Stage 2 Scientific Studies – Assessment Type 2 Collaborative Inquiry (20%)

Introduction and Purpose of Task:

Your task is to collaborate with others to address an investigable question or to propose a solution to a problem, need or opportunity related to your program for which the outcome is uncertain. Your group will deconstruct the question or problem and design a scientific investigation to test a hypothesis or prototype.

To deconstruct your question or problem, you may need to consider various aspects, including but not limited to:

* what effects there are,
* how to measure the dependent variable,
* equipment that could be used and any other variables.

After the experiment has been completed, you will need to analyse your data, evaluate the procedures and justify conclusions based on the data obtained. You will also need to consider the limitations of the experiment and consider ways of improving the outcome of your experiment.

Evidence for assessment is in the form of two individual submissions:

* Personal journal
* Evaluation (recorded presentation)

# Part 1: Collaborative Inquiry Design (Personal Journal)

You are to maintain, then submit a personal journal where you record work and critical thinking individually. The personal journal will demonstrate:

1. initial thinking and ideas as you deconstruct the problem – a hypothesis or design brief
2. evidence of your contribution to the project and supporting documentation on the application of the group’s collaborative skills (this can include pictures and linked video/audio evidence by QR code)
3. representation(s) of the data collected by the group
4. analysis and interpretation of data
5. connections between results and relevant scientific concepts
6. an evaluation of the procedures and their effect on data
7. a conclusion with justification and the consideration of possible limitations

The personal journal may include, but is not limited to:

* + Deconstruct template
  + Design Annotated research template/ideas
  + Methods trialled and outcomes
  + Ideas or questions investigated or posed
  + reflection on progress/journal entries
  + pictorial record of experiments
  + analysis of data
  + future planning, and
  + peer review (rate-your-mates)

The personal journal is limited to **12 A4 pages,** single-sided, with a minimum font size of 10. Students are encouraged to submit their personal journal in an electronic format.

# Part B: Collaborative Inquiry Evaluation (Recorded presentation)

Students individually evaluate the effectiveness of the group’s collaborative skills, in the form of a recorded presentation. This should include:

1. a statement about the inquiry
2. an evaluation of the effectiveness of collaboration and its impact on results/outcomes

## Guidelines

*The following guidelines may be useful in the preparation of the student’s recorded presentation. Please note that these are guidelines only. Students are not required to address every dot point and may include other relevant aspects.*

## A statement about the inquiry

This includes:

* + the title
  + the problem, need or opportunity that your group was addressing (maximum of **1 minute**).

## Evaluation of effectiveness of collaboration and its impact on results/outcomes (maximum of 4 minutes)

Students should evaluate collaboration that occurred across the whole task when:

* identifying and deconstructing a problem
* formulating an investigable question / hypothesis
* identifying variables
* designing and implementing appropriate procedures,
* collecting, sharing and analysing data

The evaluation of collaboration should, together with the statement about the inquiry, be a maximum of 5 **minutes.** You may choose to either:

* Have a recorded conversation with your teacher, or another student
* Film yourself presenting using your laptop or camera
* Screencast your voice + evidence using QuickTime (recommended)

The following pointers may be considered by students when preparing for the evaluation of the effectiveness of collaboration and its impact on results/outcomes in the Collaborative Inquiry. Choose TWO or THREE to focus on!

|  |  |
| --- | --- |
| Communication within the group, such as: |  |
| - Communication during and between meetings |  |
| - Record keeping |  |
| - Positivity |  |
| Leadership and involvement, such as: |  |
| - Leadership model |  |
| - Inclusive |  |
| - Contribution to the outcome |  |
| Collaborative Processes, such as: |  |
| - Decision making | - Democratic |
| - Goal setting | - Evidence based |
| - Action plan | - Risk taking |
| - Task allocation | - Problem solving |
| - Shared responsibilities | - Check points |
| - Opportunity for ‘way out’ thinking | - Finalisation |
| Deadlines |  |
| - Setting milestones/targets |  |
| - Adjusting deadlines |  |
| Conflict resolution |  |
| - Interpersonal |  |
| - Project related |  |

## Assessment Design Criteria

Your personal journal and evaluation (recorded presentation) will be assessed against the following Performance Standards

Editor’s note:

Some common specific features assessed in this task have been identified on this resource. You may wish to amend this selection to fit the needs of your students and program.

* + Investigation, Analysis, and Evaluation: IAE 1, 2, 3, 4, 5
  + Knowledge and Application: KA 4

## Submitting your evidence

Use the following naming protocol when submitting your evidence:

*SACE registration number-2STU20-AT2-collaborative inquiry journal*

*SACE registration number-2STU20-AT2-collaborative inquiry evaluation*