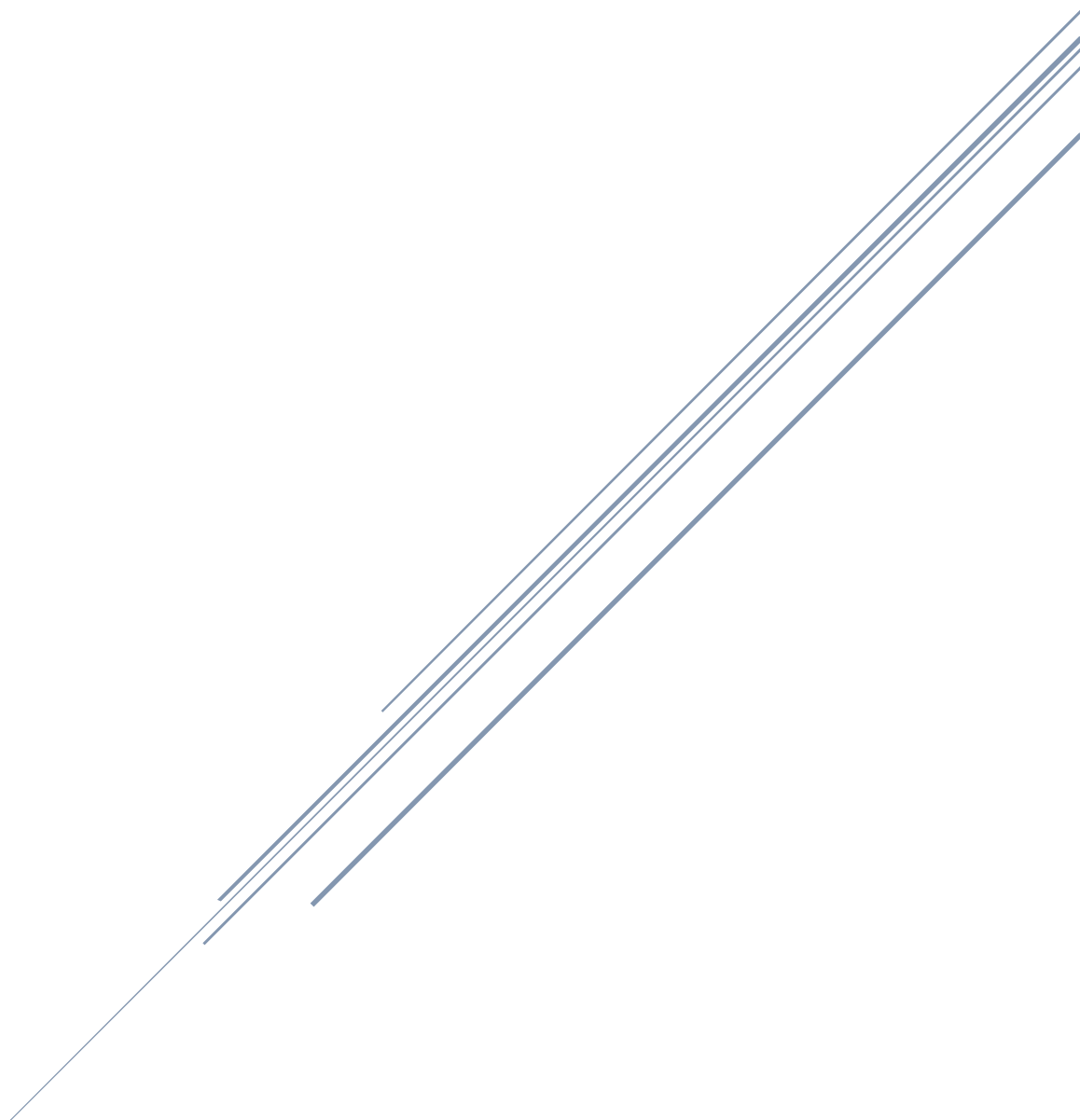


A Plastic Free Bishops

Big Ideas Sustainable Development Goal 15

Adam Lewis, Robbie Dow and Matthew Malan



Contents

Introduction	2
This is us:.....	2
Our project relates to multiple SDG's:.....	4
Roadmap of our group above land:	7
Body	8
We read up and found this interesting:.....	8
What we planned to do:	13
What we did and our evidence of it:	16
And this is how well it worked:.....	33
Conclusion	35
Our future ambitions for this project:	36
Our Individual Reflections:.....	38
Bibliography	44

Introduction

This is us:

We are a group of Grade 9 Bishops boys who are part of the 2019 Big Ideas course at Bishops Diocesan College in Rondebosch, Cape Town. This course is a new curriculum, started in 2018, that was inspired by a group of teachers who wanted to change the way that we as students are educated. The whole course is based on the 17 Sustainable development goals and aims at better future fitting us for the world we will inherit. At the beginning of the course we were loaded with information about these SDG's (sustainable development goals) and the different threats that our world faces. After we had learnt about the SDG's we had to choose the one that resonated with us the most. So, we were brought into a class and on the walls of a classroom were posters of all the 17 SDG's. We were asked to stand next to the SDG that we felt the strongest about. The boys standing at each SDG were put into the same group. These groups were the groups we would be working with for the remainder of the year. Our group comprised of three boys; Robbie Dow and Matthew Malan from Ogilvie House and Adam Lewis From Gray House and we were very pleased about this because we all knew that we would work together well as a group.

We all chose the SDG Life on Land and we were given Mrs. Peel as our coach. Our coach would play a critical role in the progress of our project and she would guide us through the rest of the year.



This is our group hard at work

We are all from privileged backgrounds and we were mostly unaware of the problems that the modern-day world faces. I think this is why we all decided to go into this course, and we have all greatly benefited from it. Everything that we have learnt and all the skills we have acquired throughout the Big Ideas course have helped us to creatively collaborate in order to critically think our way through Big Idea's and we hope to be able to communicate our solution successfully.

The problem that we are basing our project on is plastic and how producers and sellers excessively package their products with plastic. We are all appalled at how some people don't care about the environment. The problem of plastic pollution affects the environment, almost all ecosystems on earth, the animals and plants that live on our planet and ultimately it affects us humans and the survival of our species. The putting together of our project has taken place on campus (in the tuckshop and in lectures), at Nude Foods (in Zonnebloem in Cape Town) and at a major online retailer (here forth know as Company X). It has been a privilege to stay local and work within our own school, trying to change the world one step at a time. We aimed to reduce the plastic consumption at Bishops and in turn transform our environment into a cleaner and safer place for all. What inspired us to pursue this path was the suffering of animals and the environment from the plastic pollution that we as humans create.

Our project relates to multiple SDG's:

- **SDG 15 (Life on land)** and **14 (Life below water)** because it is helping reduce the amount of plastic that gets produced and used, this will help the living and non-living ecosystems on land and in the water thrive and not be polluted and damaged by harmful man-made objects.



- **13 (Climate action)** because it reduces greenhouse gasses. Most people don't really look at plastic as a major contributor to climate change as it is firstly, overshadowed by fossil fuels and secondly people see plastic mostly as only a threat to creatures on land and in the ocean. However, plastic must be produced and so plastic contributes to

greenhouse gas emissions in every stage of its life cycle. Our project aims to reduce the need for producing single use plastics and in turn reduce greenhouse gas emissions on a very small scale.



- **12 (Responsible consumption and production)** because if products are being packaged with excessive plastic packaging then that is non responsible consumption and production. The producers of these products are not taking responsibility for the plastic that they are producing.



- **11 (Sustainable cities and communities)** because if everything within a certain community (e.g. Bishops) is packaged with excessive plastic then that community and area will not be sustainable.



Because plastic has a very broad effect on the earth, we feel that the problem of excessive plastic packaging is very interlinked with all these SDG's.

We chose to address the problem of excess packaging, as after a survey (in which we asked questions about 3 different environmental problems). We established that excess packaging is what the Grade 8s and 9s thought was the biggest problem in our country out of these three. As a group we all love the planet, the outdoors and all South Africa's natural beauty, and we want to do our part to protect it for the future generations of Homo Sapiens to come. We want them to remember our generation as the people who did something to help the earth and we don't want them to view us the way we view our past generations now, as failures in protecting/restoring our environment.

We faced many challenges and obstacles that we had to overcome, but that was part of the learning curve and it helped us strengthen our project. We didn't spend too much time in the cloud, but we had multiple ideas and it was hard to choose which one we wanted to use, so we had to make a very challenging choice. We based our choice on the research we had done and how realistic the ideas were. One of the other challenges we faced was getting interviews with some people because people are generally already very busy in their work lives. It was very frustrating. We knew we wanted to focus and start early, and delays in getting interviews were not part of our plan. However, through perseverance we were able to meet up first with Paul from Nude Foods and then Mrs Whitehead from the school tuckshop. Organising these interviews taught us some very important life lessons. We learned the art of patience and most importantly we learnt how to construct emails and communicate with people, which is a very important skill to have in the modern-day world.

Roadmap of our group above land:

1. Wax worms and how we could use them to clean up plastic. What are waxworms?
Wax worms are worms that can eat and decompose plastic in relatively large quantities for how small they are.
2. Alien invasive trees damage our ecosystems and we wanted to try and spread awareness.
3. Creating an app to identify alien invasive trees and then report them to the Government, and companies that attempt to get rid of them.
4. We wanted to try and eliminate excess packaging at Bishops.

5. What we ended up doing:

We targeted the tuckshop and tried to get rid of all their plastic packaging. We found out that 90% of their plastic packaging was already biodegradable. So now we are trying to get the tuckshop to allow people to bring and use their own reusable coffee cups. We are also going to try our best to get rid of all plastic bags on the campus and we are going to try and implement a new school rule that Bishops' boys aren't allowed to use plastic bags on the campus. We are also going to make sure that boys have access to cheap, but quality, reusable bags that can be used as an alternative.

Body

We read up and found this interesting:

Before we were all put in a group together, we had our own individual ideas and thoughts on which SDG we wanted to target. We were all very happy when we were put into the same group as we trusted each other and knew that we could all work well together.

Our starting point in this project was looking at SDG 15 and its sub targets. Getting an idea of what it was and what it focused on. We spent quite a lot of time on this, as we felt like understanding our SDG was essential to an effective and successful project. Researching the sub targets enabled us to become aware of problems related to our goal which in turn helped us start scheming projects. We wanted to try and keep it relevant to Cape Town and Bishops and we wanted to keep it small and achievable but not too small so that it was ineffective.

Our first idea came out of the problem of plastic pollution. We knew how bad this problem was, so we decided to try and come up with ideas revolving around this. We all got to work pondering solutions and then one of us came upon an amazing article about worms that could eat plastic. They were called waxworms. Overnight, 100 wax worms could degrade 92 milligrams of a plastic shopping bag (Arnold, 2017). We thought that if we purchased them, we could try to target the school's plastic recycling campaign and then try to use these worms to break down the plastic. We embarked on further digging and research on the topic and eventually, through Googling on the internet it came to our attention that unfortunately we weren't going to be able to source them locally in South Africa. Other reasons that deterred us from using this as a project were that they ate plastic very slowly and that they turned into moths after 2 months (this means that you would have to replace them often as the moth phase was of no use to us).

Thought Bubble

"Right now, we are in the cloud. We are brain storming a lot of ideas and I was finding out amazing new things from all the research we are doing. I think we are going to leave "the cloud" soon and I am very excited for what this project could turn out to be."



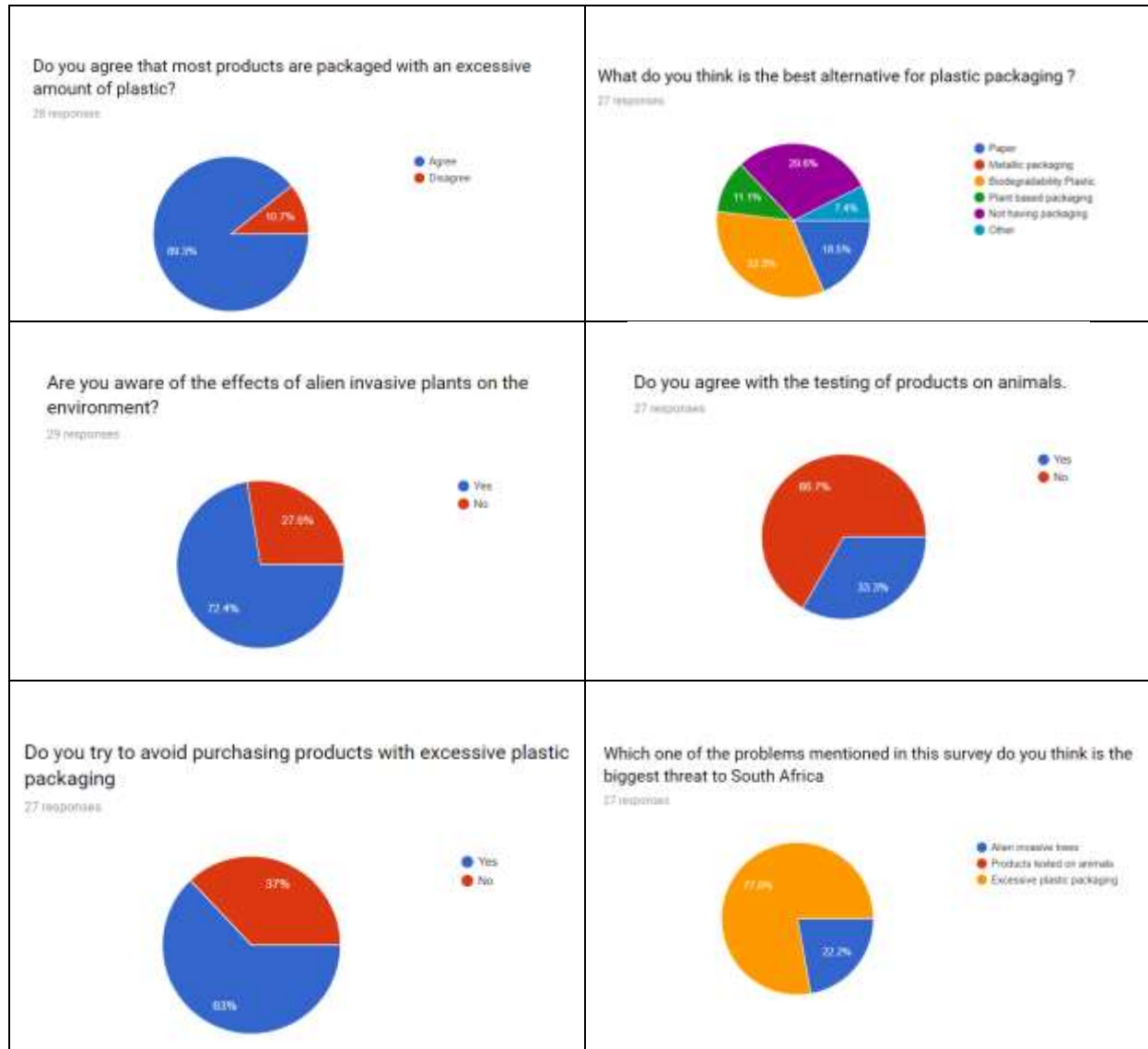
After this first fail of an idea, we went back to the drawing board relooking at all the sub targets of the SDG. Then we remembered that in some of the previous research that we had done on waxworms, that they were a very invasive species that damage ecosystems that they don't belong in. Then this got us thinking about invasive species of plants and animals. So, we did some research on which invasive plants and animals have impacted and are impacting South Africa, but mainly Cape Town and we all came up with the same conclusion. This conclusion was that alien invasive plants have a huge impact on our indigenous environment. Alien invasive plants are plants that are growing outside of their natural boundaries and therefor have negative effects on the environment that they have been introduced into. They reduce surface runoff, they decrease groundwater supplies, they cause habitat destruction and biological desserts (areas of land that are deprived of biodiversity), they intensify flooding, they increase the risk and intensity of wildfires, they damage the indigenous vegetation and soil, leading to excessive erosion and if we didn't have them, we would have 30% more water (Author, 2017). We found the water fact very interesting as everyone knows that the country is getting drier and drier. We already struggle with droughts and now there are these aliens tapping into our very limited water supply. We thought that targeting alien invasive plants as our project would be a very

relevant project. We thought of having a day at school that we would invite people to come and on this day, we would educate people on these alien plants and the effects that they have on our country. We would also buy a whole lot of small indigenous trees that the people who attended the day could buy and plant on the Bishops grounds and surrounds, and then we would use this money to give to an organization that controls alien trees. We knew this was a good option for a Big Idea.

We then started coming up with other projects and this led to the idea of creating an app. This app would allow the user to scan a plant or tree and then it would tell them whether it was invasive or not. It would also provide an easy way to report what you found to an organisation controlling the alien invasive plants. Unfortunately, to our dismay, creating an app was the same price as buying an island. So, we either had to abandon this idea or think of a new project around this idea.

So, we all agreed we had actually come up with this idea so quickly and hadn't explored other options. So, we carried on brainstorming and then we thought about things we felt strongly about and wanted to change. This led us to products that are tested on animals; we began researching this concept and found out that it was mostly beauty products, a lot of which are sold in Cape Town (Author, 2017)! With all these ideas and so many things we could potentially do, we decided to create a survey asking the public what they thought was the biggest problem in our local communities. Our topics in the survey were: Alien invasive plants; products tested on animals and excessive plastic. We asked the public which problem they thought was the biggest and the one they thought we should focus on for our project.

Here are the graphical results of the survey responses.



The results showed that 75% (the majority) thought that plastic was the biggest problem in south Africa and that we should pursue reducing plastic packaging as a project. After you had completed the survey there were videos that shed light on the problems if you wanted to learn more on that topic. Here is a link to our survey

(<https://docs.google.com/forms/d/1z1DZKbAJbQV4topAxUePSLE0eSMCXsHcWtqbxnnBI-Y/edit?ts=5d775118>) and here are the links to the videos on the survey:

- Invasive species (https://www.youtube.com/watch?v=spTWwqVP_2s).
- Products tested on Animals (https://www.youtube.com/watch?v=3lb9w-XtaYA&feature=emb_title)
- Excessive plastic packaging (https://www.youtube.com/watch?v=HW-ljJexN-M&feature=emb_title)

After receiving the results, we started focusing on plastic and what we could do to reduce it in some way. We started to look around our city to find a problem that would really be relevant to where we live. A few days later Robbie came to school and told us about how he had ordered something from an online store, and it came in a huge cardboard box, filled with excessive amounts of nonrecyclable plastic materials to protect the product. The item that he had bought was small and didn't need protection as it already came in a plastic and cardboard box. This is when we clicked and knew that we had a "BIG IDEA".

What we planned to do:

After we had decided to pursue trying to reduce plastic packaging at Bishops as a project, we had so many amazing ideas that we thought could become huge successes. (No Author, 2018) “We did some research about plastic and to our amazement, we as humans make 300 million tons of plastic each year. 50 percent of this is single use plastic. 8% of this 300 million tons ends up in our oceans. We found out that packaging was the biggest use of plastic, it made up 40% of all plastic produced. 500 billion plastic bags are used per year and all of these bags have an average time of use of 15 minutes” (<https://plasticoceans.org/the-facts/>”). We were absolutely flabbergasted when we found these figures. It enabled us to narrow our ideas down a bit, but we were still left with quite a few. Our original main ideas included: replacing the packaging at the tuck-shop with biodegradable plastic; getting Spar to not sell their plastic bags to Bishops boys while trying to offer a long-term alternative for their plastic bags; trying to get boys to limit their plastic packaging in their lunchboxes and finally selling reusable cups from the tuck-shop with the Bishops and Origin logos on them.

We wanted to try and limit the plastic packaging and plastic waste that the tuckshop uses and produces because we knew that the tuckshop at the school was responsible for most of the school’s single use plastic and waste. We knew that we either had to limit it or get rid of it completely. The problem was that some of the products needed plastic packaging and couldn’t use any alternatives as the properties of plastic are perfect for the storing of food (No Author, 2019). We needed to find something with similar properties, but that does less damage to the environment. We found a company called Eco-pack (Ecopack, 2017) (NA, 2019) (Anon., n.d.) who made a plastic that is completely biodegradable and eco-friendly, this plastic is called Polylactic Acid (PLA). PLA is known as a bioplastic and it is derived out of biomass. It is used for 3D printing, plastic bottles and medical devices. It

is recyclable because when you melt it turns into a liquid that can be moulded in to something else. It can be cooled and heated multiple times without major degradation of the plastic itself. It is nontoxic so it can be used in the packaging of food and it biodegrades within 6-24 months. Although it biodegrades, it is very robust and can be used in many places where usual petroleum plastic is used (Rogers, 2015).

We also wanted to get Spar to not sell plastic bags to Bishops boys. The reason for this was every time we saw someone coming back from Spar in Sillwood with more than two items, they had a plastic bag. We thought that this was very unnecessary and excessive, as having to carry 4 or 5 items 700 meters isn't much of a hassle. The problem with humanity is that we are too lazy and would much rather have convenience than save the planet. Plastic bags kill wildlife and cost money to clean up once they have been littered. Animals either mistake plastic bags for food or they get tangled and trapped inside. Often when animals eat plastic bags, they think that they are full and don't need to eat but then they starve to death. So, we thought if we could stop Spar from supplying Bishops' boys with plastic bags, we could decrease the school's waste as these bags are only used once, thrown away and then the next day another one gets bought. But even if we got Spar to stop supplying the boys with plastic bags, they would still want something to put their items that they have purchased in. We decided to try to get the school shop to sell a reusable shopping bag. "It is estimated that 500 single use plastic bags are replaced by using one recycled bag for a year" (No Author, 2019). We were also thinking about and many other online shops that deliver the products that you buy online to your house. We knew that these online shops were big culprits in the world of excessive packaging. We thought that if we could target them for our project it would be brilliant, but this wouldn't really be realistic as they are huge multi-million-rand corporate businesses and we were aware that it was very unlikely that they would listen to us as a small group of grade nines.

Thought Bubble

After doing all of this research had come up with some facts that really amazed us and we were all very happy that there was an eco-friendly plastic out there.



We are all were very aware that the school is really wanting everyone to use reusable water bottles and coffee cups at school to try and get rid of all the plastic ones that are used at school. This fact got us thinking and we came with the idea of trying to get the tuckshop to sell reusable coffee cups made from bamboo as the tuckshop sells their coffee and all other hot drinks in those plastic-coated cardboard cups. If we could get the tuckshop to sell these reusable cups, then people wouldn't have to use the plastic-coated cardboard ones. We would also then be able to give boys a discount off their drink if they used their reusable cups.

Then we thought to add to this we could try to start a movement where the day-boys at Bishops would try not to use any single use plastic at all in their lunchboxes, because we know that most Bishops boys' lunches are full of single use plastic packaging to keep the food fresh. Then we would push the use of reusable containers to put the food into. You may think that shrink wrap is the greatest invention in the world, but we soon found out that it isn't as wonderful as we all thought it was. Shrink wrap is a huge contributor to the plastic pollution crises that we face today, it is extremely difficult to recycle, it is made from dangerously harmful chemicals that get released into the environment and it takes

millions of years to break down because of its properties. We found that this harmful wrap was used in dayboys' lunches at school and we wanted to put an end to the use of this disguised monster that lurks in our lunchboxes (Gibbens, 2019).

What we did and our evidence of it:

We started off with being reminded how much plastic the tuckshop uses to package some of their products. We knew about cling wrap and how bad it was for the environment, so we went down to the tuckshop to go and have a look at the plastic packaging that they used.



This is us investigating the tuck-shop's packaging in preparation for our interview.

We thought that some of the foods that they sold didn't need plastic packaging or the plastic could be substituted for a biodegradable plastic called PLA. Our original idea was to try and eliminate all plastic at the tuckshop and replace it with PLA plastic. We had the idea of what we wanted to do and where we wanted to implement it, but we wanted to get some ideas on how we could implement it in the tuck shop. So, we were talking about this in one of our Big Ideas periods and Mr Maree overheard our conversation. He asked us what our idea was, so we explained it to him, and he suggested that we must go to a shop called Nude Foods. We did some research and we found out that Nude foods is a shop that uses no plastic packaging and sells completely organic and biodegradable products (Rubin, 2017). We made the decision to go to Nude Foods to meet with the Paul Rubin, the owner of the shop.

Questions for Paul at Nude Foods

- Has being plastic free had any effects on your business?
- What made you decide to make a non-plastic business?
- What effects has it has on your customers\ are they more happy or sad?
- How have you done it when literally everything comes in plastic these days?
- What food did you struggle to package or couldn't package?
- Are there any suggestions that you have for us in trying to make our tuckshop plastic free and sustainable?
- Where do you get your packaging from?
- How do you sell the big brands products that are packaged in plastic?
- How do you keep your products fresh?

Thought Bubble

We were really energized after the interview with Paul full stop he inspired us to act on our project rather than just raise awareness we learned so much during the interview we did not only get valuable insight with regards to our projects but we also learned a lot of bars what it is like to earn a plastic free store in the real world and the struggles that come with it



We interviewed the owner and gained some extremely valuable insight on how their shop runs without packaging. It turned out that he started his shop because he felt that there was the need for a “eco” shop in Cape Town and since then, multiple shops have opened all over the country. Paul was the starting point of eco shops in South Africa. During the interview he also gave us some tips on how he thought we could integrate this system/some of his products into our school. We thought of ideas that included giving the boarders environmentally friendly shampoo and soaps. We found out that shampoo and soap weren’t as bad for the environment as we had previously thought. It turns out that the soap compounds degrade very quickly, quickly enough so that it doesn’t cause any problems to the environment. So, this idea soon became a fail because of the reason that the soaps that people are already using aren’t that bad for the environment and we realized that this didn’t really fit into excessive plastic packaging at all. (Abildlund, 2014)



Our visit to Nude Foods



Thought Bubble

In the last week of school, we were very unproductive. We thought that we didn't really need to do anything in this week as we thought that we would have plenty of time in the Fourth Term. We would like to disagree with that comment now as we really could've used this time to make our project greater



We had been doing a lot of research on alternative packaging and prices of them in preparation for our meeting with Origin, and after this interview, thanks to Paul, we were ready to confront them (No Author, 2019). So, on the 8th of October 2019, after a lot of miscommunications and missed meetings we finally managed to meet up with Mrs Whitehead (head of the tuckshop). At the beginning of the interview we proposed our first idea of replacing the packaging they already had with more sustainable and biodegradable packaging. We were quickly shut down when voicing this suggestion. She immediately, rightly so, came to her company's defence saying all their packaging was already biodegradable. After she said this, we wanted to tell her that the plastic Origin uses is no better for the environment and that we could supply her with a 100% eco-friendly alternative; but we felt this was to 'attacking' and we didn't have the confidence to tell her. Our second proposal, however, was more successful, and she was more open to it; this was to sell branded, re-usable cups and water bottles and that she could give those who bought, a discount on certain drinks as well as a loyalty card. She told us that she loved the idea, but we would have to do all the work, i.e. all the marketing, prices and supplying of the cups and bottles. For us the interview didn't go perfectly to plan but we felt that we had finally began our project.

Although we had a good idea of what we wanted to do, it was going to take a lot of hard work and dedication to execute our plans, so we knuckled down and began. We started by researching the cheapest, most reliable eco-cups we could find but decided that going through Paul was our best option as we had already developed a strong relationship with him. We emailed Paul and asked him to give us prices for some eco cups and water bottles. He replied to our email with the following information:

Hi Robbie, Matthew and Adam.

Apologies for the delay.

Coffee Cups:

Minimum order quantity is 50 units

Cost: R84.00 ex VAT per unit for 50-99 units

R79.00 ex-VAT per unit 100+ unit

R200.00 ex VAT once off set up fee for branding of single colour logo

Please provide Logo in PDF for mock-up.

Thought Bubble

We were quite surprised when we saw the email
as we expected the cups to be a lot more
expensive.



After receiving this email from Paul, we immediately went on to email Ms. Whitehead the head of the tuck-shop.

She replied to us saying she would email her manager telling her about our idea. This is what she said:

Good day Candice (the manager)

Hope you are well?

I was approached by the Big ideas group here at Bishops (Grade 9)

One of the ideas that they had was to re-sell reusable coffee cup in the Tuck-shop, they would have them branded and the Origin logo could be placed at the bottom as per their mail below.

I said that I would first have to speak to you before we could make a decision.

Please let me know your thoughts.

Kind regards

At this point in the project our hopes were up, and we were rather confident that the manager of Origin would go ahead with our idea. After this email our project hit a bit of a halt and our motivation dropped. We had to wait a rather long time before finally receiving an update from Ms. Whitehead. During this period of waiting, the only effective thing we really did in our project was organize an outing to an online retailer, Company X (the company requested that we didn't mention their company name). We felt that this outing would be very beneficial as we knew that online retailers were very excessive with their packaging, so we decided to go and meet with the biggest online retailer in the country. Luckily enough we had a connection at Company X, and he helped us tremendously with finding the correct person to talk to. We felt that we were extremely lucky as we all knew just how big and busy Company X was and that the chance to go and interview their head of packaging was the chance of a lifetime. We wanted to ask them about sustainable packaging and why they decided to start reducing their plastic and if it was hard to start this process.

We soon got some disappointing news. We were all sitting in the library for a Big Ideas period when an email popped up on our commuters from Ms. Whitehead. The subject of the email was "update on coffee cups". We opened the email and the first thing said was that Origin were not going to go ahead with our project.

The email below from the management of origin contained reasons why they wouldn't go ahead with the project which we did not necessarily agree with. Here is what the email said:

Hi Anneline,

I know on the face of it this seems like a great and simple idea for building a sustainable environment. We have had in depth conversations with many different stakeholders at the other schools about this exact thing over the years.

We took a decision not do this in schools for many reasons but mostly because of the hygiene risk.

First and foremost, we are responsible for health and safety in the tuck-shops and we cannot guarantee that students will bring clean cups to us. Some students may just rinse out the cup without using the proper detergents and bring it to be refilled after it has been sitting in a classroom somewhere. This is a huge problem because as you know, milk can carry some dangerous bacteria's if the cup is not cleaned properly then that student can get ill. This is further exacerbated if someone is ill and does not wash their cup properly, we can then end up being the source of an outbreak as we must place that cup under our coffee machine. Once again, although a cup may look clean on the surface, we cannot be guaranteed that it has been washed properly.

We also do not have the staff resources to offer cleaning services for cups that are dirty, stopping service to do this is not an option, and as you know boys are not allowed into the kitchens, so we do not want to encourage that as it is also a health and safety risk.

Then there are those that will say they have left their cup and bring another one etc. the cup size many different and it just gets complicated.

We cannot under any circumstances, afford any contamination or health risks, especially in the school environment, so we will be unable to do this project. We do use compostable cups, most of our packing is biodegrade and compostable so I am afraid that will have to do for the moment until there is a practical effective solution to the potential risk.

Just some reading on this:

<https://home.howstuffworks.com/home-improvement/household-hints-tips/cleaning-organizing/often-wash-coffee-cup.htm>

<https://www.telegraph.co.uk/news/2018/01/16/wash-reusable-coffee-cups-every-drink-public-health-england/>

Candice



Vida E Caffè's 100% biodegradable cups

We felt like their reasons for not going ahead weren't valid. Their main point was for health reasons for example when the boys bring in dirty cups. We compared this to Vida Café and Seattle Coffee Company who also sell their own reusable coffee cups and no matter how dirty your cup is, they will still fill it with coffee. So somehow large businesses who have huge risks if someone gets sick could do it but our small little tuck-shop at school couldn't?

Thought Bubble

After receiving this email, we were extremely gutted. We knew how well this project could've worked. We were also very annoyed that it had taken her three weeks to give us the answer as to whether it would work or not, as we thought that this idea would be our Big Idea. But sadly, it turned out that it wouldn't be. There was one benefit that had come out of all of this and that was that we were much better at writing emails and we all felt that this was a huge life skill that we were learning.



We had a chat with Mrs. Anley, and she agreed with us in saying that their main point of hygiene and health is invalid.

After all of this we knew that we had to at least try to come up with a new project. So, we decided to go with the idea of trying to get rid of plastic bags that are used at school and replacing them with reusable shopping bags that could be sold at the school shop. We decided to email Mr. Westwood and ask him if we could create a new rule that would not allow Bishops boys to buy and bring plastic bags onto the campus.

We knew that it was a long shot, but it was worth a try. Almost instantly we got a response, and this is what it said.

Hi Adam

Making a rule like this is a very big decision because one must be willing to engage with all the boys in an on-going way and then police it. Boarders go to Sillwood all the time and return with bags.

You may need to think about finding a sponsor for reusable shopping bags so that boarders can each obtain one cheaply. Then you would need to market the idea etc. etc.

Which teacher are you operating under for this project?

I will ask the executive because I know some schools do this.

Thank you for caring!

This is what the school shop told me..... They are currently using plastic and paper, but are phasing out the plastic so that they use paper only

They also have the re-usable cloth bags as an option

Kind regards

Mr. Westwood

Thought Bubble

This idea that we came up with was a bit of a longshot, but it was worth a try. I was extremely pleased that we got such an immediate response from Mr. Westwood. It was nice that he showed some interest in our project. He also told us what we could do to make our project better. This kind of response really helped us as we were going through a bit of a dip in our project.





The Reusable bag that the school shop sells

Then we went down to the school shop and found out that they were already selling a reusable shopping bag and that they were stopping the use of plastic bags in their shop. The reusable bag costs R40 and it was nice that the school shop is selling them as it made our lives easier as we didn't have to look for an alternative option that people could use instead of the plastic ones that we were going to ban.

We decided to use this project as a secondary project that we would not spend as much time on. Although it was a good idea it would take a lot of time and effort to get authorities to implement the 'no plastic bag rule' and we just unfortunately did not have that time on our hands. We also thought that our coffee cup idea would be a bigger step towards a plastic free Bishops as there are not many negatives to the idea. For instance, we did not think that the boarders or anyone in fact would spend R40 rand on a shopping bag, however people/boys would most likely spend money on a reusable cup as it is a good investment in the long run because every time you get a coffee or hot chocolate you would get the original 'packaging' cost off your drink.

Just as we thought that we were going to have to rule out the coffee cups as an idea we were rescued by Mr. Noel. After one of the Gin Society meetings, we went to chat to him about our project. We told him about how our idea was shut down by Origin and we told him the reasons they had for doing this. He, just like us, thought that these reasons were irrelevant, and he was angry that Origin were unwilling to change their ways for the good of the environment. He asked us to forward an email of the exact response to him, so we

did so. He said that he would mention it at the Bishops sustainability meeting and see what they thought about it and what they thought we should do and what they thought about Origin's reasons as to why they were not going to go through with our re-usable coffee cups idea.

We went to town to visit Company X (the reason that we do this is because they don't want the name of their company mentioned). We wanted to ask them about the sustainable packaging and why they decided to start reducing their plastic and if it was complicated and hard to start this process. They were very friendly and accommodating and it was an amazing experience and a great eye-opener into the corporate world.

We asked them why they changed their packaging from non-recyclable to recyclable and they said that it was a mixture of pressure from the public, them wanting to become more sustainable and the global movement of sustainability. They explained to us that they took all the styrofoam peanuts and plastic void fillers (the objects that they use inside the box so that the object doesn't break) out of their packaging and they replaced them with more sustainable alternative void fillers made from paper. It turned out that their packaging had been sustainable for about 4 years and that they made the paper void fillers at the factory but the boxes they got from an outside supplier.



These photos compare the two types of void fillers

Paper void filler: <https://www.powerpackaging.com.au/wp-content/uploads/2015/02/filleasi-box.jpg>

Plastic void filler: https://cdn11.bigcommerce.com/srd0ndag3a6/content/vspfiles/assets/images/green_recycled_packaging_void_fill_pillows.jpg

They said that they had replaced their tape that was used on the delivery boxes to a plant based one. They had also started using one uniform size of cardboard box so that they waste less cardboard and so that they could improve efficiency. This enabled them to lower their total waste and it also helped them fit more boxes into a delivery truck. This enabled them to do less delivery trips and therefore cut down their carbon footprint.

They told us that most other online retailers were starting to move in the direction of sustainability, and they explained that it is hard to make a huge change in their business as they must check if their consumers are happy with it and all these changes cost money. Instead of just going into full “sustainability” mode, they were slowly integrating it into their business. They told us that if something was returned, they couldn’t reuse the box because then the consumer felt that it had already been opened (as the tape rips off some of the box), but that they could reuse the paper void filler. From the outing we learnt about struggles that big companies face when trying to move toward a more sustainable way. The interview helped us to understand that it is not as easy to reduce a company’s plastic consumption or usage and become more sustainable. It is amazing that so many companies are taking big strides towards making their company a sustainable one.

Thought bubble

I really enjoyed our interview. It gave me a lot of insight into how large corporations control their carbon footprint. I am very happy to see that this company is doing so much to try and reduce their carbon footprint.





Us on our outing to company X

Questions for our outing to Company X

- What have you guys done with regards to your plastic packaging?
- What is currently used in your packaging?
- Has there been any pressure from the public to decrease and rethink your packaging?
- You used to use those Styrofoam pellets and inflatable plastic bags in there packaging, has anything changed, if so, what has changed?
- What makes you guys different to the other online retailers in terms of your packaging?
- Do you agree that most products currently are packaged with an excessive amount of plastic packaging?
- What are the reasons that you guys need to use so much packaging?
- What are the reasons that plastic and styrofoam is used so commonly in packaging?
- Is plastic and styrofoam packaging more expensive than paper and sustainable packaging options?
- How often do people return products? If so, do you reuse the packaging?
- When did your packaging change?
- Do you think that all plastic packaging is going to have to disappear soon?
- Where do you guys get your packaging from?

On one Thursday afternoon Mr. Noel came to speak to us face to face in one of the Think Tanks at school. The first thing he did when he was in the room was tell us about a situation that he had experienced down at the school tuck-shop. The situation was that the tuck-shop refused to fill up his re-usable coffee cup with coffee. He said that the best way to approach a situation like this was to send a very well-structured email full of research to the management of the company that respectfully insured them that their reasons for not going through with our idea were irrelevant and some of the issues that

they said came with the idea were easily solvable and some not issues at all. We knew that we had to be very cautious with this email as if it went wrong it would be detrimental to our project.

This Is what the email said:

Dear Origin Management.

Thank you for your response. It is sad to see that Origin aren't able to modify their business practice in line with future sustainability thinking and other industry standards. From our research, the movement to this type of business model for a coffee service is inevitable going forward. Currently these well-established businesses offer this service:

- **Vida E.**
- **Seattle.**
- **Starbucks.**

St Stithian's college in Johannesburg have a Seattle coffee shop and they run this practice. Some other independent schools also offer this service such as: St Peters, St Dunstan, Michaelhouse and St Albans. We personally have contacted these schools, and they have not had any health issues, nor have they viewed these risks as being a big enough problem to stop them from using coffee cups and single-use plastics (coffee up lids).

We really think that this issue should be discussed further to see if there is a way forward for Bishops in this regard and have copied in Mr. Noel (sustainability coordinator) Mr. Westwood, Mr. King as well as Mrs. Peel.

Kind Regards.

Matthew Malan, Robbie Dow and Adam Lewis.

We are still waiting for a reply from Origin.

And this is how well it worked:

Because our projects are still running and not complete, we can't comment on how well it worked. But what we have done so far in our projects has been very successful. We have been able to get our ideas rolling and many teachers have been very pleased with what we have been doing and they have encouraged us to carry on with our projects even when everything was going south quickly.

What did work for us was the life lesson that we all learnt about the complexity of becoming plastic free, the even bigger complexities of sustainability and the time it takes for the wheels of change to turn. Especially in the big organizations such as company X. When company policies, politics and profits come into play the complexities become a big barrier to the world of change.

Although we were unable to complete our plastic free bishops' projects, we would like to share some insight as to how our group worked. Our group worked extremely well together, we were comparable to a well-oiled German machine. When we wanted to get something done, we didn't procrastinate, we got it done in a quick and efficient manner.

There were a few times we struggled with being able to stay productive with distractions like games, Social Media and YouTube. Every now and then we had to confiscate laptops and phones in order to stay focused on doing work. We experienced no internal conflict as we all got on well and we were able to build up each other and support and grow our individual ideas. After working with each other for 1 and a half terms we got to know each other quite well. We established each other's weaknesses and strengths. Knowing what these were, we were able to use each other strengths and weaknesses to help us become a more productive, collaborative and cohesive group and we felt a responsibility to each other to work harder.

Name of group member:	Strengths:	Weaknesses:
Adam:	Gets projects going and gets the ball rolling. Good at doing writing. Good at making people focused. Keeps the group working and speaking	Sentence construction and grammar. Sometimes gets stuck in his ways and sometimes doesn't listen to others.
Matthew:	Good at communication and getting people to reply to emails quickly. Very creative and comes up with good ideas. Good at maintaining a relationship with some connections.	Distracted easily by things that interest him.
Robbie:	Good at structuring the narrative and coming up with creative ideas. Good at writing emails and controlling all admin and relationships with our connections.	Loves socializing and talking. Gets distracted easily by his laptop and by his phone.

Conclusion

We ended off targeting excess plastic packaging and how it is unnecessary and unneeded. We wanted to target this as a project because of how plastic is extremely bad for the environment and creating more than is needed is useless, wasteful and unthoughtful towards the environment.

We focused on things in and around the Bishops community, like the tuck shop and Spar as we felt that these two shops were the main sources of plastic in and near the school. We found out how bad the plastic bag problem was at Bishops. Bags are used so often and when they are used, they are used for a very short period of time. But then they are thrown away and they can last a million years in dumps, in the wilderness and worst of all in the oceans. Then we went to the tuck shop and noticed the amount of plastic packaging they used, so we decided to propose an idea to the tuck shop where they would sell reusable water bottles and coffee cups. But very soon this idea was rejected by their manager. So, we talked to Mr. Noel and he said that he would help us to try and get them to rethink about our project in the future. We are also going to try and institute a ban on the use of plastic bags at Bishops sometime soon (with part of the solution being the co-ordination of a project with the school clothing shop to sell reusable Bishops shopping bags). Both of our projects are still in progress and we are going to follow up and complete them. Although we used the time we had extremely efficiently, we have realized that the wheels of change, only change slowly.

We really hope that our projects can become a big success as we feel that excessive plastic packaging is very relevant to Bishops (where mindfulness over plastic and waste is lacking) and South Africa. The SDGs that are related to our end project are: SDG 15 and 14 because plastic is very bad for the environment (ocean and land) ; SDG 13 because of the greenhouse gases that are produced when the 300 million tons of plastic is produced each year; SDG 12 because if people are packaging products with excessive amounts of plastic,

then we are not being responsible with our production and SDG 11 because if we want to have sustainable cities and communities we are going to have to get rid of excessive plastic packaging.

If we don't use, produce and dispose plastic responsibly then our generation is going to be remembered for how we destroyed the world by not solving the huge plastic problem. We all feel that eventually we must end our addiction to plastic otherwise our time on earth might end.

Our future ambitions for this project:

Most people participating in this course will discontinue their projects as soon as they have finished their presentations at the end of the course. However, our group will keep on moving forward. This whole course has been about sustainability and if you stop being sustainable straight after the course ends then you have not learnt anything.

Our plan is to keep pushing Origin to take steps toward a sustainable future. We will keep offering them solutions to their problems and keep pressing them to take further action by themselves. We will also keep pursuing projects we did not have time to finish and to do this we will keep a close relationship with all the people we met throughout our project.

In order to accomplish this dream, we will continue working after Big Ideas is finished, and, with the help of Mr. Noel, and the GIN committee, we believe that this dream will become our reality.

With regards to the plastic bags we are going to keep on pushing the school to implement the school rule that Bishops boys aren't allowed to bring onto or use plastic bags on the campus.

The bag costs R40 which we feel is quite pricy for a student to want to buy it. We want to try to lower the price of these bags so that more people will be willing to buy them.

When we leave Bishops, we want to be able to look back at it and say we made a difference. Our goal is to have transformed Bishops into a school which is predominately plastic free and sustainable.

We have all really enjoyed the big Ideas course as it has given us insight into what is going to be needed of us in the future. It has enriched us by giving us great opportunities and giving us information that we will need in the future. It has empowered us. We feel that it has strengthened our skills and taught us some new ones.

We really hope that more schools all over the world could start courses like this one because if we are going to make a change, it will be a lot easier if everyone is on the same page and is aware of what we are trying to achieve and why we are trying to achieve it. We have all also enjoyed the break from usual school and parrot learning, as Big Ideas has made us adapt, adopt and engage a new and creative mindset that we feel will be more helpful to us than the linear methods of teaching and learning that evolved out of the Industrial Revolution in Europe over 200 years ago. We would really recommend the Big Ideas course to the Grade 9s of 2020.

Our Individual Reflections:

Matthew Malan's Reflection

The whole of the Big Ideas Course has been an incredible experience for me. I have learnt so much and I feel like it has changed and benefited me as a person. I am so thankful that I have had the opportunity to participate in this incredible course. It has been an amazing journey. The course is based on 4 main skills which I feel are essential these days for life outside school. The four skills are communication, creativity, collaboration and critical thinking. This course not only teaches us life skills, but it makes us truly aware of the earth's social, economic and environmental problems. Obviously before the course I knew the basics about climate change and Gender inequality etc. but I did not know them on a deeper level which I now do after the course. I feel that it is extremely important that we understand the problems our world faces better because then we will be in a better position to make a difference and comment on them.

The first sector of the course (in the third term of the school calendar year) is based on the numerous sustainable development goals (SDG's) set by the UN. I think the most important thing I learnt in the third term was that every problem is interconnected meaning that every complex problem requires complexity thinking to be solved. I learnt about most of the SDG's on an extreme level throughout the term. We were consistently bombarded with information. Some of the information I gathered impacted me more than other information. It was extremely important that we felt connected to a certain SDG as we knew that that's what our project at the end of the year was going to be based on. The SDG that resonated with me the most was SDG 15, life on land. I have always felt a connection to the outdoors as I do many sports where I am exposed to nature at its finest, such as surfing, mountain biking and hiking. I would

hate to see the nature I am exposed to and love so much trashed because of human actions.

In the second sector of the course (term 4) I had to work with two other people in a group to come up with an idea and then turn it into a project. Our idea had to be related to SDG 15 as that's the sustainable development goal that we felt most passionate about and chose to pursue in a project. Throughout the fourth term I have learnt so many skills. I have learnt how to construct and email, communicate and I have learnt many other skills that come with being in a team. I have thoroughly enjoyed the independence given to us in this fourth term. We have been allowed to control the amount of work we do, and we have been able to organize our own outings. I think going on outings have taught me the most throughout the course. The outings we have been on have been very insightful and have helped us a lot in our project. Some of the outings have been real life examples of what sustainability is and other outings we have gone on were purely for research sake.

After much research we eventually collaboratively came up with an 'Big idea' that we though were very good. Our plan was to sell reusable coffee cups outside the tuck-shop. After a long process of organizing our idea was shut down by the origin management for reason that we as pupils could not understand. I was extremely upset by this. It was very disappointing to see all our work go to nothing because of reasons that we though were irrelevant. However, experiencing this pain taught me that things in life don't always go your way and we had to recover and keep moving forward.

In conclusion, it has been my great honour and privilege to participate in such an insightful and forward-thinking course and I think I will carry what I have learnt with me for the rest of my life.

Robbie Dows Reflection

This Big Ideas course has been one of the best educational experiences of my schooling life. I have learnt so many amazing skills that are going to help me throughout my life. Everything that we have done in this course and every skill that we acquired, is going to change every one of our lives for the best. We all understand now that it is our generation that is going to have to take on all the challenges that earth is facing and because of this course I think that we are all now more prepared and more capable to enter and try change the world that we are going to grow up into.

Before I began this course, I had a small understanding of Climate change, complexity thinking etc., but I never gave it much thought and I didn't think that it was relevant to me. So, when I started the course and I we began to learn all these things, I felt like I had made a mistake. But I was wrong, because, through the help of amazing teachers and excellent talks, I began to see what was being explained. Slowly it all pieced together and when it all came together, it was such an incredible feeling because I was able to look at the world with a completely different understanding. I was able to see the interconnectivity of everything in the world, how every problem relates to the other and that changing one small thin inside a system can have a massive compounding effect. My problem-solving skills were greatly strengthened, and I felt that I was ready to begin my Big Ideas project.

The end of the third term approached and we were told to start thinking about which SDG we wanted to choose to focus on for our project. It was a hard decision, but I finally chose SDG 15 (Life on Land). I choose this SDG because I thought I would be able to have the biggest impact doing this SDG. I was very happy with my choice and I got partnered up with, hard-working, creative group. At the very start of the project we sat in the cloud for a while and we bounced ideas off each other, but we eventual came up with a project that we all loved. After a lot of research and outings we took our ideas of the coffee cups to the school Tuck Shop.

Disappointingly the Tuck Shop deny requested, this obviously angered all of us but. We all had perseverance and we have taken this problem to the sustainability comity. Even though our project was unsuccessful, this whole process taught us very important life lessons that I will benefit me and my group for the rest of our lives.

I have really loved this Big Ideas Course and I have been so privileged to have had the opportunity to go through this course. I wish that everyone can have this chance as every child that gets this chance will make a difference for the world, for the better.

Adams Lewis's reflection

I have really enjoyed the Big Ideas course as it has shown me the problems that we as the human race are going to face in the near future (and the course highlighted how near and what a reality that future is). They loaded us with information on these problems, leaving us thinking on what we could do as an end of year project. I found this information overload very useful as it immediately got me thinking. I learnt that everything is intertwined in a web of connections (and some extremely complex) and in order to solve some of these problems we need to look at the whole web. If we don't consider that everything is interconnected, then some unexpected problems will be thrown in our direction. I found that this is so true because as I reflected on it, even in everyday life we need to look at problems, we need to look at them as a whole and take everyone and everything into account otherwise these problems will never get solved.

Before the course everyone made fun of Big Ideas because they said that they already knew the problems that we were going to face, and they argued that they didn't need a whole course to expose them to the problems. Sure, they knew of the problems, but

they didn't understand them. I had previously found any lessons on sustainability very depressing and battled with the notion that we were destroying the planet, but we never had time to discuss possible solutions. Big ideas gave me the platform I needed to start engaging my creative brain, as I realised that we are going to have to think out of the box if we think we can solve these highly complex issues. Even more than just that, it equipped me with skills for the future and it helped me understand the interconnectedness of these problems. I feel that in the future, the fact that I had the chance to do Big Ideas will give me an advantage over others. I feel I have been empowered.

This course has also helped improve my formal email writing, my self-organisation and my summarizing. I really enjoyed all of the teamwork during the course as I felt that this is one of the most important skills that we are going to need in the modern-day world and Big Ideas was a safe environment to test out some of these skills. I felt that Robbie, Matthew and I have really worked well as a team; splitting up the work load. I really think that my teamwork skills have improved during the course. This course has taught me to not procrastinate and to work hard because when completing the project and narrative I felt like stopping at times and taking a break, but this wasn't an option as I realized that we had to work hard in order to get it done.

Coming up with and working on a project was fun as we could chose to work on something that we were passionate about (not often the case in a traditional school syllabus) and something that we felt that needed changing in the world around us. The project also took us to some very interesting places where we met some very interesting people and I really enjoyed that journey that our project has taken me on. We chose to work on SDG 15(life on land) and within this SDG we focused on excessive plastic packaging. We focused on packaging at and around the school, deciding to stay

local seemed right. My primary motive for why I chose the goal – Life on Land, was because I am a person that loves nature and the outdoors. My passion is wildlife, fish and fishing and plastic fatally threatens these things that are really close to my heart.

The big ideas course has really inspired me to do something to help the world. Before the course I would hear all of this stuff about how all of us need to do something to help, even if it is small. I always thought that I would never be able to do anything that would be helpful, but Big Ideas has taught me that I can actually do something, and it doesn't matter if it is small, it still makes a difference. So, this is why I would recommend the Big Ideas course to next year's grade 9s.

Bibliography

- Abildlund, A., 2014. *Study reveals: soap is not harmful to the environment*. [Online]
Available at: <https://sciencenordic.com/city-denmark-pollution/study-reveals-soap-is-not-harmful-to-the-environment/1407266>
[Accessed 26 August 2019].
- Anon., n.d. [Online]
Available at: <https://ecopack.co.za/>
- Anon., n.d. [Online]
Available at: <https://ecopack.co.za/>
- Arnold, C., 2017. *This Bug Can Eat Plastic. But Can It Clean Up Our Mess?*. [Online]
Available at: <https://www.nationalgeographic.com/news/2017/04/wax-worms-eat-plastic-polyethylene-trash-pollution-cleanup/>
[Accessed 17 August 2019].
- Author, N., 2017. *IMPACTS AND CONTROL OF INVASIVE ALIEN PLANTS IN SOUTH AFRICA*. [Online]
Available at: <https://www.hortgro.co.za/news/impacts-and-control-of-invasive-alien-plants-in-south-africa/>
[Accessed 29 September 2019].
- Author, N., 2017. *These Beauty Brands Are Still Tested on Animals*. [Online]
Available at: <https://www.peta.org/living/personal-care-fashion/beauty-brands-that-you-thought-were-cruelty-free-but-arent/>
[Accessed 6 October 2019].
- Ecopack, 2017. *Ecopack*. [Online]
Available at: <https://ecopack.co.za/>
[Accessed 25 october 2019].
- Gibbens, S., 2019. *The sticky problem of plastic wrap*. [Online]
Available at: <https://www.nationalgeographic.com/environment/2019/07/story-of-plastic-sticky-problem-of-plastic-wrap/>
[Accessed 2 October 2019].
- NA, 2019. *article*. [Online]
Available at: <https://www.nationalgeographic.com/news/2017/04/wax-worms-eat-plastic-polyethylene-trash-pollution-cleanup/>
[Accessed 6 August 2019].
- No Author, 2018. *Plastic Oceans*. [Online]
Available at: <https://plasticoceans.org/the-facts/>
[Accessed 6th september 2019].
- No Author, 2019. *How Many Plastic Bags are Saved by Using One Reusable Bag?*. [Online]
Available at: <https://www.factorydirectpromos.com/blog/how-many-plastic-bags-are-saved-by-using->

one-reusable-bag/

[Accessed 23 october 2019].

Rogers, T., 2015. *Everything You Need To Know About Polylactic Acid (PLA)*. [Online]

Available at: <https://www.creativemechanisms.com/blog/learn-about-polylactic-acid-pla-prototypes>

[Accessed 7 october 2019].

Rubin, P., 2017. *Nude foods*. [Online]

Available at: <https://nudefoods.co.za/>

[Accessed 1 August 2019].

Assignment Inbox: Big Ideas 2019						
Assignment Title	Info	Dates			Similarity	Actions
Big Ideas Narrative		Start	21-Oct-2019	9:59AM	1% 	Resubmit View 
		Due	29-Nov-2019	11:59PM		
		Pool	29-Oct-2019	12:00AM		

