

Hi! I am Erin Baurmann. I am a student at Hockerill Anglo European college, and this my portfolio consisting of the work that I am proud of and would like to share with you and maybe even inspire or encourage you to try something new.

Scroll down to see my work!

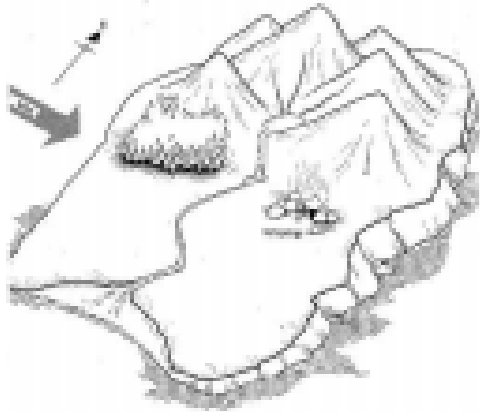


My first piece of work I would like to share is my physics assessment in this piece of work I had to find energy sources that would power an island with scientist on it that were doing an experiment. I was proud of this project I got 7/8 and an 8/8 I did this project in year 9.

This is the link to my joule island project:

[https://www.hockerillct.com/exemplar\\_work/portfolios/erinb/Joule%20island.pdf](https://www.hockerillct.com/exemplar_work/portfolios/erinb/Joule%20island.pdf)

## 4 Joule island



Joule island is a remote island located in the Pacific. This island is a site of a three-year project involving a team of thirty scientists who will be staying there. I will be planning for the energy needs of the team, because the island is isolated the scientists need to be self-reliant as they cannot be expected to be supplied on a regular basis. I will also be analysing the effect of energy production on the local environment and try to ensure that the team has a minimal impact. On the island there will be no fossil fuels allowed as it all must be sustainable.

In this project I will need to do the following: select the energy source which will have the lowest impact on the environment, Evaluate the environmental impact that each energy production option has on the local environment, to consider the different available energy types and to plan and assess for energy needs of the 30 scientists who will be staying there for three years.

As the energy source has to be sustainable there will be no fossil fuels allowed, so there are 6 types of energy sources that could be reliable. But there are 4 that I think would work the best on the island and ensure that the scientists have no problem with the energy. These are:

### Wave energy:

Wave power is produced by the up and down motion of floating devices placed on the surface of the ocean. In other words, wind produces waves, and then waves produce energy. As the waves travel across the ocean, high-tech devices capture the movements of ocean currents and the flow of waves to generate power. The advantages of using wave energy are that waves do not cost money and they will never run out, so the money goes into building the power station and that there are not many safety risks with wave power generation. But there are also a few disadvantages such as they may not always be able to generate energy as waves can be big or small, I will need to figure out a way to transport the energy from the sea to land and that as not many people have tried to generate energy this way the equipment may be expensive.

### Wind energy:

When wind blows past a wind turbine, its blades take in the wind's kinetic energy and it turns around, turning it into mechanical energy, this rotation turns an internal shaft connected to a gearbox, which speeds the rotation by a factor of 100. That spins a generator that produces electricity. One of the advantages of using

wind energy is that wind is free, and it will never run out so instead of paying the cost of the wind the money can be spent on building the best wind turbines and also there are very few safety risks when you use wind turbines. But there are also a few disadvantages, such as wind turbines can only be placed somewhere that has a lot of wind or they won't be effective, some days there may not be wind so there would have to be a backup energy source, there would have to be multiple turbines and many people do not like the way they look and say they spoil the view.

#### Tidal:

Tidal energy is made by the movement of tides and oceans, when the water from the rise and fall of tides is a form of kinetic energy. Tidal power surrounds gravitational hydropower, and that uses the movement of the water to move the turbines and make energy. The advantages of tidal energy are that the tides are free once the power station is built and they will not run out and that we know the exact time that tides happen so we know when electricity will be produced. The disadvantages of tidal energy are that you may need to build a dam which is expensive, the tides only happen twice a day so electricity can only be produced at those times and it may not be good for animals who live nearby.

#### Geothermal Energy:

Hot water is pumped from underground under high pressure. When the water reaches the surface, the pressure decreases, which can make the water turn to steam. The steam spins a turbine, which connects to a generator and then produces energy. Disadvantages for geothermal energy are that they can be difficult to control and they can occasionally produce harmful gases. But their advantages are that the energy is free and won't run out and does not produce greenhouse gases.

#### Solar energy:

Solar technologies change sunlight into electrical energy either through photovoltaic panels or through mirrors that concentrate solar radiation. This energy can be used to make electricity or be stored in batteries or thermal storage. The advantages of solar energy are that the energy from the sun is free and that the sun will always be there during our lifetime. The disadvantages include that it is relatively expensive to build a solar power station, that if it is cloudy or in the night-time there is not enough light so the electricity cannot be made, and some people do not like the look of solar panels.

Energy sources	How many	location	Building cost (\$ million)	Running cost (\$ million)	Average power output in summer (MW)	Average power output in winter (MW)
Wind power	2	West coast	150	10	10	20
Tidal	1	ocean	100	15	20	20
solar	1	South east plain/ flat land	125	10	7.5	5
Geothermal	1	Hot springs	50	5	3	3
Total	5		425	40	30.5	38

I have put the wind turbines on the west coast of the island because this is the place where there is most wind and if I put it in the mountains the mountains would block the wind. I have put the tidal system is here because it is by the shore making it the best and easiest place to build. The solar panels were placed in the south east as it is on flat clear open ground. I put the geothermal energy source on the hot springs because it was a good heating source.

#### Conclusion:

In conclusion, I think that I choose a good balance of sustainable energy sources. Of course, there is no such thing as the flawless energy source because all of them have their advantages and disadvantages some more than others that is why we removed energy sources that produce fossil fuels as we want to keep the beautiful island in its natural form and not damage it.

#### Bibliography:

- Class notes- accessed 7<sup>th</sup> December and the 3<sup>rd</sup> of December 2020
- 05 Adv and disadv Manchester- accessed 7<sup>th</sup> December and the 3<sup>rd</sup> of December 2020
- 05 Joule island Map accessed 7<sup>th</sup> December and the 3<sup>rd</sup> of December 2020
- <https://www.nationalgeographic.org/encyclopedia/tidal-energy/> - accessed 7<sup>th</sup> December 2020- author Morgan Stanley
- [https://openei.org/wiki/Wave\\_Energy](https://openei.org/wiki/Wave_Energy) - accessed 7<sup>th</sup> December 2020- no author specified.

This next piece of work was my geography brochure it was a travel plan for people who wanted to travel around Africa starting from Stansted airport. This project I had to write in German I got two 8/8s.

#### Tag 4-7 Old Jinka Airport

Der nächste Flug geht nach Old Jinka Flughafen, in Äthiopien  
Von hier sehen Sie zwei Stämme,  
Den Konso Stamm im Omo Tal  
Leben und den Himmels Got  
anbeten. Der andere Stamm ist der  
Hamar Stamm. Die sind Moslime und  
Leben im Süden von Lake Chamo



#### Tag 8-11

Die Serengeti  
Flug zum Kilimanjaro Flughafen in  
kenya dan mit dem Auto in den  
Serengeti National Park wo sie viele  
Tier und auch die Thomason  
Gazellen in der heissen, trockenen  
Savanne sehen koennen. Von den 4  
Tagen koennen Sie 3 Tage safari  
machen.

#### Diese Broschuere

Diese Broschuere ist ein Reisplan  
fuer einen Urlaub in Afrika. Du wirst  
gehen zu vilen Atraktionen. Zum  
Beispiel zwei Stämme, zwei Tier  
reservate, ein Kolonial Haus, ein  
Projekt fuer Leute zu helfen und  
mehr.

#### Der Erste Tag

Am Ersten Tag fliegen Sie von  
London Stansted 2184 Meilen nach  
Kairo International Flughafen in  
Ägypten. Hier werden Sie bleiben  
fur eine Nacht und am Morgen  
gehen Sie nach Luxor. In Luxor  
können Sie die alten Gebäude, das  
Tal der Könige, Tempel und Gräber  
sehen. Sie bleiben dort 3 Tage.



#### Afrika Broschüre über ein Urlaub





Tag 12-13

Flug nach Kigali Flughafen und von dort in die Vulkanischen National Park in den Bergen wo sie die Berg Gorillas besuchen.

Dies Gorillas Leben nur dort. Sie haben warmes Fell weil es dort sehr kalt sein kann.



Tag 14 - 28

Flug nach Südafrika zum Kinshaka Flughafen.

Sie gehen zum Zululand um kranken Kindern und der Gesellschaft zu helfen. Dort bleiben sie für 2 Wochen. Das Projekt ist von Afrikaimpact. Sie wohnen am Strand in der Mitte von Afrikanischen

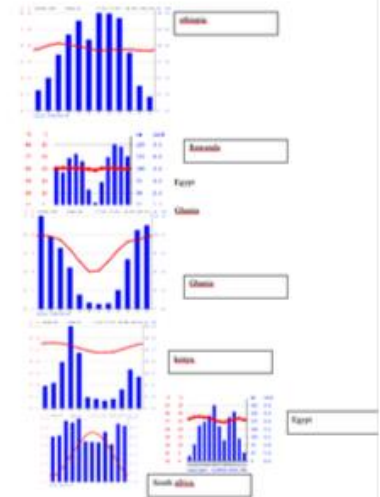


Tag 29-35

Flug zum Kotoka Flughafen  
Besichtigung von Häusern aus der Kolonial Zeit von dem Sklaven Handel. Der bleiben sie für 6 Tage und wohnen in einem Hotel am Strand mit Schwimmbad.



Die Luftmeilen  
Alle Luft Meilen zusammen sind  
**14.255** meilen



#### Klimagraph:

Ich denke das es ist gut zu gehen nach Afrika in März weil es war aber nicht so heiß ist und das Wetter ist ähnlich in allen Ländern. Für ein Reise is 20 bis 25 gut.

This next piece of work was my Food tech practicals in these we had to make street food from a country of our chose I chose France for the first practical I made oregano and basil bread rolls with sesame seeds on the top and for the second practical I made raspberry tarts







This next piece of work is my dystopian creative writing piece I have been writing in English, it is about the world becoming overpopulated, so the government has to step in, but vita is determined to find out what is happening behind closed doors.

## **Dystopian creative writing -The Thinning**

When you are in chaos you don't see what people are feeling, but when you are sitting on the sidelines you witness the fear and trepidation in people's eyes. All emotions gush out as distress takes over their bodies. Today was that day that I was one of the people in distress, along with the countless number of others fighting for their place in society. Every year on the 1 January havoc breaks free, anywhere else it would be a time of celebration, children, adults, and families happy for a new year, a fresh start, but people live in fear here in Railstone.

In 2050 the world became overpopulated; war broke out as too many people had opinions, and it meant that many more people had to eat so it drove to mass species extinction. The world couldn't go on, so the governors stepped up and strived for peace, they say they did this by sectioning people into regions, but we have never had proof of this, every year the population governors come to Railstone and let out the thinners. The thinners are "men" as we are told who take away the innocent, no one knows where to, but the overpopulation is calmed. This day is called thinning. My goal is to discover where all the people have gone that they have Thinned. I just want to know the truth.

Two years ago, when I was 16, on the 1st of January 2998 my mother was taken by the thinners. On the 1st of January 2997, my father was taken. Gila is the only family I have left. Gila is my sister she is 5 years younger than me, yet she is so brave and valiant. Her eyes are always filled with hope, ambition, and love and her grins were always wide.

As I approached the porch of our hut, I soon realise that all I could hear were birds chirping and the captivating sound of nature. Where had everyone gone? I push the door open and scurry inside to find out more. Everything was disarrayed, as I stepped onto the wooden floor, I felt something crunch under my foot and pierce into my loafer, the window had smashed leaving hundreds of shards scattered across the ground. All of our belongings were thrown around the room. I call out for Gila, but nothing came back in response. I ran out as I became bewildered at where everyone had gone to. As I stumbled upon my thoughts, I remembered the date it was January 2nd 3000 yesterday was the Thinning but also the end of the 2000s sectors. When I was young, I was told of this day on the first day of the year 3000 the sector would restart meaning everyone would disappear. But why was I still here? I took a moment to myself to take in what had happened, would I ever see my sister again? What will happen to me? And how will I fix this?



Another project I am proud of was a project from year 8 in Computing, we had to create a brochure about E-safety I got an 8.



### Hacking and viruses

Have you ever had a virus on your computer

How do you get the virus of your computer?

Step 1: Enter Safe Mode. Before you do anything, you need to disconnect your computer from the internet, and don't use it until you're ready to clean your computer.

Step 2 : Delete any files

Step 3: download a safety scanner

Step 4 : run the scan

How to prevent them:

Do not open messages from people you don't know.

<https://www.pcworld.com/article/243818/security/how-to-remove-malware-from-your-windows-pc.html>



### E-safety

*Inside this booklet you can find very important information about safety on the internet . The online world is amazing but it can be dangerous this is for year 7*



By Erin Baurmann

### Sexting

What is it and why should you not do it?

Sexting is sending a friend an inappropriate picture of you or even a you sending a picture to a friend.

Don't do this because you or someone else could get into trouble and the person how you send it to could send it to other people and it could go viral.

This is why you should not sext if you get one from someone else do not spread it and tell an adult.

<https://www.nspcc.org.uk/preventing-abuse/keeping-children-safe/sexting/>

### Cyberbullying

If you ever get cyberbullied tell someone it is a very serious thing you should tell a trusted adult,

Cyberbullying is like any other bullying but it is online people can say mean things about you and be mean to you on a device.

You should not text/say anything back because it could make matters worse.

Lastly here is a repl I made in year 9 which is a program of a German flag.

<https://replit.com/@ErinBaurmann/German-flag-2#main.py>

