Modiragatsi 2020

PROJECT OUTLINE

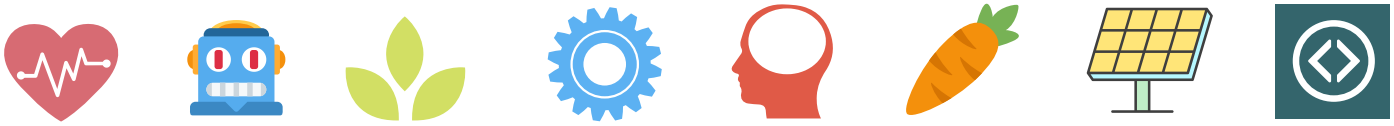
1. Identify a problem

It should be problem that you care about, and maybe have a possible solution. Think about what is going on in everyday life? i.e. Transportation, electricity industry, health care etc.

Is there a friend or family member you can make a difference for by designing a new solution?

2. What are *you* passionate about?

Identify the areas in which your passion lies and which you are interested in order to design a solution for the problem identified.



Healthcare | Robotics | Nature Conservation | Mechanical Structures | Mental Health | Food Science | Sustainable Energy | Coding

3. Formulate a *key question* from your identified problem

How can we…?

Is there an alternative to…?

How much does…?

What if…?

Is it possible…?

4. Research your problem

Conduct research on your identified problem to gain insight on what solution already exist. You can also talk to experts, teachers & community members.

You can answer questions such as what will be the impact of solving this problem? Who is responsible for the problem? Will it have an impact to a wider community or only to some individuals? Does other people in the world also experience this problem? Why is your problem important to solve? Who is your audience? Who will use your solution?

What is the solvability of your problem? Can it be solved with creative thinking? Remember not to limit yourself!

"Make it simple, but significant."
Don Draper

4. Develop your *solution*

Using your key question & thorough research, you can now develop a viable solution. Do not limit your creative thought in thinking of a solution, think of out of the box, innovative ideas!

1. Between you & your team-member write down at least 10 possible solutions to the key question, now matter how crazy.
2. Answer the following questions about each of your 10 solutions as throughly as possible:
   a. How will you make this solution a reality?
   b. What manufacturing materials will you require?
   c. Where will you develop your solution?
   d. Can you build your solution at home? Do you require some sort of additional facilities?
   e. Why is this solution better than other existing solutions?
   f. What makes this solution unique?
   g. Who can help/mentor you to develop the solution?

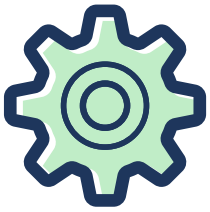
4. Develop your *solution* (Continued)

Choose the best possible solution of the 10 after answering all the questions.

The questions should help you identify the best solution.

After identifying your solution design a possible prototype using materials available to you.

5. *Test* your solution



Prototype

Using material available to you, build your first prototype. No need to go to special laboratories or buy special equipment. Be creative and utilize what is available around you.

1. It should not be a final product, it should only be a proof of concept.
2. Think out of the box, don't use newly store bought materials.
3. You will need to show us the prototype in your video/slideshow as proof if concept.

Test - Will it work?

You should formulate a testing routine using a sound experimental method, to support your initial design hypothesis.

1. What methods can you use to test if you design actually does what it is intended for?
2. You will be required to show the testing phase of you project, to back up your final results.

Analyse

Analyse the outcomes of the testing phase of your project:

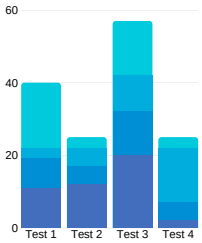
1. Is there anything that you need to redesign?
2. Is there something crucial you did not think of?
3. Do you maybe need to rebuild you prototype & repeat your testing phase?
4. You will be required to show your analysis in your video/slideshow as proof if concept.

6. *Communicate* your project & results

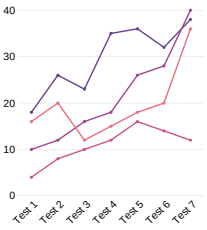
Document each phase of your project to communicate your results in a 200-250 word summary.

The results of your testing phase can be documented in creative visual charts & included in 2-min video/20-slides.

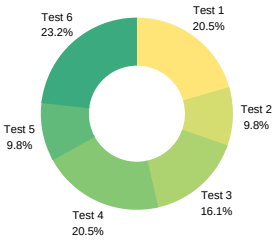
Chart examples:



Bar graph



Line graph



Donut chart

Other ideas:

Online Tools

- Canva.com
- Animaker.com
- Showeet.com

7. *Submit* your project to the NWU

Submit your project summary with your project media to NWU via the submission link received from the registration process.