



HWA CHONG INSTITUTION (HIGH SCHOOL SECTION)

PROJECT WORK 2021

Group: Project Evergreen (Group ID: 4-010)

Category: 4 - Resource development

Leader: Kaden Cheng Zi Qian 2P3 (11)

Members: Chng Ming Cong Jerrell 2P3 (05)

Lee Eu Shien 2P3 (13)

Wang Hongyu 2P3 (30)

Teacher-mentor: Mrs Sukhdevi Kaur Grewal

Abstract:

Project Evergreen aims to promote the usage of biodegradable products through spreading more information about how it will slow down climate change, using its resource package.

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1 INTRODUCTION

1.1 Background

Plastic pollution is an especially relevant topic in our world today. From plastic drink straws, to product packaging we use a lot of it. However, the story of the plastic we use rarely ends well. Most of the plastic we use ends up in landfills and the ocean, forming a “new continent” spanning from the coast off California to the west of Japan, nearly 3 times the size of France as of 2020. Plastic also causes land pollution. When we burn plastics, toxic gases are also released, such as polychlorinated biphenyls and other dioxins and greenhouse gases like carbon dioxide which can further harm the environment by trapping heat, promoting global warming which further tears down the ozone layer, earth’s protective layer. Thus this greatly affects us, humans in many ways

1.2 Rationale

Apart from finding better ways to dispose of plastic, or get rid of it from the environment, our project decided to go onto the path of using biodegradable materials that can substitute plastic and still serve the same functions while being widely available. Our group also decided to use comics to show this information such that it is easier for our audience to read and understand. Furthermore, in our world of social media, people would want faster ways to absorb information instead of reading large chunks of texts, hence, we are able to get more people to read our information by making it simpler to understand through comics.

1.3 Target audience

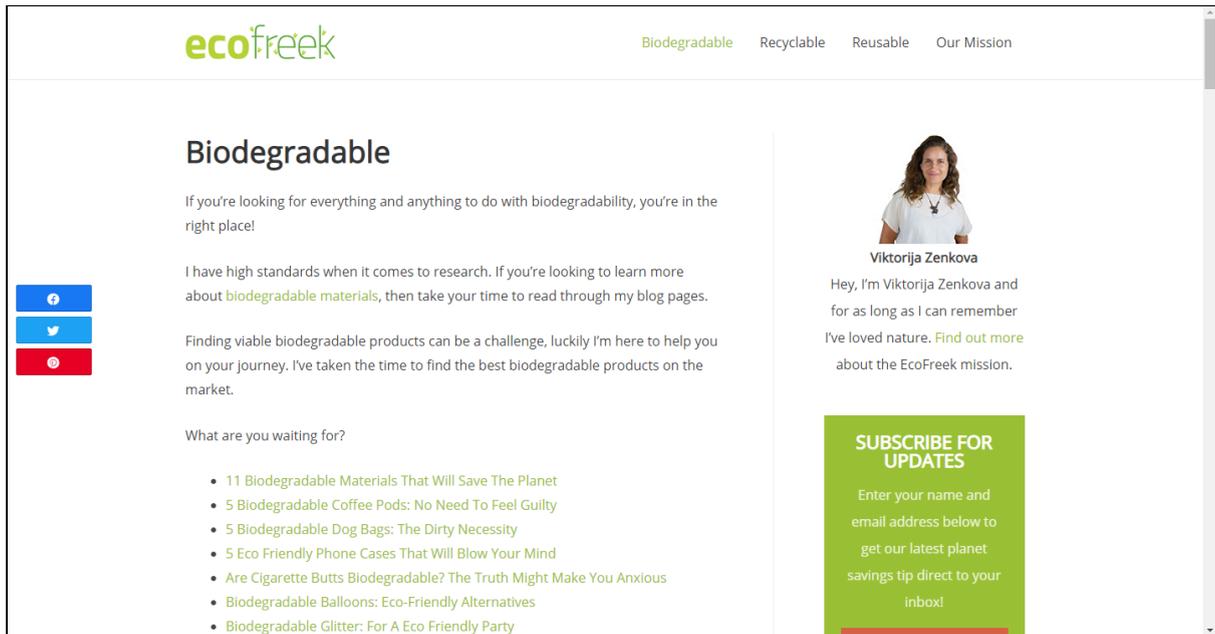
Our target audience is teenagers aged 12 to 16 years old, as the future of our plastic problem lies in the hands of the younger generation.

1.4 Objectives

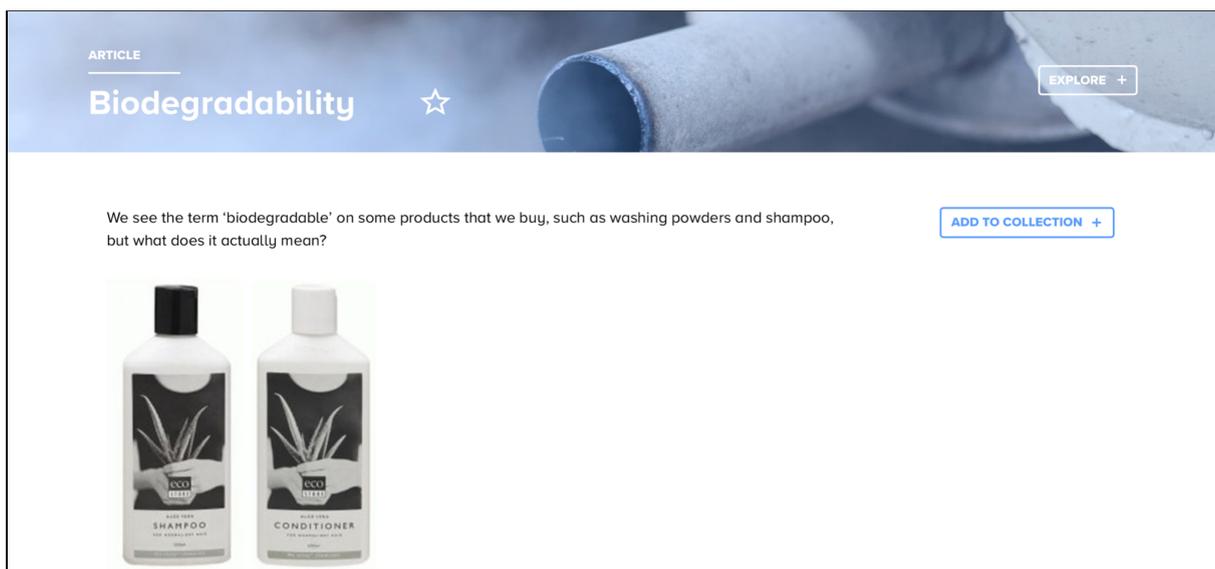
Our group's objective is to encourage people to switch to using biodegradable materials through educating them on the importance of reducing our plastic waste and substituting the plastics in our lives with other materials which would not harm the environment with easy-to-read comics.

2 LITERATURE REVIEW

We also searched up on biodegradable materials through different methods, including visiting different trustworthy websites online which focuses on biodegradability just like what we are doing. One of which is Ecofreek. Ecofreek is a website which provides a clear indication of different biodegradable resources, such as bamboo and cork, and also explanation on the importance of using biodegradable materials. Science learn is also a website which we visited. It provides information about how biodegradable materials can decompose faster, and what it means by “Bio” and “Degradable”.



^ Ecofreek website



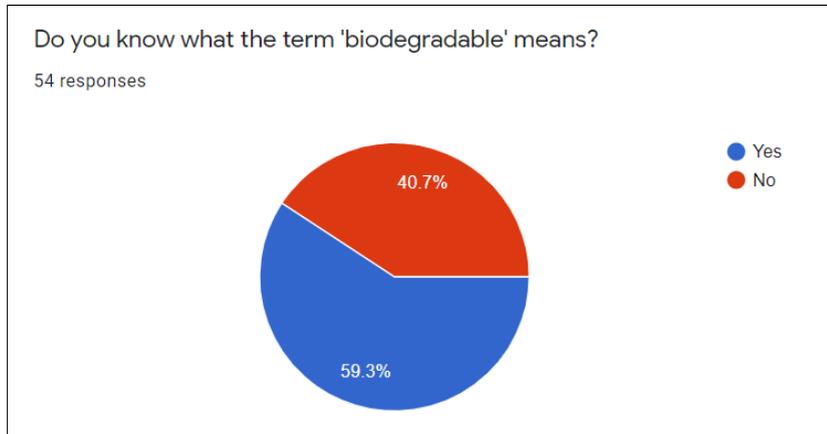
^ Sciencelearn website

We noticed that these websites only covered the importance of biodegradability and the variety of biodegradable materials, but they are not very impactful towards people doing their part to protect the planet. Hence, we decided to offer a more detailed explanation to biodegradable materials to first timers, and also include a compilation of the affordable products which they can buy to start saving the planet. Furthermore, we also included comics to bring in more interest to this topic of biodegradability. We believe that through the usage of comics, which are much easier to read than big paragraphs of text, our target audience will be willing to gain knowledge on this topic and understand the importance of using biodegradable products instead of commercial plastics.

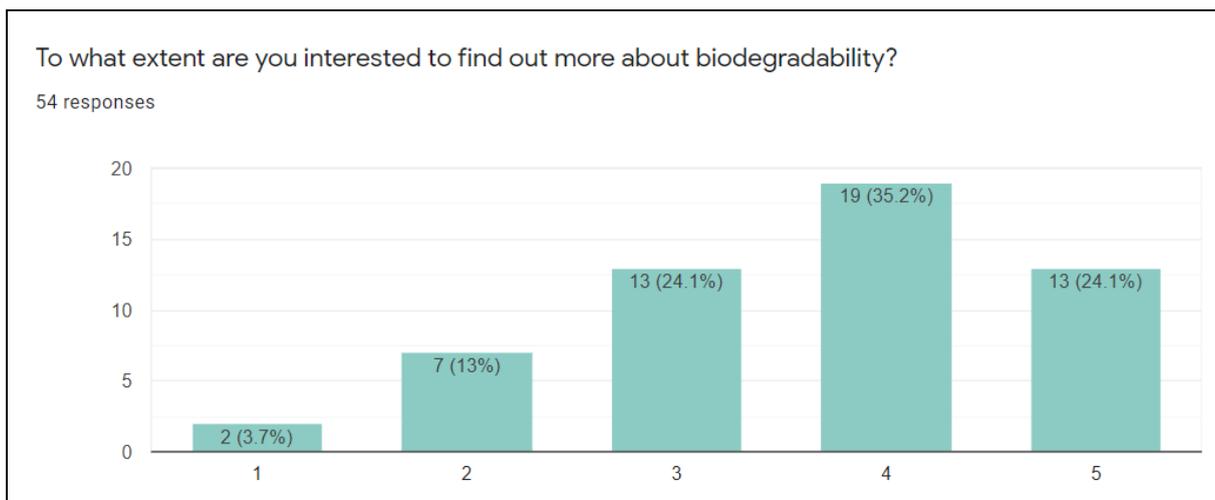
3 METHODOLOGY

3.1 Needs analysis

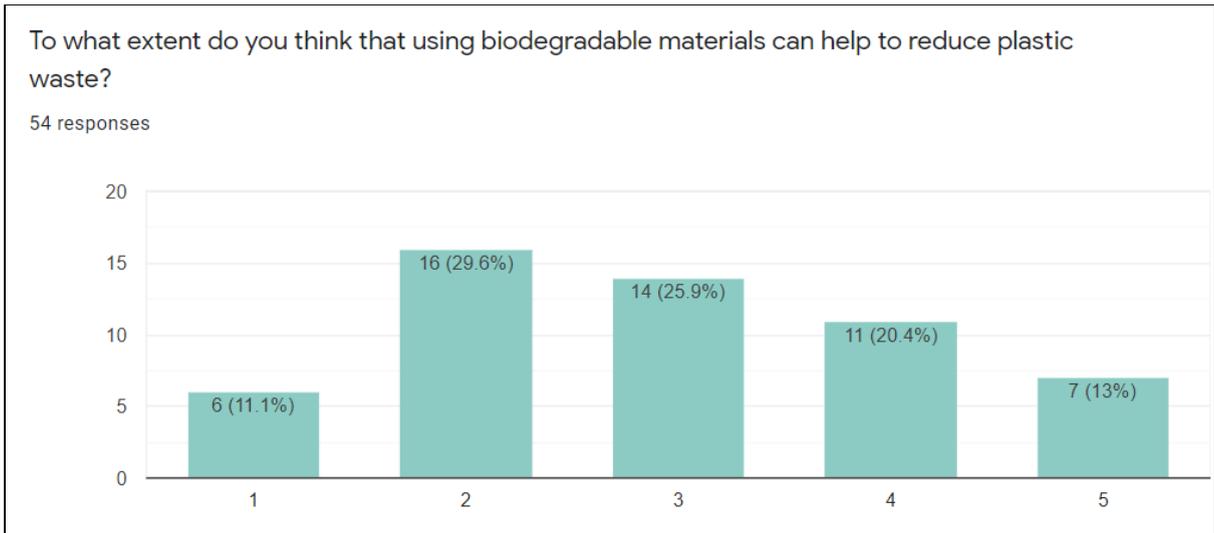
In total, we gathered **54** responses. The respondents consisted mostly of males (32 males and 22 females), ages ranging from 12-16.



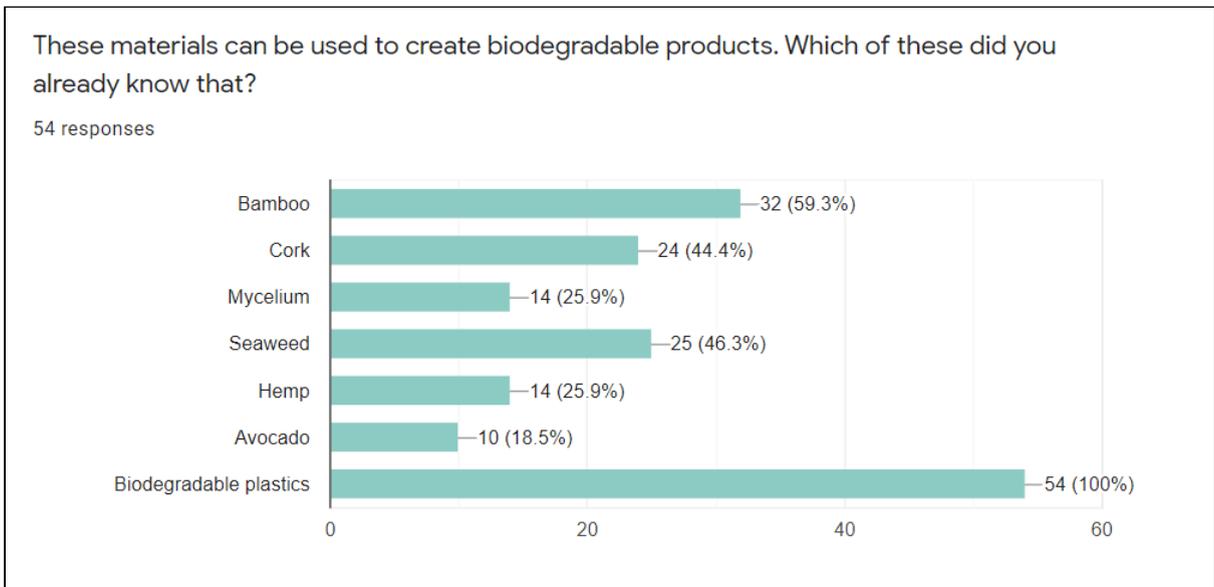
^ Fig 1: About 40% of our respondents claimed not to know what biodegradable meant.



^ Fig 2: About 60% of respondents were interested in learning more about this topic.



^ Fig 3: To our surprise, there were quite a great number of people who were unaware of how plastic waste would be reduced by using biodegradable materials.



^ Fig 4: We gathered a few examples of materials which could be used to create biodegradable plastics and not all were known to people.

Therefore, we concluded that there was a need for us to spread more information on biodegradability through Project Evergreen.

3.2 Construction of resources

Resources	Things included
Instagram page	<ul style="list-style-type: none">● Comics on biodegradability● Quizzes● Fun facts
Website	<ul style="list-style-type: none">● Detailed information on biodegradability● Climate simulations● Collation of all the comics drawn● Challenge (with prizes)
Video	<ul style="list-style-type: none">● Interviews with people from our target audiences' age group

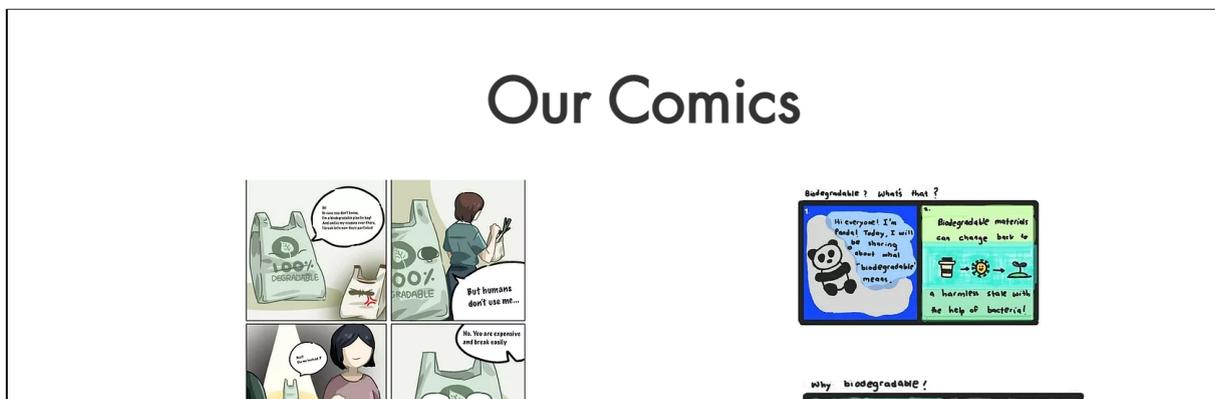
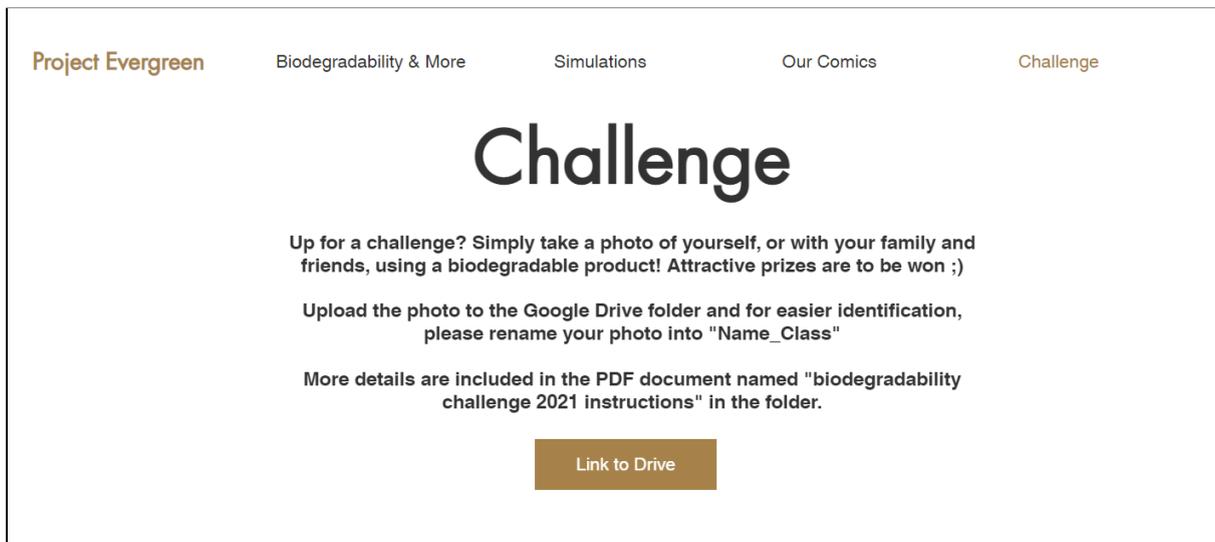
3.3 Instagram account (@Project.evergreen_)

Since our target audience is teenagers, ages ranging 13-17, the usage of Instagram is extremely prevalent. Therefore by creating an Instagram account, we would be able to reach out to more of our target audience. The account is updated regularly with the comics we have drawn and/or fun facts about biodegradability. Quizzes are also occasionally posted to check if our methods have been effective in achieving our aim. Currently, we have 105 followers. We hope to be able to reach out to more people, preferably 200.

3.4 Biodegradability website

The biodegradability website was made in order to better appeal to the target audience by making the information more easily accessible and convenient. The website has all the information we gathered through research, links to biodegradable products which have been rated according to price, average durability and accessibility, to encourage people to buy and use biodegradable products. We also created a challenge with a point system as an incentive to encourage the usage of biodegradable products.

Examples of the pages on our website:

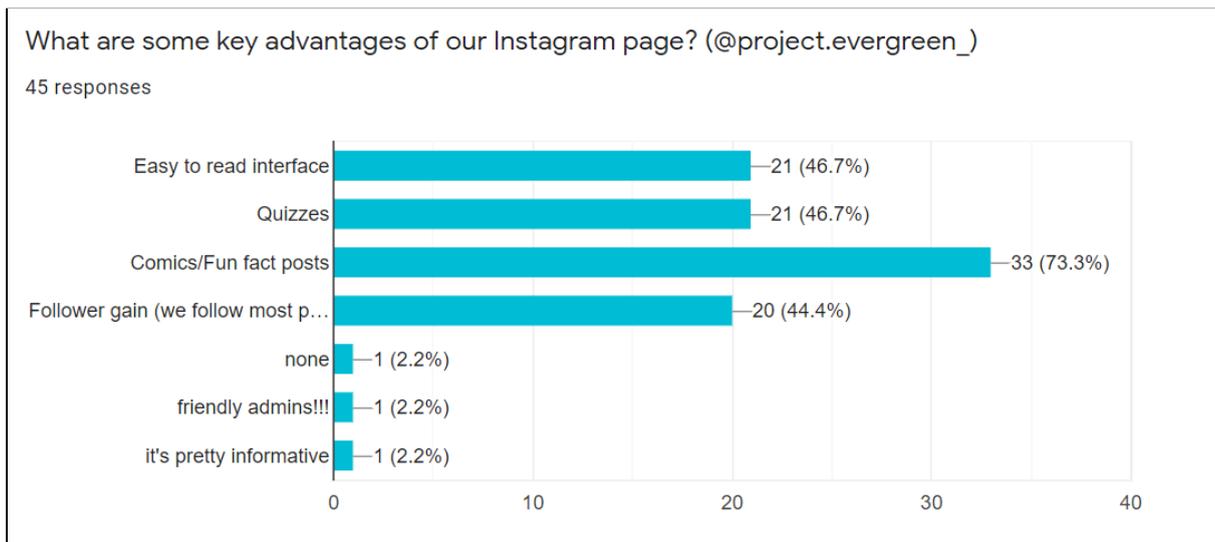


(Link to website: <https://evergreenprojectye.wixsite.com/my-site>)

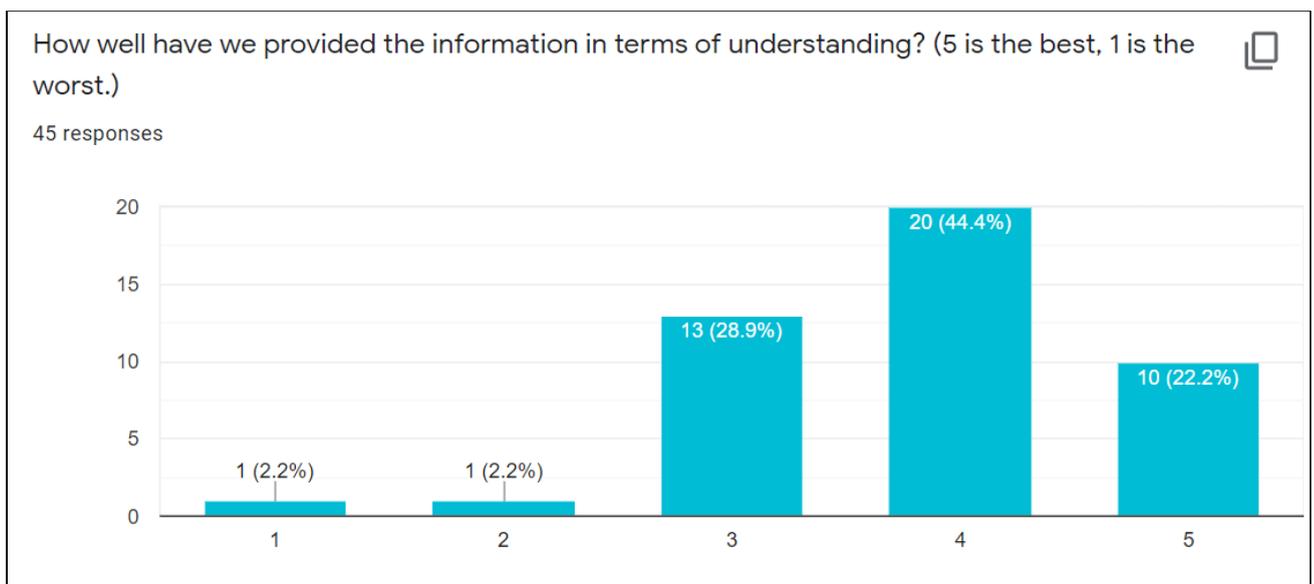
4 PILOT STUDY AND AMENDMENTS

4.1 Pilot study

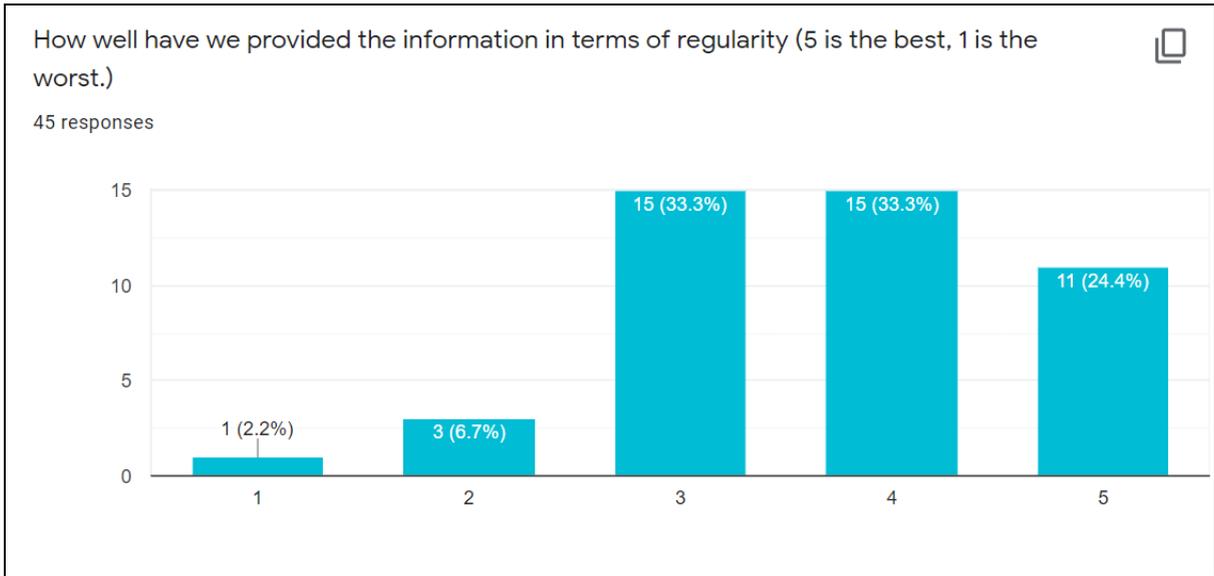
After roughly 5 months, in May, we came up with the first pilot study. We sent out the form to all the same participants from the needs analysis from before, who had been keeping up with our project. In total, there were 45 participants in this form. These respondents were all the same participants from the needs analysis from before. The results are as shown below:



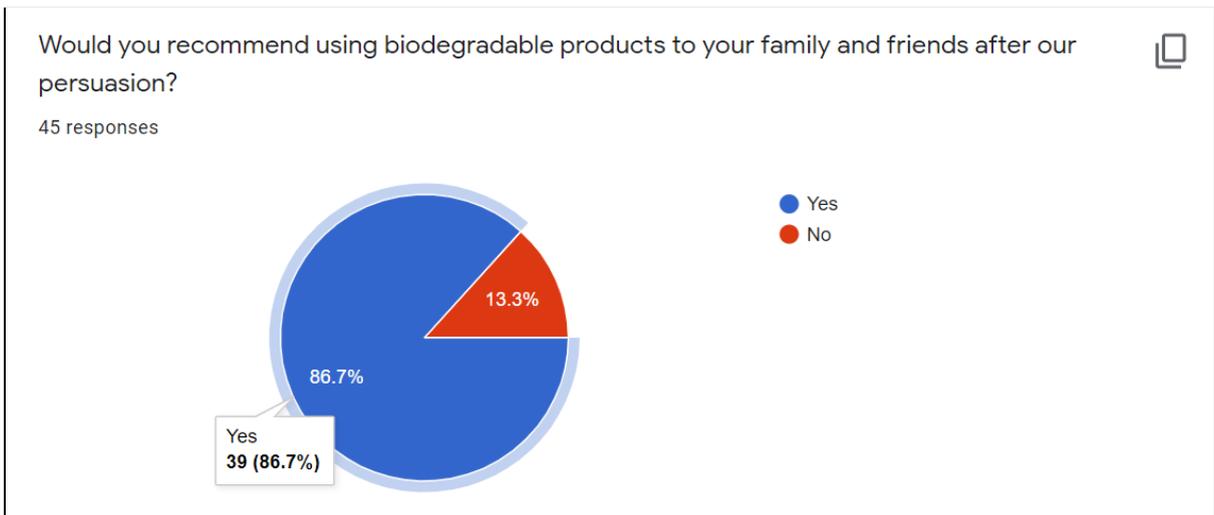
^ Fig 1: From these questions, we found out that our comics were the most well received by our target audience as 33 out of the 45 respondents voted for it, followed by the quizzes, tied with our easy-to-read interface with 21 votes.



^ Fig 2: A total of 27 people indicated that they found the information easy to understand. However, there is much room for improvement since there were still a total of 15 people who were unsatisfied.



^ Fig 3: While 26 people indicated that the regularity of posts were just right, 19 of them found that we have not been posting frequently enough.



^ Fig 4: 39 of our respondents indicated that they would recommend using biodegradable products to their family and friends. However, there were still 6 of them who felt that it was not worth recommending.

4.2 Amendments to resource package

After drawing the first comic, we realised that we had used up too much time due to the amount of details required. Therefore, in order to speed up the process and meet our target audiences' requirements for the frequency as shown in Fig 3, we decided to simplify the drawings. However, the content remained the same, in order to ensure that our target audience learned as much information while we could come up with more of them more quickly.

4.4 Limitations

Although we have attempted to make our resources as informative as possible, it would not be able to fully convince everyone to. This is due to the fact that even after persuasion, some people may still be too lazy to switch to a different product from the usual ones they have always been using, and it is also possible that they find the products too expensive since the biodegradable products are slightly more expensive than commercial products.

5 CONCLUSION

Project Evergreen has been a fulfilling learning journey and experience for us. It was definitely a test of our time management skills as we had many things on our hands while undertaking this project. We have spent much time researching information about the topic of biodegradability. Without prior knowledge on building websites, building it was also a challenge as we had to start from scratch. Not to mention the many comics that we have drawn, each explaining the different materials that can be made from biodegradable sources. We also have acquired many essential skills like communication and teamwork skills which were needed throughout the project for it to be successful. In a nutshell, we hope that Project Evergreen will be beneficial to educating people on the importance of biodegradability in the world, by introducing the different types of biodegradable materials in our website. In doing so, we also hope that people will be more mindful about using single use plastics in the future.

References

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(The varieties of biodegradable materials)
<https://www.thebalancesmb.com/what-does-biodegradable-mean-2538213>
(The definition of biodegradable)