Sample Journal 2

Year: 2024-2025

Grade: G10

Semester: 2nd Semester

Question 1: You have noticed that one of your teammates has experienced a sharp decline in performance. What advice would you give him/her to help him/her regain his/her performance?

A member's performance decline is a common situation between the groups, but it is crucial to deal with such vital problems to ensure that everyone is working effectively and producing his maximum effectiveness to get the highest possible grade.

In the fifth week of this semester, one of my groupmates was not working as he usually did not submit his task in the portfolio and was not coming to the meetings we were making as a result, my other teammates were not happy with what was going on and we decided to take him and to advise him. My advice for him was that every member of the group should work efficiently and produce his maximum potential to get the best mark and if any teammates were lazy and did not work this would affect our grade. I gave him this advice because I wanted him to feel loyal to the team and remind him that his work in the capstone would affect us in one way or another.

Another piece of advice was to work in a place where he has chosen to work and this place must be peaceful and away from others, this ensures that he would not be distributed easily. He was working on his tasks in the study room. Such a place is the worst place to work because everyone will come and talk with you for at least 15 minutes and since he is disturbed easily, he won't focus on his job.

To summarize, I advised him to work in a peaceful place to not waste his time with others and reminded him that his work can greatly affect our grades.

Grade: Blue

Feedback:

Strengths:

1- The response covers all points and even offers two pieces of advice.
2- It follows an essay format: introduction, body, and conclusion.
3- It includes a clear example “He was working on his tasks in the study room.” and explains it in detail.
4- It uses some advanced or academic vocabulary like “maximum potential”, “effectively”.

Weaknesses:

1- The question asks directly for advice, not a situation between teammates or anything similar! So, everything before “My advice for him was” is unnecessary. A shorter introduction would have been more effective.
2- The first piece of advice isn’t strong or convincing. If someone’s performance is declining, there’s usually a specific problem that needs a clear solution or motivation. Simply telling him that others rely on his work might give him motivation to work but it’s usually not enough or it might cause more pressure on him.
3- There’s almost no punctuation and many sentences are too long.

General Notes:

It would be more impactful to show the **result** of the advice and how the teammate benefited from it.

Grammar and wording needs improvement. For example: “working effectively and producing his maximum effectiveness” → literally said the same thing twice with the same word, better: “working effectively and doing his best”. “not be distributed easily” → “not be disturbed easily”, “Such a place is the worst place to work” → “That place made it hard for him to focus.”, “I advised him to work in a peaceful place to not waste his time with others” → “I advised him to choose a quieter spot so he wouldn’t get distracted.”

Question 2: According to the edp process, you are supposed to be in the stage of constructing your prototype which is the most important stage. Explain two prototyping steps you made.

After searching and gathering information, and after we discussed with our teachers to ensure that our research was correct or not, of course, we needed to see and visualize our idea. This is the importance of the prototype.

The first step in constructing the prototype is to gather the material we need. And of course, this material should have a budget from our point of view. Our solution is a combination of two vertical wind designs after a meeting we had in the study room the materials we decided to get were plastic to print the blades of the design, a generator, an AC to DC converter to have the ability to store the energy in the battery, a gearbox to increase the efficiency of the prototype and lastly, a battery to store the produced energy.

The second step is to assemble the components of the prototype that we bought. This was not an easy task as while we were combining the gears in the gearbox (a box contains 2 gears small one and a bigger one to increase the number of turns) the smaller one broke because it was weak, so we got the help of our fab lab teacher, and he told us how to install it correctly.

The third step. We began to work on it test. We did not test the efficiency of the prototype, but we tested its size with an app called Fusion to ensure that we achieved a design requirement that our prototype did not exceed 0.5 m3.

Grade: Blue

Feedback:

Strengths:

1- The response clearly outlines the steps and explains them well.
2- Each step is presented in its own paragraph.
3- The solution is briefly introduced before directly answering the question.
4- Before listing the steps, the response gives a small introduction to the previous step and how it led to this step as well as the current step's importance.
5- The examples are detailed and based on real-life materials and concepts from the capstone project.

Weaknesses:

1- The question asked for *two* steps, but the answer listed three. Replacing the third step with a proper conclusion would have been more suitable.

2- Several grammar and spelling mistakes like: “a box contains 2 gears small one and a bigger one to” → “a gearbox contains 2 gears: a small one and a big one to”, “We began to work on it test” → “We began testing it.”

General Notes:

Wording and overall style could be improved. Punctuation is acceptable but is missing in some places.

Question 3: in (ch.1.09), you have studied the physical properties of different elements. Explain four physical properties of the materials you use in constructing your prototype and why these properties are suitable for your project.

In our chemistry course, we studied in Learning Outcome 9 that each element has unique physical properties like ductility, malleability, electrical and thermal conductivity, elasticity, and strength. This LO helped us in deciding which materials we needed in our prototype.

The first property we use in our prototype is ductility. Ductility is the ability of materials to be made into wires. This property helped us because we wanted wires in our prototype to store energy from the generator to the battery therefore, we chose copper. Copper has great ductility and humans use it in making electricity wires

The second property is malleability, Malleability is the ability to turn into sheets. This helped us in choosing aluminum to cover our gearbox and not expose it to air.

The third property is its electrical conductivity. It is the ability to conduct electrical power without losing its energy and we chose copper because it has high electrical conductivity that won’t waste a lot of electricity that we generate from the generator.

The last property is the strength of the material, this is the ability of the material to withstand the force exerted on it without breaking into pieces, this property helped us to choose acrylic as a material for the holder of the blades to not break from the high air speeds.

In the end, These properties helped us a lot in deciding which is the best material to choose in the prototype.

Grade: Blue

Feedback:

Strengths:

1- The response is well-organized, with a clear introduction, a body divided into multiple paragraphs, and a conclusion.
2- The four properties are identified clearly and directly.
3- The learning outcome was briefly explained before listing the properties.
4- Each property was supported with examples of materials used and how they contributed to the project.

Weaknesses:

1- Some sentences are repetitive or express the same idea. For example: “Copper has great ductility and humans use it in making electricity wires”, while ductility and wires were already mentioned earlier (even if in a slightly different context.)
2- Some properties lack creativity or depth, and their explanations are vague. For example, saying copper was used for wires due to conductivity is obvious. It would be better to mention a more unique property that’s especially related to your prototype.
3- The conclusion is weak and repeats what’s already mentioned in the introduction.

General Notes:

Some phrases are awkward or not academically phrased. For example, “to not break from the high air speeds” or “helped us a lot in deciding”. They can be cleaner and more academic.