



The  
CO-COON  
Growing community through education.

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## The brief

The plan is to create an 'educational space' for children, and possibly adults, living under the poverty line in less economically developed countries. The poverty may have occurred due to socio-economic issues, a natural or man-made disaster, or an outbreak of an epidemic. The 'educational space' should help them to escape for a time from their harsh reality and give them a safe environment to learn and gain essential skills.

Whilst volunteering in Pune, India, I saw first-hand how poor children are disadvantaged with their education: "One in four young people in developing countries are unable to read a sentence...[,] a "legacy of illiteracy"..." Disasters quickly escalate already existing problems. "Typically, the poor are the worst hit for they have the least resources to cope and rebuild." In the short term, the 'education space' would provide disaster emergency support and education. In addition to saving life by teaching survival skills, it offers the children affected by a disaster opportunities to learn basic skills and literacy to break free from the poverty cycle for a better future for themselves and their family. For example, the 'educational space' aims to help children and their families to move on from the camps and rebuild more quickly. While at present, a small body of literature and voluntary organisations address disaster education, these are only short-term solutions for education after a disaster.

Biomimicry is the inspiration for the 'educational space'. People have a closer connection to organic shapes and, therefore, tend to feel instantly more relaxed and safe. I have a keen interest in biomimicry as a way of solving problems and using it as a design tool to influence the outcome. Because the 'educational space' is to be placed in an area of poverty, mainly after a disaster has occurred, it needs to be easily assembled with minimal experience required. Additionally, it will be better if the design is easily transportable as in some cases the best way to reach a disaster zone is by air dropping. The site is not going to be set in one place because it needs to be a structure that can help people in lots of different areas.

The 'educational space' is to be an interactive way of learning and gaining new skills by creating a sense of community through informal, yet organized, community education. Information is more easily retained when playing or interacting with something. The space and scheme should be seen as a glimpse of hope for the people in the community.

Right now, around 85 million people around the world have been made homeless by natural disaster and conflict.



Homelessness in the UK.



Refugee camp in Calais.



War in Syria.



Volunteering in South Korea.



Hurricane Katrina in the USA.



Earthquake in Japan.

Types of Disasters

Natural Disasters - 'Natural disasters are large-scale geological or meteorological events that have the potential to cause loss of life or property.' Such as, hurricanes, tornadoes, floods, wildfires, earthquakes and drought.

Man-made Disasters - 'Man made disasters are hazards caused by human action or inaction.' Such as, wars, acts of terrorism, shootings.

Other incidents of mass trauma - 'Infectious disease outbreaks, incidents of community unrest, and other types of traumatic events can also bring out strong emotions in people.' Such as, Homelessness, the Ebola outbreak in 2014.

Personal experience - Volunteering in areas of poverty.



Tsunami in the Thailand.



Volunteering in India.



Tsunami in the Thailand.



Wildfire in Australia.

## Disaster zones and time scale



Earthquake



Tsunami



Hurricane, cyclone & typhoon

## Time scale of a disaster relief

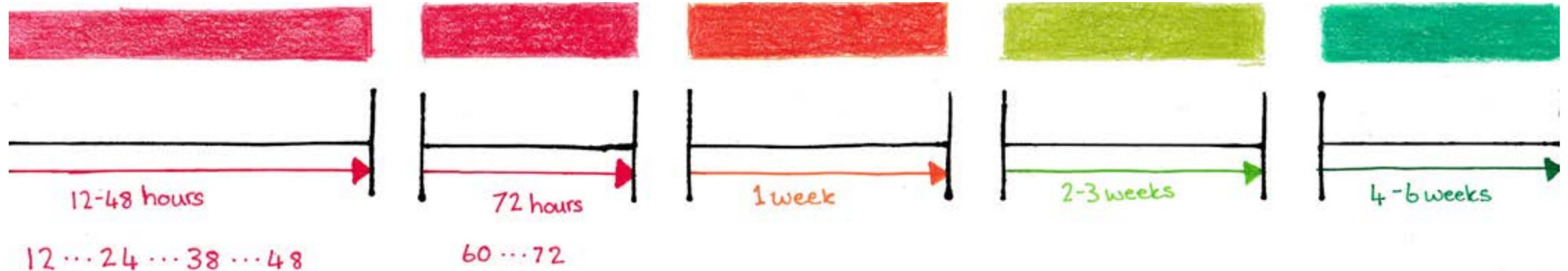
- Declaration of emergency by affected government
- Request for and/or acceptance of international assistance by affected government
- Potential development of FACT, RDRT and ERU teams
- Potential deployment of USAR, ERAT and UNDAC team
- Potential MCDA deployment
- APHP and IHP and deployed if required
- IFRC, DREF and INGO seed fundong available
- UN situation reports produced

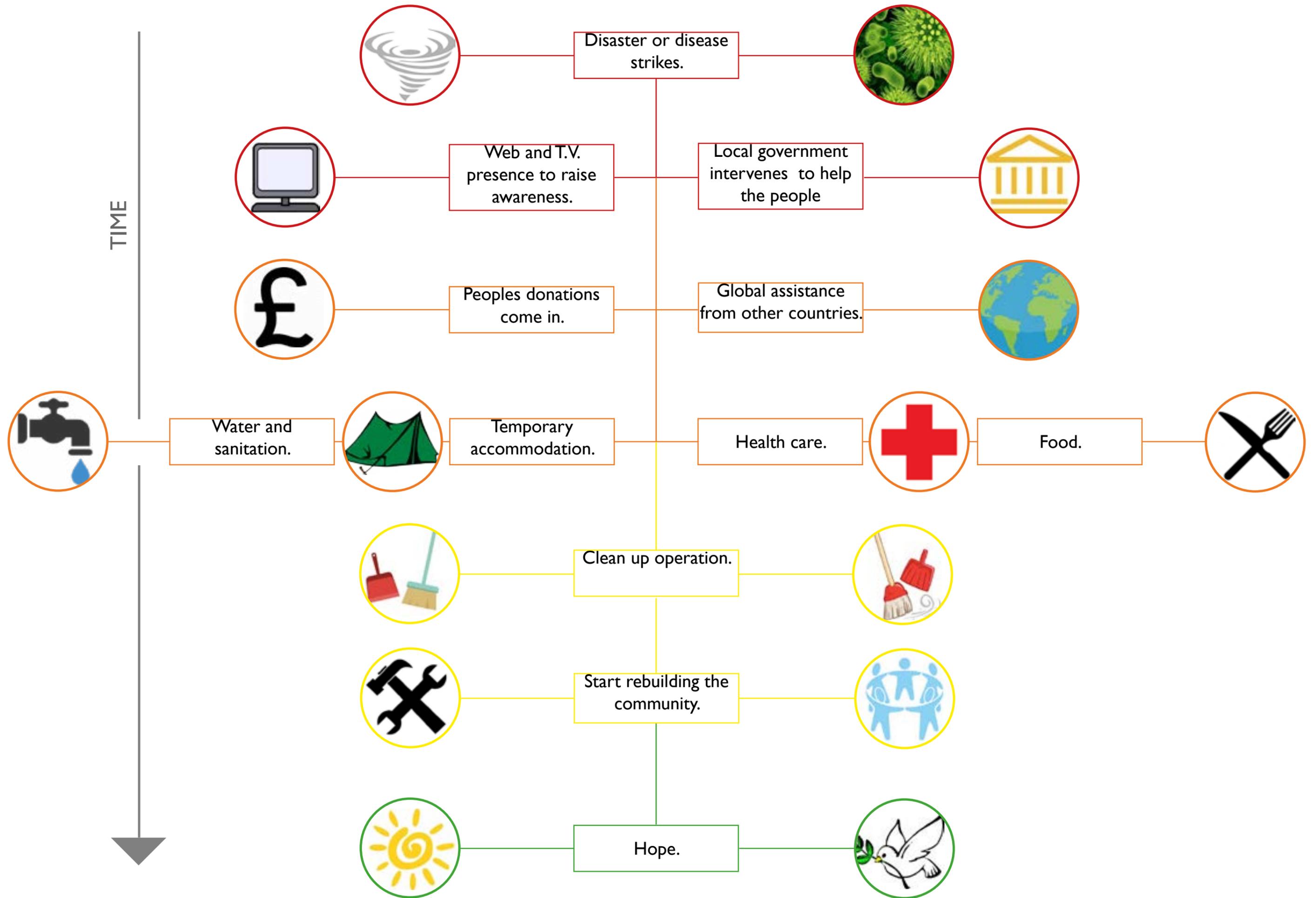
- Potential appointments of HC
- Cluster reports planning initiated
- HIC set up
- MIRA Phase I: Preliminary scenario definition (PSD) completed
- Creation of ICRC family links networks

- Dispatch from UNHRD
- Initial GERP allocation
- Launch of flash appeal
- USAR median and heavy teams exit between 7 to 10 days after deployment

- UN OCHA emergency cash grant can be dispersed within 10 days
- MIRA phase 2: Report complete
- FACT teams exit between 2 to 4 weeks after deployment
- UNDAC teams exit 3 weeks after deployment

- 2nd CERF allocation
- Reviewed flash appeal







During the Summer in 2017, I spent several weeks volunteering in Pune in India. I spent my time helping in a local school working in large over-crowded classrooms, that were filled with up to 60 children. Due to the large amount of children attending the school they have to split the school day up into two sections. Half the school attends lessons in the morning and then goes home at lunch. To allow the other half of the school to attend in the afternoon.



Whilst we were there we were set the task of giving the children a fun filled lesson with games. We played games with them outside in the courtyard, from their reactions this seemed very unusual for them. Indicating that they spend most of the time sat behind a desk just listening to the teacher. Their favourite activities were when we did crafts and made things with them. Additionally, just allowing them to come to the front and write on the chalk board meant so much to them.



The fact that the school is a private school illustrates how bad the public education system is within the country. Considering this is one of the best schools in the area. Even though, the children don't have much at home or at school they are still exceptionally enthusiastic. I found that the children always had a smile on their faces and were very keen to learn. With such high ambitions and potentials, it's a shame to think just because they are from a poor area that they can't fully reach their potential.



Problems

- Lack of space
- Lack of resources
- Outdated technology
- Poor sanitation in the local area
- Not a fun or interactive educational programme
- Lack of money



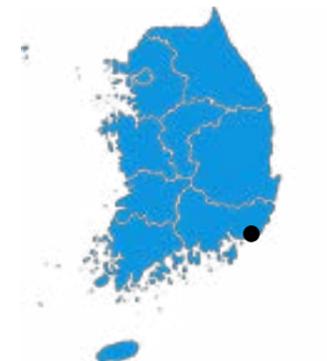
During the summer of 2015, I spent several weeks volunteering in Busan in South Korea. I spent my time helping with a regeneration project in a local market. The locals who run the market are defectors who escaped North Korea during the war in the 50's. The people in the market see the market as their second chance and work long hours everyday despite their age to create a better future for them and their families.



We spent time clearing up rubbish and waste in different areas of the market. Then we redecorated these areas with simple murals. Just a simple splash of colour to these places brightened up the market so much. The aim of the regeneration was to improve the market for the workers and the punters. They have a lot of work to do as the market is very much a botched job with tape holding things together. The market however does have character and you can see the struggles the people have gone through to get there.



We were working with a community action programme that are based in the small building near the market. Where they cater to a large range of people. It is a bright space that gives the locals a bit of space away from the market and a place for them to go to learn new skills. They had a few interactive games and educational props for the younger children, from the families working in the market. The building is very simple inside it doesn't have any new pieces of technology.



Problems

- Lack of money
- Lack of materials
- Unhealthy lifestyle work long hours bent over their stalls
- Living in unsanitary conditions
- Not many market workers have other skills



IKEA flat pack refugee shelter

IKEA have designed a flat pack refugee shelter, that recently won the Beazley design of the year 2016, by London's design museum. The shelter is around 17.5 sq m that can fit inside 2 boxes additionally, it can be assembled within 4 hours and by 4 people. The instruction manual follows a simple pictorial structure similar to their furniture instructions. The shelter is solar-powered and can last 6 times longer than a typical emergency tent. As a result, it has changed the lives of thousands of refugees around the world.



It is no surprise that the shelter won the design of the year in 2016 as it was a revolutionary design that has already help thousands of people. It is also clear that the IKEA foundation is determinate and has a strong ethical background as they started production immediately and were able to make the shelters reach those in need within 6 months. Even though the shelter is a much need solution it does have a shed like aesthetic, which is made more obvious by the fact it is built from "lightweight polymer panels laminated with thermal insulation, which clip onto a steel frame." Overall the shelter does meet the requirements needed by the people in refugee camps. However, the shelter doesn't create a homely feel, it has a very industrial quality about it.



Scandals in the news

People have always been a bit suspicious of large charity organisations as, they don't know or understand where all the money goes. The main question on peoples minds is how much and many people get paid?

"Penny Mordaunt, the international development secretary, has accused Oxfam of "a complete betrayal of trust" over the way it handled the Haiti sex scandal."

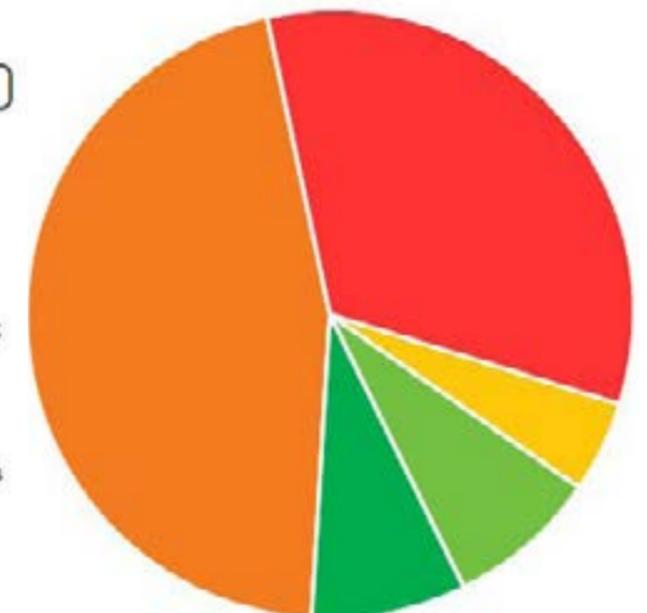
Oxfam was in the news recently over a scandal involving there aid works working overseas and prostitutes. This is a topical problem that causes a concern with the people living in poverty as there chance of change and a better future has been blurred. The idea that these big charity organisation are meant to provide safety for these people. Instead they are doing the complete opposite.

As a result, it has causes a large doubt in the public around large charity organisation. A study in 2000 showed that the general public donate £20.6 bn out of £45.6 bn. Therefore, they can't afford to loose the trust of the public as they are nearly half of their donations.

FOR EVERY £1 GIVEN TO OXFAM...

- 42p goes towards development work
- 37p goes towards emergency response work
- 3p goes towards campaigning for change
- 10p goes towards support and running costs
- 8p goes towards fundraising costs

Source: Oxfam Annual Report & Accounts 2015/16





### Operation Christmas child

Operation Christmas child is an charity organisation run by Samaritan's Purse. The Idea behind the project is to create a small shoebox of gifts in time for Christmas aimed at a child in poverty, usually in a developing country. They believe " A small shoebox can have a big impact. What goes into the box is fun, but what comes out of it is eternal." Once a shoebox is filled and correctly labelled for the right age group and gender. The shoebox is then sent flown over to the children. Where they are distributed within the community.

The fact that it's such a simple act for the sender but it means so much for the child who receives it. It's just lovely to see the face of the children receiving the gifts. The small shoebox give the children so much joy and hope over the smallest and most basic items like toothbrushes.



### Book bus

The book bus is a charitable organisation that was set up to "improve literacy rates in Africa, Asia and South America by providing children with books and the inspiration to read them." The book bus works with rural schools, and inspire the children to read with story telling, assisted reading practice and creative arts. Each book bus helps support five schools within three months. They finish a project off with an end of term party and an opening of a new school library.

The book bus is such a small but clever idea that manages to reach a large amount of children. It doesn't just supply a few books and sessions for a few weeks but has a ripple affect by giving them a tool kit for learning that they can use to improve their reading and inspire younger generations. Additionally, they use a more interactive learning approach, which has been proven to be more affective.



### Shelter box

Shelter box was set up by a group of people who believe having a shelter is part of our human rights. Their aim is to provide emergency shelter and tools for families robbed of their homes by disaster, they're transforming despair into hope.

In each sturdy green shelter box is a family sized tent to protect them from the elements. The other contents differ depending on the climate and disaster. The items include : solar lights, water storage/purification equipment, thermal blankets and cooking utensils

"When I received a ShelterKit, it gave me the courage to start rebuilding my house because I knew I had the materials I needed for the roof." - Chief Sonjeka, from Mulanje, Malawi



### Igloo

The word igloo comes from an Inuit word, iglu, which means simply "house," no matter what it's constructed from. An igloo can be a temporary or permanent structure, and are made from the local surrounding to build a warm shelter. Igloos have mostly been built by the Inuit tribes that live in parts of Canada and Greenland.

It is an ingenious idea that is adapted to the environment, the igloo retains heat and protects against wind, since snow and ice act as excellent insulation. The design includes a tunnel entrance that forms a cold trap to preserve heat inside. The sleeping and sitting area is raised above this and so maintains a higher temperature; a small hole near the top of the igloo provides ventilation.





Peace Pavilion by Atelier Zündel Cristea

The inflated continuous tube is twisted to create three 'arm' forms that allow visitors to walk and sit underneath, or even climb over. "The design of the structure is a simple topological deformation of a torus and the shape was mathematically generated." It was originally placed outside the V&a museum of childhood in London. The site's main use is as a recreational garden for living, working and visiting communities.



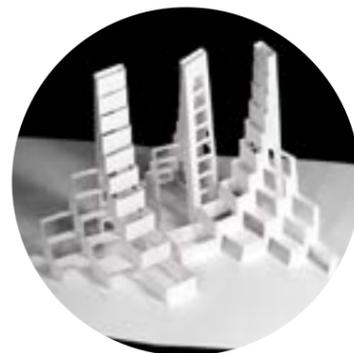
The peace pavilion doesn't have a set function or ability and therefore, the users have to be creative and get to decide how they use the space. It encourages community as there aren't any barriers dividing people and space. It's particularly clever that it is placed outside a museum of childhood as the pavilion encourages adults especially to act more like children and interact with the space in an unconventional way by potentially climbing over it.



Peter Dahmen

Peter is an artist that works with paper and card to create unique large folding structures. This came about when he was a student and needed to transport his models around on the train, he thought what if I could fold them? One of his largest pieces of work was a gigantic constructed backdrop for a trade fair more than ten meters wide and five meters high. "Probably the largest folding map in the world."

His work looks so fragile and seems like it could fall to pieces with a small gust of wind, but it's actually very strong. The idea of folding up the structure could have a great deal of potential when it comes to disaster zones and areas of poverty as the locals don't necessarily have the skills to build a large structure. Additionally, as he has proven it's an inventive way of dealing with transport, and keeping the item safe.



Shipping containers

The use of shipping containers to construct buildings, either permanent or semi-permanent, is a relatively modern solution to sustainable architecture as it re-uses old shipping containers. It has become increasingly popular in recent years and is an innovative solution to building pop-up exhibitions or shops. There are many advantages to this solution, for example: customizable, modular, transportable, availability and eco-friendly to name just a few. Unfortunately, there are still a few disadvantages: previous damage, roof weakness, humidity, etc.

Considering these factors, it is still a viable option. As seen in this cafe, it is able to open up and increase the floor space dramatically. Additionally, when they close at the end of the day, they know everything is safe and put away.



playLAND pavilions by LIKEarchitects

PlayLAND pavilions is a set of three bouncy and colorful spatial installations, aimed at young children. It is constructed from rubber rings. "playLAND is an off-the-shelf installation." I was built with the help of local volunteers and split into three different stages, which are: an informal stage, where different shows for children could be seen; a silo-shaped tower, that kids could enter and play in; and a small tunnel pavilion, for children to cross and run around.

The pavilions encourage children's creativity through play as well as being used as a space to read stories. The brightly colored rubber rings are designed to encourage children to play quietly in the sea or pool. Using familiar objects instantly makes the children more relaxed within the space, therefore the space will be more appealing to the children.



## The cycle of Poverty



Poverty begins in childhood when babies are born to poor, malnourished mothers. As they are born into families that are poor, these children enter into a cycle of poverty that can be difficult to break. But, there is hope.

Plan International is a charitable organisation. They strive for a just world, working together with children, young people, our supporters and partners. Additionally, they believe “that breaking the cycle of poverty begins with investing in children”

Plan International gives children, families and communities the tools they need – like education, healthcare, and access to water and sanitation – to break the cycle of poverty and build solutions for improving their own lives, beginning a cycle of progress.

They work with families, communities, local governments and partner organisations to ensure children have improved access to: Education, Health, water and sanitation, economic security and child protection and participation.



## Mainstream education

Mainstream schools are also known as ‘normal’ or ‘conventional’ schools. In the Oxford Dictionary mainstream education is described as “the ideas, attitudes, or activities that are shared by most people and regarded as normal or conventional.”

Mainstream schooling follows age categorisation of students and that all students are taught the same material at the same time. Learning is more along the lines of a passive activity through texts and lectures and not as interactive as perhaps alternative schooling approaches. They use a grading system to gain results and rank the schools. In mainstream schools a strong emphasis is placed on academic performance and sports as extra-curricular activities. Intelligence is often measured against grades and logical and mathematical abilities. However, if a child struggles with pace of the curriculum and lesson, can fall behind and therefore fail.

Mainstream education follows an approach of “rote memorisation” – memorising work with little or no understanding of the subject matter which is evident in an assignment-study-recitation-test. Languages, maths and sciences are treated as individual disciplines.

Mainstream education tends to have a religious foundation and targeted at a specific language group. In the past mainstream schools used to divide children into certain subjects depending on their gender, like home economics was for girls.

Large classes of around 30 are found in mainstream schools. Therefore, it’s more difficult for the teacher to create an individual setting for the students. The pace of the academic year is set by the education departments and government as they set the curriculum for every school. The aim of a mainstream school is to prepare the children for the real world after school, but they don’t teach simple tasks that every child needs to know like sorting out taxes or bills. They mainly prepare you for your next step in education. These days there are more similarities between mainstream schools and alternative schools like Steiner schools and Montessori schools, but there are also lots of differences in approaches to learning.



## Steiner schools



Rudolf Steiner was an Austrian philosopher, artist, architect and play write (1861 - 1925).

For education he believed in the idea of developing a whole person. His first school was founded in 1919 and was for Waldorf Astoria factory workers. This became the name for the schools are they a globally known as Waldorf Steiner schools.

He has developed a new approach to education, a spiritual movement that he anthropology anthroposophy (seeking to use mainly natural means to optimize physical and mental health and well-being.) Which is based on the idea that children's moral, spiritual and creative needs are equal to their intellect. Therefore, need just as much attention. As a result, many children finish their education with a fantastic grasp of art, a gift for being practical and creative. The form of education is ideal for generating enthusiasm within children. Encourages enjoyment towards learning. Less competitions and testing in early education. They are helped to develop their own abilities and excel academically. Development of imagination is regarded as very important for young children. They prefer wooden toys to plastic and computers are genuinely avoided until they are older.

The main differences between mainstream education and the Steiner approach to education is:

- Steiner schools have a strong emphasis on the importance of spiritual values and social skills
- The teaching method is based on a balance of intellectual, practical and artistic teaching
- Physical development also regarded as having great importance - to facilitate this they use a dance form called Eurythmy to help the children's physical development. Eurythmy is music translated into movement.
- Colour is also of great importance, especially for helping a child with their imagination skills, and teaching about the colour spectrum is an important part of the education philosophy.

In most cases in a Steiner school they have one teacher from the around the age of 6 until 14 ( In some cases even starting in nursery). As a result, there is a mix of age groups within one class. To combat this they use a incorporate group discussions, individual working and the teacher teaching, within the classroom. However, this can create problems for the children especially if a teacher and child doesn't get on.

The philosophy helps children to develop a healthy sense of awareness, concern for other people, respect for the world, and their own sense of meaning and purpose.



## Montessori Education



Dr Maria Montessori was an Italian physician and educator, best know for her philosophy of education. (1870 - 1952).

“Education is a natural process carried out by a child and is not required by listening to words but by experience in the environment.” - Dr Mari Montessori

Montessori education is based around self-directed activities, hands-on learning and collaborative play. With the class children make creative choices in their learning while the teacher offer age-appropriate activities to guide the process. Similarly to Steiner schools, they have a mix of ages within one classroom, because they vertically grouped. The mixed age group environment creates an atmosphere where children learn to help and be helped by other children. They The mixed age group environment creates an atmosphere where children learn to help and be helped by other children

Above all, Montessori classrooms at all levels nurture each child's individual strengths and interests. Montessori education encourages children to explore their world, and to understand and respect the life forms, systems and forces of which it consists.

The main differences between mainstream education and the Montessori approach is:

- Active vs Passive - Montessori children are active participants in their learning. Understanding come through a child's ability to discover things for themselves.
- Individual Learning - allows children to learn at their own individual pace and follow their unique interests, resulting in enjoyable learning which is sustainable over a lifetime. Avoiding interruptions whenever possible.
- Internal Validation - Belief that the child's self-esteem comes from an internal sense of pride in his or her own accomplishments. The teachers encourage children to develop their self-esteem based their own accomplishments.
- Environment - The classrooms are prepared in advance based on observations of the individual needs. They include student-centered lessons and activities. Therefore, the children are able to teach themselves using specially prepared materials.

“We must help the child to act for themselves, will for themselves, think for themselves” - Dr Maria Montessori



Steiner

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VS

Montessori

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VS

Main stream education

- Divided in to larger classes of around 30 children based on their age, and in some cases their ability as well.
- Passive approach to learning, Either through read a textbook or the teacher giving lectures. Following the "rote memorisation" approach - memorising work with little or no understanding of the subject matter which is evident in an assignment-study-recitation-test.
- Strong emphasis is placed on academic performance and sports as extra-curricular activities The children's intelligence is often measured against grades and logical and mathematical abilities.
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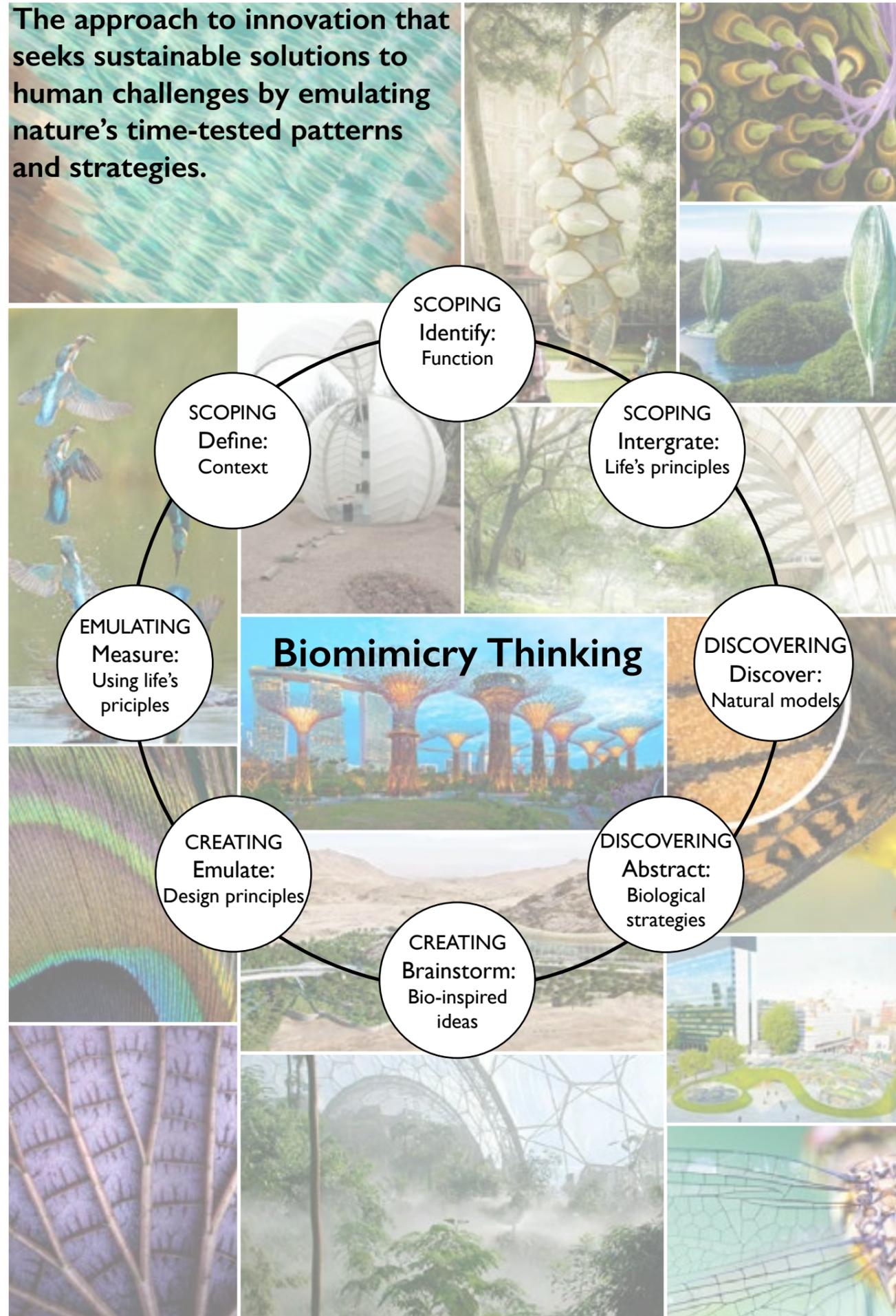


Nature is a prominent feature within Steiner and Montessori education. They feature a nature based curriculum. This includes hours playing in the meadow, science hikes in early elementary or a robust gardening program, Waldorf schools understand the health and academic benefits of nature study.

Biomimicry is The approach to innovation that seeks sustainable solutions to human challenges by emulating nature's time-tested patterns and strategies. To include nature in the design process and means that even if there isn't much nature around the education space will have a natural essence to the space.



The approach to innovation that seeks sustainable solutions to human challenges by emulating nature's time-tested patterns and strategies.

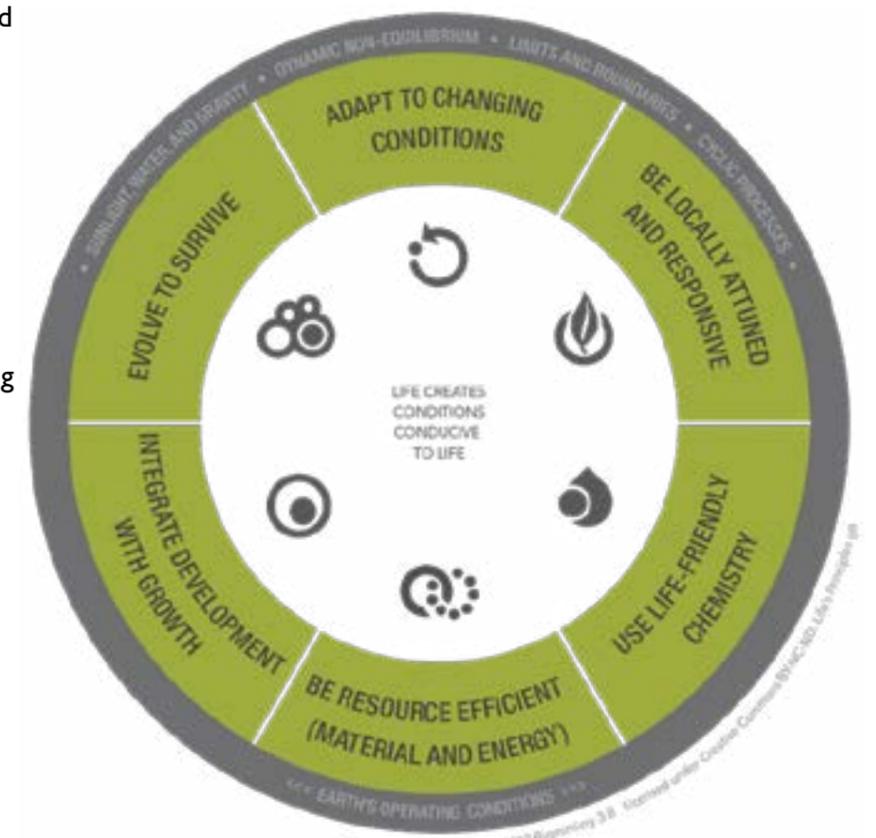


Many designers are and have been inspired by nature, especially when it comes to form, function and adaptability. As a species, we have a natural connection to organic shapes; however, this does not always mean that the buildings or products we create, from this connection to the organic, is sustainable or even good for the environment. As a result, designers and biologists have started to look at nature from another perspective, they are interested in finding ways to emulate nature's time tested structures and patterns to make items more sustainable, more durable and more attractive. Nature has evolved and developed over 3.8 billion years, Design can learn from nature by studying how nature develops details of form to sustain itself within given environments. This has resulted in the ideology of and its resultant terminology, such as biometric designs. In the relatively short time humans have been on earth, we have used a large amount of the world's resources without giving any consideration to the impact this has on our environment. "Life on Earth is under tremendous stress," it is now about "time to become conscious and to choose the kind of difference we make."

Biomimicry is a relatively modern term to the design world, as it was first mentioned in science literature in 1962, but grew in popularity during the 1980s with material scientists. However, it was in the 1950's Otto Schmitt first used 'biomimetics' and then in 1960 bionics was created by Jack Steele. In the past 15-20 years, there has been a major influx of interest surrounding biomimicry because of 3 influential figures: Professor of Biology Steven Vogel, Biological science writer Janine Benyus and Professor of biomimetics Julian Vincent. Even though this area of interest has been around for nearly sixty years it has only really been in the last 10-15 years that the most progression has been made. Especially as, bio-inspired design has started to emerge within the medical world.

Nature is an incredible resource as it holds the solution to many of mankind's problems, by mimicking nature, the most pressing problems may be solved. The use of biomimicry has applications not just in design and architecture but in agriculture, engineering and medicine. There are a number of designers and scientists pushing this ideology and methodology, but the most famous in recent years is Janine M Benyus, she is one of the leading innovators within this field and is the president

Of the institute and has paved the way through with her book *Biomimicry: innovation inspired by nature*. As a result of this, Architects like Michael Pawlyn and Yaniv Peer have been inspired to set up their design studio 'Exploration'. This thesis will explore and detail the history of biomimicry while also detailing and focusing on exciting case studies and developments within the field.



## The CO-COON

The Idea behind my concept is to create an 'educational space' for children, and possibly adults, living under the poverty line in less economically developed countries. The poverty may have occurred due to socio-economic issues, a natural or man-made disaster, or an outbreak of an epidemic. The 'educational space' should help them to escape for a time from their harsh reality and give them a safe environment to learn and gain essential skills.

The whole concept should help the entire community. I take community as a group of all aged people living in the same place or sharing certain things in common. The CO in CO-COON stands for community as they whole community has gone through the disaster and needs to be re-established.

Along side helping the community the 'educational space' aimed to educate young people, to give them the opportunity to grow and escape from the poverty cycle. Considering biomimicry is going to play a large part of the design process the idea of basing the name around something in nature seems very fitting. Using nature as an solution from the very beginning. A cocoon is used by caterpillars to grow and transform into a beautiful butterfly.

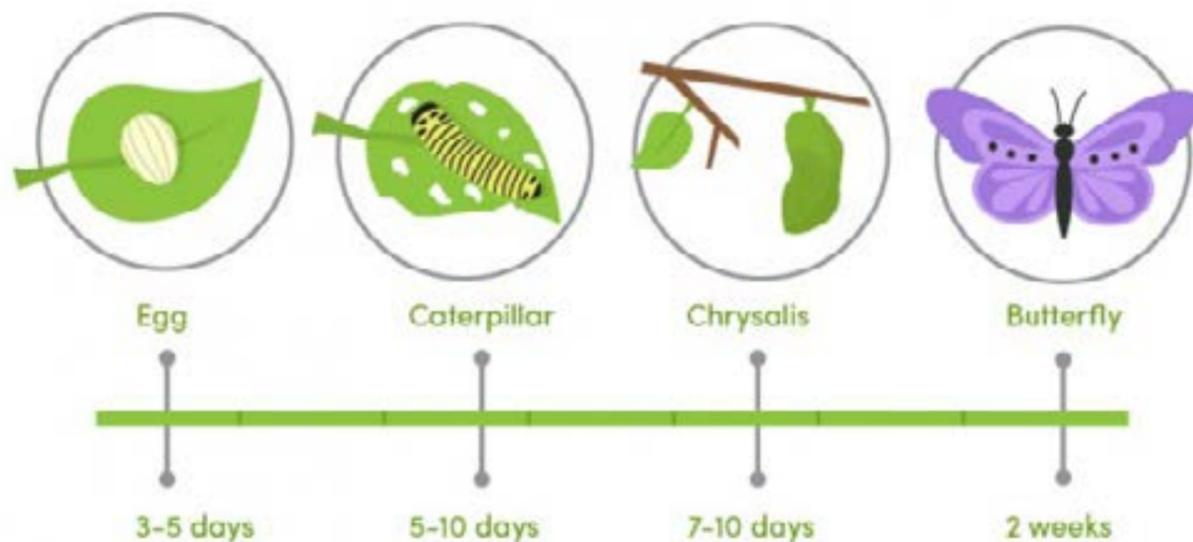
### The life cycle of the butterfly

**The Egg (3-5 days)** - An adult butterfly lays their eggs on plants that caterpillars like to eat.

**The Larva or Caterpillar Comes Out! (5-10 days)** - The caterpillar munches through the leaves, eating constantly and growing quickly. Every caterpillar changes skin 4 times before it's fully grown.

**The Chrysalis—Metamorphosis Begins (7-10 days)** - A silk thread that comes out of the caterpillar's spinneret, the caterpillar spins a silk pad to attach to and hang from. The caterpillar's skin splits open, from head to abdomen, revealing a dull, brownish case underneath—the chrysalis or pupa. Inside the chrysalis, the caterpillar is becoming completely liquid and reforming itself into a butterfly.

**The Butterfly Emerges! (2 weeks)** - The butterfly first emerges from the chrysalis, with wings are soft and crumpled. The butterfly then slowly unfolds its wings to dry. After a few hours, the butterfly will be ready to fly. During that time, its main goal is to reproduce and lay eggs so the cycle can begin again!



Examples of cocoons



Drawings of cocoons



Logo ideas



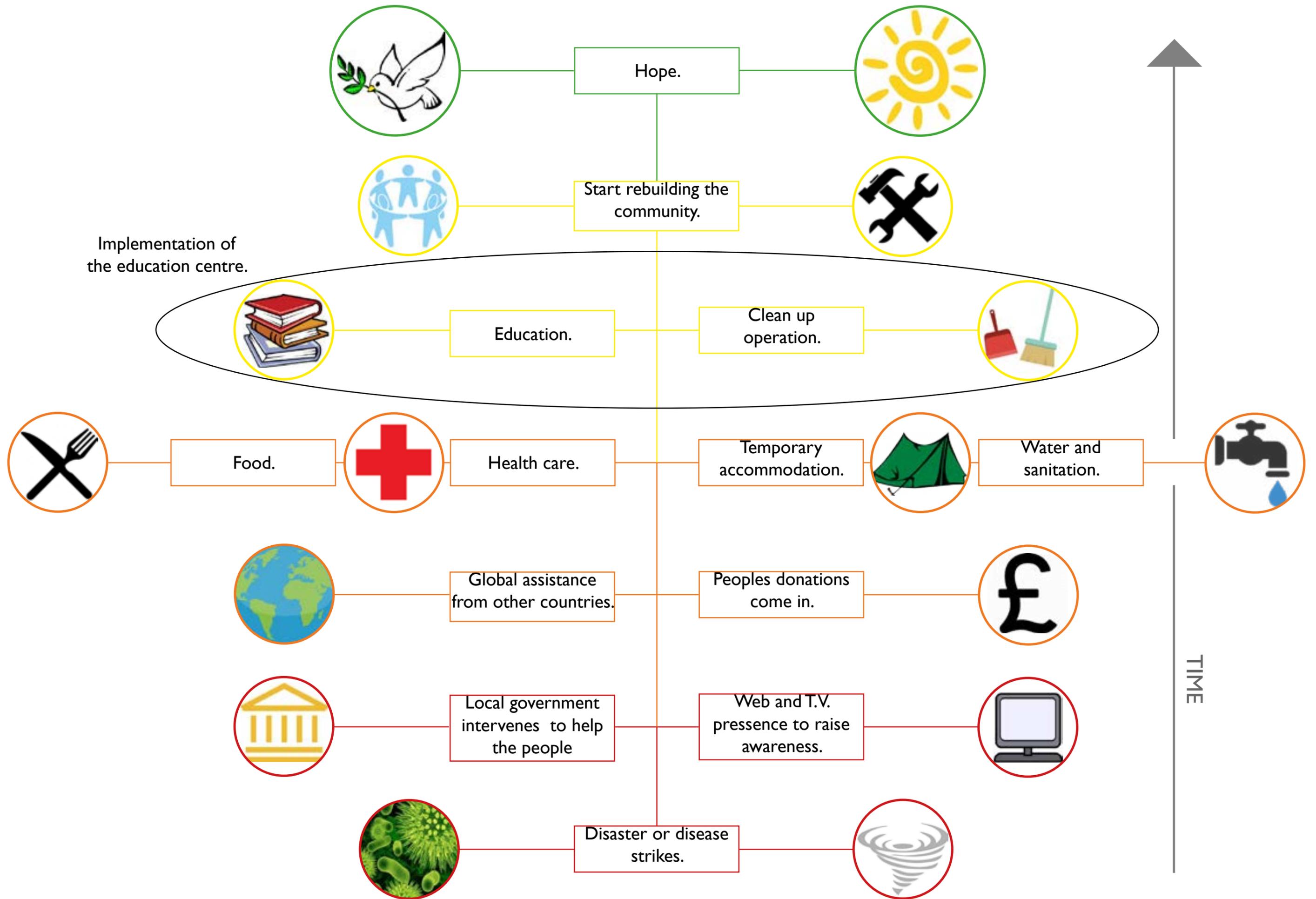
The logo

A cocoon is "the covering made of soft, smooth threads that surrounds and protects particular insects during the pupa stage as they develop into adult form."

I have chosen to go with the cocoon design in the middle as it is simple and gives the name all the attention. Additionally, using a microscopic image of a butterfly wing subversively links the idea of breaking free from the cocoon and growing into a beautiful butterfly. I would also like to link the logo more closely with the final design. Creating a more complete project. I plan to use this logo at the moment and depending on the final idea use the shape to create the final logo.

“One in four young people in developing countries are unable to read a sentence, according to a report, which warns that poor quality education has left a “legacy of illiteracy” more widespread than previously believed.”







Strength

- Can be used in lots of different scenarios and therefore, be beneficial to a large amount of communities.
- Is sustainable because it is be re-used but different communities.
- Similar projects that provide education for children in poverty, like the book bus are functioning with great success.



Weakness

- The cost of moving the educational space around, whether it's inside a vehicle which needs petrol to move around or packing up and physically moving the centre.
- The educational space is meant to help them to create better futures, but it can't do this is it has to move because another disaster has occurred.



Opportunities

- There are limited solution to this education problem, there would be plenty of opportunity to use the concept.
- Many companies are recycling old shipping containers into mobile cafés.



Threats

- Going into a disaster so there are chances of the disaster re-occurring, a mobile structure would not be very sturdy or is unlikely to with stand the weather.
- Each community affected by a disaster has its own needs and the educational space needs to cater for that.



Strength

- There is a genuine need for this type of disaster relief
- Can be adapted to each community depending on the disaster and what they need to escape the poverty cycle.
- The structure can stay with the community as long as they need it.
- More flexibility.



Weakness

- The cost of deploying the educational space with in a disaster zone.
- Every location will be different, therefore one design might work well in one are but be a failure in another.



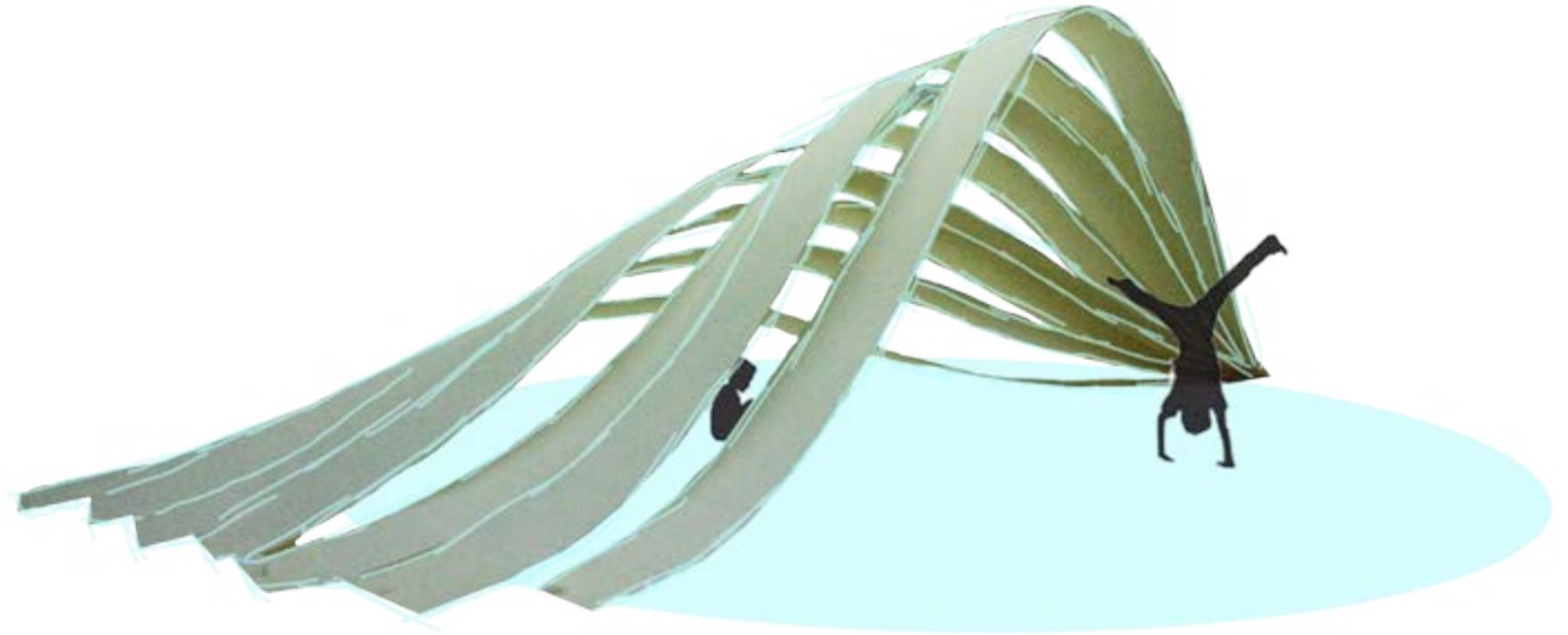
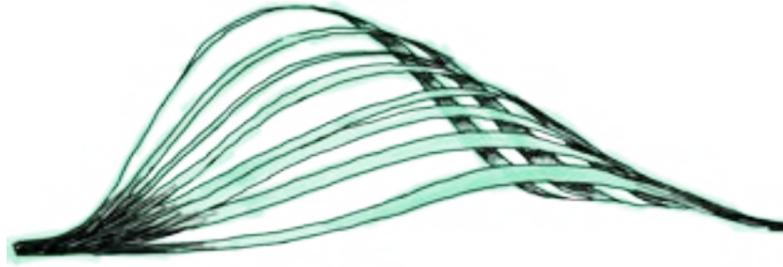
Opportunities

- There are limited solution to this education problem, there would be plenty of opportunity to use the concept.



Threats

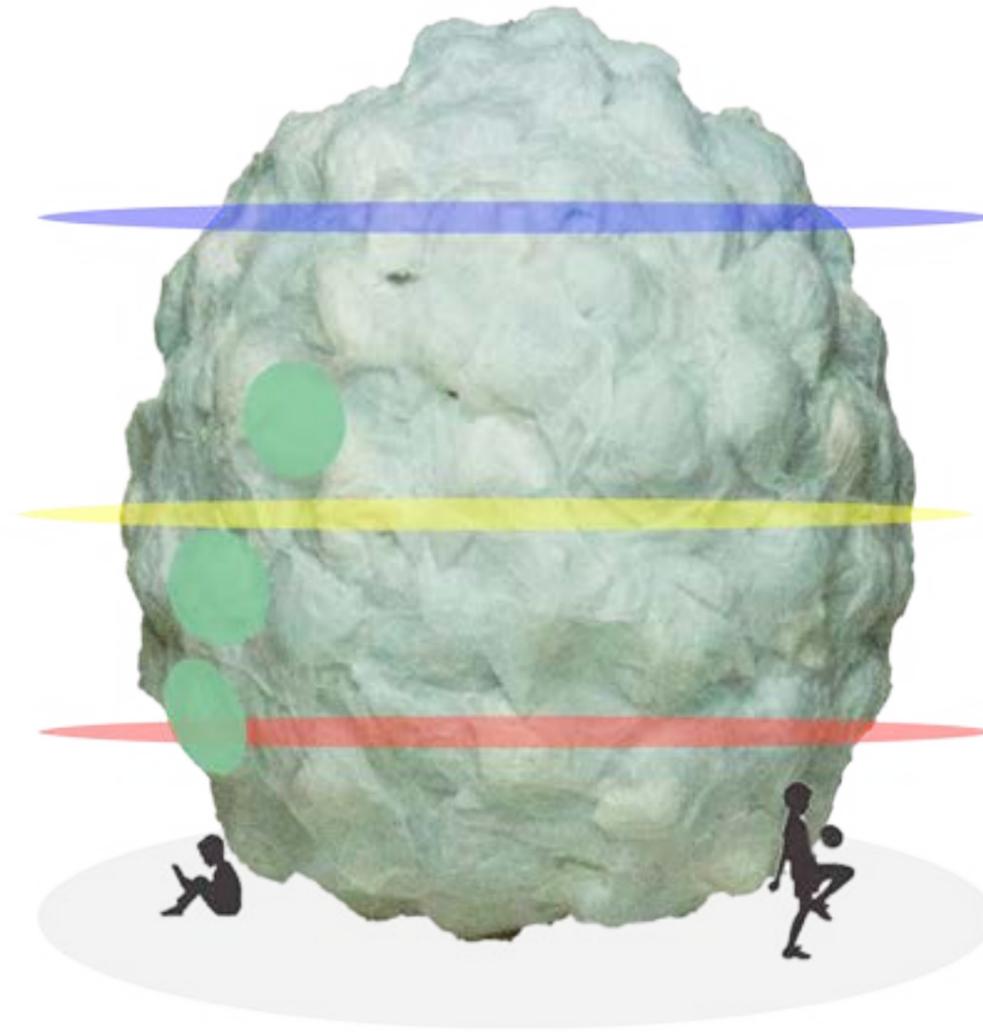
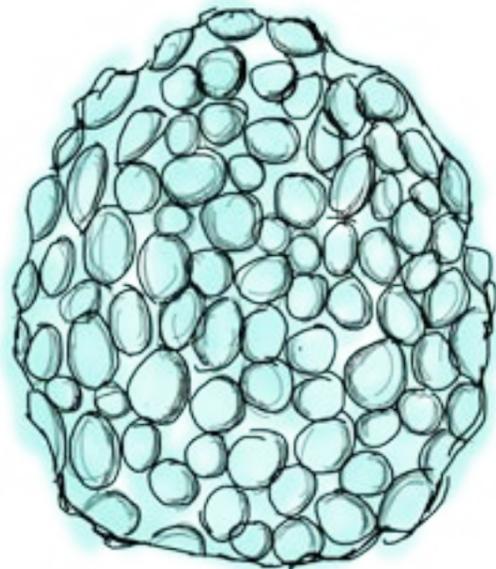
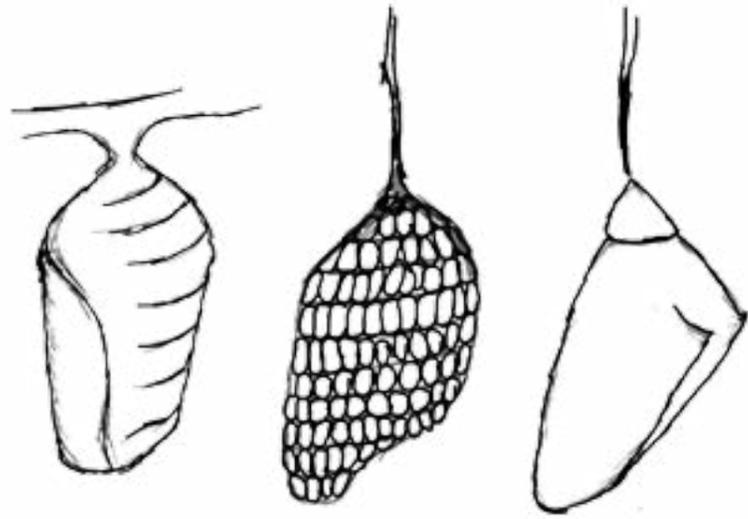
- Difficult to construct the structure as the community will have limited material and skill.
- Going into a disaster so there are chances of the disaster re-occurring, the structure is only semi permanent and might not be able to withstand the adverse weather conditions.



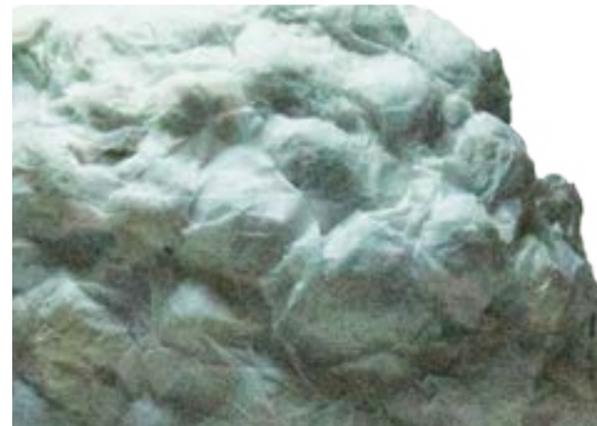
In Steiner and Montessori education, nature is very important, so much so that they sometimes have lessons outside. The idea is to blur the boundaries of the classroom and nature. This means only part of the activities are covered. However, considering the children have just gone through a disaster, they might want to be inside and under cover. Additionally, the design isn't going to protect them for any adverse weather conditions.

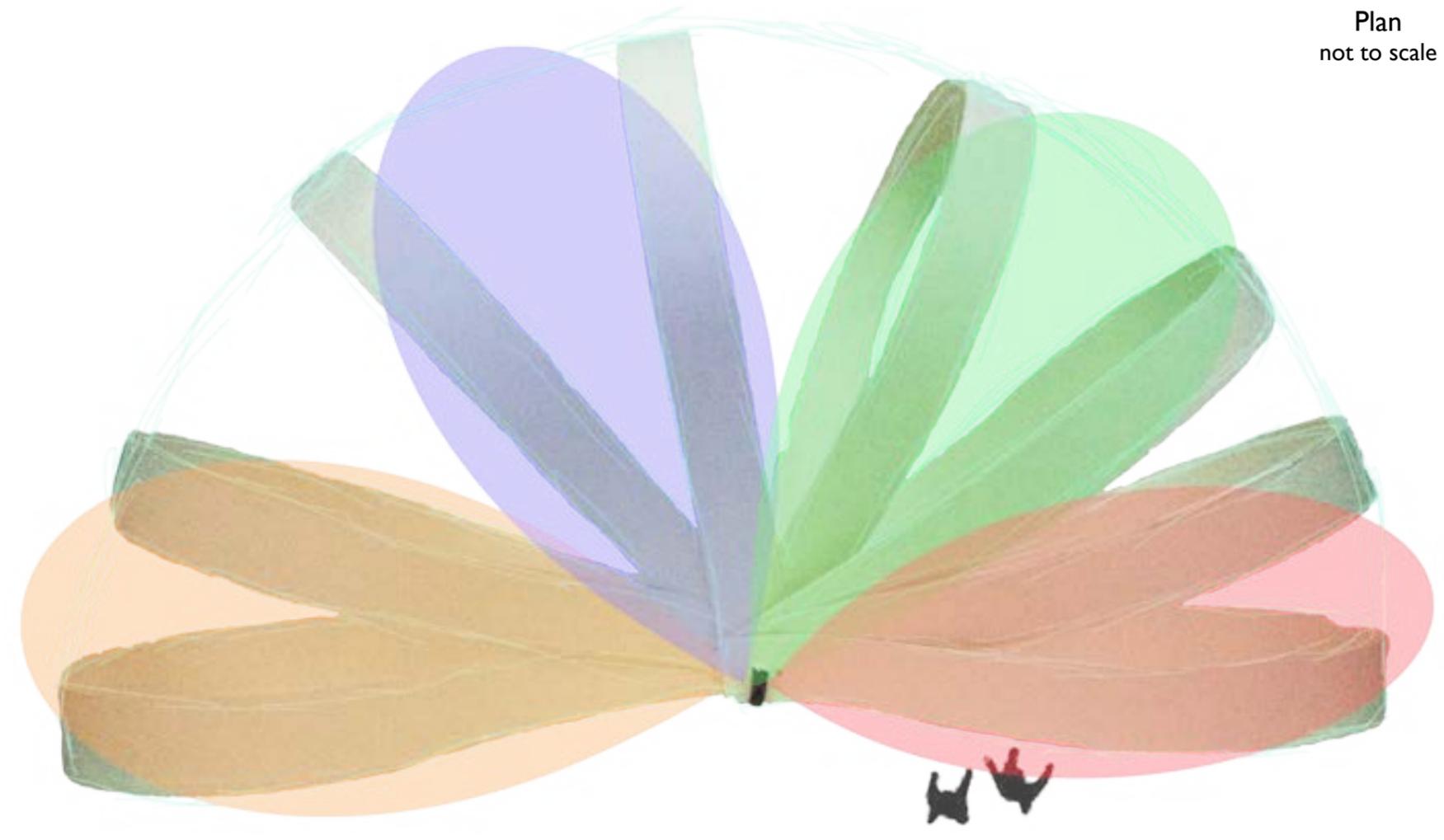
The shape was created from playing with strips of paper trying to make cocoon shapes. It transformed into more of an open cocoon shape. Additionally, taking inspiration from waves and water. Which, if they have been struck by a tsunami might be inappropriate and be the complete opposite of relaxing.





Basing the idea from a cocoon in shape. The idea is the structure is potentially inflatable, but instead of having one massive inflatable idea. It consists of lots of like bubble types area that get inflated as highlighted in green. This makes the structure suitable for air drop. Within the structure it will contain 3 different area. The red area will be for the whole community to use, like a library or playground. The Yellow would be a more academic space. Lastly, the blue area will be for the creative arts.





**Red area:** A community library, for everyone to use.

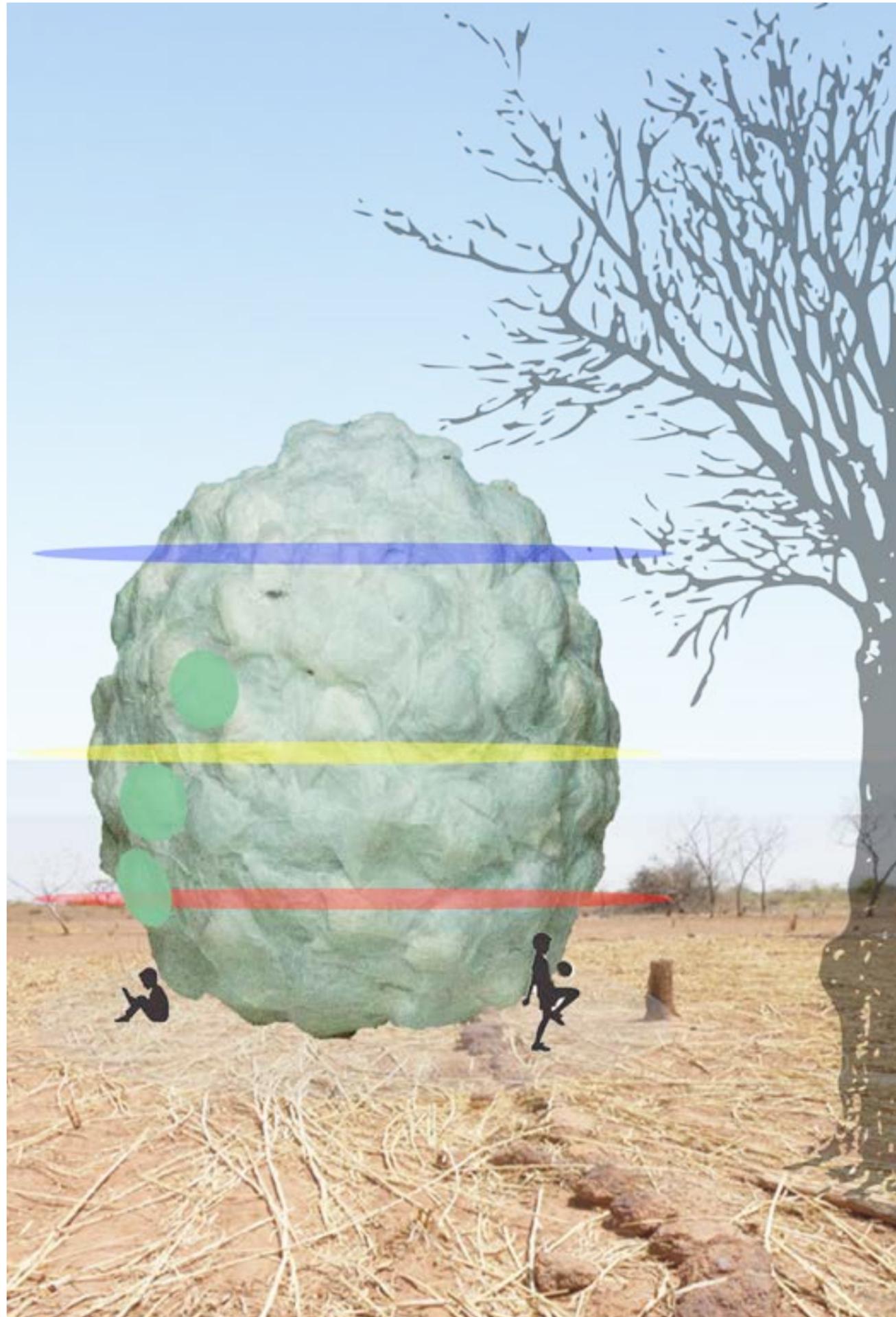
**Green area:** A class room area for primary school aged children ( 5-12 ).

**Blue area:** A classroom area for secondary school aged children (13-18 ).

**Orange area:** An interactive playground area.

The idea is that the structure unloads into a semi circle tube system. That has an open access library at one end and a playground area at the other end. In the middle would be 2 closed of to the public classrooms. Closing them of to everyone would make it a safer environment for the children to learn.



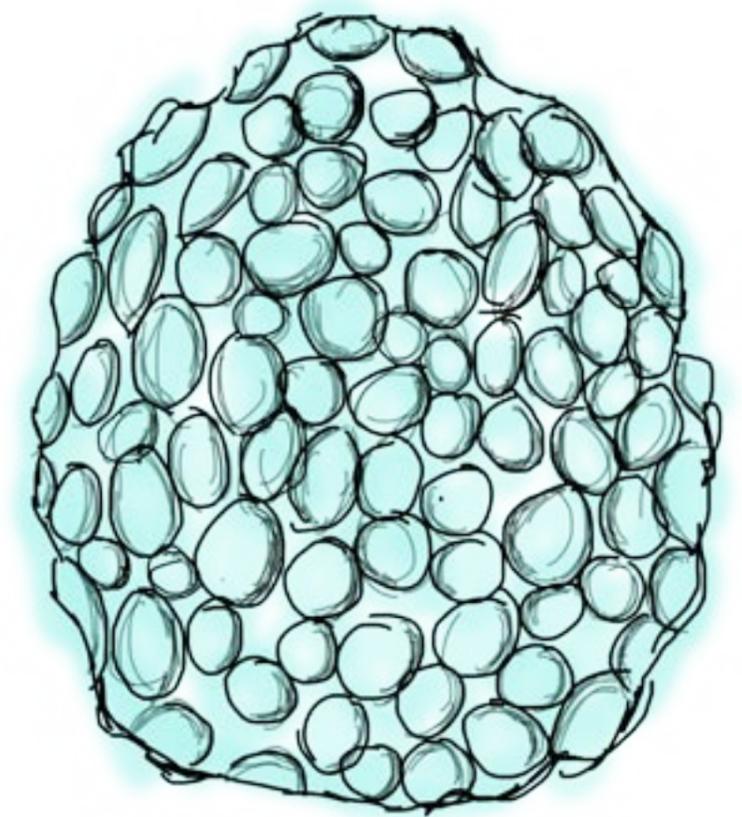


I have chosen to go for the second design concept as I believe it is the design that has the most potential. There are few different routes I go explore, I think splitting up the 'educational space' would be beneficial because each section or pod would have a specific purpose. Therefore, once the disaster has struck they can decide which pods are most useful and on air drop the required ones in. Alternatively, the size could be altered where by the 'bubbles' on the outside provide small individual pods. As a result, I believe with development this I could evolve into the ideal solution.

**Blue level** - Is a space designated to the creative arts, as they are a very important factor according to the Steiner and Montessori education.

**Yellow Level** - Is a space designated to a more academic learning, following a similar system to main stream education in the UK.

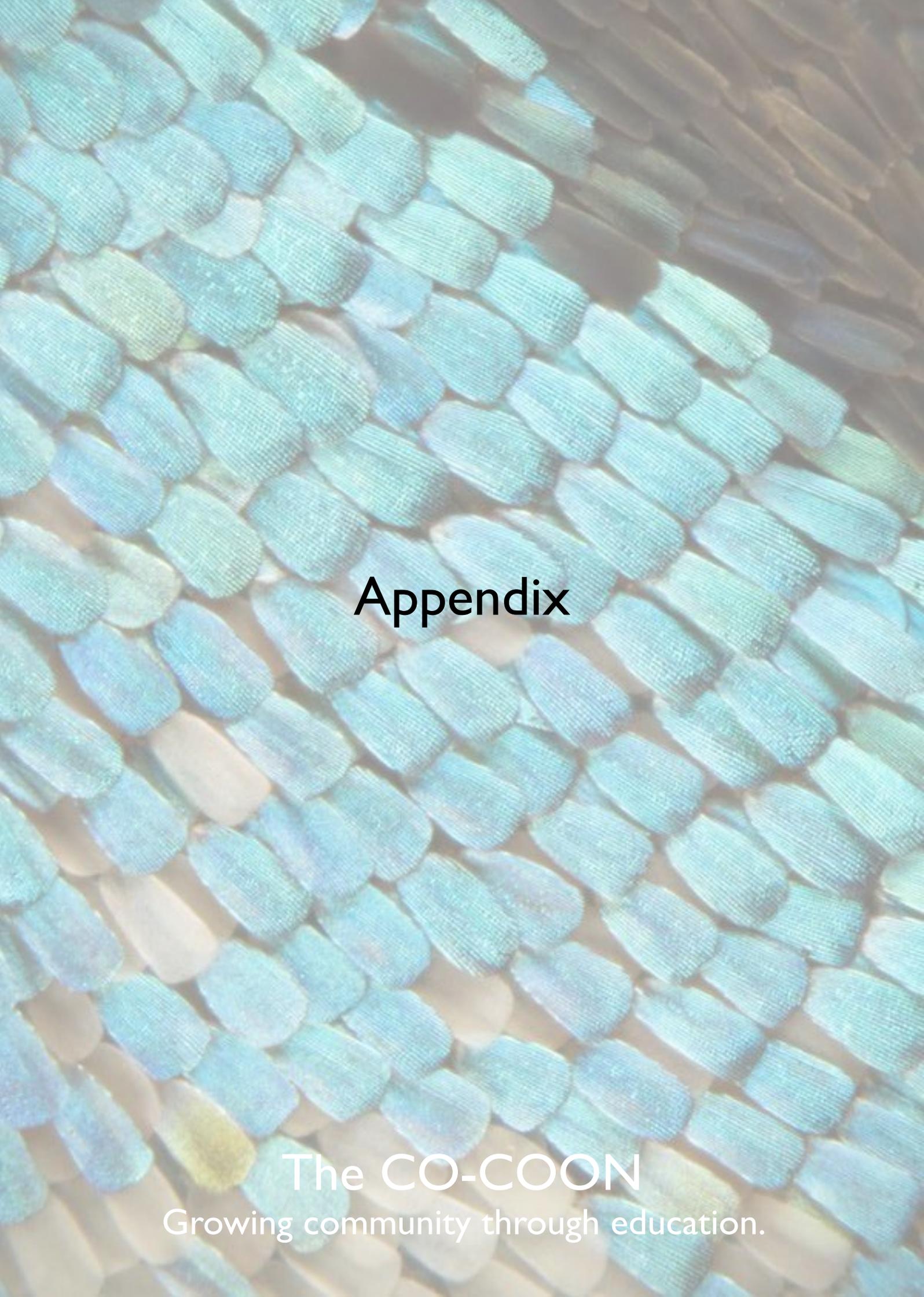
**Red level** - Is a space designated to the entire community as it will act as community learning space, acting very similar to a local library as it be beneficial to have book available for everyone.



The shape for the structure has been influenced by the round shape of cocoon. As there is such a large range of shapes and types. The more mesh textured ones gave me the idea to have it split up in to different sections. I thought these could individually inflate. They are with green circles. I have a similar way used in the Eden project to create the biomes. The 'pillows of air' allow lots of light in, they are extremely lightweight and very cost effective.



	Week 1 6 <sup>th</sup> – 11 <sup>th</sup>	Week 2 12 <sup>th</sup> – 18 <sup>th</sup>	Week 3 19 <sup>th</sup> – 25 <sup>th</sup>	Easter 26 <sup>th</sup> – 1 <sup>st</sup>	Easter 2 <sup>nd</sup> – 8 <sup>th</sup>	Easter 9 <sup>th</sup> – 15 <sup>th</sup>	Week 4 16 <sup>th</sup> – 22 <sup>nd</sup>	Week 5 23 <sup>rd</sup> – 29 <sup>th</sup>	Week 6 30 <sup>th</sup> – 6 <sup>th</sup>	Week 7 7 <sup>th</sup> – 13 <sup>th</sup>	Week 8 14 <sup>th</sup> – 20 <sup>th</sup>	Week 9 21 <sup>st</sup> – 27 <sup>th</sup>	Week 10 28 <sup>th</sup> – 29 <sup>th</sup>
In-depth Research													
Design exploration													
Educational research													
Design development													
Site analysis													
Experimentation													
Model making													
Experimentation													
Finalising design													
Final model making													
Final drawings													
Interdisciplinary critiques													
Visual													
Presentation													

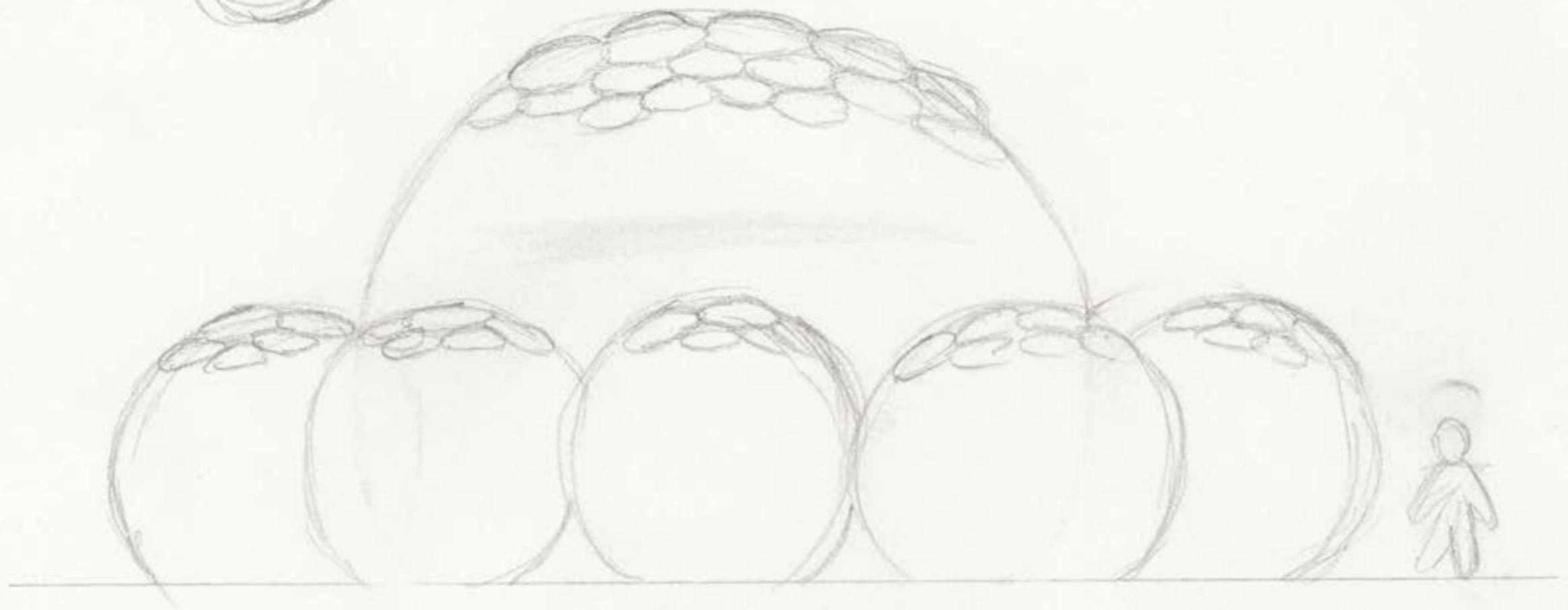
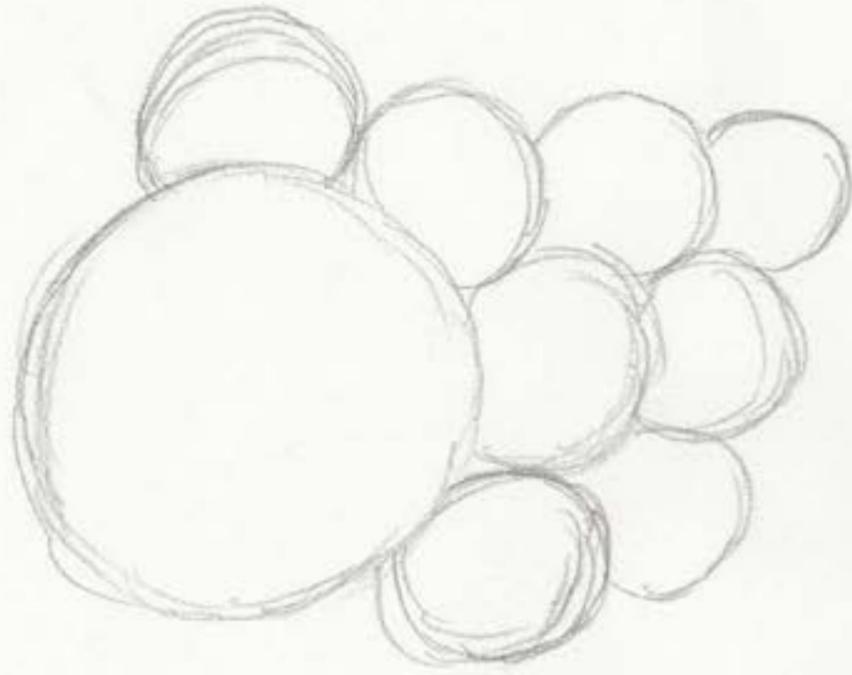
A close-up photograph of a bird's feathers, showing a dense pattern of overlapping, scale-like structures. The colors transition from a light, almost white base to a vibrant teal and then to a deep, iridescent blue. The lighting creates a shimmering effect across the individual feather segments.

# Appendix

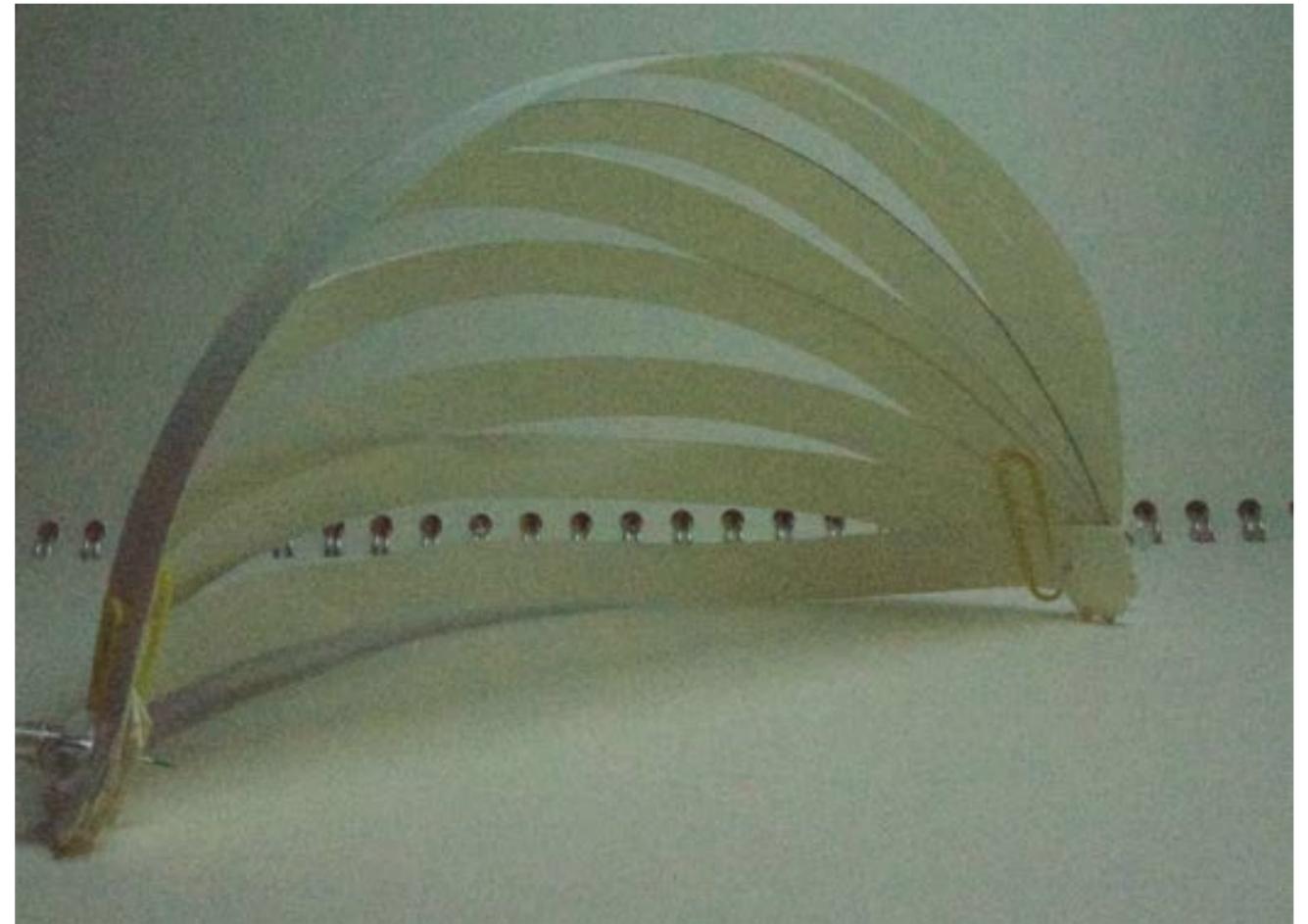
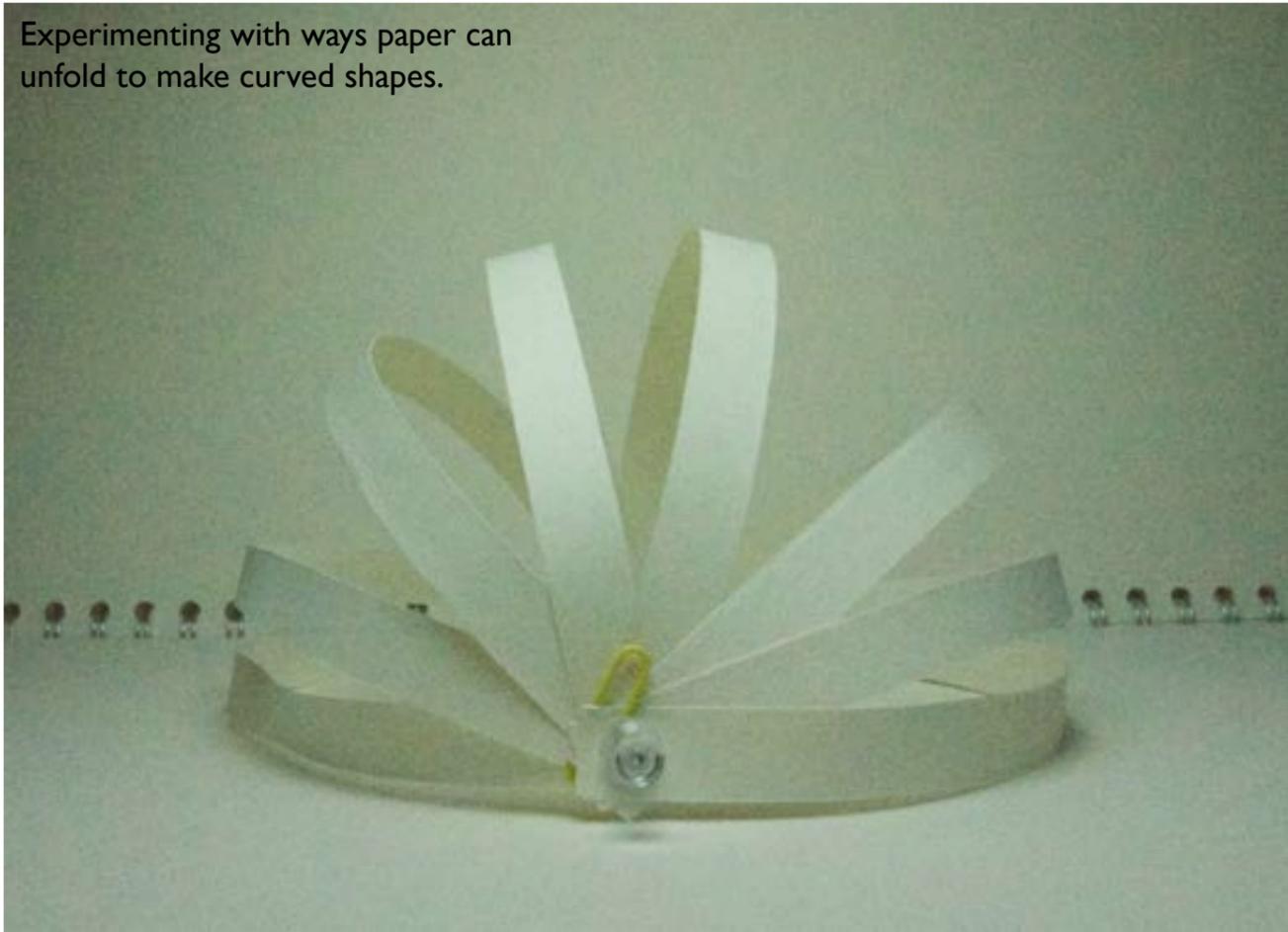
The CO-COON  
Growing community through education.

Modular design that based around bubbles.

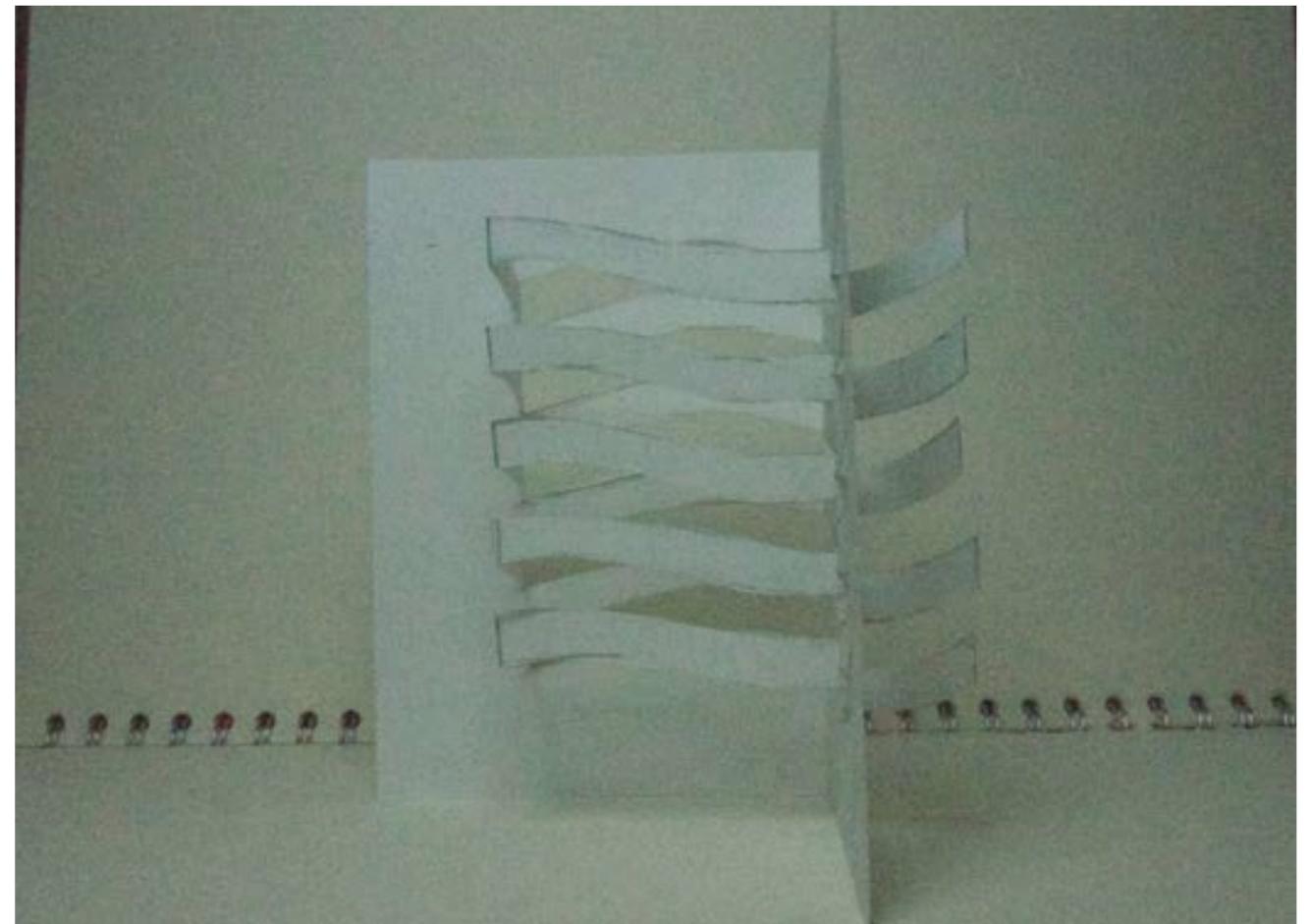
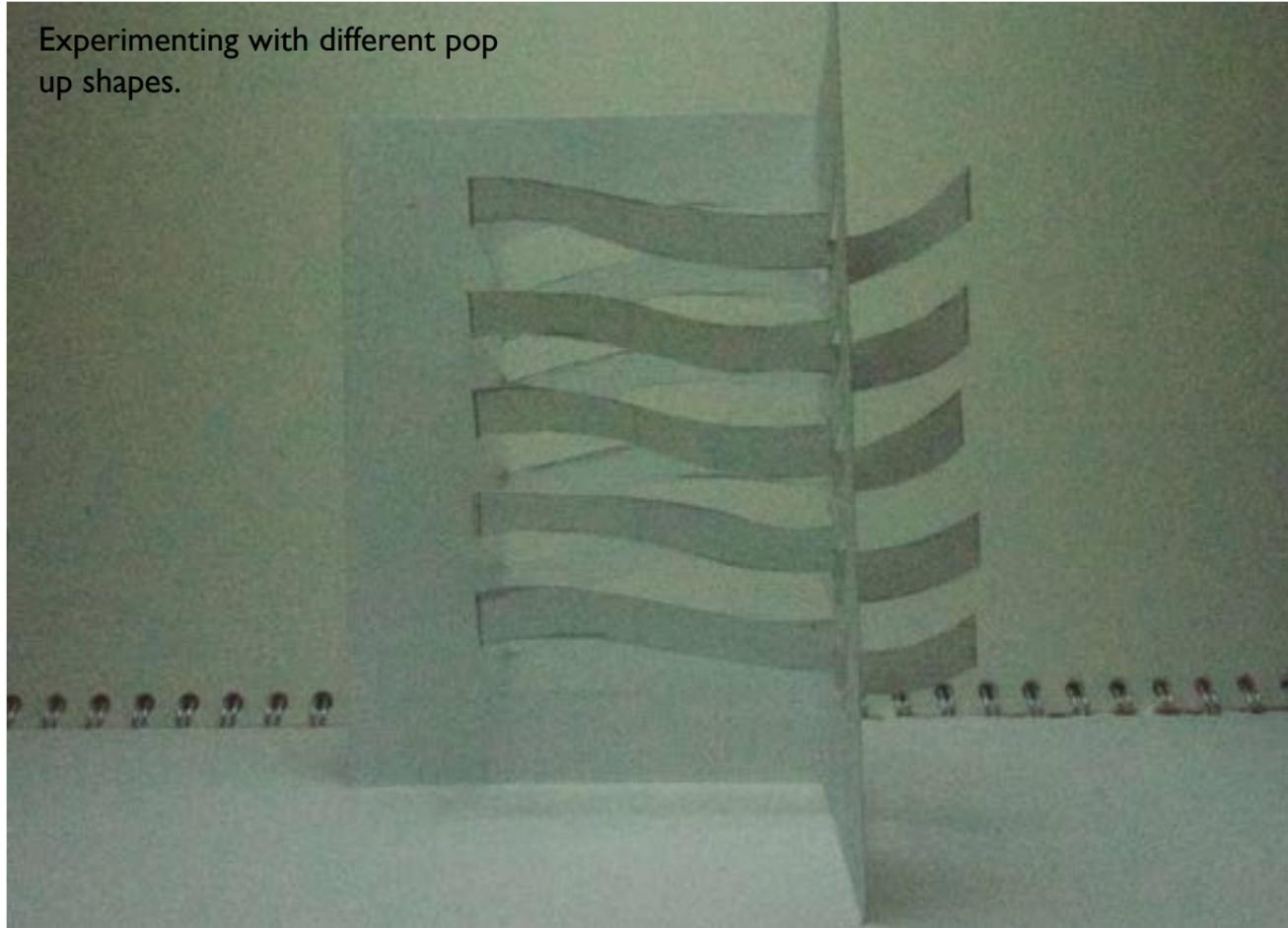
Adaptable Evolving.



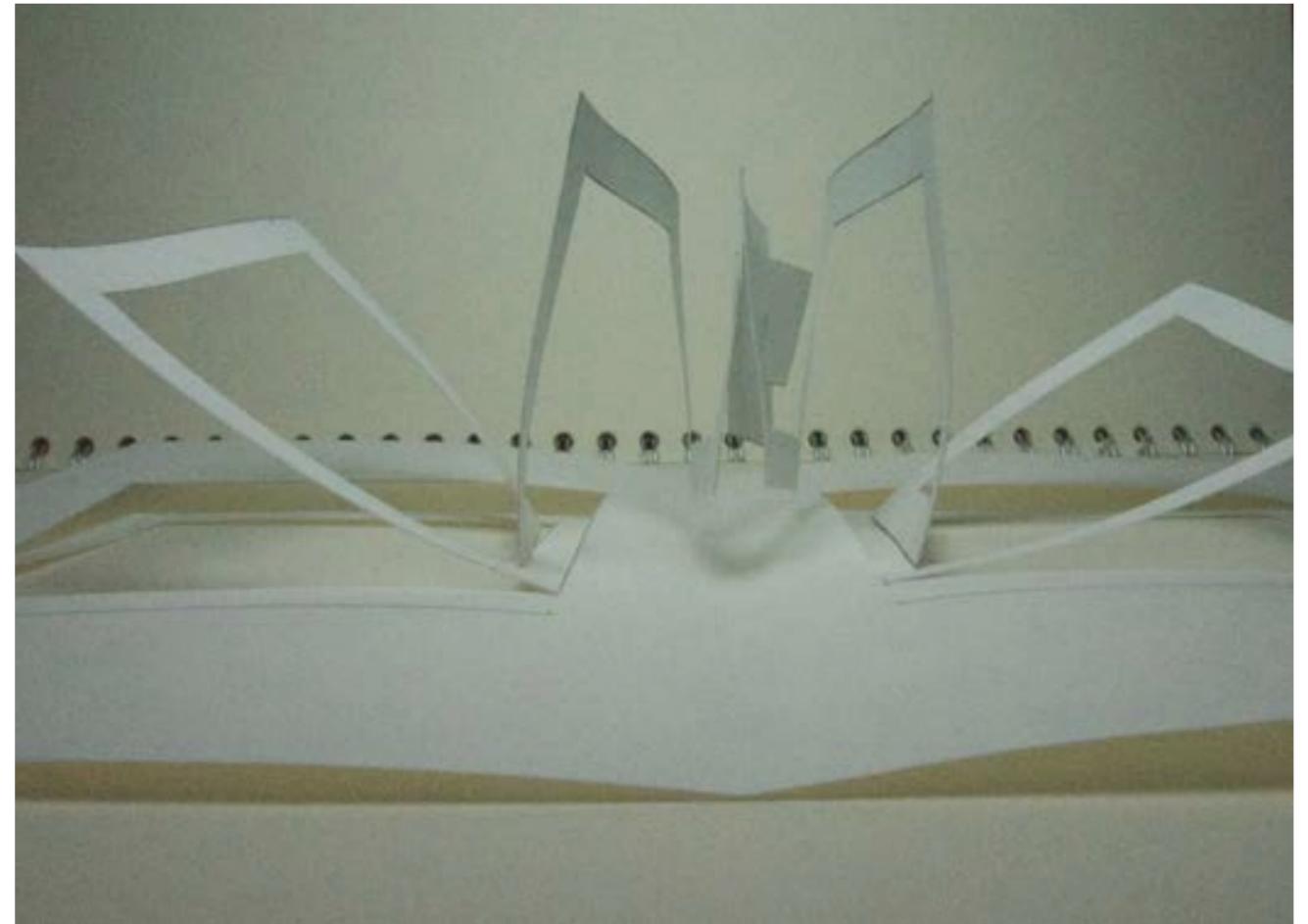
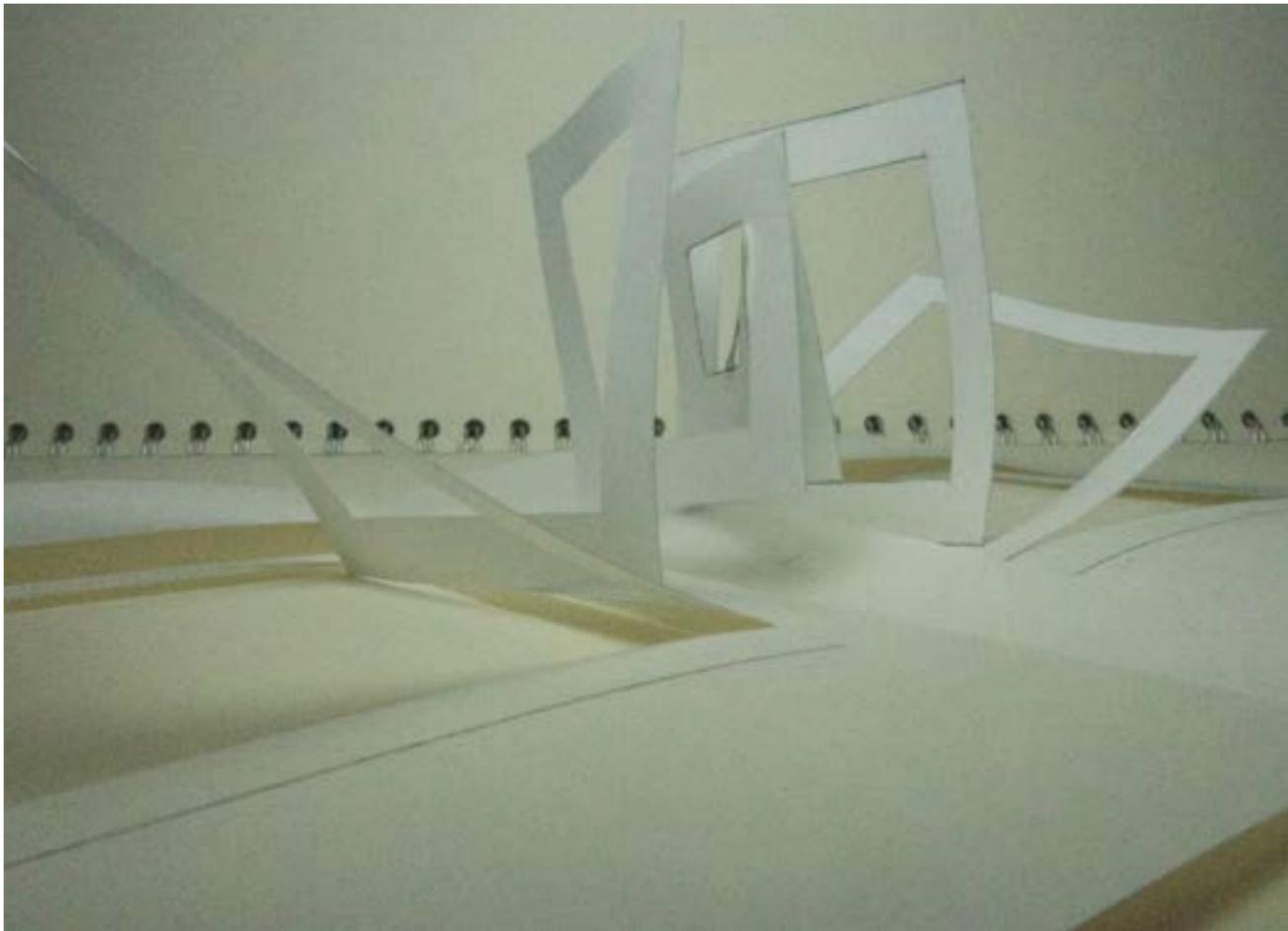
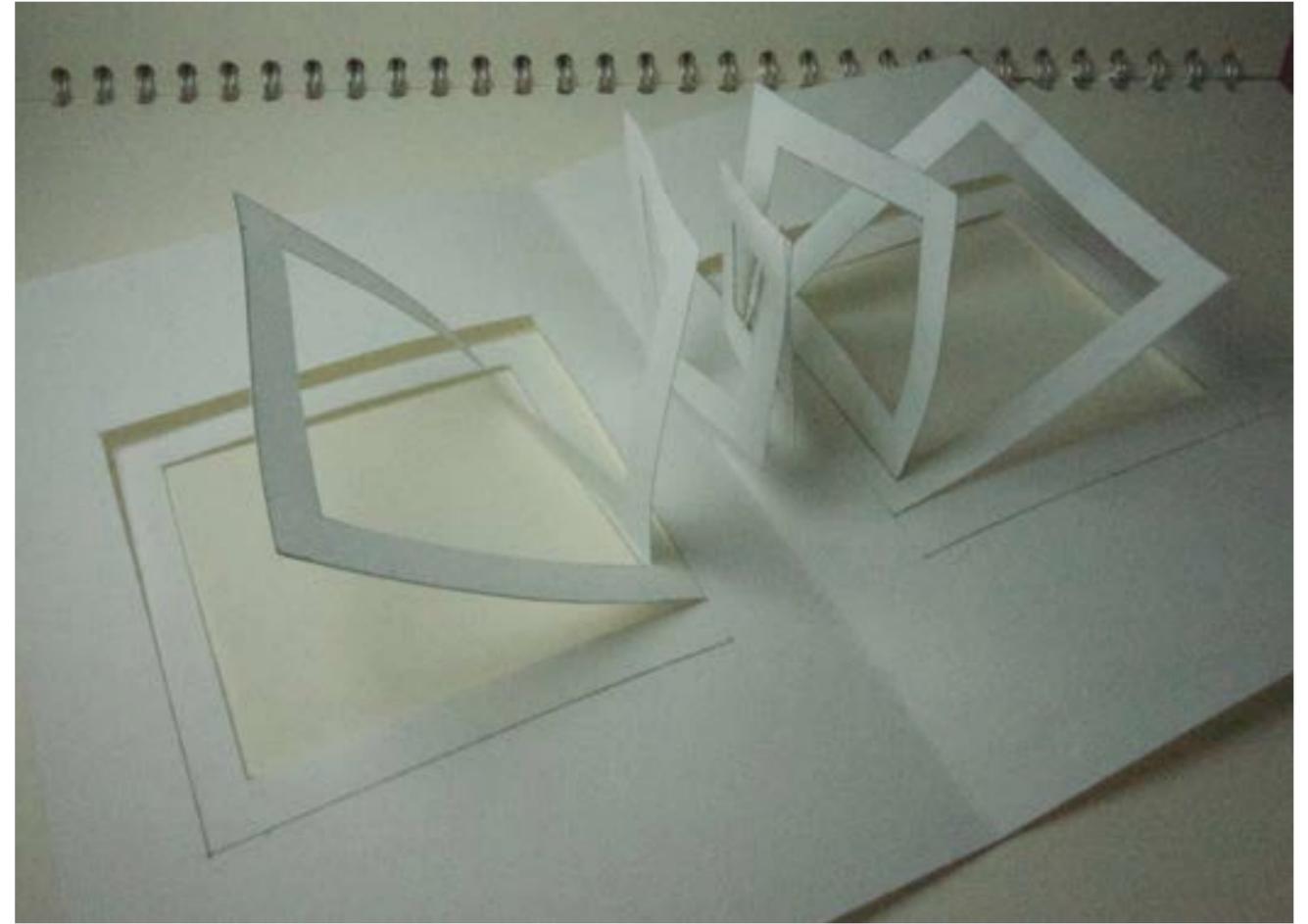
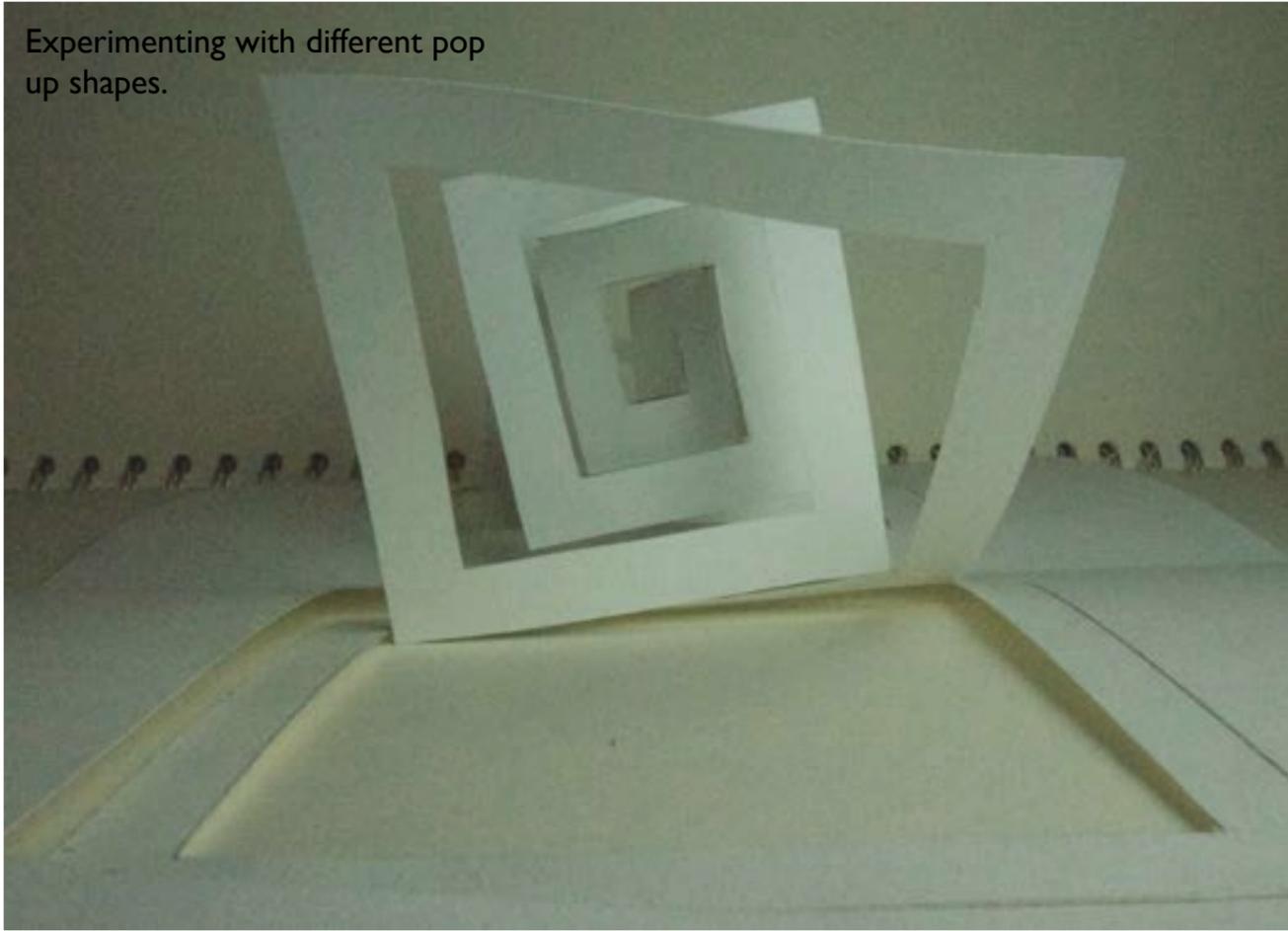
Experimenting with ways paper can unfold to make curved shapes.

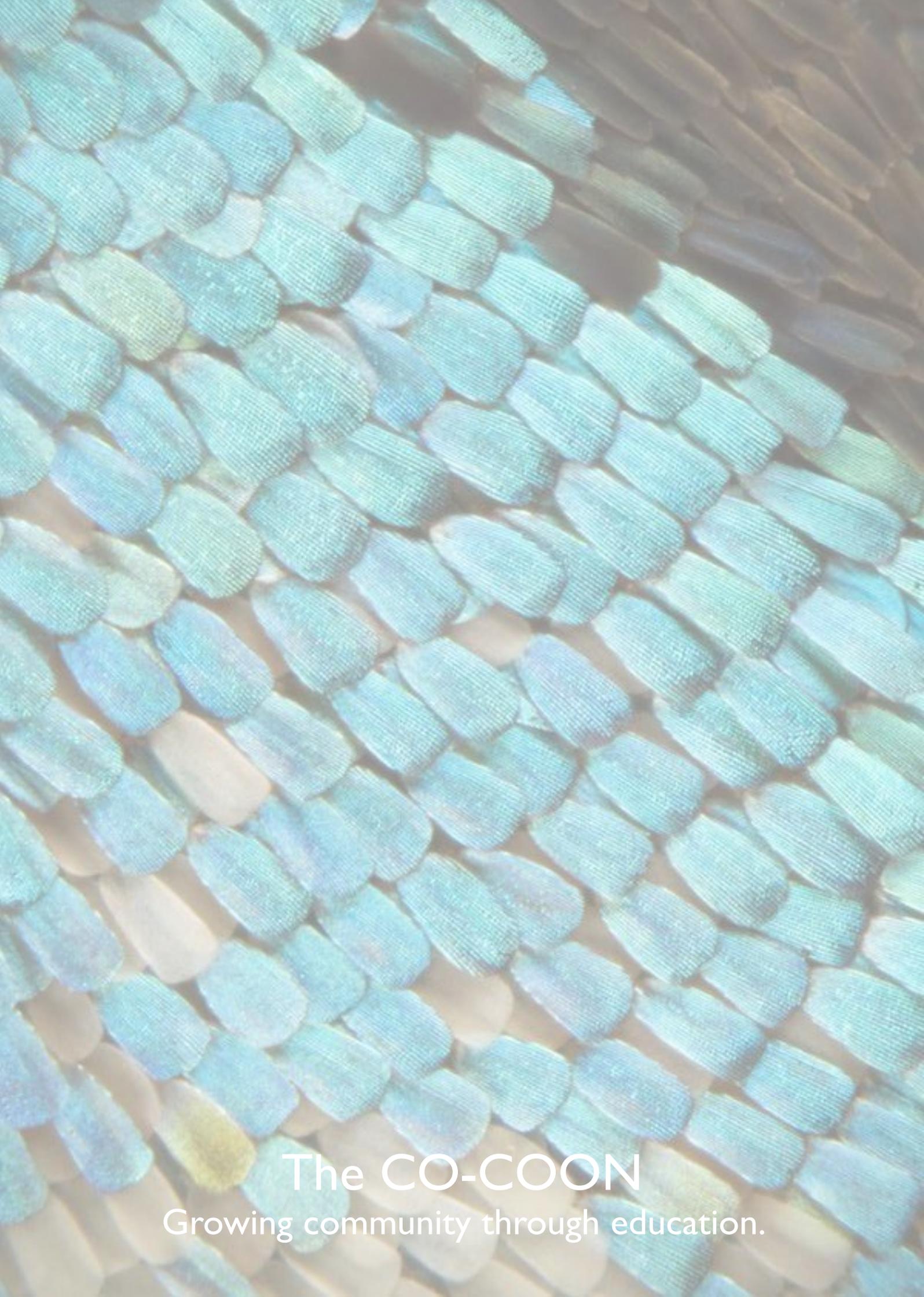


Experimenting with different pop up shapes.



Experimenting with different pop up shapes.





The CO-COON  
Growing community through education.