected to complete a self-reflection.

Students will be required to complete a self-reflection worksheet at the time students receive their assessment mark and teacher feedback. Self-reflection is an important part of the learning process as it provides an opportunity to reflect on the strength of our performance, as well as areas that have been identified to strengthen in future tasks.

## How does this link to my learning?

Learning and integrating the basic science process skills together and gradually developing abilities to design fair tests is increasingly emphasised in successive grade levels and is an expectation of students in senior year.

## Assessment Procedures

All students should be fully aware of the School Assessment Procedures for their year group. These were provided at the beginning of the school year and are available off the school website under the Learning Tab for each year group.

## MARKING CRITERIA:

OUTCOME	INDICATOR	EXPERIENCING DIFFICULTY	DEVELOPING	COMPETENT	OUTSTANDING	MARK
<b>SC5-4WS</b> develops questions or hypotheses to be investigated scientifically <b>SC5-5WS</b> produces a plan to investigate identified questions, hypotheses or problems, individually and collaboratively	<i>Complexity of investigation</i>	Investigation is very basic and requires limited time and effort to complete	Investigation is simple but investigates a core question	Investigation is appropriate for students' level	Investigation is complex and creative, displaying real thought in planning	
		1	2	3	4	
	<i>Research</i>	No evidence of research on project topic	Very brief or simplistic account of researched material	Satisfactory depth of research presented.	>2 paragraphs dedicated to research findings with multiple points	
		0	1	2	3	
	<i>Aim</i>	The stated purpose of the investigation is irrelevant.	The purpose of the investigation is identified but is stated in a somewhat unclear manner.	The purpose of the investigation is clearly identified and stated.		
		0	1	2		
	<i>Hypothesis</i>	Fails to propose hypothesis	Proposes a hypothesis that is not valid	Proposes a valid hypothesis		
		0	1	2		
	<i>Independent variable</i>	Fails to identify independent variable	Student clearly identifies independent variable			
		0	1			
	<i>Dependent variable</i>	Fails to identify dependent variable	Student clearly identifies dependent variable			
		0	1			
	<i>Equipment</i>	No equipment list	Equipment list incomplete	Imprecise list of appropriate materials.	Complete, detailed list of appropriate materials	
		0	1	2	3	
	<i>Describes a logical procedure</i>	Procedures do not accurately list the steps of the experiment	Procedures are listed but are not in a logical order or are difficult to follow.	Procedure is appropriate and is listed in logical order but lacking full detail	Procedure is detailed and is listed in clear, logical, and coherent steps.	
	0	1	2	3		
<i>Validity</i>	Other factors not kept constant	Some factors kept constant during experiment	All effects of other factors minimised			
	0	1	2			
<i>Control group</i>	No control group used	Control group identified or control not appropriate (comparative testing)				
	0	1				
<b>SC5-6WS</b> undertake first-hand investigations independently with safety & competence	<i>Identifies and controls safety risks</i>	Safety concerns not addressed.	Includes only critical safety concerns or fails to list management strategies	Addresses most safety concerns and includes plans to minimise safety risks	Comprehensive assessment that includes all predictable risks and management strategies	
		0	1	2	3	

SC5-6WS gathers first-hand data accurately	<i>Reliability</i>	Data not collected	Data was collected once. (i.e. single trial only)	Data was collected twice.	Data was collected more than twice	
		0	1	2	3	
	<i>Accuracy</i>	<i>Not addressed</i>	<i>Includes an attempt to improve accuracy</i>	<i>Includes and explains an attempt to improve accuracy</i>		
		0	1	2		
SC5-7WS processes, analyses and evaluates data from first-hand investigations and secondary sources to develop evidence-based arguments and conclusions	<i>Discussion</i>	No discussion	Discussion is simplistic	Discussion reflects on experiment and decisions that were made.		
		0	1	2		
	<i>Conclusion</i>	No discussion	A conclusion has been suggested which has not been based on the results.	A conclusion has been suggested based on the results.	A conclusion has been suggested based on the aim and results.	
		0	1	2	3	
	<i>Justifies inferences (linking data to theory in discussion)</i>	Inferences are not justified by the information gathered.	Justifies inferences through available information but inferences are very weak.	Supports and justifies inferences through specific data.		
	0	1	2			
SC5-9WS presents science ideas and evidence for a particular purpose and to a specific audience, using appropriate scientific language, conventions and representations	<i>Images/Diagrams</i>	Report uses no images or diagrams	Report uses inappropriate images or diagrams	Report uses relevant images or diagrams	Report uses many relevant images and diagrams	
		0	1	2	3	
	<i>Graph</i>	No graph	Unsuitable graph used to display results	Graph with minor errors or omissions used	Well formatted and correctly used graph included	
	0	1	2	3		
	<i>References</i>	No references included	Incorrectly formatted references used	Correctly formatted references used		
		0	1	2		
	<i>Logbook</i>	No Logbook	Partially completed	All questions Completed		
	0	2	4			
	<i>Proposal</i>	No Proposal	Partially completed proposal	Complete and signed proposal on due date (8/3)		
		0	2	4		
<b>Literacy</b> (refer to last page)						/5
	<i>Punctuality</i>	Assignment was handed in over 10 days late.	Assignment was not handed in on time.	Assignment was handed in on time.		
		<i>Zero marks</i>	Minus 10% per day late	<i>Full marks</i>		/58

**TEACHER COMMENTS:**



**SAFETY ASSESSMENT**

WHAT SAFETY RISKS ARE THERE AND HOW WILL YOU MINIMIZE THEM?

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**VARIABLES**

INDEPENDENT VARIABLE (THE ONE FACTOR YOU DELIBERATELY ALTER IN YOUR EXPERIMENT)

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DEPENDENT VARIABLE (THE ONE THING YOU TAKE MEASUREMENTS OF TO TEST FOR EFFECT)

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WHAT OTHER VARIABLES DO YOU NEED TO CONTROL? (THOSE THINGS KEPT CONSTANT IN ALL TRIAL GROUPS)

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**CONTROL GROUP**

DESCRIBE WHICH SET OF EQUIPMENT YOU INTEND TO COMPARE ALL OTHER RESULTS AGAINST WHEN DECIDING IF YOUR INDEPENDENT VARIABLE HAS MADE A DIFFERENCE TO COLLECTED RESULTS.

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**EXPERIMENT**

LIST THE EQUIPMENT THAT WILL USE IN YOUR EXPERIMENT.

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**PARENT/GUARDIAN ACKNOWLEDGEMENT**

I AM AWARE THAT THE Yr10 STUDENT RESEARCH PROJECT IS A MAJOR COMPONENT OF THE ASSESSMENT.

THE PROPOSAL IS DUE ON ..... AND THE FINAL PROJECT IS ON .....

CARER'S SIGNATURE.....

STUDENTS SIGNATURE .....

PROPOSAL APPROVED

TEACHERS' SIGNATURE.....

## GTHS Literacy Criteria

Literacy Outcomes	Elementary achievement You have:	Limited achievement You have:	Satisfactory achievement You have:	High achievement You have:	Outstanding achievement You have:
<b>Vocabulary</b> <i>Uses technical vocabulary to explain concepts and/or range of precise and appropriate words for effect</i>	Very limited response. Few content words used.	Only simple words are used.	Some precise and technical words are used.	Sustained use of precise and technical words.	Sustained, consistent and fluent use of precise and technical words.
	0	0.25	0.5	0.75	1
<b>Punctuation</b> <i>Use of correct and appropriate sentence and other punctuation for effect, and to aid in reading of the text</i>	No evidence of correct sentence punctuation.	Sentence punctuation is correctly used in at least one place - <i>one sentence is punctuated correctly.</i>	Some correct sentence level punctuation (at least 50%). May attempt other punctuation where it is required.	Mostly correct sentence level punctuation (80%) and at least two correct examples of other punctuation.	Writing contains accurate use of all applicable punctuation.
	0	0.25	0.5	0.75	1
<b>Sentences &amp; Cohesion</b> <i>The intentional construction of a variety of sentences to match purpose and audience, and the control of multiple sentence threads across the whole text.</i>	No clear evidence of sentences: a list of words OR text fragments.	At least one sentence is used correctly. Some meaning can be construed from the text.	Some correct formation of sentences. Mainly uses simple and compound sentences, but may attempt more complex structures.	Most sentences are correct. Range of sentence types and connectives are evident, but with varied effectiveness.	All sentences are correct, effective and controlled, and include a range of sentence types and connectives (complex sentences and other sophisticated structures)
	0	0.25	0.5	0.75	1
<b>Paragraphs</b> <i>Paragraphs are used to effectively structure information and partition events and ideas</i>	No correct use of paragraphing; may be a block of text or random breaks.	Ideas are separated; paragraphs may contain some unrelated ideas.	At least ONE paragraph is well structured and develops an idea	Writing is organised into paragraphs that assist the reader to digest chunks of the text, but may not be linked or executed effectively.	All components of the paragraphs are evident and paragraphing is consistent and well-developed across the whole text.
	0	0.25	0.5	0.75	1
<b>Text Structure</b> <i>Uses features of the appropriate text type</i>	No evidence of the structural features of the appropriate text type. <i>No attempt to write in the appropriate text type and/or response is off task.</i>	Minimal evidence of the structural features - <i>1 component evident</i> - of the appropriate text type.	Some evidence of the structural features - <i>2 components evident</i> - of the appropriate text type.	Substantial evidence of the structural features - <i>all components evident but there may be some lapses</i> - of the appropriate text type.	Coherent and controlled use of <b>all</b> the appropriate structural features of the text type.
	0	0.25	0.5	0.75	1
	Level of response is well below syllabus expectation	Level of response is below syllabus expectation	Level of response is equivalent to syllabus expectation	Level of response is above syllabus expectation	Level of response is well above syllabus expectation