**COWRA HIGH SCHOOL**

**ASSESSMENT TASK COVER SHEET**

This sheet **must** be attached to the front of your Assessment Task and submitted to your class teacher on or before the due date.

Student’s Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Course: Science

Assessment Task: Water Filtration and Treatment

Date Due: Week 9

Date Received: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

🞏 Extension granted \_\_\_\_\_ days

🞏 Other circumstances ~ documents attached

I certify:

1. This assignment is entirely my own work and all borrowed material has been acknowledged
2. The material contained in this assignment has not previously been submitted for assessment in any formal course of study
3. I retain in my possession a copy of this assignment
4. I understand that late assignments will be penalised unless an extension has been granted by Deputy Principal - Curriculum

Student’s Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**COWRA HIGH SCHOOL**

**Assessment Task (Student’s Copy)**

Student’s Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Course: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Teacher: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Assessment Task received by: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Time: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Please detach this if the Assessment Task has been handed in**

**to the office and give to student to keep for their own records.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **COWRA HIGH SCHOOL** | | | | | | |
| **Stage 4 Science Assessment Task** | | | | | | |
| **NAME: Water Filtration Assignment** | | | **CLASS:** | | | **TEACHER:** |
| **COURSE: Science** | | **TASK No: 1** | | | **Unit: Mixtures** | |
| **DATE DUE: Monday week 9 term 1** | | | | | | **TIME DUE:** |
| **MARK: 73** | **WEIGHT: 25%** | | | **PRESENTATION: Scientific report and water filter** | | |
| **SYLLABUS OUTCOMES: A Student:**  **SC4-4WS** identifies questions and problems that can be tested or researched and makes predictions based on scientific knowledge  **SC4-6WS** follows a sequence of instructions to safely undertake a range of investigation types, collaboratively and individually  **SC4-7WS** processes and analyses data from a first-hand investigation and secondary sources to identify trends, patterns and relationships, and draw conclusions  **SC4-8WS** selects and uses appropriate strategies, understanding and skills to produce creative and plausible solutions to identified problems  **SC4-9WS** presents science ideas, findings and information to a given audience using appropriate scientific language, text types and representations  **SC4-17CW** explains how scientific understanding of, and discoveries about the properties of elements, compounds and mixtures relate to their uses in everyday life | | | | | | |
| **DESCRIPTION OF TASK:**   * In class work on your design for a water filter and submit a planning sheet * Produce a working water filter * Submit a scientific report of your water filter experiment | | | | | | |
| **MARKING CRITERIA:**  See attached sheets | | | | | | |



**COWRA HIGH SCHOOL**

**Assessment Task Submission Policy**

Submission of assessment tasks by students must follow faculty guidelines. There are basically four types of assessment tasks:

1. **In Class Assessment Tasks** ~ these tasks are supervised by the class teacher and collected by the class teacher at the conclusion of the assessment task. It is the responsible of the student who miss in class assessment tasks to contact the Head Teacher of that faculty.
2. **Formal Examinations** ~ at the conclusion of any formal examination the assessment task papers are to be collected and returned to the relevant faculty teacher.
3. **Major Projects / Pieces of Work** ~ these items, due to their size, are usually kept in the appropriate faculty location. Major works and projects should be kept in safe locations that minimises the risk of damage. Any assessment task would be submitted directly to the teacher. A receipt for the task will be issued to students.
4. **Take Home Assessment Tasks** ~ these are tasks that students are required to complete by a due date. Students should follow faculty submission guidelines regarding submission of these tasks.

**Guidelines for the Submission of Assessment Tasks**

1. When an assessment task is issued, the information provided to students will include:

* a clear statement of what the task involves and what the expectations of the student are
* an explanation of the marking criteria / outcomes to be assessed
* the due date of submission
* an assessment task submission cover sheet ~ see attached

1. Teachers should record the names of all students issued with the assessment task on a roll/class list and have the student acknowledge receipt of the assessment task by getting them to sign next to their name.
2. Students **must** take their assessment task to the class teacher. They must be signed in on the class roll and keep their receipt
3. All students **must keep a copy** of their assessment task.

**Illness and Misadventure Appeals**

If a student fails to submit an assessment task by the due date and has a legitimate reason than normal illness and misadventure procedures will apply.

**REQUEST FOR ASSESSMENT EXTENSION PROCEDURE**

Assessment extensions will only be granted in exceptional circumstances. All requests need to be made in writing using the extension request form. In seeking an extension discuss your request with your teacher/Head Teacher at least three (3) days before the due date with work already completed.

**Forms for Illness/Misadventure and Extension can be accessed on the**

**Cowra High School Website.**

**Task outline**

1. **Design** a water filter using a 1.5 litre PET bottle as the structure (you will be provided with the plastic bottle and this is a constraint or limitation).

* You may use any everyday materials from around your home or yard to make the filter.
* It is expected that you would NOT have to buy any “fancy” specialist filtering materials but rather find everyday items. For example, sand and gravel, pebbles, dishcloths (this is a constraint).
* **You need to be able to filter 100 mL of river water or muddy water in 2 minutes (this is a constraint)**
* **You need to run 3 trials to get an average volume of the filtrate collected**

1. Complete the **planning sheet** and submit this sheet in week 5

|  |
| --- |
| **Planning**  1. Carry out **background** research on home made filters and filtration and note down three interesting facts about filters and filtration (3 marks)  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 2. Identify the **aim** of the investigation (1 mark)  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |
| 3. Develop an appropriate hypothesis (2 marks)  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 4. List all of the equipment/resources that you need (5 marks)  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 5. Carry out a risk assessment by identifying all of the potential hazards/risks and ways to overcome them (3 marks)   |  |  |  | | --- | --- | --- | | Identified Risk | Level of risk (1-5) | Way to overcome risk | |  |  |  | |  |  |  | |  |  |  | |
| 6. Identify the limits (constraints) that you need to consider when designing your water filter (1 mark)  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  7. Identify how you will determine the success of your design (2 marks)  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **Predicting**  8. Draw a labelled scientific diagram of your filter (3 marks) |

1. **Construct** a working model water filter inside a 1.5 litre PET soft drink bottle in class.

* You will need to run three **trials** of your water filter, and collect **qualitative** and **quantitative** data for your scientific report.



1. Complete a **scientific report** on your water filter experiment following the scaffold provided in the google word doc and here with the task outline.

Submit your scientific report in week 9.

1. In week 9 your water filter will be assessed on how much of 100 mL of river water is filtered in 2 minutes, and the quality of the water by comparing it to three standards of water.

**Scaffold for the scientific report** (also provided in your google classroom)

**Background:** information you have researched. This needs to include:

* A definition of filtration
* A definition of filtrate and residue
* An explanation of how a home-made water filter works
* An explanation of how water is treated/purified for drinking.

**Aim:** the purpose of your investigation (you can copy this from your planning sheet)

**Hypothesis:** your prediction of what you think will happen (you can copy this from your planning sheet)

**Materials:** a list of all of the equipment that you used

**Method:** the steps you followed in developing your water filter and testing it.

* The method needs to show how you tested your model at least three times, and how you ensured your experiment was *fair*, and your results were *accurate* and *reliable*.
* The method needs to include a labelled scientific diagram of your model, or a labelled photograph of your model

**Risk assessment:** outline all the possible risks, assess the level of the risk, and identify how to prevent any injury or harm (copy this from your planning sheet)

|  |  |  |
| --- | --- | --- |
| Identified Risk | Assessment of level of risk (1-5) | Way to overcome risk |
|  |  |  |
|  |  |  |
|  |  |  |

**Results:** the qualitative observations and quantitative data collected for your three trials.

* Filter 100 mL of water, and **measure** and record how much filtrate is collected in 2 minutes (this will be trial 1).
* Repeat twice more and record your results in the table below

Table 1: the volume of filtrate collected in two minutes

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Volume of filtrate collected in 2 minutes (mL) | Trial 1 | Trial 2 | Trial 3 | Average volume (mL) of filtrate collected |
|  |  |  |  |

* Include one labelled photograph of your model filtering your muddy water
* Compare your filtrates to the three diagrams and decide qualitatively which it looks like



A B C

**Discussion:** analyse the results by answering the questions

1. *State* if your hypothesis was supported (or not) by your findings (1 mark)

2. *Explain* why you selected the equipment that you used in your filter. Clearly state why each material was chosen for the filter. (3 marks)

3. *Identify* any problems you had designing or testing your filter and if your final water filter matched your planning sheet (3 marks)

4. *Discuss* what you would change about your filter if you did this task again (any improvements) (3 marks)

4. *Evaluate* if your filter was effective or not, and explain why it was or was not effective. To evaluate its effectiveness you need to consider the aim of the experiment, and if the results of the experiment achieved what you wanted. Explore the positives of your water filter design, and the negatives, then come up with an evaluation of its effectiveness. (3 marks)

6. If you were camping at Wyangala Dam, *justify* if you would use this filter to get drinking water from the dam (4 marks)

7. *Discuss* what you need to do to river or dam water to make it safe for drinking (4 marks).

8. There is approximately 4 mg/L of chlorine in drinking water.

a. *Calculate* how many grams per litre this equals (1 mark)

b. If you have 100 mL of water, *calculate* how much chlorine you would need to add (2 marks)

**Conclusion:** a summary of your main findings

**Bibliography:** list all sources used, including websites with the dates accessed.

**Acknowledgements:** acknowledge all assistance, including from parents/carers and teachers.

Marking scheme

Planning sheet /20

Scientific Report and filter model:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Limited  1 | Basic  2 | Sound  3 | High  4 | Outstanding  5 |
| Water filter  Applies scientific knowledge | A **model** water filter was not completed | A **model** water filter has only just been started. It is a very long way from being able to filter water | The **model** water filter is partly made, however it isn’t finished enough to be tested or produces C grade water | The water filter is nearly complete. It looks good and produces B grade water in 2 minutes, or A grade water in over 4 minutes | A **fully working** **model** of a water filter is constructed and is able to produce A grade water in 2 minutes or less |
| Background | Limited background | The background is missing all three definitions (the terms filtration, filtrate, residue) or does not fully explain why we need water filters or water purification | The background is missing two definitions (the terms filtration, filtrate, residue) or does not fully explain why we need water filters and water purification | The background is missing one definition (the terms filtration, filtrate, residue) or does not fully explain why we need water filters or water purification | A detailed background is provided which defines the terms filtration, filtrate, residue, explains why we need water filters and water purification |
| Materials | A limited materials list | The materials list is missing some components of the water filter | A thorough list of all the materials used to make the water filter |  |  |
| Method | Limited method | Method is missing three of the essential criteria | Method is missing two of the five essential criteria | Method missing one step, or missing how you ensured reliability, or missing how you ensured your experiment was fair, or your results accurate. Or the method is missing a labelled scientific diagram of your model, or a labelled photograph of your model | Detailed steps which can easily be followed, shows reliability, and how your experiment was fair, and your results accurate. Your method needs to include a labelled scientific diagram of your model, or a labelled photograph of your model |
| Results | Limited attempt at completing the results table, and the diagram is missing or no comparison has been made | The results table is missing a trial and the average is not calculated correctly, or the labelled diagram is missing and there is no comparison with the samples | The results table is missing one trial or the average is not calculated correctly, or the labelled diagram is missing, or there is no comparison with the samples | The results table is completed with an accurate average, and there is a labelled diagram or photo of your filter working, and there is an accurate qualitative comparison to one of the three standards of water |  |
| Discussion 1 | Accurate statement reflecting if the hypothesis was supported or not |  |  |  |  |
| 2 | Limited outline of why you selected some parts of your filter | Partial explanation of why you selected each part or clear explanation of most of the parts, but some parts are missing | Clear explanation of why you selected each of the parts that you used in your filter |  |  |
| 3 | Limited outline of design problems or testing difficulties or partial statement of water filter produced in relation to original design | States if your final water filter matched your original design in the planning sheet and clearly identifies some design problems or testing difficulties | States if your final water filter matched your original design in the planning sheet. Clearly identifies all design problems and testing difficulties |  |  |
| 4 | Limited outline of what you would change about your water filter | Partial discussion of what you would change about your filter | Detailed discussion of what you would change about your filter if you did this task again (improvements) |  |  |
| 5 | Limited outline of effectiveness | Partial evaluation which does not cover all of the positives and negatives of your water filter or does not come up with an accurate evaluation | Thorough evaluation of the effectiveness of the filter, including explanation of why it was or was not effective |  |  |
| 6 | Limited outline of filter use on dam water | States if the filter should be used to get safe drinking water from the dam | Attempts to justify if the filter should be used to get safe drinking water from the dam | Thorough justification of filter use to get drinking water from the dam |  |
| 7 | Limited outline of what needs to be done to make water fit for consumption | Outline of some of what needs to be done to water to makie it fit for consumption | Partial discussion of what is needed to do to river or dam water to make it safe for drinking | Detailed discussion of what you need to do to river or dam water to make it safe for drinking |  |
| 8 | Attempts a calculation | Correctly calculates how many grams per litre this equals or calculates how much chlorine you would need to add | Correctly calculates how many grams per litre this equals and calculates how much chlorine you would need to add |  |  |
| Conclusion | Limited outline of the main findings | Partial summary of some of the main findings | Clearly and concisely summarises the main findings from the experiment and states if the aim of the experiment was met |  |  |
| Presenting information | The report has many spelling and grammar errors and lacks sentence structure.  The **Bibliography** lists 1 places where you found information  **or** the A**cknowledgements** lists people who gave assistance in constructing the model but doesn’t state what they did to help. | The report has multiple spelling and grammar errors or sentence structure needs some work.  The **Bibliography** lists 2 places where you found information  and /or the A**cknowledgements** lists people who gave assistance in constructing the model but doesn’t state what they did to help. | The report is well presented, with several spelling and grammar mistakes  The **Bibliography** lists at least 2 places where you found information  and the A**cknowledgements** lists people who gave assistance in constructing the model but doesn’t state what they did to help. | The report is well presented with mostly correct spelling and grammar.  The **Bibliography** lists at least 2 places where you found information and the A**cknowledgements** clearly states the people who gave any assistance received in constructing the model and states what they did. | The report is well presented with correct spelling and grammar.  The **Bibliography** lists at least 3 places where you found information and the A**cknowledgements** clearly states the people who gave any assistance received in constructing the model and states what they did. |