



Bridgewater State University

Virtual Commons - Bridgewater State University

Honors Program Theses and Projects

Undergraduate Honors Program

5-11-2020

Gaia Bioplastics: A Design Exploration of Bioplastics Through a Brand Campaign

Kelsey Long

Bridgewater State University

Follow this and additional works at: https://vc.bridgew.edu/honors_proj



Part of the [Graphic Design Commons](#)

Recommended Citation

Long, Kelsey. (2020). Gaia Bioplastics: A Design Exploration of Bioplastics Through a Brand Campaign. In *BSU Honors Program Theses and Projects*. Item 336. Available at: https://vc.bridgew.edu/honors_proj/336

Copyright © 2020 Kelsey Long

This item is available as part of Virtual Commons, the open-access institutional repository of Bridgewater State University, Bridgewater, Massachusetts.

Gaia Bioplastics: A Design Exploration of Bioplastics Through a Brand Campaign

Kelsey Long

Submitted in Partial Completion of the
Requirements for Departmental Honors in Art

Bridgewater State University

May 11, 2020


Prof. Alain Blunt, Thesis Advisor



G A I A

BIOPLASTICS

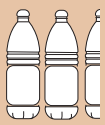
A Design Exploration of Bioplastics
Through a Brand Campaign



Kelsey Long
Honors Thesis, Graphic Design
Bridgewater State University

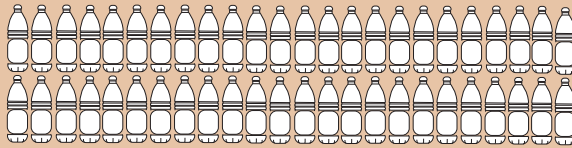
Single Use Plastic Pollution

1950
2.3M tons
produced



Production is expect to
double
by 2050

2015
448M tons
produced



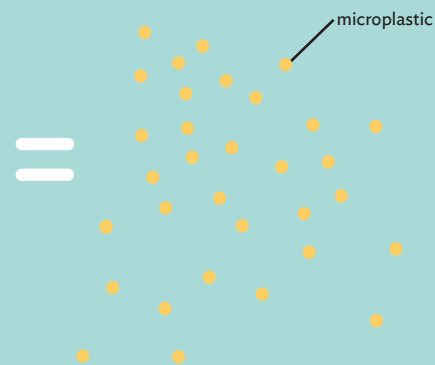
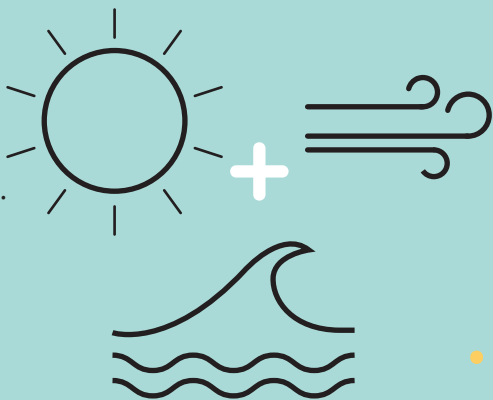
Half of all plastics ever
produced, were made in
the last 15 years

Every year,
8 million tons
of plastic waste goes
into our oceans

57,000 Blue Whales



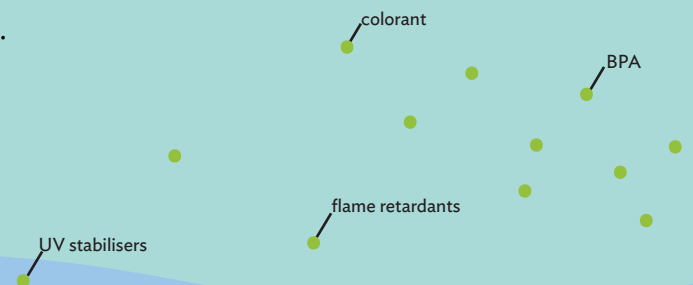
Microplastics: Once at sea, sunlight, wind, and wave action break down plastic waste into small particles, often less than one-fifth of an inch across. These so-called microplastics are spread throughout the water column and have been found in every corner of the globe, from Mount Everest, the highest peak, to the Mariana Trench, the deepest trough.



The Garbage Patch

Today we have 5 'islands' of garbage in our oceans. Together, they are double the size of Texas.

As plastic decomposes in the water, it releases
toxic substances
into the ocean

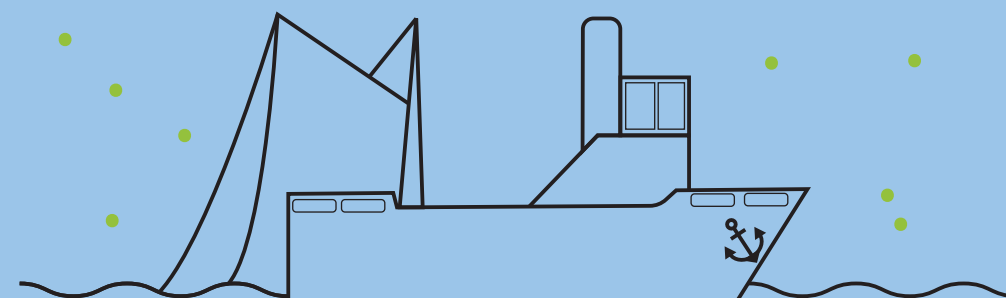


The Animals

Nearly every
Seabird eats plastic

700 species
have been affected by plastic

Most marine life are
Strangled
by
six-pack rings
and abandoned
fishing gear



What
We Can do
To Help

Limit your use of single use plastic

Bring reusable bags when going grocery shopping.
Opt for bioplastic water bottles, or even better bring your own reusable bottle.

Speak to your local officials

Working with local government officials, voting, beach clean-ups, and speaking up for the voiceless are all ways you can help save the planet.



TABLE OF CONTENTS

6.	Intorduction
14.	Brand Theory
18.	Bioplastics
24.	<i>Lignin</i>
28.	<i>Hemp</i>
32.	<i>Seaweed</i>
34.	Future Planning
36.	<i>Marketing</i>
38.	<i>Ad Campaign</i>
43.	<i>Timeline</i>
47.	<i>Color-Coding</i>

Abstract

The world is drowning in petroleum-based plastics. Plastics and their by-products have created an environmental crisis by polluting our oceans and negatively affecting human health and diverse ecosystems around the world. Alternative bioplastics sourced from plants, especially hemp, seaweed, and lignin (organic polymers in wood and bark), offer promising solutions. Still, bioplastics currently make up only one percent of the global plastics market. My undergraduate scholarship in Graphic Design aims to build a consumer awareness campaign of bioplastics and promote their viability through branding, logos, and advertising designs. Based on research into hemp, seaweed, and lignin-sourced bioplastics, I have developed a brand called Gaia Bioplastics with different logo variations for each of the three types of bioplastics. I have also designed visuals for advertising bioplastics, including infographics and product designs, that illustrate the sources and advantages of the products. In addition, I have provided website designs that educate consumers in appealing ways about the social and environmental benefits of substituting bioplastics for the plastics based on oil and gas. I aim to share the results of this interdisciplinary design project with start-up biomaterial companies working with hemp, seaweed, and lignin materials.

Personal Motivation

My motivation is to create a campaign that influences change. Through the use of my design discipline, I aim to create provoking designs that will change the way people see plastic. The implementation of attractive design, my goal is to generate attention and buzz about bioplastics. During my Spring 2019 semester, I created my honors contract that was an ad campaign about the harmful effects that humans make to our oceans. I created two posters that demonstrated rising sea levels and plastic pollution effects on marine life. During the final years of my college career, I aim to depict a story of how passionate I am about the environment and find ways to efficiently change our everyday lives to become a more sustainable planet.

I live in Hull, Massachusetts, where the land consists of multiple islands connected by sandbars. I grew up loving the beach and spending most of my days there and have always envisioned raising my kids by the beach.

However, between intense storms, rising sea levels, and general climate change education, I now fear it will be impossible for me to raise my kids there. Climate change is a significant concern to me, and this is how I started my passion projects towards protecting the environment and the awareness of climate change.

In my undergrad thesis, I wanted to explore the possible futures of bioplastics. I want to create a step in the right direction in the only way I know how - through good design that educates. I know this will not be the final solution to this massive problem that we have, but I genuinely believe that this will be the right direction for humankind. Next time you drink out of a water bottle or finish your shampoo bottle, I want you to notice a bioplastic substitute would have no adverse effects on your experience while reducing the impact of plastic pollution.





The Age of Plastics

Plastic is cheap and versatile, making its presence extremely prevalent in the 20th century. Plastic has been a lifesaver for people when it comes to convenience, technology, and medical equipment. With a broad perspective of how plastics have changed the world we live in today, I question: where do they come from, where do they go when we toss them away, and is there any way we can change this pattern we are currently on? Traditional plastic is made from petroleum oil or crude oil. In order to create conventional plastics, we have to extract oil out of our Earth. Petroleum oil is a finite resource, and as it depletes, we will see a rise in the price of traditional plastics. When throwing away plastic, it usually ends up in landfills, the ocean, our ecosystem, and so forth. Only 10% of traditional plastic is appropriately recycled (Sanclements, 6). Traditional plastic is in our ecosystems, such as our oceans, and it is creating a severe problem for marine life. The plastic pollution problem is created by humans, due to lack of education and resources regarding the disposal of this long-lasting material properly. *We are now living in the age of plastics.*



Answering the Plastic Crisis

BIOPLASTICS (n): *a type of biodegradable plastic derived from biological substances rather than from petroleum.*

My answer to the current plastic waste crisis is to create a socially ethical company that makes bioplastics. Bioplastics are plastic made from organic materials, and therefore they can decompose, unlike conventional plastic. I want to make a compelling argument that with good design, the conventional plastics market can be penetrated, and bioplastics can become a household resource for everyday lives. The demand for bioplastics is an untapped market. With the rate we are consuming plastics, introducing bioplastics will be a logical step in the right direction to a more sustainable earth. Although this company aims to create bioplastics, I want to express that limiting the use of using single-use plastics is the most efficient way of reducing plastic pollution. I look to Germany's color-coding trash to create a more sustainable waste system. Through the creation of a new system, I will also focus on educating the public through infographics. I intend to introduce bioplastics to the following markets: garbage bags, compost bags, and single-use plastics such as water bottles, food service items, and beauty containers.

I have created a brand called Gaia Bioplastics. This brand aims to develop sustainable bioplastics that are 100% biodegradable. Through this brand, I will run a social ad and awareness campaigns and educational infographics. Gaia has three different bioplastics that it will study and produce: Lignin, Hemp, and Seaweed. Each of these bioplastics has its own sub logo with a differentiated logo and color scheme. These strategic colors help the consumer make an informed decision on what they are buying. These bioplastics can help create a step in the right direction for a more sustainable future for our Earth. Plastic is so tightly woven into our everyday lives; we barely notice how prevalent it is within our society. Therefore, with the use of a well-designed brand and social awareness campaign is crucial for the success and influencing people to switch to bioplastics.

Glossary

Carbon Neutral: making no net release of carbon dioxide to the atmosphere, especially through offsetting emissions by planting trees.

Tensile Strength: the resistance of a material to breaking under tension.

Biomass: organic matter used as a fuel, especially in a power station for the generation of electricity.

Feedstocks: raw material to supply or fuel a machine or industrial process

Polymer: a substance that has a molecular structure consisting chiefly or entirely of a large number of similar units bonded together

Cellulose: an insoluble substance which is the main constituent of plant cell walls and of vegetable fibers such as cotton. It is a polysaccharide consisting of chains of glucose monomers.

Petroleum: a liquid mixture of hydrocarbons that is present in certain rock strata and can be extracted and refined to produce fuels

Composite: made up of various parts or elements.

BRAND THEORY

“You can contribute to the ugliness of the world or you can contribute to its charm”

-Steve Hayden in Mark Gobe's "Emotional Branding"

During my Fall 2019 semester, I authored and designed a 60-page brand standards guide, creating an identity for my company, Gaia Bioplastics. This style guide created a personality for the Gaia Bioplastics brand and therefore helped bring this campaign to life. I envisioned Gaia as a person and asked myself essential questions: what would they look like? Where would they shop? What do they do for fun? Are they aware of the current trends? With these questions, I created a brand with a consumer profile that was personable, unique, and creative for today's market. Mark Gobe wrote, "an identity program in the 21st century is a multidimensional expression of a brand vision brought to life in the most imaginative way" (129). By envisioning an identity for Gaia Bioplastics, I have created a logo and a set of guides that have a personality and a heart.

It is easy to say my brand has a heart due to the involvement that it has with the environment; it is also easy to deny. Identifying that a brand has a personality is the answer to solving consumer doubts about the transition to bioplastics. Giving personality to my brand through typography, photography, and illustration, ultimately created a compelling image that speaks to a broad range of consumers. We are in an age of truth, and with the consumer being more ethically aware of their purchases, I believe bringing my brand to the market will generate a significant amount of positive feedback. Today is the right time to be talking about these pressing matters. Today is the right time to be pushing back against the plastic and oil industry with more sustainable options. Today is the right time to inform consumers to become more aware of the impact of their purchase choices.

My brand has a very consistent color pallet —the main color of each of my primary and sub-logos consists of different variations of green. The idea I had behind choosing green was to make a clear picture that this brand is about the environment and nature. Younger Americans correlate green with nature, health, and environmentalism (Gobe, 81). Therefore, when the consumer sees Gaia's logo, they will

automatically assume it is eco-friendly without knowing about the brand itself. I chose the color blue to have connotations to the ocean. The color is subliminal to the green eco-friendly colors, although it ties back to the idea of plastics drowning our oceans. Al Reis wrote in 22 Immutable Laws of Branding that leaders in the market have first pick on the color choice of their logo (89). My goal is to become a leader in the Bioplastics industry. Reis also writes that to become the leader, you must become first in the industry, and there is no time to waste (90). While there are already competitors, there is no clear front runner, allowing Gaia the opportunity to become one. None are making the strides that I aim to with Gaia Bioplastics.

I have used the brand based corporate identity relationship model in mind when creating my brand. In Mark Gobe's Corporate Identity Relationship Model (brand based), he explains, "Emotional Branding enhances corporate branding with a powerful point of view that can integrate the human fac-

tor to provide a more cohesive vision consistent with the objectives of the company. It is about simplifying and clarifying the possibilities and charting new innovative paths" (140). Gaia Bioplastics is charting these new and innovative paths with the main idea of eliminating oil-based plastics and replacing them with 100% biodegradable bioplastics. This will not be a small feat. This will take time and the use of great advertising, social awareness campaigns, and education Gaia Bioplastics will be effective at speaking to the consumer.

“Creativity is overtaking capital as principal elixir of growth. And creativity, although precious, shares few of the constraints that limit the range and availability of capital and physical goods.”

-Quoted from Mark Gobe's "Emotional Branding: The New Paradigm for Connecting Brands to People"

BIOPLASTICS

Why Bioplastics?

Perhaps the closest we have ever come to having a significant presence of bioplastics was when Henry Ford began a substantial research project aimed at making plastic automobile parts out of soybeans (Stevens, 5). To date, more than 18 trillion pounds of plastic have been produced, and bioplastics make up just one percent of all plastic (Gibbens, “What you need to know about plant-based plastics”). That means the majority of plastic being produced today is petroleum, or crude oil, based plastic. Petroleum is a finite substance, and to plan accordingly, we must make sure we are not utterly dependent on this resource. I passionately believe we should take this course of action. By weaning off of plastics, it will make us better prepared for the future and help aid in creating a cleaner environment. E. S. Stevens excellently wrote, “As fossil fuels become more and more expensive, is now not the time to begin developing technologies based on alternative feedstocks?” (25).

Traditional petroleum-based plastics are nonrenewable and are not biodegradable, breaking up into smaller pieces deemed “microplastics” that stay in our ecosystem for centuries. Petroleum-based plastics are harmful to the environment by going into landfills, waste streams, and even our oceans. Bioplastics are non-toxic, recyclable, and are biodegradable, thereby having minimal impact on waste management. They can be returned to the ecosystem harmlessly in a carbon-neutral process (Stevens, 138). That is why I have come up with a company that not only capitalizes on bioplastics, but also creates educational infographics to inform and spread awareness about the harmful effects of traditional plastics and how we as humans can stop this ever so saturated market of plastic. I created the brand Gaia Bioplastics (Gaia). The name “Gaia” comes from the ancient Greek goddess of the Earth - a fitting name for a brand that strives to be kinder to nature and protect our environment.



Photo credit: Margarita Talep Follert

“As fossil fuels become more and more expensive, is now not the time to begin developing technologies based on alternative feedstocks?”

-E.S. Stevens



GAIA

BIOPLASTICS | LIGNIN

“Lignin is a byproduct of making paper; approximately 70 million tons of lignin is pulped every year” -Quoted from “Bioplastics continue to blossom - are they really better for the environment?”

Lignin is an organic polymer that is in the cell walls of woody plants. Troy Farah wrote that lignin might be one of the most promising bioplastics (“Bioplastics continue to blossom”). Lignin is promising because the polymer is solid and robust, and when put to the test, it has a very high tensile strength. Tensile strength is “a measure of the force required to break a test specimen when it is placed between two clamps and drawn” (Stevens, 142). Lignin is a byproduct of making paper; approximately 70 million tons of lignin is pulped every year (Farah, “Bioplastics continue to blossom”). This creates a great partnership opportunity with paper making manufactures and therefore helps facilitate lower costs in producing this product. Lignin is fully biodegradable, and with its high tensile strength, would work efficiently for trash bags and compost bags. Using lignin bioplastic reduces plastic waste during the disposal process, since it can decompose and is fully biodegradable (Sarken, “High Strength Lignin Based Plastics”).

The lignin sub logo of the Gaia Bioplastics logo is a variation of the company logo. The colors that are within the logo are green and yellow. I chose these colors to create the idea of a budding tree. The logo is green with a yellow accent of a leaf as a ‘hairpiece’ for Gaia. When putting this logo on a bioplastic, the designer has the choice of putting the whole logo or just the hairpiece itself. The colors must always stay the same. The two options are so the logo can be suitable for all different variations of mediums. The idea is to use the lignin bioplastic for trash or compost bags. The applications can also expand to any type of film that encloses food.

Primary Logo



All white logo on-top black



All black logo



All white logo on-top tint



Gray scale



All white logo on-top color





G A I A

BIOPLASTICS | HEMP

Hemp is the non-toxic cousin of marijuana. Hemp and liquid hemp are within mainstream media as CBD and wellness trends, and it is used for its nutritional and medicinal purposes for years. Hemp has served as a raw material for countless products such as food, textiles, and medicine (Palmer, “Why is there a need for an alternative to plastics”). The leftover stalks and leaves can be processed into all kinds of plastics (Farah, “Bioplastics continue to blossom – are they really better for the environment?”). Hemp cellulose is mainly used to make paper but has the potential to become plastic. Like lignin, hemp is a byproduct. This creates yet another promising opportunity to have partnerships with manufacturers that produce CBD. Many car manufacturers such as BMW, Mercedes, and Bugatti are recognizing the potential of these plastics and incorporating hemp bioplastics within their vehicles (Palmer, “Why is there a need for an alternative to plastics”). Hemp bioplastic is advertised as 100% non-toxic biodegradable and recyclable. Hemp also has high tensile strength, making this a well-rounded bioplastic. The areas that I would market hemp bioplastics in would be beauty containers and water bottles.

The Hemp logo is similar to the company logo, with the addition of a hairpiece of a hemp leaf. The logo can be used as its logomark or as just the hemp leaf hairpiece. This is up to the design of the plastic bottle and the placement of the logo. The colors I chose are brown and green, to represent the hemp seed and the hemp leaf. Hemp is also a great bioplastic because it is 100% biodegradable, and it supports the brand’s standards.

Primary Logo



All black logo



Gray scale



All white logo on-top black



All white logo on-top tint



All white logo on-top color





G A I A

BIOPLASTICS | SEAWEED

“Today, we are at the beginning of a seaweed renaissance, where seaweed can play an essential part in the push for sustainable alternatives for food, feed, materials, and energy” -Quoted by Froya Thue

Seaweed is an untapped market that has the excellent potential of being a bioplastic. In the published article by N. Rajendran, he states “macroalgae like seaweeds have more potential [...] because of its high biomass, ability to grow in wide ranges of environments, cost-effective, easily cultivated in a natural environment, and can be harvested around the year” (3). This exemplifies the fact that seaweed can be a useful resource for bioplastics. The fact that seaweed grows year-round and in many places makes this a suitable investment for seaweed farming. The macroalgae form under three different divisions: Chlorophyceae (green algae), Phaeophyceae (brown algae), and Rhodophyceae (red algae). “Today, we are at the beginning of a seaweed renaissance, where seaweed can play an essential part in the push for sustainable alternatives for food, feed, materials, and energy” (Thue, 21). As there is more demand for seaweed bioplastics, we must find a balance between consumption and overconsumption.

Seaweed bioplastic would work the best in packaging. This is because of how well this bioplastic biodegrades. Graphic and product designer, Margarita Talep is already on board with creating a seaweed bioplastic. She writes, “This truly biodegradable plastic works because it is made from 100% organic material that can easily break down after just a couple months, depending on the weather” (Steffen, 3). The main ingredient in seaweed is agar, a jelly-like substance. Seaweed also has high tensile strength, is toxic-free, and will have chemical resistance similar to many plastics today (Rajendran, 3). This bioplastic would be a great addition to the packaging industry, especially food packaging. The logo I chose for Gaia’s Seaweed Bioplastic has a hairpiece of two leaves of seaweed. The colors are reminiscent of the ocean, a technique that utilizes a similar appearance to all the logos to create consistency.

Primary Logo



All white logo on-top black



All black logo



All white logo on-top tint



Gray scale



All white logo on-top color



Marketing

Marketing is a large part of how a brand becomes recognizable. When marketing is “harnessed responsibly, it can encourage us to recycle, reuse, buy Fairtrade, eat healthily, drink sensibly, save energy, and support good causes” (Gordon, 144). Marketing for Gaia will use four different marketing strategies to create a sustainable brand. These strategies include green marketing, social marketing, critical marketing, and to design for good, Gaia will use cause-related marketing strategy. Through these strategies, marketing for Gaia will build brand awareness, brand image, and brand association. To create a sustainable company with sustainable marketing, each of these strategies will complement one another.

Social marketing targets individual behavior; it is defined as “the systematic application of marketing concepts and techniques, to achieve behavioral goals for a social or public good” (Gordon, 149). This strategy identifies the individual and persuades them to change their habits. For Gaia Bioplastics, the goal is to educate the individual to be more conscious of how abundant traditional plastic is in the world and where their waste goes. The main objective of this strategy for Gaia is to encourage the individual to dispose of their bioplastics properly. The way Gaia will use social marketing strategy will be through intensive research and ad campaigns. Gaia Bioplastics will have an event that will run in April 2021 (see timeline). The month of April will consist of releasing the first roll-out of water bottles, along with a launch event that will create buzz around the goals of this company. At the event, there will be forms so individuals can pledge to reduce their use of petroleum-based plastics. The social ad campaign will consist of posters advertising the with poster size infographics informing the public of the harms of petroleum-based plastics.

Green marketing is described as “the holistic management process responsible for identifying, anticipating, and satisfying the requirements of customers and

society, in a profitable and sustainable way” (Gordon, 147). Gaia will think about its impact on the environment from production to post-consumption while balancing the need for profit margins. One step that Gaia will take is partnering with firms that use hemp, lignin, and seaweed as a byproduct, this will reduce waste removal costs for those companies and will be cost beneficial for Gaia. Gaia strives to have a cleaner planet, and its message is to stop using plastics that are unnecessary and to persuade individuals to prevent the overconsumption of single-use plastics. “A Framework for Sustainable Marketing,” emphasizes, “if performed with integrity, [green marketing] is brand and corporate image enhancing, and likely to engender goodwill for public and media relations” (148). Gaia pledges to remain flexible and transparent; the brand aims to improve and strive with constantly updated research techniques. The main goal is to aim to achieve a cleaner planet.

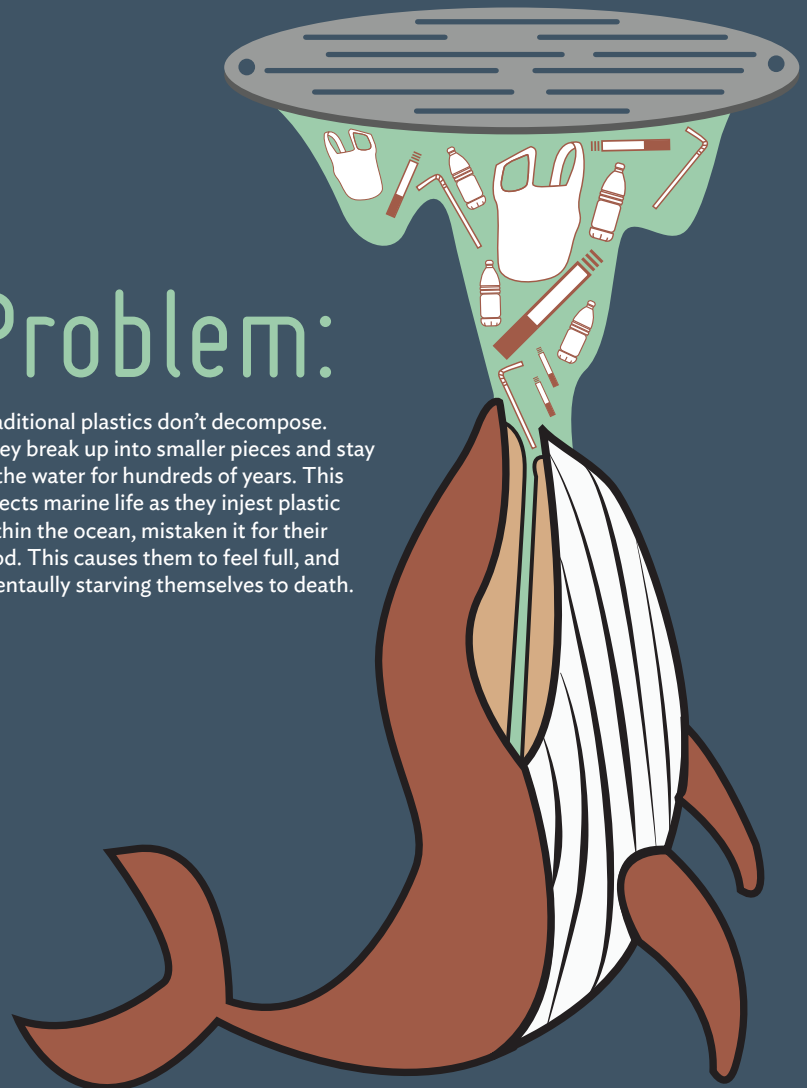
Lastly, with the help of social and green marketing, critical marketing can be applied further to change the role of society as a whole. Critical marketing is a “critique of the schema of marketing systems, paradigms, and methodologies, and even the ex-

istence of marketing itself” (Gordon, 154). Green marketing and social marketing can help restructure the ideology of a sustainable individual. Still, without the implementation of critical marketing, one is not incentivized to become a more sustainable individual or consumer. “An important task of critical theory is to simultaneously offer a critique of contemporary society while envisioning solutions to problems” (Gordon 154). One significant strategy that Gaia will be to emphasize the ethical criticism around the overconsumption of traditional plastic, in an effort to introduce bioplastics as an alternative. Gaia will be creating ad campaigns to stop the consumption of single used petroleum-based plastics with the use of informational infographics, as seen through the report. In today’s marketing, the focus is on overconsumption of products, Gaia aims to shift this view and focus on everyday quality of life goals, such as the conscious decision of choosing bioplastics. Along with these goals, Gaia will seek to influence upstream activities such as environmental regulations, advocacy, and policy change on the federal level. This is shown in the proposed color-coding waste system.


Teaser Ad

Problem:

Traditional plastics don't decompose. They break up into smaller pieces and stay in the water for hundreds of years. This effects marine life as they ingest plastic within the ocean, mistaken it for their food. This causes them to feel full, and eventuallu starving themselves to death.



Solution:



Gaia Bioplastics aim to create an alternative plastic that help stop the plastic pollution. Their mission is to educate the public on plastic pollution and the fossil fuel industry.

#GaiaBioplastics #TheSolution
#YourTrashShouldNotBeTheirFood

For more information please go to gaiabioplastics.com

Rollout Campaign Ad (1/3)

Plastic *from* Seaweed



that's a thing?



GAIA
BIOPLASTICS SEAWEEED

#ItsAThing
#GaiaBioplastics
#SeaweedPlastic

Rollout Campaign Ad (2/3)

Plastic *from* Lignin



that's a thing?



#ItsAThing
#GaiaBioplastics
#LigninPlastic

Rollout Campaign Ad (3/3)

Plastic *from* Hemp



that's a thing?



#ItsAThing
#GaiaBioplastics
#HempPlastic

Design for Good

To emphasize a sustainable marketing strategy with the use of social, green, and critical marketing, Gaia will also use cause-related marketing to target their audiences. Examples of companies successfully using cause-related marketing are the Truth campaign and TOM's Shoes. Gaia will apply their ideologies to create its cause-related marketing strategy. Through the use of partnerships with non-profits that help clean our oceans, and to continue spreading the message of climate change. Gaia Bioplastics' competitive advantage is their creativity; each bottle will have an artist's work displayed, along with promoting the idea of having a cleaner planet. Consumers have "a pressing need to have products and services that have social and environmental value" (Lii, 16). It is integral that Gaia will have social and environmental value to the consumers.

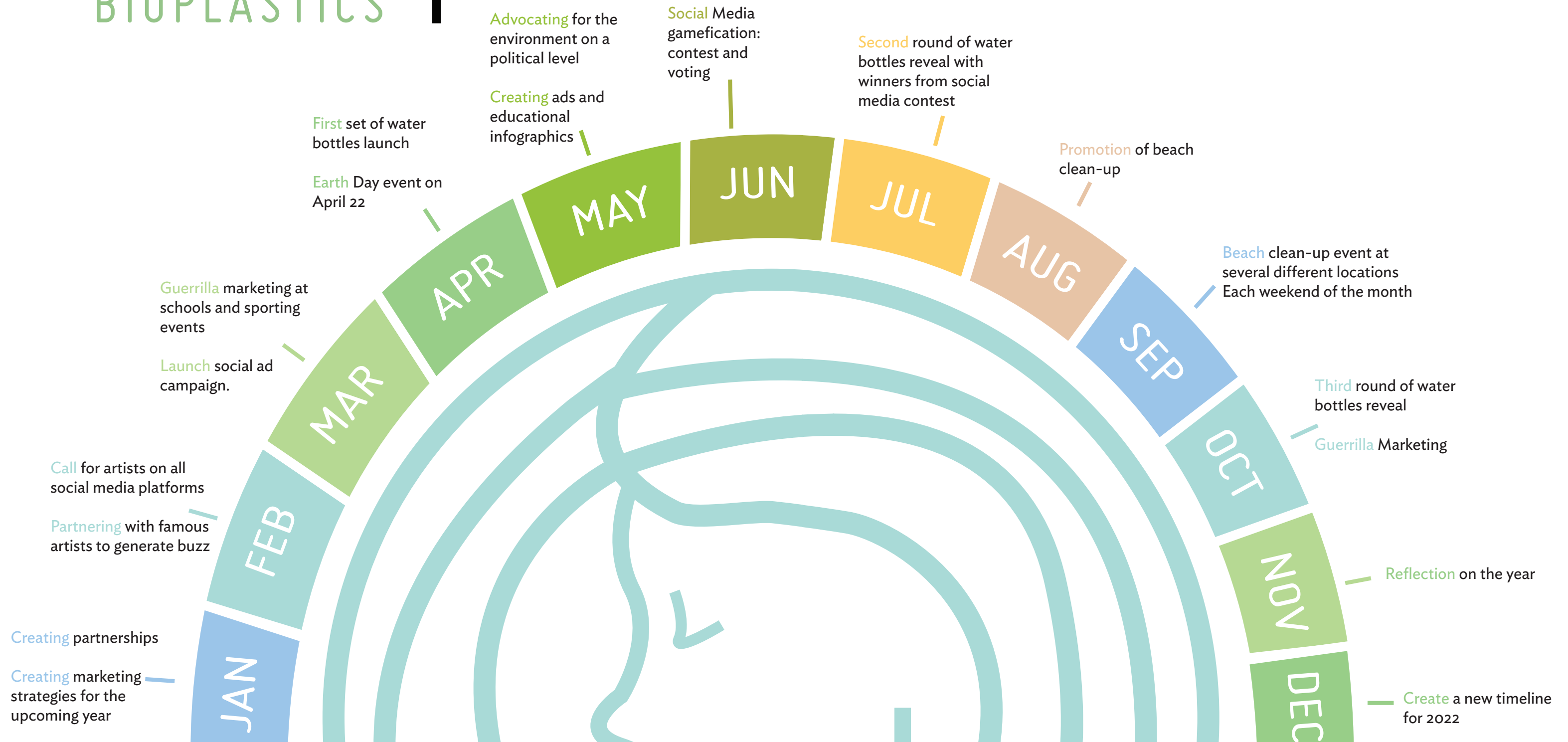
Timeline

Starting in January 2021, Gaia will create partnerships with companies that use their main products (hemp and lignin) as byproducts. Gaia will also be creating a strategy for a guerrilla marketing strategy in sports events such as basketball. In February, social media platforms will have a call for artists to design their water bottle, along with partnering with a famous artist to unveil their first series. In March, Gaia will use guerrilla marketing to pass out its products at colleges and launch its first ad campaign. In April, it will be the unveiling of their first set of water bottles, along with campaigns for an event on Earth Day that will inform the public and hand out free merch. In May, Gaia will start implementing its voice politically by creating ads to educate the public on single-use plastics. June will have a competition for the top choices of art submitted by the audience. There will be voting on social media platforms bringing a sense of consumer involvement to the brand. In July, Gaia will have its first set of everyday artists that will appear on its water bottles. The water bottles will change each quarter. August and September, Gaia will be focusing on promoting its products along with advertising and conducting beach clean-ups. October will have their new set of artist-made water bottles. Also, in October, Gaia will do their last round of guerrilla marketing at events. In November and December, Gaia will reflect on their prior year and create a new timeline for 2022.

G A I A

BIOPLASTICS

2021 Timeline



Education

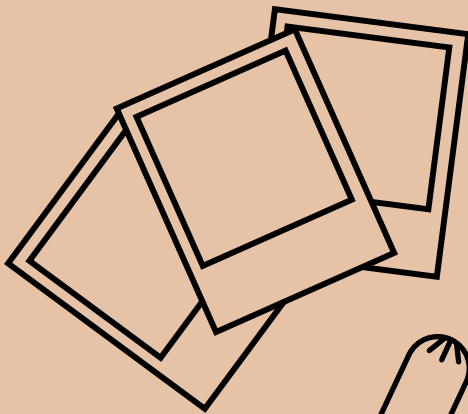
In this ever so saturated world, where ads come and go, having a brand presence is essential. “Brand presence at its best connects intimately to the consumer’s lifestyle” (Gobe, 185). With the new age of technology, advertisement is ever-changing. Being creative, innovative, and up to date on modern trends is crucial to having a successful brand. Gaia Bioplastics aims to be up to date with the contemporary trends of information and aims to be 100% transparent and to educate their consumers. That is why it is imperative to continually update the consumer with accurate facts about what the Gaia brand represents with legible infographics. One of the biggest challenges that Gaia Bioplastics faces is creating a waste system for these bioplastics. If disposed of properly, these plastics can be beneficial to eliminate the waste problem. Although many fears are that people will make uneducated assumptions about bioplastics, such as just throwing the bioplastic on the ground, thinking that is a proper way of disposal. That is why I have created these educational infographics that show the public how to dispose of bioplastics properly.

Color Coding

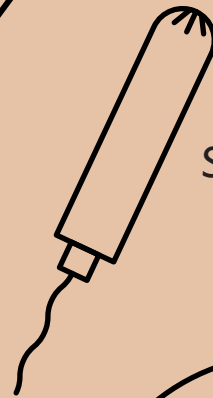
I have looked to Germany to implement a color-coding system that will be beneficial to the country and to the way we work our waste management system. According to E.S. Stevens, “Plastics now make up a significant part of a typical municipal solid-waste system, [...] Forty-four billion pounds of plastic enter the United State’s municipal solid-waste stream each year, equivalent to half a pound per day per person” (17). The task of improving the waste management system will have to be at a federal level. In Germany, their municipal waste system is divided up by colored bins. This is something easy to follow and can be implemented all around the country. Their containers consist of four bins at each person’s house and a non-returnable glass bin section that is in most neighborhoods (“How to Germany”). The bins differ from each district but follow the same guidelines. The black bin is for all nonrecyclable, non-hazardous waste, residual waste. The blue bins are for paper and cardboard products. The green bins are for organic waste, compost. Lastly, the yellow bins are any other recyclables such as beverage bottles, metal, empty tins (Cave, “Recycling in Germany”). By advocating a color-coding system in the United States, this will benefit Gaia Bioplastics. Creating this system will help consumers understand where bioplastics fall into the color-coding system. I have proposed Gaia’s take on a color-coding system for the United States with an informational infographic.

Color-Coding your Trash

Based off of Germanys Waste Management System

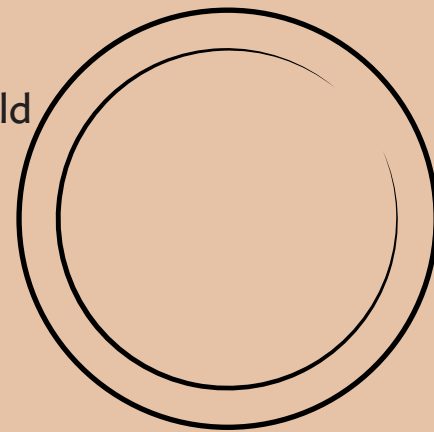


Photos

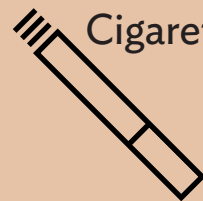


Sanitary Items

Household
Dishes



Ashes and
Cigarettes

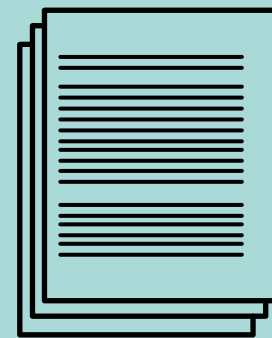


TRASH



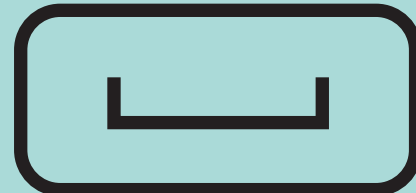
Newspaper

Books and
Magazines



Paper

PAPER



Egg Shells



Tea Bags and
Coffee Filters



GAIA
BIOPLASTICS



Garden Waste

Food Scraps



COMPOST

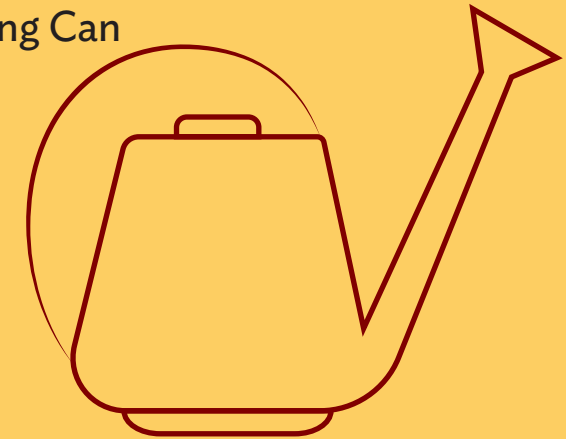


Clothing

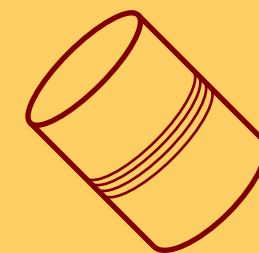


Pots and Pans

Watering Can



Aluminum



Traditional
Plastics



RECYCLE



Conclusion

With the use of brand theory, marketing, and ad campaigns, Gaia Bioplastics have the potential to become a significant brand. The main focus of this brand is to inform the public on scientific facts about the individual's overconsumption of petroleum-based plastic. This brand influences the consumer on making more ethical choices. Gaia Bioplastics is creative, yet strategic. The brand has room for growth, along with an aim for recognition. Overall, Gaia's purpose is to create a more sustainable future for all.

Creating this thesis has been a passion of mine. Completing this year-long project is something that I am very proud of. This has been my most significant project to date, and I am so thrilled to be able to say, 'I finished my undergrad with a well-developed thesis.' With the guidance of my mentor, Alain Blunt, and Dr. Jacobsen, I have created a company that not only has personality but emphasizes environmental issues that are going on today. My most substantial challenge was getting all my words down on paper. Also, with the more I researched about bioplastics, I found out that they do not decompose well in the ocean, that is when I created the proposal of following Germany's waste system. This will not only inform more people but will help provide structure for the company as a whole. Although, there were some crazy hurdles in the road to completing my thesis, I believe I gained the experience that has made my education at Bridgewater State University fulfilled.

Acknowledgements

I want to thank the Undergraduate Honors Program and the Art Department for allowing me to create my undergraduate thesis. I fully appreciate the support and resources that were at my fingertips during this past year. I have gained great opportunities that will be with me for a lifetime. I want to thank Dr. Jacobsen for always answering my emails and concerns in a timely manner. Thank you for helping me figure out the marketing side of this brand. Thank you for letting me tap into your mind for the knowledge that I would not have had without you.

Most of all, I want to say thank you to Professor Blunt. From day one, you have always been pushing me to become the best graphic designer that I could be. Thank you for investing your time in me. Thank you for giving me all of the opportunities that I have so far, and for advocating for me to become a part of the honors program. Without you, I would still be doing subpar work and not setting goals and achieving them. You have shown me how to love and appreciate design in a way that I did not know was possible.

Thank you for everything.

Allen, Jane A., Donna Vallone, Ellen Vargyas, and Cheryl G. Heulton. "The Truth Campaign: Using Countermarketing to Reduce Youth Smoking." Jones and Bartlett Publishers, http://samples.jbpub.com/9780763753771/53771_CH10_FINAL.pdf. Accessed 15 Apr. 2020.

"All about Recycling in Germany." How to Germany, <https://www.howto-germany.com/pages/recycling.html>. Accessed 15 Apr. 2020.

Barrett, Alex. "Forbes Goes Seaweed Bioplastics." Bioplastic News, 6 Apr. 2019, <https://bioplasticsnews.com/2019/04/06/forbes-goes-seaweed-bioplastics/>. Accessed 20 Mar. 2020.

Barrett, Alex. "Hemp Plastics." Bioplastic News, 4 May. 2019, <https://bioplasticsnews.com/2019/05/04/hemp-plastics/>. Accessed 20 Mar. 2020.

Beer, Jeff. "How the Truth Campaign Plans to End Youth Smoking Once and for All." Fast Company, 13 Aug. 2015, <https://www.fastcompany.com/3049629/how-the-truth-campaign-plans-to-end-youth-smoking-once-and-for-all>. Accessed 15 Apr. 2020.

Cave, Suzie. "Recycling in Germany." Northern Ireland Assembly, 12 Jan. 2017, <http://www.niassembly.gov.uk/globalassets/documents/raise/publications/2016-2021/2017/aera/1117.pdf>. 15 Apr. 2020.

Farah, Troy. "Bioplastics continue to blossom—are they really better for the environment?" ARS Technica, 1 Jan. 2020, <https://arstechnica.com/science/2020/01/are-bioplastics-all-hype-or-the-future-of-textiles/>. Accessed 20 Mar. 2020.

Gobe, Marc. *Emotional Branding: The New Paradigm for Connecting Brands to People*. Allworth Press, 2010.

Gibbens, Sarah. "What you need to know about plant-based plastics." National Geographic, 15 Nov. 2008, <https://www.nationalgeographic.com/environment/2018/11/are-bioplastics-made-from-plants-better-for-environment-ocean-plastic/#close>. Accessed 25 Oct. 2019.

Gordon, Ross, Marylyn Carrigan, and Gerard Hastings. "A framework for

sustainable marketing." Marketing Theory, Pensilvania State University, 8 May 2016.

"Hemp Plastic – Benefits, Uses & Characteristics." <https://www.hempme.com.au/hemp-plastic-benefits-uses-characteristics/>. Accessed 20 Mar. 2020.

"Hemp Plastic: What is it and How is it Made?" Sensi Seeds. 30 Apr. 2020, <https://sensiseeds.com/en/blog/hemp-plastic-what-is-it-and-how-is-it-made/>. Accessed 20 Mar. 2020.

"Leaving Plastic in the Dust." Industrial Engineer: IE, vol. 46, no. 7, July 2014, pp. 14–15. EBSCOhost, search.ebscohost.com/login.aspx?direct=true&db=mth&AN=96555685&site=eds-live.

"Lignin." Bioplastic News, <https://bioplasticsnews.com/lignin/>. Accessed 20 Mar. 2020.

Lii, Yuan-Shuh, Kuang-Wen Wu, and May-Ching Ding. "Doing Good Does Good? Sustainable Marketing of CSR and Consumer Evaluations." Wiley Online Library, Feng Chia University, 30 Dec. 2011.

McDonald, Norma. "Biological Recycling Of Biodegradable Plastics: To Meet Demand for Organics Recovery and Reduced Plastic Waste, Biodegradable Plastics Will Be an Increasing Part of the Future. Biological Recycling Infrastructure Must Be Ready to Respond." BioCycle, vol. 60, no. 7, Sept. 2019, p. 32. EBSCOhost, search.ebscohost.com/login.aspx?direct=true&db=f5h&AN=138705329&site=eds-live.

Rajendran, N., Sharanya Puppala, Sneha Raj M., Ruth Angeeleena B., and Rajam C. "Seaweeds can be a new source for bioplastics." Journal of Pharmacy Research, Vol 5, Issue 3, Mar. 2012, https://www.researchgate.net/profile/Ruth_Angeeleena/publication/258495452_Seaweeds_can_be_a_new_source_for_bioplastics/links/004635285255732935000000.pdf. Accessed 20 Mar. 2020

Reis, Al, and Laura Reis. *The 22 Immutable Laws of Branding: How to build a Product or Service into a World-Class Brand*. HarperCollin Publishers Inc., 2002.

Sanclements, Michael. *Plastic Purge*. New York, St. Martins Press, Apr. 2014.

Sarkanen, Simo. “High Strength Lignin Based Plastics.” The University of Minnesota, 9 Dec. 2016, http://license.umn.edu/technologies/20140254_high-strength-lignin-based-plastics. Accessed 20 Mar. 2020.

“Scientists create eco-friendly plastic from tree molecules.” Daily Telegraph [London, England], 5 July 2018, p. 11. Gale In Context: Global Issues, https://link-gale-com.libserv-prd.bridgew.edu/apps/doc/A545425614/GIC?u=mlln_s_brid-coll&sid=GIC&xid=91668aa2. Accessed 12 Oct. 2019.

Serle, Jack. “How long do biodegradable bags take to decompose?” Science Focus, <https://www.sciencefocus.com/science/how-long-do-biodegradable-bags-take-to-decompose/>. Accessed 10 Apr. 2020.

Steffen, Andrea D. “Here’s a Truly Biodegradable Algae-based Bioplastic You Can Make at Home!” Intelligent Living, 5 Jun. 2019, <https://www.intelligentliving.co/algae-bioplastic/>. Accessed 20 Mar. 2020.

Stevens, E.S. *Green Plastics: An Introduction to the New Science of Biodegradable Plastics*. New Jersey, Princeton University Press, 2002.

Thue, Froya and Frida van der Drift Breivik. “DYPP: exploring the future potential of seaweed as bioplastic through strategic use of design.” The Oslo School of Architecture and Design, May 2019. <https://aho.brage.unit.no/aho-xmlui/handle/11250/2604071>. Accessed 20 Mar. 2020.

Photo Sources:

<https://www.nps.gov/glba/learn/nature/kelp-forest.htm>

<https://www.pexels.com/photo/forest-covered-in-white-fog-1423600/>

<https://www.piqsels.com/en/public-domain-photo-ozogt>

<https://www.flickr.com/photos/jariceiii/40825487500>

<https://pxhere.com/en/photo/1402466>

https://commons.wikimedia.org/wiki/File:Plastic_Pollution_in_Ghana.jpg

<https://www.flickr.com/photos/zainub/430144884>



GAIA
BIOPLASTICS

designed by kelsey long

BRAND STANDARDS GUIDE



TABLE OF CONTENTS

P.3 Overview
P.4-5 Our Values
P. 6-7 Our Customer
P.8-9 Logo Anatomy
P.10-11 Logo Usage
p12-13 Tagline Usage
P.12-15 Improper Usage
P.16-17Photo Usage
P.18-23 Color
P.24-25 Typography
P.26-27 Grid
P.28-47 Sub logos
P.48-57 Samples

OVERVIEW

It was the summer of 2018 and I went to a local music festival. By the end of the night, there was plastic covering the ground. There were more than enough trash bins, and not enough recycling, yet plastic was all over the ground. I thought “what is the solution to this” and that is when Gaia Bioplastics was created. The word Gaia means the goddess of the earth, thus the logo mark is making a direct connection to the goddess herself. Gaia Bioplastics’ mission is to create a clean alternative to plastics. A biodegradable plastic that is an alternative to petroleum based plastics.

The use of the mark can be changed into sub logos of hemp, seaweed, and lignin and these all have their own color palettes. The type in “Gaia” is always meant to be one color, black. The type of “bioplastics” and the sub logos can be within the color palette.

OUR VALUES

An underwater photograph of a kelp forest with long, green blades swaying in the water.

100% BIODEGRADABLE

A close-up photograph of a green leaf with a serrated edge, set against a dark, blurred background.

ECO FRIENDLY

A photograph of a dense forest of tall evergreen trees, with a misty or foggy atmosphere in the background.

ETHICAL BUYING

OUR CUSTOMER

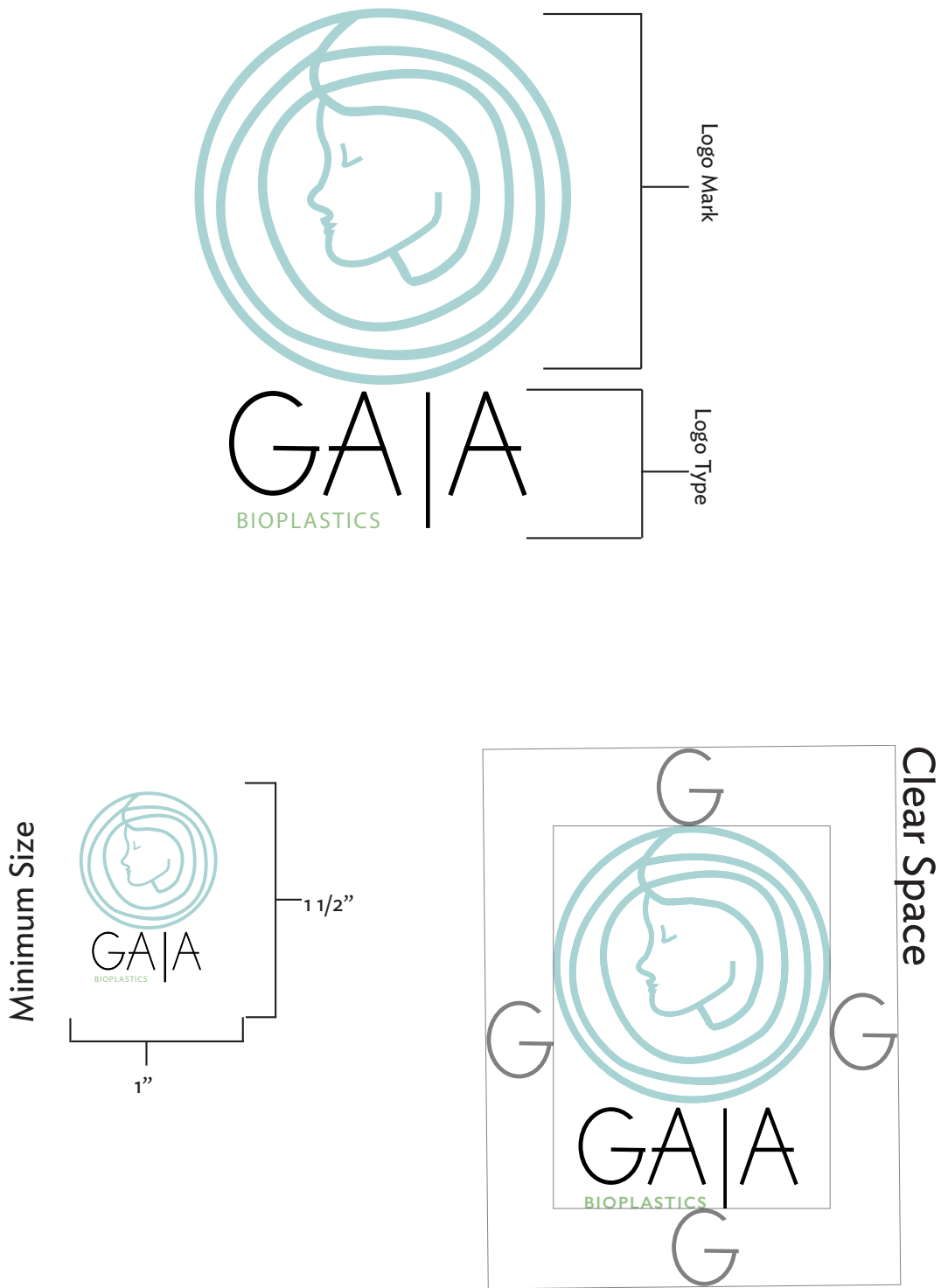
THEY ARE CREATIVE

THEY ARE MODERN

THEY ARE AWARE

ANATOMY

LOGO



LOGO USAGE

Primary Logo



All white logo on-top black



All black logo



All white logo on top tint



Gray scale



All white logo on-top color



Horizontal Arrangement



Logo Type only



Logo Mark only



TAGLINE
 USAGE

GAIA

Horizontal Arrangement



Vertical Arrangement



A BETTER PLASTIC

Tagline can be used separate from the logo. It should be in Ideal Sans Book Italic. The same clear space applies when adding the tagline

IMPROPER USAGE

- a. do not stretch or distort the logo mark or logo type
- b. do not change the change orientation other than what is shown
- c. do not rotate the logo
- d. do not use off brand colors
- e. do not place elements in the logo clear space
- f. do not add drop shadows

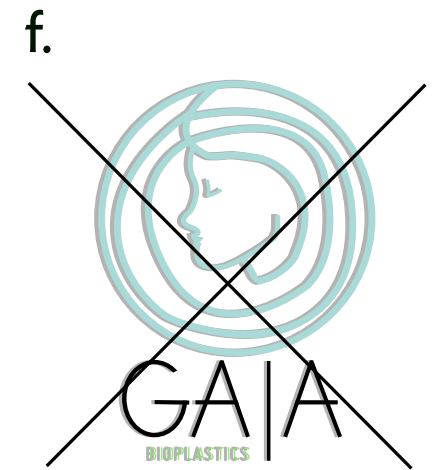
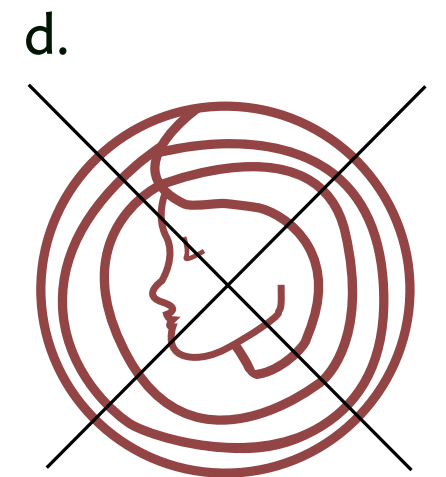


PHOTO USAGE

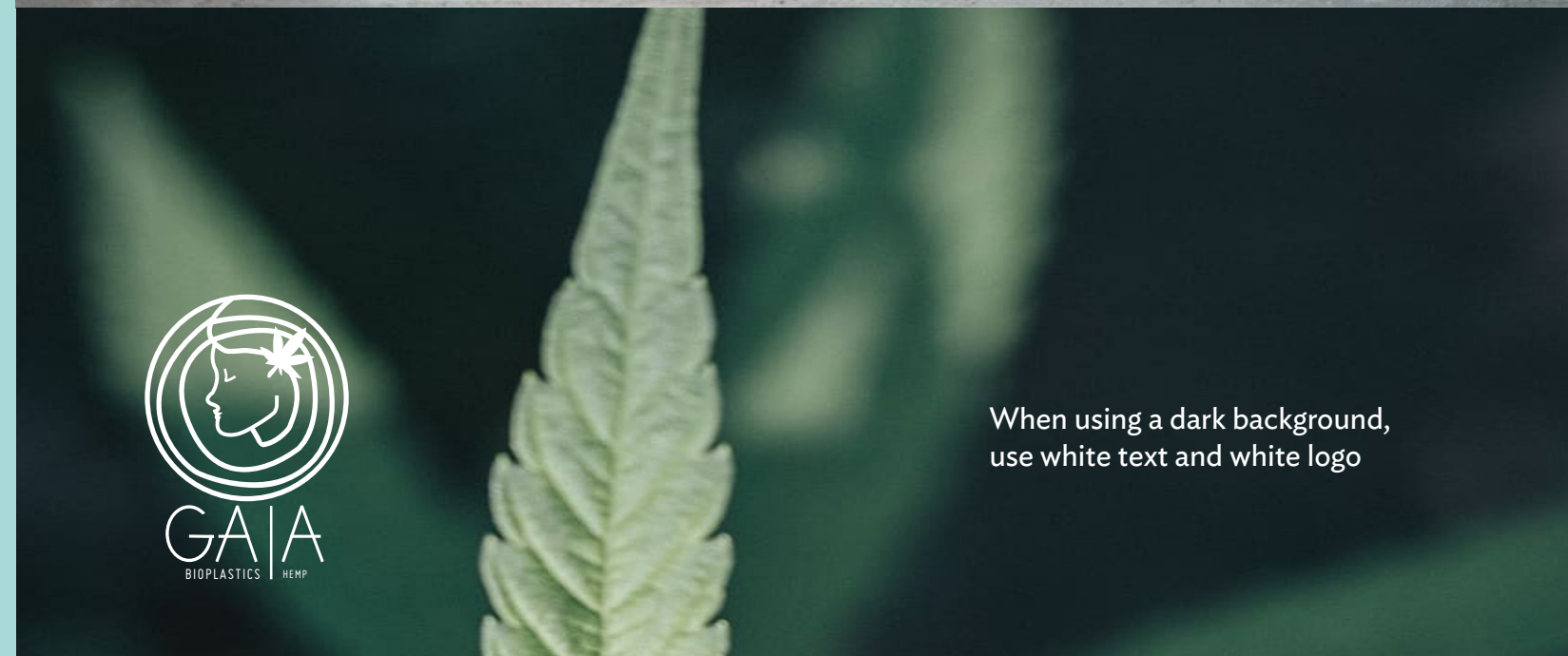
There are many ways to use photos, just make sure the type is not obstructed by the image. Here are some tips.



Be careful with light backgrounds, use all black logos on light backgrounds.



Be careful with 'busy' backgrounds. Use backgrounds a blurred background.



When using a dark background, use white text and white logo

COLOR

color.

Primary (Corporate) Color Specs

<div>7464U Tint 30% C37 M12 Y0 K0 R153 G198 B238</div>	<div>Neutral Black U Tint100% C0 M0 Y0 K100 R0 G0 B0</div>	<div>358U Tint 30% C43 M0 Y61 K0 R150 G214 B 138</div>
<div>7464U Tint 60% C37 M12 Y0 K0 R153 G198 B238</div>	<div>Neutral Black U Tint60% C0 M0 Y0 K100 R0 G0 B0</div>	<div>358U Tint 60% C43 M0 Y61 K0 R150 G214 B 138</div>
<div>7464U C37 M12 Y0 K0 R153 G198 B238</div>	<div>Neutral Black U Tint30% C0 M0 Y0 K100 R0 G0 B0</div>	<div>358U C43 M0 Y61 K0 R150 G214 B 138</div>

Secondary (Lignin) Color Specs

7486U Tint 30% C31 M0 Y54 K0 R181 G225 B148	Neutral Black U Tint 100% C0 M0 Y0 K100 R0 G0 B0	127U Tint 30% C0 M19 Y71 K0 R254 G206 B98
7486U Tint 60% C31 M0 Y54 K0 R181 G225 B148	Neutral Black U Tint 60% C0 M0 Y0 K100 R0 G0 B0	127U Tint 60% C0 M19 Y71 K0 R254 G206 B98
7486U C31 M0 Y54 K0 R181 G225 B148	Neutral Black U Tint 30% C0 M0 Y0 K100 R0 G0 B0	7128U C0 M19 Y71 K0 R254 G206 B98

Secondary (Hemp) Color Specs

726U Tint 30% C9 M22 Y34 K0 R231 G197 B167	Neutral Black U Tint100% C0 M0 Y0 K100 R0 G0 B0	583U Tint 30% C39 M18 Y94 K1 R167 G178 B65
726U Tint 60% C9 M22 Y34 K0 R231 G197 B167	Neutral Black U Tint60% C0 M0 Y0 K100 R0 G0 B0	583U Tint 60% C39 M18 Y94 K1 R167 G178 B65
726U C9 M22 Y34 K0 R231 G197 B167	Neutral Black U Tint30% C0 M0 Y0 K100 R0 G0 B0	583U C39 M18 Y94 K1 R167 G178 B65

Secondary (Seaweed) Color Specs



AaBbCcDdEe
FfGgHhIiJjKk
LlMmNnOoPp
QqRrSsTtUu
VvWwXxYyZz

Typography

Miso

Miso is used throughout this brand standards, along with the sub title of the logo. Use Miso Regular over Miso Light to ensure legibility. Miso embodies a more unique personality that also portrays the brand's essence.

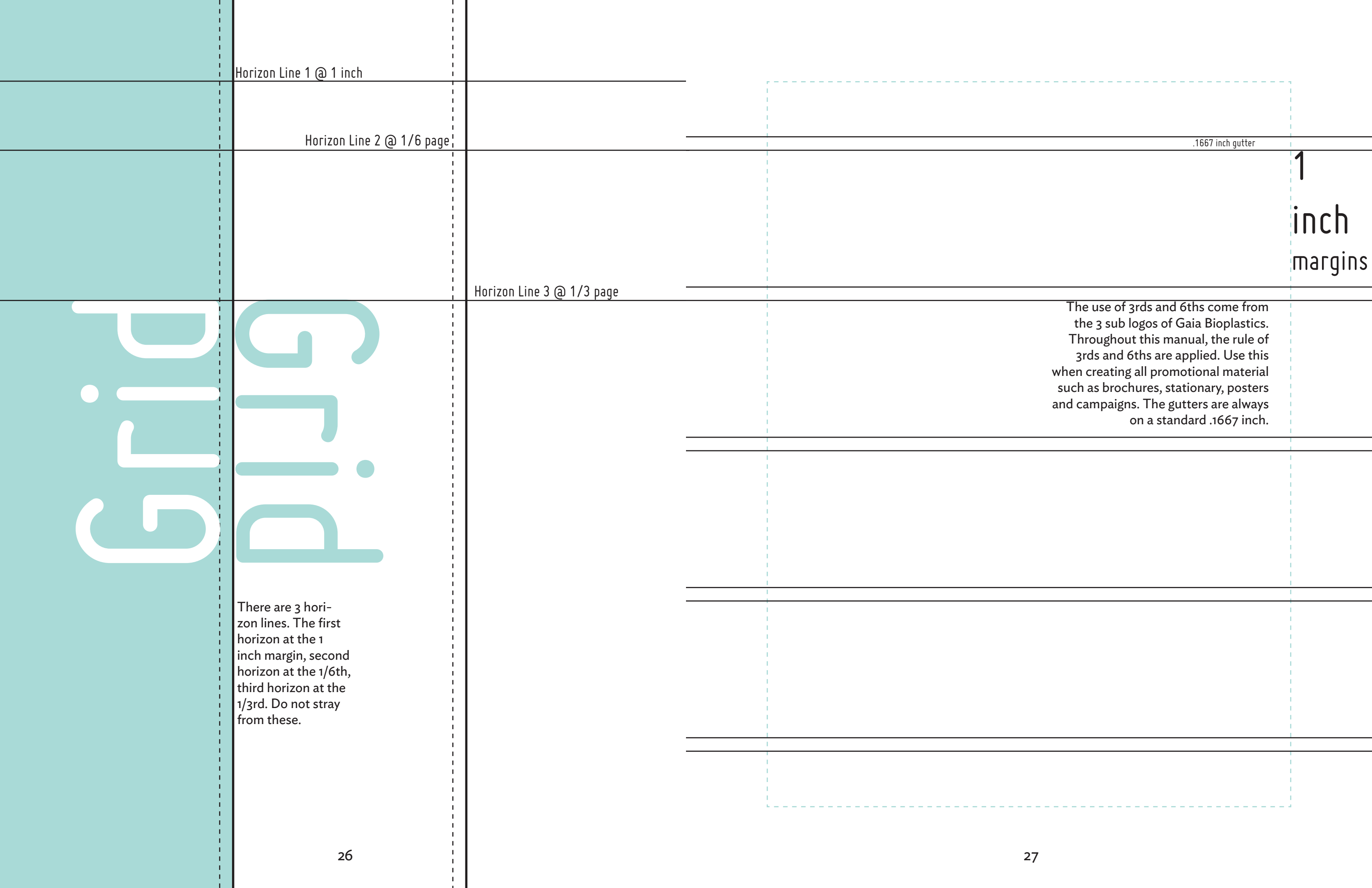
Arial
An alternative to Miso is Arial

Ideal Sans

AaBbCcDdEeFfGgHhIiJj
KkLlMmNnOoPpQqRrSs
TtUuVvWwXxYyZz
1234567890!@#
\$%^&*()_+--='~

Ideal Sans is used to compliment Miso. It is meant to be used on long bodies of text, 40 words or more. This font is used mainly in Book, although there is 10 variations in the family and the user is free to use them sparingly. But please, always choose Book over Light.

Myriad Pro
An alternative to Ideal sans is Myriad Pro



Horizon Line 1 @ 1 inch

Horizon Line 2 @ 1/6 page

Horizon Line 3 @ 1/3 page

.1667 inch gutter

1
inch
margins

The use of 3rds and 6ths come from the 3 sub logos of Gaia Bioplastics. Throughout this manual, the rule of 3rds and 6ths are applied. Use this when creating all promotional material such as brochures, stationary, posters and campaigns. The gutters are always on a standard .1667 inch.

There are 3 horizon lines. The first horizon at the 1 inch margin, second horizon at the 1/6th, third horizon at the 1/3rd. Do not stray from these.

SUBL
SUBL
SUBL

LOGGOS
LOGGOS
LOGGOS



G A I A

BIOPLASTICS | LIGNIN

LOGO USAGE

Primary Logo



All white logo on-top black



All black logo



All white logo on-top tint



Gray scale



All white logo on-top color



Horizontal Arrangement



Logo Type only

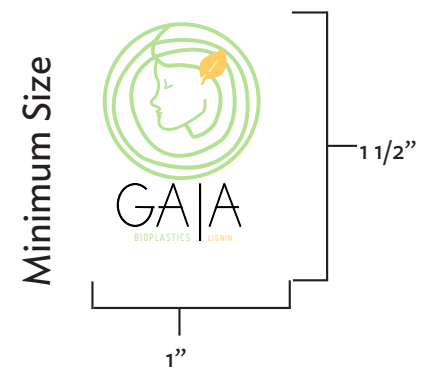
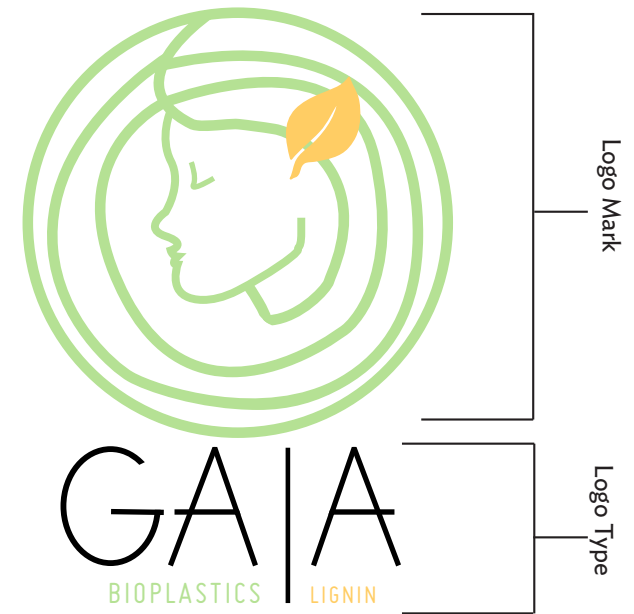


Logo Mark only



LOGO

ANATOMY





G A I A

BIOPLASTICS | HEMP

LOGO USAGE

Primary Logo



All white logo on-top black



All black logo



All white logo on-top tint



Gray scale



All white logo on-top color



Horizontal Arrangement



Logo Type only

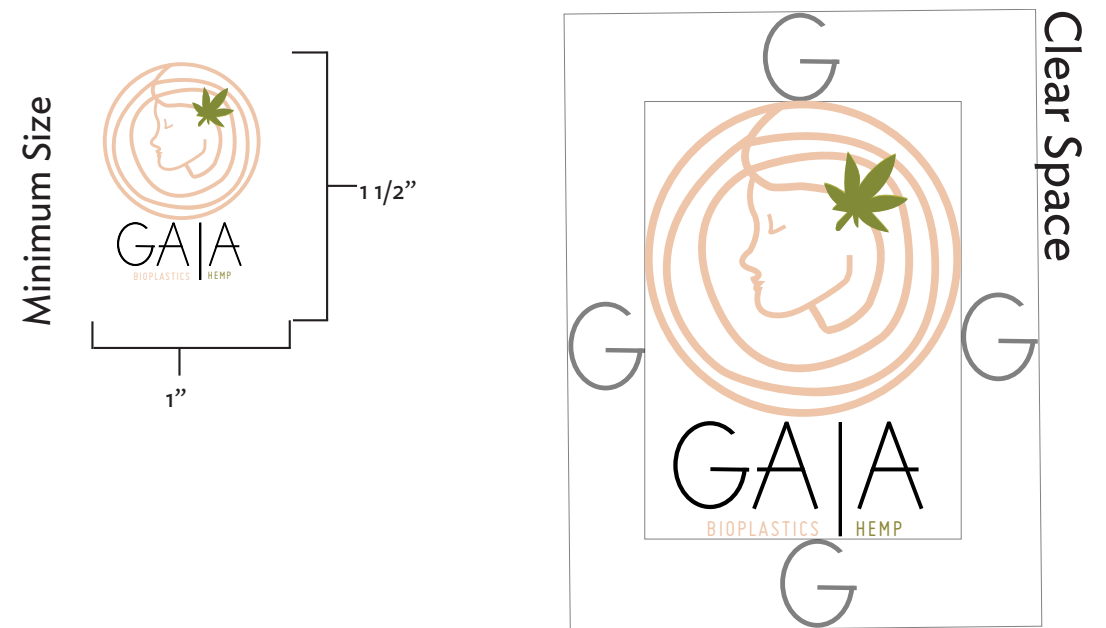


Logo Mark only



LOGO

ANATOMY





G A I A

BIOPLASTICS | SEAWEED

LOGO USAGE

Primary Logo



All white logo on-top black



All black logo



All white logo on-top tint



Gray scale



All white logo on-top color



Horizontal Arrangement



Logo Type only

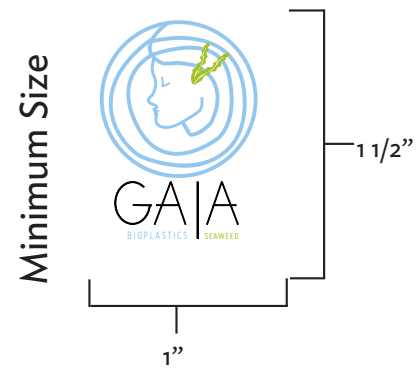
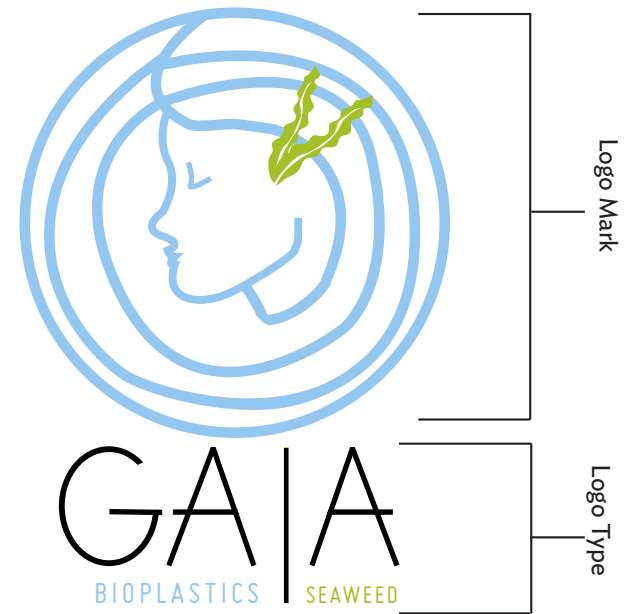


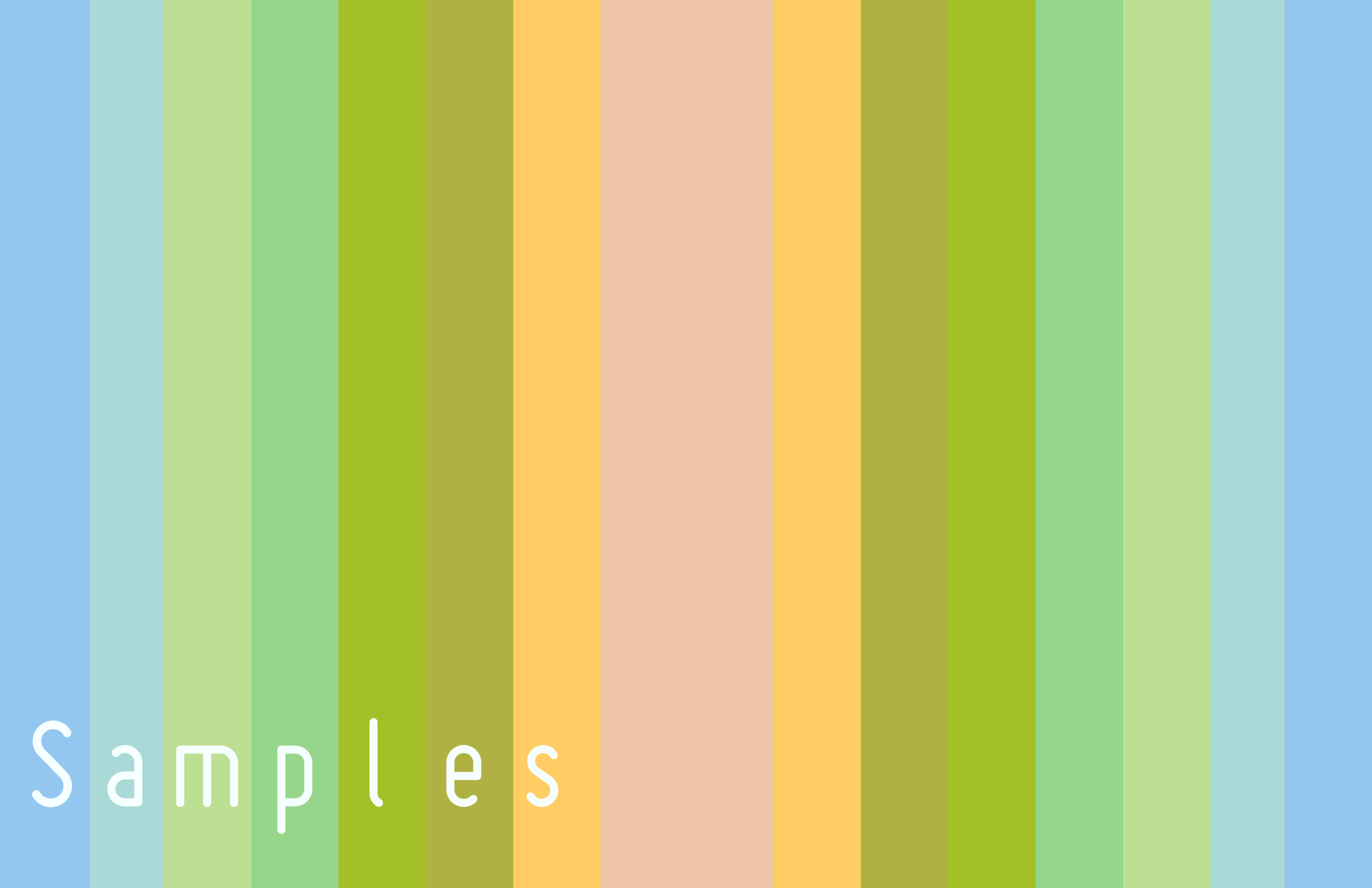
Logo Mark only



LOGO

ANATOMY





Samples

THE BOTTLES

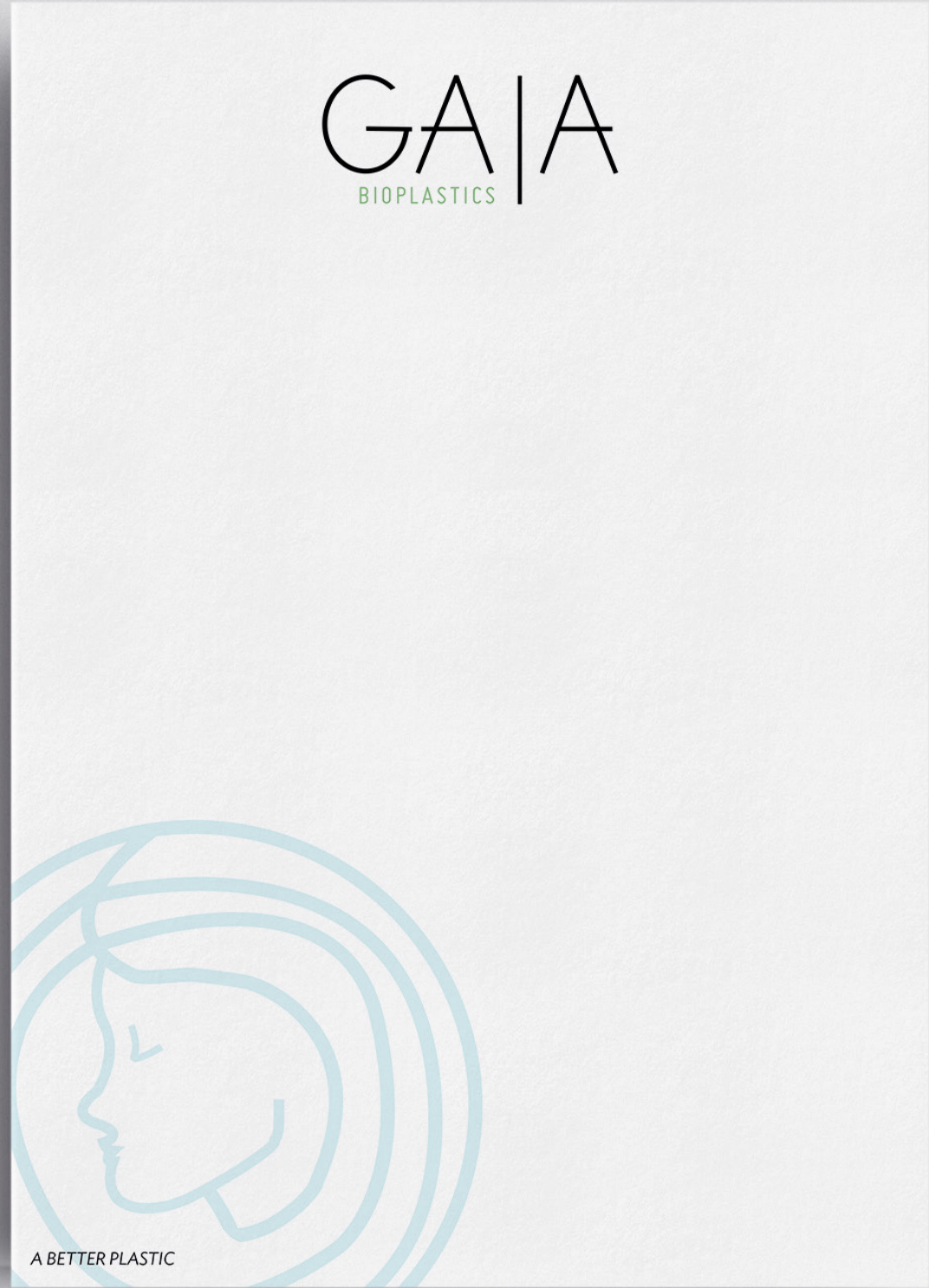
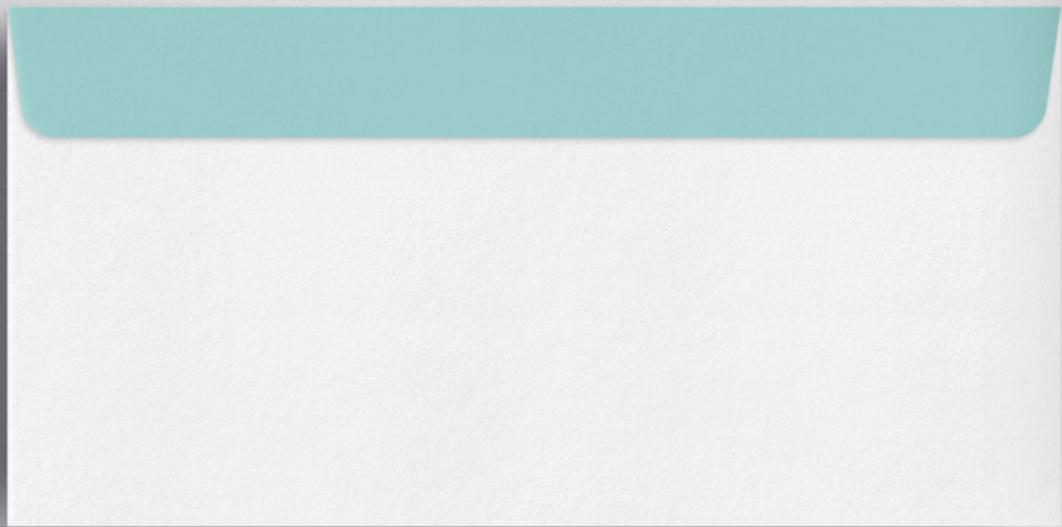
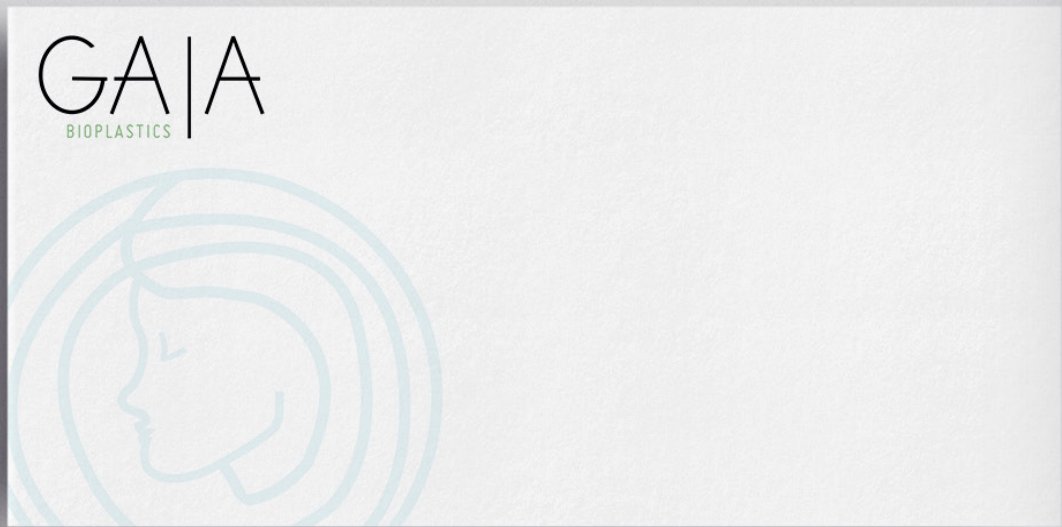
Due to our very creative background, the hemp water bottle would be considered a 'blank canvas' this could be where an artist can be hired and design a cool label that can entice the consumer to buying this product.

While the lignin water bottle would be a more typography oriented. This brand is flexible with either option. This creates room for diversity among products.











GAIA
BIOPLASTICS

designed by kelsey long