

Hwa Chong Institution
Project Work
Category 3
Inventions Log Book
(Revised for 2020)

Title of Project: Project Get Hooked
Group Name: Project Get Hooked
Group Members: 1) Jeremy Hew Khai Hsien 3P3 2) Jayden Ng Yuan Hoe 3P3 3) Jacob Tan 3A3

1. Problem Finding

(The beginning...)

Identify a problem you would like to solve. You may want brainstorm for problems using different approaches eg thematic, survey or general brainstorming etc.

1 A Document a list of problems you have identified. Your documentation should show clearly how your group came up with the problems.

1. Students are not getting enough sleep
2. The classroom is very messy
3. Students are disorganized
4. Students do not eat properly due to lack of time
5. Students do not know how to manage money properly
6. Students have very poor sleep habits
7. Students' hygiene in school

1 B You should have selected a problem based on some considerations. Identify and justify these considerations.

We selected problem number 2 and 7, messy classroom and students' personal hygiene.

We selected this problem as the 3 of us are often bothered by the bags that are strewn all over the classroom floor and feel something should be done to make the classroom a more tidy, cleaner, and conducive place for us to study. Also due to the current Covid-19 situation, students' hygiene is more important than ever so we seek to help students keep their belongings clean by keeping their bags off the floor.

1 C List some problems your group would like to solve. List also the considerations for selection of problems in the evaluation grid below. Score the considerations, against the problems, with points 1 (least significant) to 4 (most significant). Sum up the total points for each problem. Identify that problem you would like to solve.

Problem Evaluation Grid

Considerations for Selection	Problems		
	students' hygiene in school	Students have very poor sleep habits	Students do not eat properly
How much would solving this problem help students?	3	4	3
How pressing is this issue?	3	3	2

Has this problem already been solved?	4	2	1
Should we embark on this project?	10 (Yes)	9 (No)	6 (No)

2. Define the Problem (This is one...)

Now that the problem has been identified. It is important to gather information on the extent of the problem and/or evaluate the usefulness of existing solutions based on *some criteria*. You may need to conduct surveys and research on existing solutions.

2 A Extent of problem (Research and discuss the problem and write down the problem statement)

After intense research and discussions, we have discovered that a messy classroom hides more problems than you would think. It is thus a pressing issue that should be resolved sooner rather than later.

Due to the current Covid-19 situation, cleanliness and sanitation is of utmost importance, and bags being laid on the floor is a simple hygiene problem which has not been addressed, therefore our group seeks to solve this issue.

Research has also proved that a messy classroom leaves students feeling anxious, stressed and overwhelmed. Unfortunately, students are rarely able to pinpoint the cause of their struggles.

Why does a messy classroom lead to so much unnecessary stress?

1. Mess attacks our brains with excessive stimuli, which causes our senses to overwork on stimuli that aren't very important.
2. Mess distracts us by drawing our attention away from what we should be focusing on.
3. Mess makes it more difficult for us to relax, both physically and mentally.
4. Mess constantly signals to our brains that our work is never done.

2 B Compare and contrast the existing or similar solutions.

Current viable solutions are the S-hook and the adhesive hook.

While the S-hook is reliable and readily available, a major drawback is its length, which would cause the bags to draw along the floor when hooked onto it, completely defeating our purpose.

The adhesive hook on the other hand hangs off the side of the table, making the bags hard to access and obstructs walkways. In addition, the adhesives used might not be strong enough to hold up students' bags.

3. Your BIG IDEA[#]

(Developing the idea....)

Write down your proposed invention and why you want to do it. State also how you think your proposed invention is better.

3 A Describe your proposed invention.

We are proposing a simple solution. Get students to hang their bags underneath their tables using simple-designed hooks to keep them away from sight and off the ground and to make the classroom a lot neater and cleaner.

Our invention will hence consist of a simple hook hung on to the grills underneath the table, taking inspiration from our idea to use the S-hooks for the same purpose but modifying the design of the hooks to better serve our purpose.

3 B Explain the purpose of your proposed invention and the potential benefits to users.

Our purpose is to help keep the classroom neat and clean for students and we believe this will be a great step forward in improving classroom cleanliness and at the same time giving students a more conducive learning environment in the long run.

In the meantime, students' bags are kept off the floor and this will help with covid-19 spreading prevention in school, along with the current wipe-downs to keep the area clean.

3 C In what ways would your proposed invention be different and/or better than existing solutions, if any?

As stated, our products are better designed for this specialised purpose than current existing products, which face practicality and effectiveness issues.

3 D What are some problems you expect in the course of your proposed invention?

One problem we might face is that the strength of the material used has to be strong enough to withstand the weight of students' bags, which can be quite heavy, and also ensuring the the weight is distributed among multiple racks so that the racks do not get damaged from the weight.

3 E What and when are the major milestone (project timeline) in your invention?

Thought of problems and formed an idea - 14/2

Made and distributed survey - 27/3

Gathered and analysed results from survey - 30/3

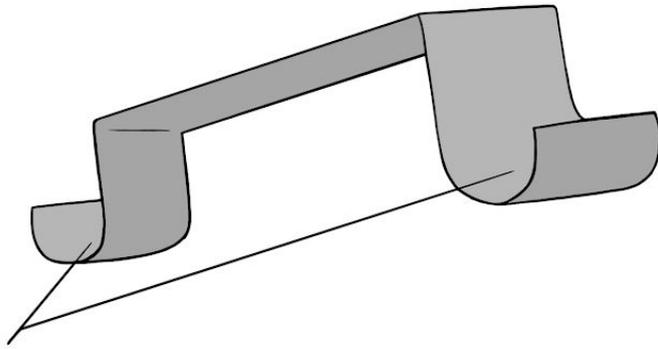
modelled prototype - 30/4

Made final adjustments - 7/7

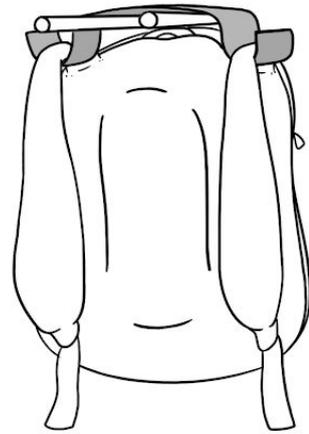
4. Proposed Construction or Modelling Process*

4A Explain why construction of a prototype is not possible and the proof of concept is needed in your case.

Due to the unfortunate, unexpected Covid-19 situation, we were unable to meet up and create a prototype.



TWO METAL HOOKS
KEEP THE BAG
SUSPENDED
BENEATH THE
TABLE



PROJECT HOOKED



-TAKES UP
TABLETOP
SPACE

-DIFFICULT TO
ACCESS



-ADHESIVE
CANNOT STICK
TO TABLE



-TOO LONG, WILL
CAUSE BAG TO
DRAG ALONG
THE FLOOR

Our prototype is a simple design of a hook meant to be hung under students' tables to allow them to hang their bags. Our product will be made of steel and will measure approximately 7cm.

4B Briefly explain how the video / animation can effectively show how your invention will work and the different considerations.

The pictures show how the hook will be installed and a potential scenario of the hook in use. The hook will be installed on two metal rails beneath a standard school table, the two hooks will each hold a strap of the student's bag, such that no part of the bag should make contact with the floor.

5. References

Read <http://www.bibme.org/citation-guide/apa/> on how to cite references.

6 A Cite the references you have used for your project work. Your source of reference should come from different types (eg books, magazine, websites, journal articles, interview, photographs, product brochure, reviews etc.)

-Why Mess Causes Stress: 8 Reasons, 8 Remedies. (2012, March 14). Retrieved August 08, 2020, from <https://www.psychologytoday.com/sg/blog/high-octane-women/201203/why-mess-causes-stress-8-reasons-8-remedies>

BOMEI Steel S Hook. (n.d.). Retrieved August 11, 2020, from <https://hardwarestore.sg/product/bomei-steel-s-hook/>

BOMEI Steel S Hook. (n.d.). Retrieved August 11, 2020, from <https://hardwarestore.sg/product/bomei-steel-s-hook/>

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