# Task:

You have been tasked with creating a showcase of your learning of the construction of a remote control car. The default showcase will be an A2 poster of your learning and two recorded presentations, one for laypeople and one for technical experts.

The construction of the robot car is intended to be done in groups due to resources. However, individuals can build a vehicle, but we will have to think out of the box on how to solve the problem of resources.

You will be provided with a default poster template. Your presentations can be recorded on any medium and are intended for marking only.

Questions for posters will be provided in the rubric and must be effectively answered three times.

1. The poster – summarises learning for general audiences in a condensed writing environment.
2. General Audience presentation – informs the general audience of your learning, allowing for some extrapolation
3. Technical Audience presentation – informs experts (the teacher) of your learning, allowing for technical depth.

##### Section 1: Knowledge Comprehension, and Application

This section of the rubric consists of the required elements of the assignment. Students should take special care to include ALL these elements as they are often extended in the following sections

##### Section 2: Analysis, Synthesis, and Evaluation.

This section will evaluate your ability to include critical thinking and justification elements into your work. Often the requirements for extension are not explicitly given, so it will be up to the you to decide how best to demonstrate what you have learned beyond the required unit goals and curriculum. Items such as 3D models, pictures, drawings, diagrammatic responses, notes, evidence of problem solving, advanced programming concepts, elegant responses, media, etc., are all available options.

##### Section 3: Submission Guidelines

For this section, students will be expected to provide a submission which fulfills all of the formatting and citation requirements listed in this assessment sheet but also that the submission is of a professional quality. Be aware, points in this section could be 2- or 4-point items. Treat them accordingly.

## Submission

All submission items should be stored in an appropriate format. For example, code must be stored in a programmatical format so it can be evaluated (**images of code, or code simply copied and pasted into a document, will not be marked**)

Evidence of working material must be recorded where appropriate. For example, if you are showing how your game meets some requirement, you must submit a recording. Similarly, if you are showing how your robot meets a requirement, you must record it.

If you are unsure if an element needs to be recorded, **ask the teacher.**

**All materials must be submitted to google classrooms.**

Students are responsible for keeping backups/master-copies.

## SCORING NOTES

Formatting for all typed/written assessments should be as follows:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Google Doc | 11-12 Pt | 1.15-1.5 Line Spacing | 1 Space between paragraphs | Spelling and Grammar “Soft Limit” | In-Text Citations with footnotes | Title Page/Slide:   * Name * Date * Class * Aim * Assessment title |
| Slides | 10-12 pt. font text  14-24 pt. font titles | 1.0 1.15 Line Spacing | Bullet Points Preferred | Word Count per slide >100-110 “Soft Limit” | Approved Templates and Themes |
| Code |  |  |  |  |  |  |
| Markdown |  |  |  |  |  |  |

*“Soft Limits” are not rigidly defined limits and will be assessed on a case-by-case basis. Ask for clarification for specific tasks*

## Possible Scoring Groups are out of 2 or 4 Points.

**2-Point Criteria - Knowledge and Understanding**

*Criteria assessed as 2-Points are classified as Knowledge and Understanding criteria. These will examine and evaluate a student’s ability to state facts and define terms and concepts effectively. Analysis and synthesis of the information will not be assessed through these criteria.*

|  |  |  |  |
| --- | --- | --- | --- |
|  | **0 Points** | **1 Point** | **2 Points** |
| **2 Point Criteria** | Not present or able to be assessed as the required criteria | Item is presented and **does meet** expectations for quality, rigour, or detail | Item is presented and **does** meet expectations for quality, rigour, or detail |

**4-Point Criteria - Analysis and Synthesis and Expert Review**

*To show true mastery of your developing skills, students must show that they can go beyond simple repetition of the given tasks or an explanation of processes. Students will show their ability to show higher order thinking through analysis, evaluation, or the linking of multiple fields of learning to solve problems in novel ways.*

**Analysis and Synthesis**

*Analysis and Synthesis components evaluate a student’s ability to effectively review data and understandings and develop these into a coherent and relevant statement. Analysis refers to the generating of thoughts from interpreting the data, while synthesis refers to combining analysis of the data with other relevant information to develop an original and effective idea.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **0 Points** | **1 Point** | **2 Points** | **3 Points** | **4 Points** |
| **4 Point Criteria** | Not present or able to be assessed as the required criteria | Item is **presented and explained**. However, it **does not show any evidence of higher order thinking** such as analysis, evaluation, or synthesis. | Item is presented and **shows appropriate evidence of higher order thinking** such as analysis, evaluation, or synthesis. | Item is presented and **exceeds** **expectations** for **evidence of higher order thinking** such as analysis, evaluation, or synthesis.  **-or-**  Item is presented and **shows appropriate evidence of higher order thinking** such as analysis, evaluation, or synthesis and **exceeds expectations** for quality, rigour, or understanding of the selected mastery. | Item is presented and **exceeds** **expectations** for **evidence of higher order thinking** such as analysis, evaluation, or synthesis. Additionally, this item **exceeds expectations** for quality, rigour, or understanding of the selected mastery. |

**Expert Review**

*Expert Reviews evaluate a student’s ability to build solutions using the skills that have been taught during the semester. Criteria assessed as 4-Points are classified as Analysis and Synthesis criteria. These will examine and evaluate a student’s ability to effectively review data and understandings and develop these into a coherent and relevant statement. Analysis refers to the generating of thoughts from interpreting the data, while synthesis refers to combining analysis of the data with other relevant information to develop an original and effective idea.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **0 Points** | **1 Point** | **2 Points** | **3 Points** | **4 Points** |
| **4 Point Criteria** | Not present or able to be assessed as the required criteria | Item is **presented** and broadly **solves the problem**. However, upon review, it **does not** show any evidence of appropriate mastery. | Item is **presented** and broadly **solves the problem**. On review, it **does** show any evidence of appropriate mastery. | Item is **presented and solves the specific problem**. On review, the evidence shows understanding **beyond expected mastery**.  -or-  Item is **presented** and broadly **solves the problem**. On review, it **does** show any evidence of appropriate mastery and is done so in a **well-constructed** or design method that **clearly shows higher levels of understanding**. | Item is **presented and solves the specific problem**. On review, the evidence shows understanding **well** **beyond expected mastery** and is done so in a **well-constructed** or design method that **clearly shows higher levels of understanding**.. |

**Multiplier**

Criteria will be combined with a **Multiplier**. While each criterion will be scored on the 0-1-2-4 scale, the multiplier will attach relevant worth to each criterion. Be aware of these multipliers and dedicate appropriate time to ensure you achieve your best result.

**Achievement Standards:**

**Evidence of higher order learning:**

What is it that I mean by “higher order thinking”?

It means I want you to go beyond just replicating what we do in class. I want you to dig into your brain and understand why you did something, what about it was great, what could be improved.

Why is this important? Reflective thinkers are able to go beyond what they are taught and can customise their learning to ben



## Rubric

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Knowledge, Comprehension & Application** |  |  |  |  |  |
| **CRITERIA** | **EXPECTATIONS** | **POSS** | **STUDENT** | **GIVEN** | **MULTI** | **TOTAL** |
| **Planning Document**  (group) | You have submitted evidence of completing the required learning material. This evidence is presented appropriately (Markdown) unless negotiated for a different format.  Your planning document must identify how to solve the following problems and describe how you plan to link all of the solutions together   1. How will you drive your robot? 2. How will you steer your robot? 3. How will you control your robot? 4. How will you communicate from your controller to your robot? 5. How will you design your robot? 6. How will you integrate all of the previous solutions?   Evidence for knowledge, comprehension, and application may include:   1. **Knowledge**: Your evidence highlights that you recall and list relevant terms covered in your learning. It may tell a story to the reader (the teacher) or state your learning conditions. 2. **Comprehension**: Your evidence highlights that you can identify key aspects of your learning or explain what you've done to the teacher. 3. **Application**: It is clear from your evidence that you constructed a complete submission | 2  2  2  2  2  2 | \_\_/2  \_\_/2  \_\_/2  \_\_/2  \_\_/2  \_\_/2 | \_\_/2  \_\_/2  \_\_/2  \_\_/2  \_\_/2  \_\_/2 | Ax2  Tx1 | A\_\_/24  T\_\_/12 |
| **Showcase**  (individual) | You have submitted evidence of your showcase. By default, your showcase responds to each of the three questions highlighted below. However, these questions can be negotiated or reframed with your teacher.   To achieve a passing grade (2) you must submit a serious attempt to respond to each question in each medium. By default, your submission for the showcase would be the given poster template, and both presentations   1. Showcase poster 2. General Audience Presentation 3. Technical Presentation   The output can be negotiated with the teacher. Previous submissions have allowed for Google Sites, HTML, or Markdown documents.  Evidence for knowledge, comprehension, and application may include:   1. **Knowledge**: Your evidence highlights that you recall and list relevant terms covered in your learning. It may tell a story to the reader (the teacher) or state your learning conditions. 2. **Comprehension**: Your evidence highlights that you can identify critical aspects of your learning or explain what you've done to the teacher. 3. **Application**: It is clear from your evidence that you constructed a complete submission | 2  2  2 | \_\_/2 \_\_/2 \_\_/2 | \_\_/2 \_\_/2 \_\_/2 | Ax2  Tx1 | A\_\_/12  T\_\_/6 |
|  | **Analysis, Synthesis & Evaluation** |  | | **SUB TOTAL** | | **A \_ / 36**  **T \_ / 18** |
| **Question 1** | **Question**: Before you started to build, what was the process you used to identify the major features of the challenge and how you would bring them all together to make a solution?  Consider your strategies for locating different aspects required for controlling a remote vehicle and how you bought them together into a single system.  Showcases are a tool **you use to highlight your learning to different audiences**. Learning how to reflect on what you learnt during your assessments and identifying what parts of your work were high quality and what you could do to improve your work is an essential aspect of education.  You will present your response to this question in 3 mediums   1. a poster presentation as a summary for general audiences 2. a recorded presentation for general audiences, which allows for extrapolation 3. a recorded presentation for technical audiences, which allows for technical details   This aspect of the assessment evaluates your ability to **analyse your learning**, identify **how and when you synthesised new understanding** on your own, and your ability to **assess your work**  Each of your questions will be marked against the following aspects of your ability to:   1. To summarise your understanding of technology concepts and principles to a general audience 2. express **your understanding of technology** concepts and principles to a general audience 3. **your ability to communicate your learning** appropriately to experts   Evidence for higher-order learning may include:   1. **Analysis**: Your evidence shows a reasoned understanding of what you did and why. For example, you may have explained how you did X, Y, and Z, but you continue to explain why you did them the way you did. 2. **Evaluative**: your evidence makes a judgement of something or between multiple things. This judgement may be the value of one thing over another or highlighting the significant differences between two things. 3. **Transferal**: your evidence highlights when you apply information, strategies, or skills that you have learnt to a new situation or context. | 4  4  4 | \_\_/4 \_\_/4  \_\_/4 | \_\_/4 \_\_/4  \_\_/4 | - | \_\_/12 |
| **Question 2** | **Question**: What is something that went unexpectedly wrong, and how did you get yourself back onto the path?  Conder your strategies for troubleshooting problems and how you may have provided contingencies for when things go wrong  Showcases are a tool **you use to highlight your learning to different audiences**. Learning how to reflect on what you learnt during your assessments and identifying what parts of your work were high quality and what you could do to improve your work is an essential aspect of education.  You will present your response to this question in 3 mediums   1. a poster presentation as a summary for general audiences 2. a recorded presentation for general audiences, which allows for extrapolation 3. a recorded presentation for technical audiences, which allows for technical details   This aspect of the assessment evaluates your ability to **analyse your learning**, identify **how and when you synthesised new understanding** on your own, and your ability to **assess your work**  Each of your questions will be marked against the following aspects of your ability to:   1. To summarise your understanding of technology concepts and principles to a general audience 2. express **your understanding of technology** concepts and principles to a general audience 3. **your ability to communicate your learning** appropriately to experts   Evidence for higher-order learning may include:   1. **Analysis**: Your evidence shows a reasoned understanding of what you did and why. For example, you may have explained how you did X, Y, and Z, but you continue to explain why you did them the way you did. 2. **Evaluative**: your evidence makes a judgement of something or between multiple things. This judgement may be the value of one thing over another or highlighting the significant differences between two things. 3. **Transferal**: your evidence highlights when you apply information, strategies, or skills that you have learnt to a new situation or context. | 4  4  4 | \_\_/4 \_\_/4  \_\_/4 | \_\_/4 \_\_/4  \_\_/4 | A x  T x | \_\_/12 |
| **Question 3** | **Question**: What is an example of some significant learning achievement you made during this project?  Think back to previous bodies of work, has there been anything that you know now that you realise that you didn't previously? Something that you struggled with before, but now it makes more sense. What is it?  Showcases are a tool **you use to highlight your learning to different audiences**. Learning how to reflect on what you learnt during your assessments and identifying what parts of your work were high quality and what you could do to improve your work is an essential aspect of education.  You will present your response to this question in 3 mediums   1. a poster presentation as a summary for general audiences 2. a recorded presentation for general audiences, which allows for extrapolation 3. a recorded presentation for technical audiences, which allows for technical details   This aspect of the assessment evaluates your ability to **analyse your learning**, identify **how and when you synthesised new understanding** on your own, and your ability to **assess your work**  Each of your questions will be marked against the following aspects of your ability to:   1. To summarise your understanding of technology concepts and principles to a general audience 2. express **your understanding of technology** concepts and principles to a general audience 3. **your ability to communicate your learning** appropriately to experts   Evidence for higher-order learning may include:   1. **Analysis**: Your evidence shows a reasoned understanding of what you did and why. For example, you may have explained how you did X, Y, and Z, but you continue to explain why you did them the way you did. 2. **Evaluative**: your evidence makes a judgement of something or between multiple things. This judgement may be the value of one thing over another or highlighting the significant differences between two things. 3. **Transferal**: your evidence highlights when you apply information, strategies, or skills that you have learnt to a new situation or context. | 4  4  4 | \_\_/4 \_\_/4  \_\_/4 | \_\_/4 \_\_/4  \_\_/4 | A x  T x | \_\_/12 |
|  | **Submission Guidelines** |  | | **SUB TOTAL** | | **T \_\_/36** |
| **Readability** | **Assessment submission is ordered** and has a definite pattern to its construction. **The reader is not confused about the content in any given section and can easily follow the submission flow**. | 4 | \_\_/4 | \_\_/4 | X2 | \_\_ / 8 |
| **Formatting** | **Students have** **followed the formatting instructions,** including any provided templates and guides, or created their own legible formatting guide **and applied it constantly**. | 2 | \_\_/2 | \_\_/2 | - | \_\_ / 2 |
|  |  |  | | **SUB TOTAL** | | **\_\_ /10** |
|  | DAYS LATE \_\_\_/7 = \_\_\_% |  |  | **FINAL** | | **A \_\_/82 T \_\_/64** |

## VET Competencies

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| --- | --- | --- | --- |
| **Result** | **Vocational competencies assessed via this task** | | **Aspect of task addressing competency** |
|  | BSBOHS201A | Participate in OHS processes | Proper use of equipment & evacuation drills |
|  | ICAICT202A | Work and communicate effectively in an IT environment | Researching, creating, printing & submitting of Research Report |
|  | ICAICT201A | Use Computer Operating System and Hardware | Participation in organised IT activity & researching & creating report |