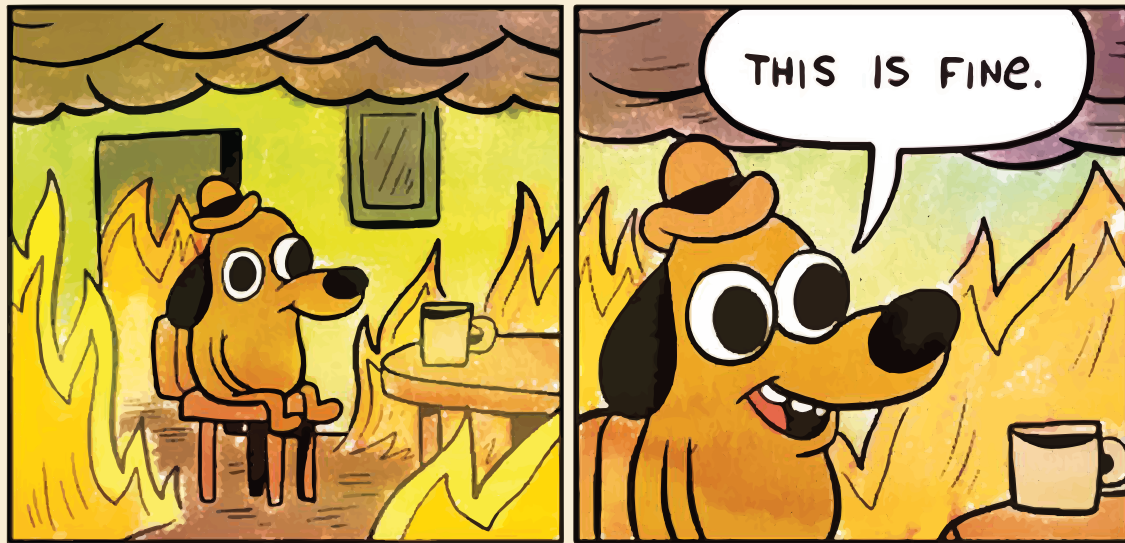


FROM ANXIETY TO ACTION

Exploring how participatory architecture can aid youth in coping with climate anxiety



Artist: KC Green



CHALMERS
UNIVERSITY OF TECHNOLOGY

Amitis Fouladi, Spring Semester 2022
Chalmers University of Technology
Department of Architecture and Civil Engineering
Examiner: Emilio Da Cruz Brandao
Supervisor: Shea Hagy

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Amitis Fouladi
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Master's Thesis

Chalmers School of Architecture
Department of Architecture and Civil Engineering
Master's Programme of Architecture and Planning Beyond Sustainability (MPDSD)

Direction: Design Activism Beyond Borders
Examiner: Emilio Da Cruz Brandao
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ABSTRACT

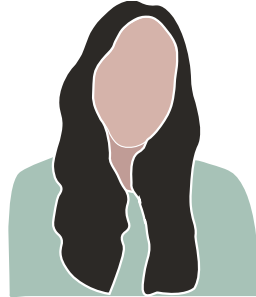
We can observe a correlation between a decreased mental well-being of individuals and the rate of temperature increase on our planet. This connection is often referred to as climate anxiety. Most vulnerable to climate anxiety are those with the least amount of power to impact their decisions and surrounding, namely children and youth. Youth are however having an increased risk of feeling hopeless as they are having a better understanding of the complexity of global problems. According to climate psychologist Kata Nysten, a way for us to feel better is if we see that the planet is feeling better and that the society is moving in the right direction. For that to happen we need to take action.

This thesis aims to explore how architecture can aid youth in coping with climate anxiety through creating an equal and inclusive process where youth will have the power to impact their environment. Making sure architecture and planning adapts to the new challenges we face and considers all factors in which our profession can help people and the planet. By prioritising making coping available for those most vulnerable, the community as a whole can grow stronger.

Through a participatory process, a group of youth get an opportunity to shape a new public space intended for dealing with climate anxiety by taking action and dealing with their emotions regarding the climate crisis at the same time. This thesis tests how the involvement of youth in planning and design can have a positive impact on the well-being of youth. At the same time using architecture as a medium of activism, taking advantage of the impact the built environment has on people.

The result of the thesis is a design proposal shaped by youth to develop meaningful coping as well as an analysis of the participatory method which aims to bring a sense of hope and empowerment to the youth participating by involving them in impact their surrounding environment.

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READING INSTRUCTIONS

Chapter 1 introduces the subject of the master thesis and explains the background and relevance to the profession of architecture and sustainability. The chapter ends with explaining the delimitations and gives an overview of the process, methods and theories that has been investigated.

Chapter 2 presents projects that have inspired the thesis addressing the climate crisis and responding with an action through architecture.

Chapter 3 presents research findings on climate anxiety and strategies to empower action as well as an in-depth study made by the author through workshops with a focus group of youth in the local context.

Chapter 4 presents the project aim that came as a result from the workshops with youth and existing strategies, methods and concepts that have guided the design intervention.

Chapter 5 presents the participatory site analysis and the proposed space for the intervention.

Chapter 6 presents the design outcome shaped through the participatory workshops with the focus group.

Chapter 7 is dedicated for reflection of the outcome by the author.

VOCABULARY

The following words and phrases can be necessary to understand in the context of this thesis.

Climate Anxiety - A range of different negative emotions that arises as a response to the climate crisis. Feeling a sense of hopelessness, uncertainty and worry regarding the future environment.

Climate action - Taking measures to minimise one's impact on climate.

Coping - To deal with and attempt to overcome problems and difficulties.

Meaning focused coping - Acknowledging the problem, but trying to reframe the situation so as to also see it in a positive light. Having existential hope and confidence in sources outside oneself (Ojala, 2012).

Design activism - Using the medium of art and design as a vehicle of activism to impact societal and environmental progress.

Participatory Architecture - The idea of directly engaging users in a design and planning process.

Passalen - Passalen is a non-profit organisation that works to create integrated leisure activities for children and youth with disabilities. The stakeholder that is planned to take over project of the Action Hub (see appendix page 60 for detailed stakeholder mapping).

Fixotek - A word that plays on the two Swedish words for fixing and library creating a new "fixing library". It is a project with a series of spaces in different areas in Gothenburg (Majorna, Hammarkullen Bergsjön) initiated by Gothenburg City for a sustainable city where the public can borrow and use tools.

Action hub - Name decided by youth to represent the space to cope with climate anxiety.

1.

Introduction

”Climate anxiety is not a disease that needs to be healed, but a natural reaction, which can be developed into a resource.”
- Panu Pihkala

(Pihkala, 2019, p 12)

1.1 BACKGROUND & RELEVANCE

This introductory section contains the background necessary to understand the development of the thesis and how it is relevant to the field of architecture.

1.1.1 Climate anxiety

Climate anxiety is a collective word describing a range of different, negative emotions that arise as a response to the climate crisis we are currently in (Anderson, Hylander & Nylen, 2019). What feelings and the intensity of them vary between individuals. However, some of the most commonly perceived emotions are; fear, worry, grief and guilt. The ones most vulnerable to an increased climate anxiety are children and youth as they have the least amount of democratic power and therefore the least amount of power to influence the harm climate change inflicts on their future and health (Hickman et al., 2021). Another study by a climate anxiety researcher shows that the most vulnerable groups in terms of coping mentally are children, teenagers and young people, those who work and live with or in close connection with nature as well as people involved with climate issues and research. (Phikala, 2019)

A study published regarding climate anxiety and government responses to climate change, involving ten thousand young people between the ages 16-25 from ten different countries, showed that the majority of the participants were very or extremely worried about the environment's future (Hickman et al., 2021).

The same study also showed that more than 70 percent are thinking about the future as something frightening due to humanity's failure to care for the planet. Almost 50 percent also reported that their feelings about climate change affect their daily life and functioning negatively. Furthermore, "climate anxiety and distress are correlated with perceived inadequate governmental response and associated feelings of betrayal" (p.e 863). Therefore, "...climate anxiety in children and young people should not be seen as simply caused by ecological disaster, it is also correlated with more powerful others, such as governments failing to act on the threats being faced"(p.e 871).

1.1.2 Climate actions

Although climate anxiety can have a negative impact on people, it is also an important resource to empower change. (Phikala, 2019) A climate action can be anything from taking small personal measures in everyday life to reduce one's impact on climate change, to communal efforts that aim for political and systematic change. (Phikala, 2019).

A very well known and strongly noticed action taken by the youth are the numerous school strikes for the environment. These have spread across the world, also revealing the amount of mistrust in adults and leaders and highlighting their inaction. School strikes have also been modified and used by students from a highly ranked university in France making efforts to influence companies in France by refusing to apply for work after graduation (Nordin, 2021).

Taking action has been proposed as a solution to climate anxiety before. (Phikala, 2019) In the United States, this has been summarised into the slogan: "The antidote to anxiety is action". Although it is clear that taking action helps with mental coping, it has led to a general avoidance of emotions or even a culture of belittling emotions. In studies made by psychologist Maria Ojala, a leading researcher on climate education and psychology, a model has been developed that

centres on growing and maintaining meaning focused coping (seeing things in a positive light, having existential hope and confidence in sources outside oneself). The model is based on two basic themes of coping theories: 1) Emotion-focused coping (developing emotional skills) and 2) Problem-focused coping, (the need for sufficient/adequate opportunities to act and be active) (Phikala, 2019). Arguing that both are necessary for improved mental health.

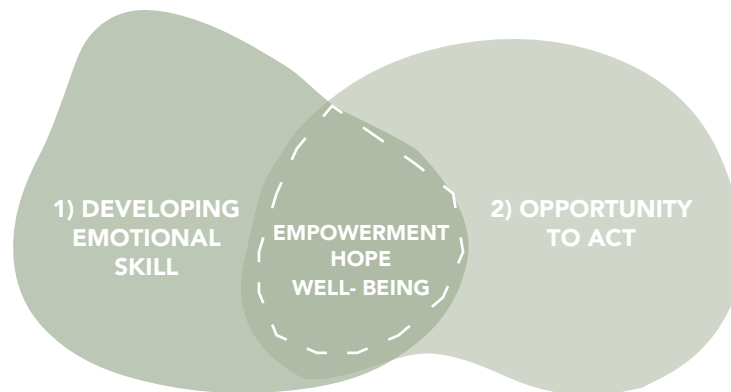


Figure 1. Diagram showing meaning focused coping

The goal is to move towards increasing empowerment for people who are experiencing that they can not impact their lives. (Ojala, 2012) By shifting one's perspective from being a bystander to being a participant, one's own attitudes and mental well-being will increase. This also helps deal with feelings of powerlessness, hopelessness, fear, frustration, grief and guilt. (Ojala, 2012)

1.1.3 Participatory Architecture

According to educator and researcher in disaster reconstruction and participatory-based design with focus on involving children, Robyn Mansfield, participation in the planning and design process can aid vulnerable groups to recover from trauma or distress. (Mansfield et al, 2021). Empowering and supporting their own development into responsible citizens.

It is also their right as stated in the Convention on the Rights of the Child, to express their views in all matters affecting them (Article 12 UN General Assembly 1989). This includes youth and children's participation in urban planning.

1.1.4 Relevance to the profession

We as architects and urban planners have a huge influence and responsibility when it comes to shaping the built environment. With an increase of people living in cities as well as rapid climate change, we must plan for the new challenges to come. To achieve the sustainable development goals we need to make improvements that benefit our environment and our well-being.

For this to succeed, multidisciplinary and multigenerational collaborations are important. Involving, sharing and learning from other professions will result in a larger impact and benefits (Jutraž, Zupančič. 2014). As architects, we should include more aspects in the process of development and take advantage of the potential impact and interactions in the built environment, using architecture as a tool for well-being, empowerment and opportunities for behavioural change through a democratic and inclusive process.

1.1.5 Thesis direction

The direction of this thesis is built upon current global crises and emergencies and navigates through complex challenges that disadvantaged and unprivileged groups face often due to normalised spatial, environmental injustices, irresponsible architecture and planning practices. This polarisation in the distribution of wealth and power in contemporary society requires a design activism approach to the architectural profession (Brandao et al). Coping with the complex emotions that come with the climate crisis is currently limited and available for the privileged. Those who have very little impact on their surrounding environment, decisions and coping mentally are most vulnerable. Not only the outcome of architecture can do good and provide well-being, the process itself is also an opportunity to do so.

1.2 THESIS QUESTION & AIM

The following section describes the aim of this thesis, the thesis question and the relationship to the sustainable development goals.

1.2.1 Aim

The aim of this thesis is to explore how architecture and planning can aid youth in coping with climate anxiety. Using the model made by climate psychologist Maria Ojola, creating an opportunity for them to act and develop emotional skills through impacting their surrounding environment. The aim is to create an inclusive process where their feelings are being respected, they feel validated and where their concerns are acted upon by adults and people with power. In this case the organisation Passalén, working for Gothenburg City. (see appendix page. 60 for detailed stakeholder map).

1.2.2 Thesis Question

The questions guiding the master thesis are: “How can participatory architecture aid youth in coping with climate anxiety?”

and “How can the discipline of architecture explore climate anxiety as an instrument of action?”

1.2.3 Sustainable Development Goals

The Sustainable Development Goals (SDGs) relevant for this project are the following:

3. Good health and wellbeing

Efforts are needed to fully eradicate a wide range of diseases and address many different persistent and emerging health issues. Climate anxiety is an emerging health issue that requires more attention. It affects the mental and physical health of youth all over the world in different ways. The outcome of the thesis focuses on having an indirect positive impact within the field of this goal.

10. Reduce inequalities

Reducing inequalities and ensuring no one is left behind are integral to achieving the SDGs. In this thesis, the aim is to reduce inequalities within the country and include the vulnerable populations, in particular youth, in planning and decision making.

11. Sustainable cities and communities

Rapid urbanisation is resulting in inadequate and overburdened infrastructure and services. In this thesis the focus is on making cities and human settlements inclusive, safe, resilient and sustainable by planning for public spaces.

13. Climate action

The aim of the Paris agreement is to strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2 degrees Celsius above pre-industrial levels. The agreement also aims to strengthen the ability of countries to deal with the impacts of climate change, through appropriate financial flows, a new technology framework

1.3 DELIMITATIONS

The delimitation section presents what the thesis will not be focusing on, as well as what it will address (see figure 2 of delimitation diagram)

1.3.1 Demographic

This thesis did not focus on people in all age groups suffering climate anxiety, rather focused on youth and more specifically youth between the ages of 16-19 and their specific emotions, desires and needs regarding their climate anxiety. The age group was limited to youth in late adolescence since a research paper by psychologist Maria Ojala (2012) showed this group to be more vulnerable as a result of having a better understanding of the complexity of global problems than younger children do, which could lead to increased feelings of helplessness. At the same time their advanced cognitive sophistication could also help them to cope in more diverse ways (Ojala, 2012). The focus group consisted of 19 students in a mixed and diverse group with an equal division between genders, living in different parts of Gothenburg.

1.3.2 Spatial

The thesis does not focus on creating a generic design for climate anxiety, rather focuses on developing a space for coping together with the youth in their local context. To reach other youth in the area and make it available, a public space was chosen. Design limitations were set up early in the process to increase the chances for it to be built by the stakeholder Passalen (see page 8) during the summer of 2022 or 2023. The proposal needed to be a temporary structure with simple construction for youth to continue the involvement and be able to build it during the summer workshop. It also needed to be an inclusive structure since it will be available for everyone in the public park.

Delimitation diagram

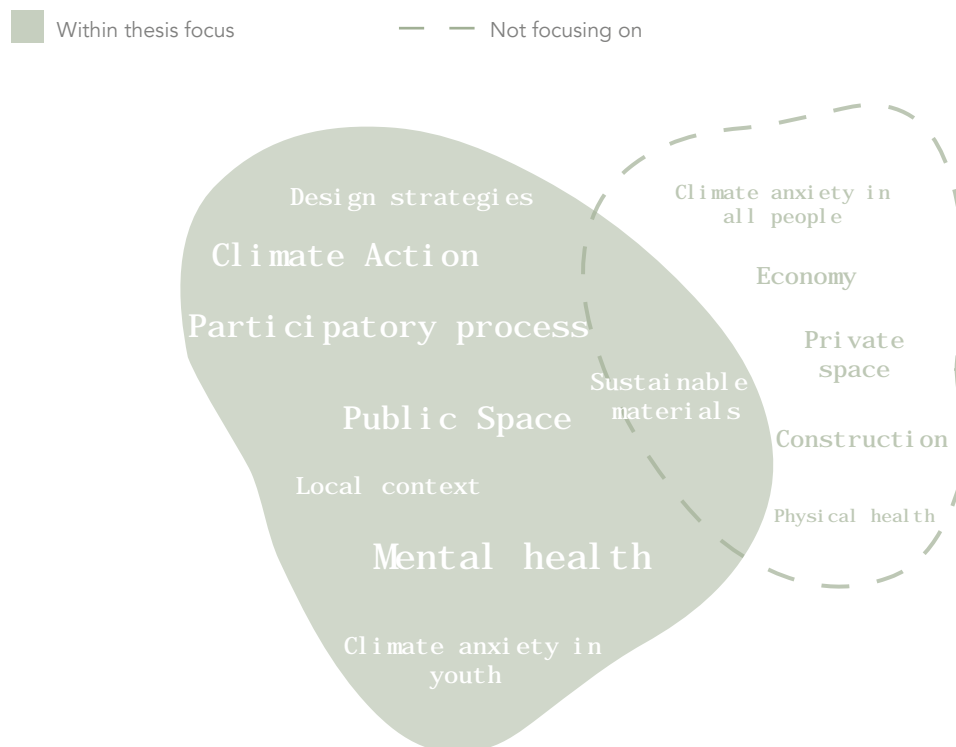


Figure 2. Showing limitations and delimitations

1.4 METHODS

The following pages describe and illustrate the methods used during the thesis. Starting with research for design, the point of departure was to collect, investigate and synthesise research and knowledge connected to climate anxiety and action. The next step was to conduct workshops with youth in their local context and together with them, in a participatory process, design a space for coping with climate anxiety, using strategies from the research. Furthermore, coping with their anxiety in the process by taking action affecting their surrounding environment .

1.4.1 Research

Literature studies on former research, case studies on projects addressing the climate crisis and well-being, lectures on designing for sustainable behaviour and climate actions, meetings with experts, interviews with youth and workshops with students became the base of the background, method for analysis and context.

1.4.2 Participatory method

During three workshops nineteen students from Lindholmens Tekniska Gymnasium participated in the development of a proposal of a project for a public park, Jubileumsparken, close to their high school. The youth were between the ages of 17-19 and consisted of a mixed and diverse group with an equal division between genders from different parts of Gothenburg. They all spend a large portion of time in Lindholmen where their highschool is located. The first workshop was to get an understanding on their emotions and desires regarding the climate crisis and desired actions. The second was to find strategies that could be used in the park to promote the actions, the third to do a deeper analysis of the site and choose one program to develop further as well as an opportunity for feedback.

1.4.3 Site and building analysis

Jubileumsparken is a public park located in Frihamnen, an area close to Lindholmen where the focus group attend their high school. The site is an old industrial area (shipyard) in a harsh environment (exposed to wind e.g.), being transformed in to a public park. It was chosen since the youth have a connection to the area and since they pass the area with public transport to reach their school. It is also a familiar environment with connection with water. Jubileumsparken also has a history of allowing the public to test ideas for the space with pop-up/DIY (do it yourself) constructions and programs before making anything permanent. Together with Passalen the youth have an opportunity to make an impact on their surrounding environment to help cope with their climate anxiety.

1.4.4 Design proposal

The design proposal was developed from the workshops with the youth and strategies found during the research phase.

1.4.5 Handover

Since the master thesis has an end-date, the design proposal, with suggested next steps, is handed over to the stakeholder Passalen for the implementation to be planned further. There will however be a continuation of contact and support if questions or thoughts arise along the process.

Methods

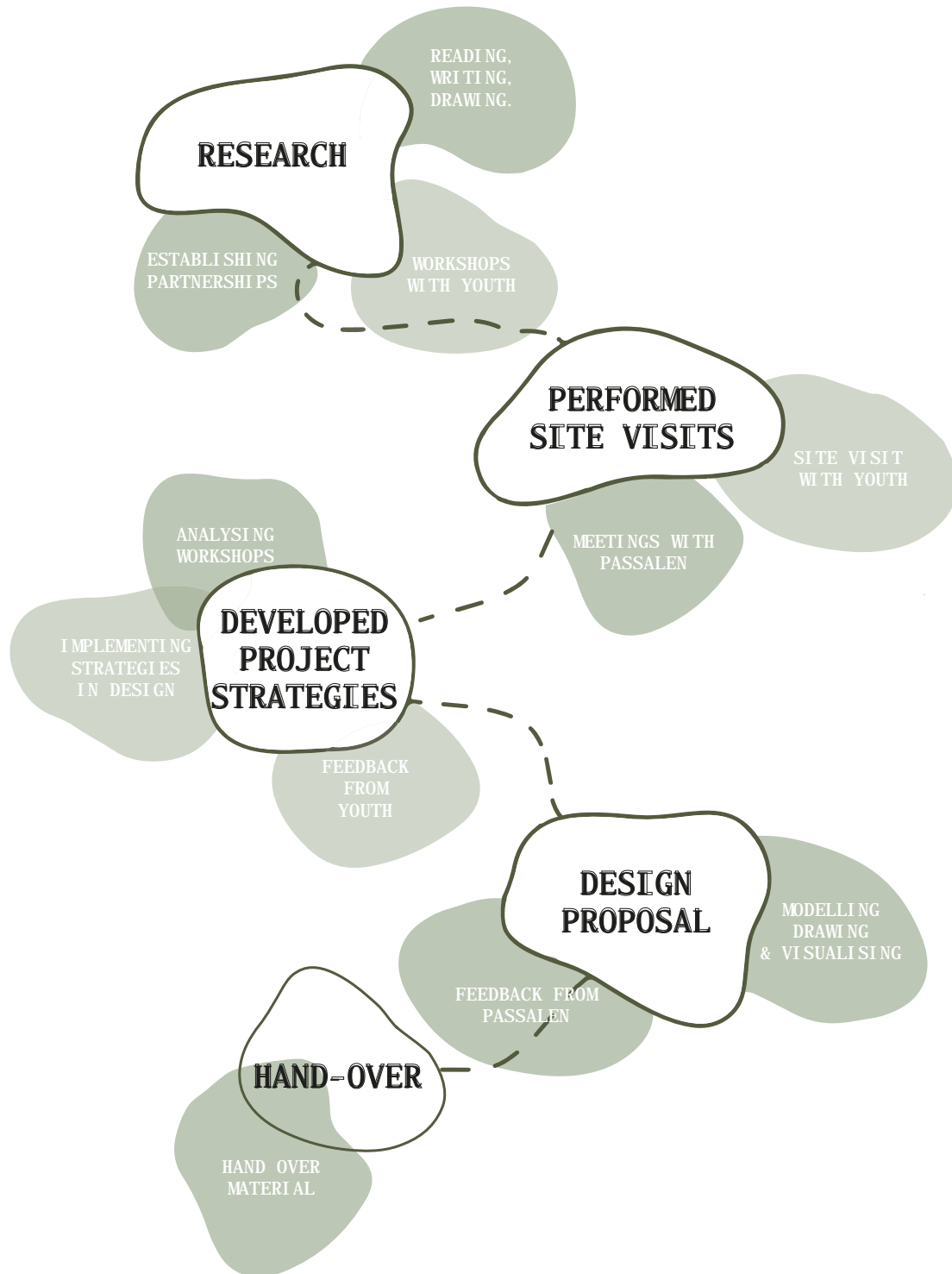


Figure 3. Showing the steps of the methods.

2.

Inspiration

”Architecture itself can not make a more equitable world... but we can contribute with specific actions.”
- *Mariam Kamara*

(ArchDaily Interviews, 2019)

2.1 INSPIRATION PROJECTS

The second chapter in the thesis presents two inspiring projects with a design activism approach that through intervening in the built environment aim to spread awareness and empower people to take climate action. These were chosen since they have clear strategies that are used to raise awareness on climate change as well as motivate and empower the participants to cope with their emotions and take action.



Figure 4. Photograph by Miguel de Guzmán of the interior and activities.

2.1.1 JF-Kit House

The JF-Kit House is a prototype designed by three architects in a Madrid based practice called Elii. The project is a self-sufficient experimental house that is powered by its inhabitants. With this project the architects aim to express the body as a critical point of a sustainable future. Raising awareness of the energy costs for common activity that can instead be used to produce energy. It also raises the discussion on energy networks and how small interventions can together power larger areas and communities. This was installed and exhibited in Brussels (Cantis, 2012).

This project has a very effective way of empowering its inhabitants by allowing them to experience an instant reward from their sustainable behaviour. By producing energy through an easy action, seeing their energy transformed into power (the lights inside). Having a clear focus, sustainable energy, the issue raised is easy to understand and grasp. The interaction with the structure where visitors use more senses also increases the chance of remembering and discussing the project after leaving it. At the same time, a “learn by doing” strategy can encourage the continuation of the behaviour, perhaps applying it to other projects. Another important strategy used is creating a sense of community. People might gather for the social benefits as well as practical. It also shows the benefit of joined efforts. The installation allows for discussions and provides feedback to the public on the potential positive consequences our behaviour can have.



Figure 5. Photograph by Miguel de Guzmán of the exterior.



Figure 6. Photograph of Pollution Pods installed in Norway (Capefarewell, 2017)

2.1.2 Pollution Pods

Pollution Pods by Michael Pinsky attempts to represent the invisible. Using science and art he has created a space for people to experience bad air quality and reflect on the reality of many people in the world and the possible future of our planet as a whole. The aim is to show the consequence of their own lives to alter their behaviour and spread awareness. The pods consist of five contrasting global environments from five different cities where the air quality, (ozone, nitrogen dioxide, sulphur dioxide and carbon monoxide levels) are recreated. This is a travelling exhibition and has had 30 000 visitors from around the world (Capefarewell, 2017).

In this project the strategy was to create an experience that triggered a strong emotional reaction (see section 3.3.10), turning worry for the future into the natural response to protect it and act (Anderson, Hylander & Nylén, 2019). By making the invisible, visible, the visitors experience the physical consequences of climate change. The installation is therefore more likely to be remembered, discussed as well as reflected upon. This can lead to behavioural change in the long run; it is however up to the visitor to identify what actions need to be taken in order to prevent such a future.



Figure 7. Photograph by Peter Macdiarmid of Pollution Pods in front of Somerset House (Capefarewell, 2018)

3.

Research

*”The next big thing will be a lot of small things ”
- mural at Gent University*

(Van Mol, 2022)

3.1 UNDERSTANDING YOUTH

In this section, the interviews carried out to understand the youth's situation in the local context of Gothenburg will be presented. A more in-depth exploration will be presented in the next section (see 3.2 Workshops).

3.1.1 Interviews at Gårdstens Fritidsgård

Prior to the workshops with Lindholmens Tekniska Gymnasium, interviews with youth between the ages 16-19 at Gårdstens Fritidsgård (Leisure centre for youth run by the municipality) in Angered were conducted to get a broader understanding of the emotional effect of climate change in youth in the local context of Gothenburg. Gårdstens Fritidsgård was one of the Leisure centres contacted that showed interest in participating in the interviews. Participation was optional and an estimated number of 7-10 people joined the discussions with the majority being male.

The first impression from the youth was lack of interest in the climate crisis. After deeper discussions with follow-up questions, it was clear that some did not know much about the crisis and some were experiencing frustration from the lack of control and inability to affect the future which presented itself as apathy. An overall hopelessness and frustration over the situation was a common emotional response. A feeling of neglect and inequality was also present, expressing that it is easier for some to be sustainable, with an example of how newly produced buildings are better adapted for it. Another example of inequality was how the lack of understanding a neighbourhood's inhabitants can prevent positive behaviour from being adapted. E.g. During the covid-19 pandemic, the municipality put up signs in the neighbourhood in Swedish and it was not until they realised that the majority of those getting the virus was the group that did not speak Swedish that they added other languages.

According to some of the youth, the lack of knowledge and ignorance is due to the fact that they have not experienced the consequences of our impact on the environment. A few of the youth had been abroad, some in Lebanon and some in Iran, to visit family and compared the situation with trash and pollution in those countries with the environment we have in Sweden, saying that at least more is being done here. Some expressed worry of overpopulation leading to deforestation. When asked to explain their thoughts, they explained that this is what is currently occurring in their neighbourhood and what they have experienced during most of their childhood. Large parts of the forest where they used to play are now construction sites where new apartment blocks will be raised. Another common standpoint was that large companies, such as Volvo Cars, carry the guilt due to their excessive production of new cars and parts.

What did not get as much focus was how we could affect those companies and our consumerist lifestyle. A conversation on peer pressure came up e.g. if you don't have a new Iphone you can be made fun of.

According to the youth, spreading awareness in a way that is easy and accessible that can be shared on social media platforms (e.g. TikTok and Instagram) to go viral, is the best solution. Laws and authorities can also be helpful as well as making public transport free and decreasing the production of cars.

3.2 WORKSHOPS

The following pages contain an in depth exploration of coping with climate anxiety made using one focus group during a limited amount of time. Beginning with an overview of the collaboration followed by presentations the workshops and excersises carried out together with the school, ending with an analysis.

3.2.1 Lindholmens Tekniska Gymnasium

During the course of three weeks, three workshops (one per week) were conducted with students attending their third year of high school at Lindholmens Tekniska Gymnasium. The sessions were mandatory since they were a part of their course in Sustainable development and city planning, held by responsible teacher Carina Mathiasson. Each class was 90 minutes and the teacher was present and took notes during the sessions. The class consisted of nineteen students between the ages 17-19 years old (majority were 18 years old) and had an equal division between genders. The attendance did however vary during the workshops due to illness and other unforeseen events.

The following structure was set for the to develop a participatory method. Before every new workshop, the analysis from the previous workshop was presented as feedback to the students.

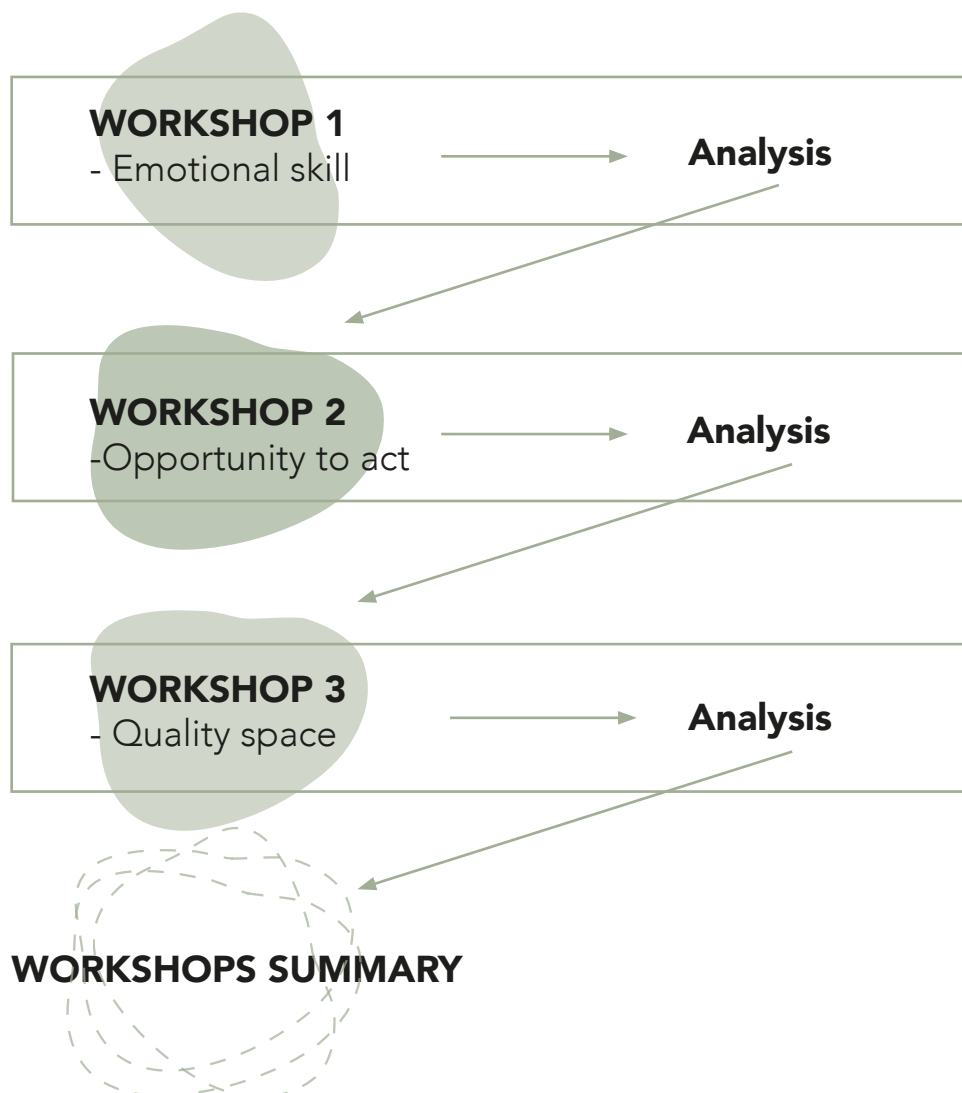


Figure 8. SHowing structure of workshops conducted with Lindholmens Tekniska Gymnasium

3.2.1.1 Workshop 1 - Emotional skill

The first workshop was seen as an opportunity to develop emotional skills. For the youth to express their worries and desires for the future, identifying what they need in order to cope with their climate anxiety as well as which actions they believe are most important for their well-being and the environment.



Figure 9: Illustration of "warm up exercise", stickynote on a whiteboard, scale of worry and knowledge regarding climate crisis.

Exercise and structure

During the first workshop the youth got to express their emotions regarding the climate crisis. Starting with a "warm up" exercise, the youth got to place sticky notes with their name on a drawn up scale on the whiteboard measuring where they are from not worried about the future environment to extremely worried. As well as one scale that measured knowledge about the crisis, from nothing to almost expert. Following this exercise, was a drawing exercise where the youth had 3 minutes to answer a series of questions through sketching and then presenting their images.

The aim of the fast sketch exercise was to remove pressure in creating visually pleasing drawings and focus on the content, allowing students to draw their first thoughts under limited time. After each finished sketch, all of the students got to present and say a few words about their drawings.

The first sketch exercise consisted of drawing a utopian future and dystopian future. This with the instructions following:

1. Draw your future Utopia, how do you think the future outdoor environment will look in the best case scenario?
2. Draw your future dystopia, how do you think the future outdoor environment will look in the worst case scenario?

The second sketch exercise was called 4 Fast Questions. The following were the questions the youth answered through fast sketches.

1. What activity or situation makes you sad/worried about the future environment?
2. What do you think is the biggest issue on climate change that you want to adress?
3. What makes you feel positive about the future environment?
4. What do you believe we can do as individuals to impact the future environment?

The following drawings are only from four students, however they do represent what the majority mentioned through the sketches. On the outcome and analysis of the first workshop (see page. 26) these are translated into diagrams to get an overview. To see the rest of the students drawings see the appendix (pages. 61-63)

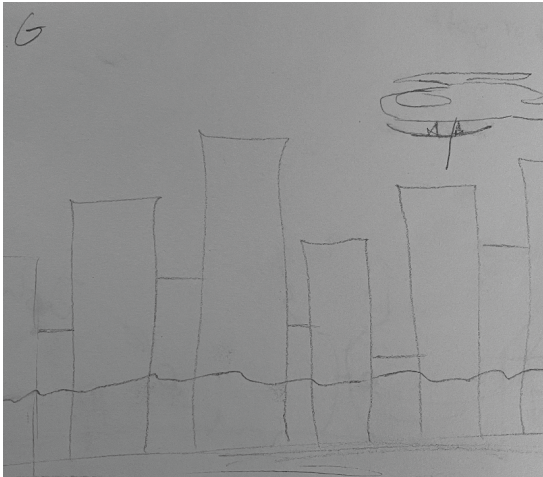


Figure 10. Showing a dystopian sketch from a student

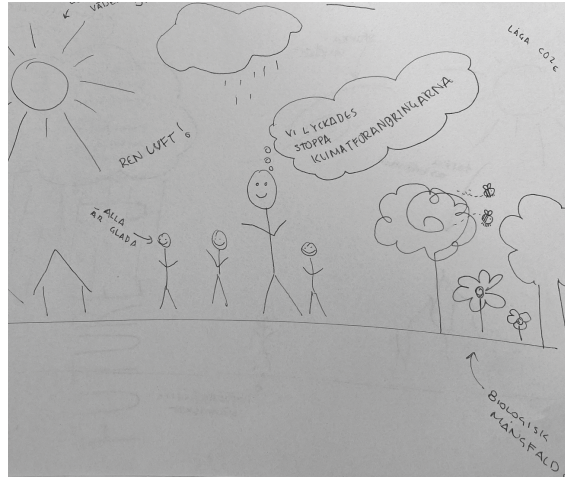


Figure 11. Showing a utopian sketch from a student

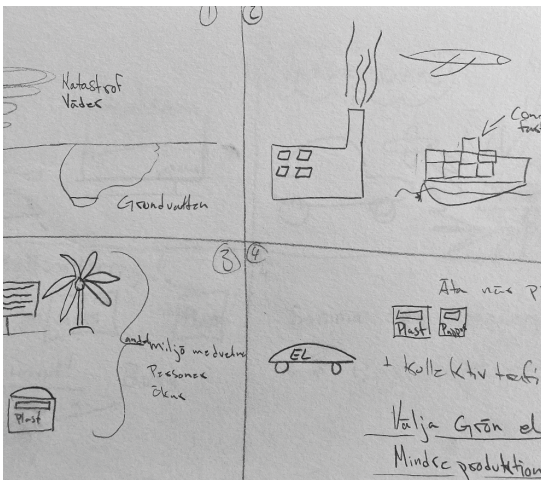


Figure 12. Showing example of a student sketch from the 4 questions sketch exercise

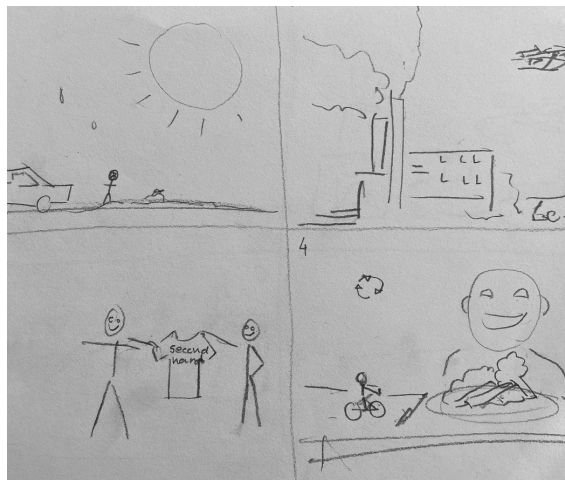


Figure 13. Showing example of a student sketch from the 4 questions sketch exercise

3.2.1.2 Analysis

The following analysis was made on the first workshop with the youth identifying what they need in order to cope with their climate anxiety as well as which actions they believe are most important for their well-being and the environment.

It was evident that the females expressed more worry than men, however the male students who placed themselves close to "not worried" on the scale measuring from not worried to extremely worried, did express worry in their drawings. Many spoke about how they were experiencing weather changes (less snow during winters or flooding on the parking lot close to the highschool), seeing news about natural disasters in other countries or seeing trash in the ocean affected them negatively. Climate deniers on social media or people who do not care also affected them negatively.

One student said and I quote: "I would have been more worried if I was a farmer in Florida, we are more protected in Sweden". Unclear if this refers to our geographic position or trust in our government. Those who expressed hopefulness said that it helps when they see people doing things for the environment, such as picking up trash from the oceans. The majority expressed that climate anxiety comes and goes. Most common emotions connected with climate change were: anger, frustration, stress, abandonment, despair, guilt, hopelessness, hope.

The drawing analysis showed the problems were mainly the western human lifestyle, mass production industries, factories, shipping and transportation, unsustainable energy, money, power, inefficient climate politics. What triggered their climate anxiety was when observing actions that harmed nature, or seeing nature in harm as well as acting in a unsustainable way. Experiencing the weather changes (see Figure. 10). Consequently, what gave them hope were seeing initiatives being taken and people behaving in a sustainable way taking sustainable choices as well as political efforts (see Figure. 12 & 13).

Graphs showing students most common worries and wishes for the future.

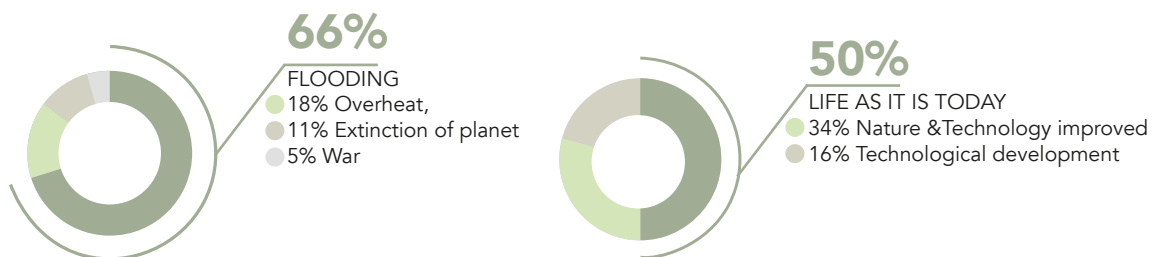


Figure 14. Showing outcome from Utopian/Dystopian drawings

- **Increased climate anxiety:** Flooding, seeing/ experiencing nature in harm, climate deniers, people in power not caring, doing unsustainable actions, news and social media. (Most common emotions: Sad, angry, frustrated, hopeless, helpless, abandonment, stressed, guilty).
- **Decreased climate anxiety:** Seeing people and initiatives doing positive actions for climate, acting sustainably (hope, empowered).
- **Wishes:** for future to be as it is today, technological development and thriving nature.
- **Actions needed:** Change of lifestyle, take sustainable decisions, spread awareness and hope.

3.2.1.3 Workshop 2 - Opportunity to act

The second workshop was dedicated to brainstorming ideas on a place to cope climate anxiety through dealing with emotions and perform a specific action. The site Jubileumsparken was presented and inspiration projects that have done similar things (promoting climate action) as well as strategies on sustainable behaviour.

Exercise and structure

During the second workshop the youth were divided into groups of four to develop ideas of a space that would empower people to take action. The result from the previous workshop showed actions taken by others in their surroundings make them feel positive and hopeful about the future. The analysis also showed that the action they believe people can take to help the environment is changing their lifestyle. The site was introduced as well as inspiration projects promoting climate action and identified strategies for sustainable behaviour they used. At the end of the workshop, the students were asked to present their design proposals in the way they felt comfortable. Some wrote lists, some made drawings, mind maps or models to illustrate their ideas.

The design strategies for sustainable behaviour identified in the inspiration projects presented were taken from a research paper made by product designers Lindman and Renström called "Designing for sustainable behaviour". These were presented in order for the youth to gain an understanding on how a space can affect people and help empower action. The strategies are divided into five categories called; Enlighten, Spur, Steer, Force and Match. According to the research paper, it is more likely to influence behaviour if combining strategies (Lindman, Renström, 2011).

The purpose of **Enlighten** is to motivate people to perform sustainable behaviours by influencing their knowledge, values, attitudes and norms. This can be done through e.g. informing, giving feedback or creating means for reflection.

In the category **Spur**, the strategies encourage and tempt a person to perform a behaviour by presenting the positive environmental consequences of the behaviour. The focus can be on the consequence or the behaviour itself. This can be done through e.g. incentives or competition.

In the category **Steer** the strategy is to guide the person by making the sustainable behaviour the evident choice. This could be done physically or cognitively by e.g. constraints or affordances.

The design strategies in the category **Force** is to compel the sustainable behaviour upon the person, through limited functionality or by restraining the undesired behaviour.

In the category **Match**, the idea is to adapt products or services to behaviours people already perform e.g. sustainable packaging (Lidman, Renström, 2011).

The following images show design proposals from two different groups consisting of four students in each group. The mind map is a collection of all the groups design proposals taken during their presentations.

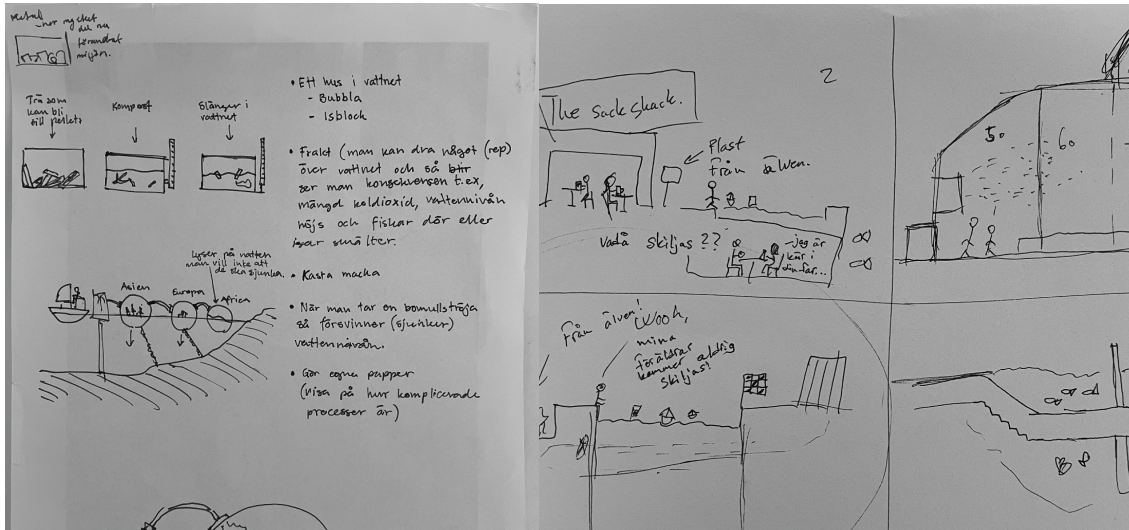


Figure 15. Showing two different groups notes on design suggestions.

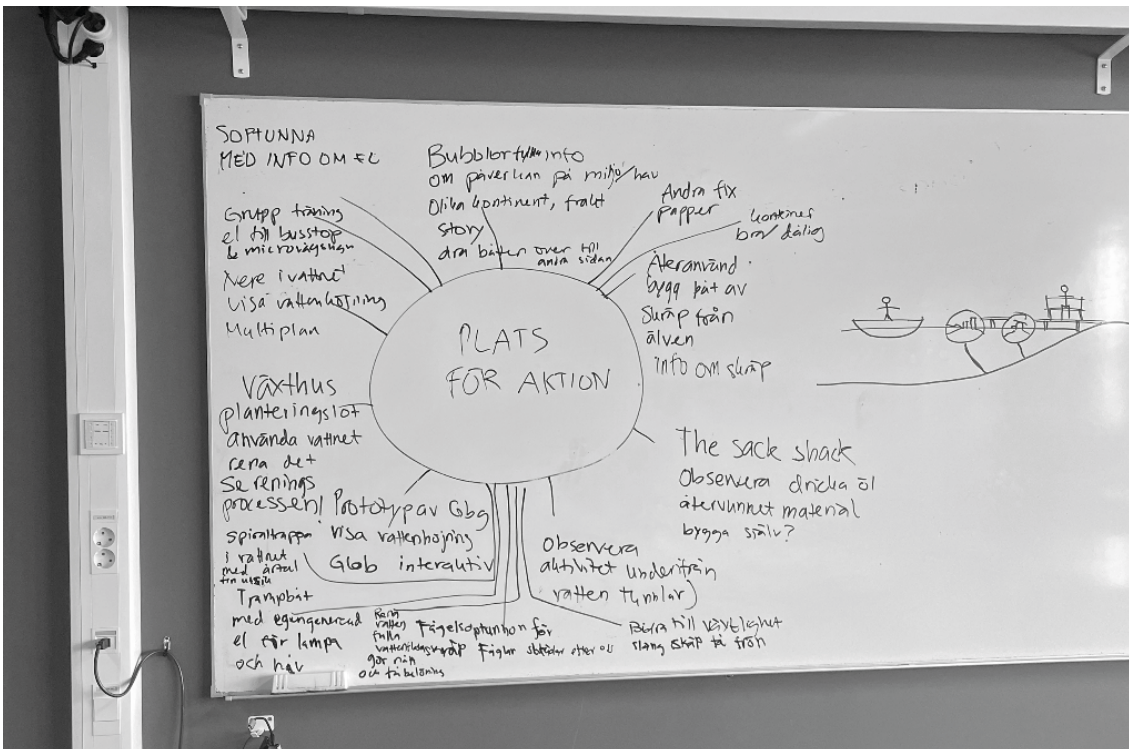


Figure 16. Mindmap showing collection of notes from students from the second workshop

3.2.1.4 Analysis

The analysis of the workshop was made by first illustrating the proposals presented by the youth in the mindmap (see Figure. 16) through simple sketches (see Figure. 17) to then identify which strategies and qualities that were most evident and preferred by the majority. These sketches will be presented in the third workshop (see section 3.2.1.6)

One example taken from a group of students with many suggestions was, a place where people could collect garbage from the water and store it to later build boats and to organise a boat race. This would make people aware of how much garbage is in the water and effect how they behave to consume less and at the same time learn how to make use of "garbage". They also had a space for those who just want to watch to be able to relax and drink beer to allow all people to be apart of the activity.

In this example, the qualities that in the discussion was presented as important were; Community engagement and belonging, Pleasant and fun space accessible for people in all ages, Spreading awareness by experiencing or seeing the negative/ positive effects, Being visible to reach many, Be close to nature and the water but accessible and Use sustainable materials and energy.

The following strategies were identified by the author in the majority of the design proposals presented by the youth:



Attention drawing design

Multiple designs included lights or an impactful shape or dramatic experience to draw attention and spread awareness as well as receive impact on social media platforms and from places further away across the water.



Engaging information

Many expressed wanting people to get involved and help the surrounding environment by picking up trash or learn how to e.g make their own paper and colour them by seeing instructions and mimicing. These were tricks they had seen on TIKTOK to help live more sustainably.



The fun theory

For people to get involved the students wanted multiple activities that could be fun for a variety of people, drawing them into the space.



Biophilic architecture

The wish to be connected to nature was expressed through their drawings, having paths going down to the water or trees. E.g. One group presented a staircase going in the water to represent waterlevels from where it was to where it is going.



Group belonging

It was important to youth to reach out to many so that the burden could be shared and people could work towards sustainability together.



Enhancing space

To make the space pleasant and worth going to by enhancing the qualities. The youth thought the space had too much pavement.

- The majority of the groups used strategies in the categories; Enlighten, Spur and match.

3.2.1.5 Workshop 3 - Quality space

During the third workshop a guided site tour was conducted by Passalen, the collaborating stakeholder working for Gothenburg city to develop Jubileumsparken, in order for the youth to experience the site and achieve a deeper understanding of the area and future plans (see page 40). After identifying and analysing current qualities of the park as well as imagining the future movement and programs a vote was made on a design proposal based on sketches from the previous workshop.

Exercise and structure

To develop the design further, a decision was required to be made, a voting took place where each student had one vote to place next to the sketches illustrating their design ideas suggested in the previous workshop (see Figure 17 below). The designs that received the most votes was decided on and qualities important for them were discussed. The design proposal was drawn out on the ground to get an understanding of size and scale. after the vote a name for the intervention was also discussed.

The last exercise was a feedback session where youth talked about their emotions on the participatory process, the climate crisis and their impact. The students were asked questions regarding the process and their experience as well as if their emotions regarding the climate crisis has changed

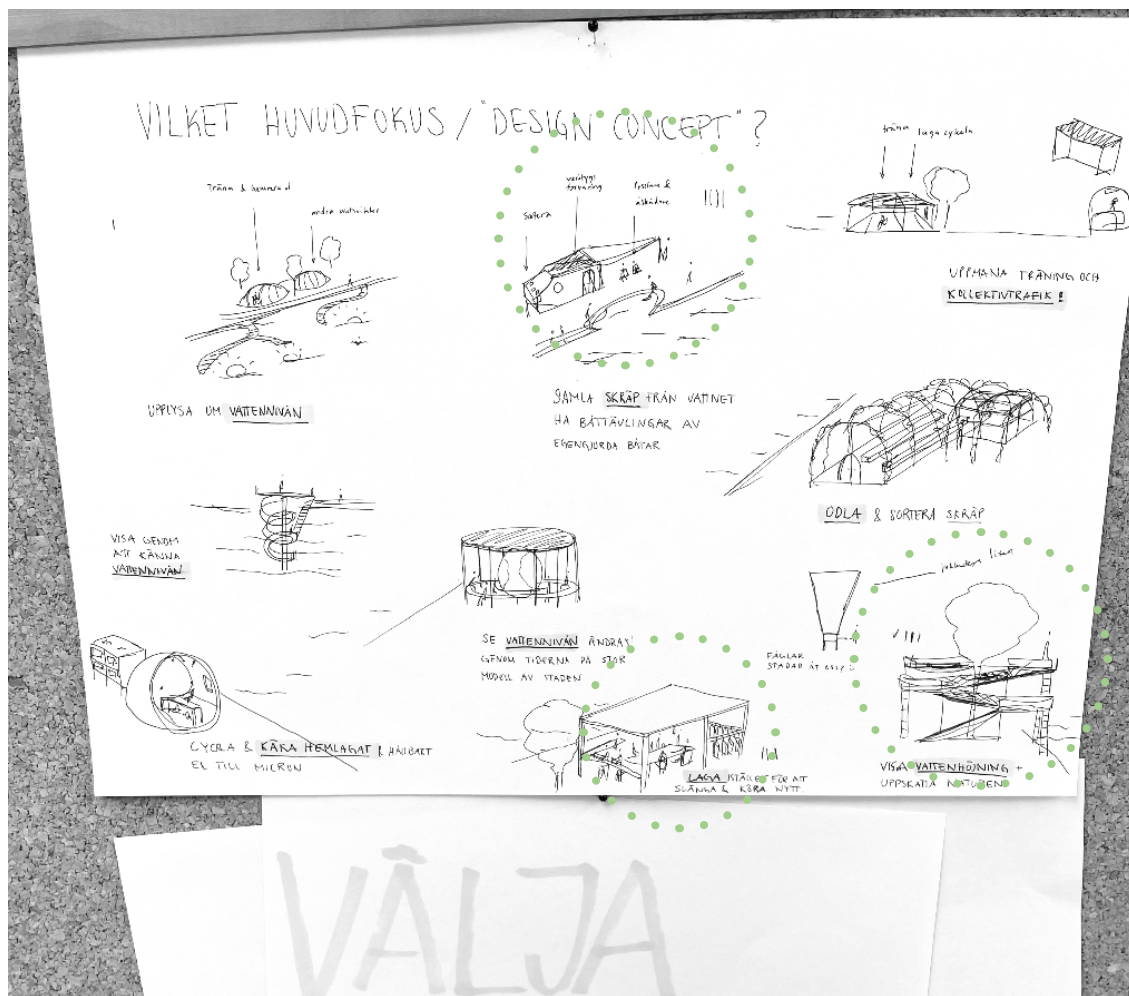


Figure 17. Showing voting process of suggestions of designs from previous workshop by youth, illustrated by author

During the site visit, a proposal to place all the plans inside the building across from the park called Kajskjul 113 was raised by some students. It was however not on the map provided by Passalen (see Figure 18) due to the ownership of the building belonging to a private corporation. The guide from Passalen did however say that the building was planned to have public functions on the bottom floor and offices on the top, making it an interesting place for a public space for action.

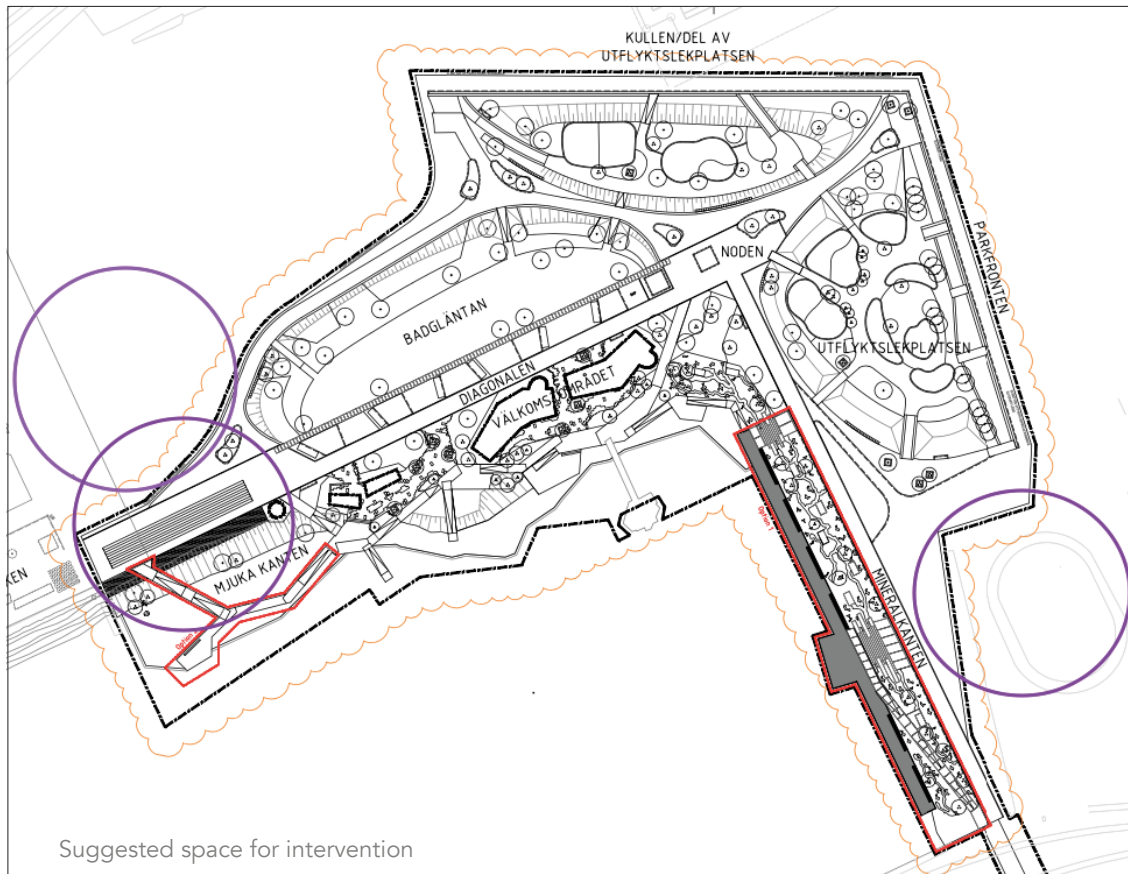


Figure 18. Map provided by Passalen showing possible spaces for intervention

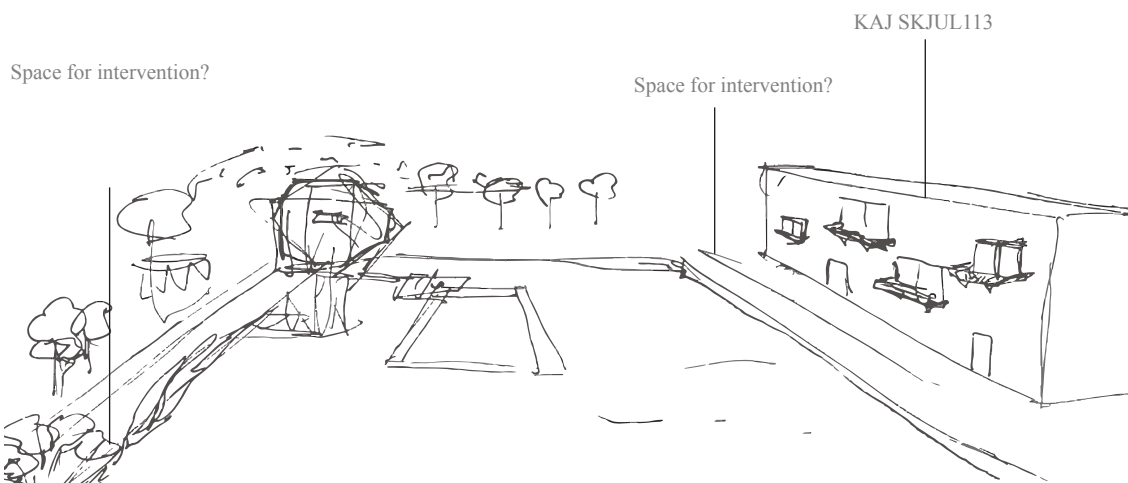


Figure 19. Sketch of Kajskjul 113 in relationship to the park with inputs from students, made by author during the site visit.

3.2.1.6 Analysis

The designs that received the most votes were both focusing on reuse and learning how to give new life to old things, spreading awareness and encouraging all people to get involved. The discussion revealed that the connection to water was important for well-being and to raise awareness about the water level rising. A space for reflection and discussions about the climate crisis and a space that inspires and brings hope was also important for the youth. A temporary name for the intervention was also chosen. The youth thought climate anxiety sounds negative and thought climate action sounded better, the intervention was therefore referred to as the Action Hub.

An expansion to include all ideas was also raised in the discussion and the possibility for the space to grow to promote other actions was a wish from the youth. It was also very important for the intervention to be accessible for everyone, including children, older people and those with disabilities.

The placement for the action was difficult for the youth to decide on, they did however know the areas they did not like. They wanted to be far away from the private housing having a feeling like they shouldn't be so close and felt like they were being watched. They wanted to be in close connection to nature and the water and make it feel more inviting. Kajskjul 113 also came up as a suggestion and the youth were curious on the plans for that side of the park (see figure 19).

The feedback received by the youth on the process and their emotions was mixed but the majority were more hopeful and did feel empowered after the workshop and wanted to continue to work with sustainability in some way. They also felt that the quote "the next big thing will be a lot of small things" mentioned was empowering. Some of the students did however express not feeling more hopeful or empowered. Those did also not take an active role during the workshops and were mainly male who felt like there was no point of caring, feeling frustrated and wanting to distance themselves. One student said "I only care about football". According to Maria Ojala, being hopeful is much more demanding because then you have no excuse for not helping and there is a need to instead of promoting distancing as coping, help the youth to confront and handle negative emotions, such as guilt, related to taking on responsibility. (Ojala, 2012) This was however difficult to do with limited knowledge and experience. It is also important to listen and respect their feelings.

- The majority of the students felt hopeful and empowered after the workshops and having a possibility to impact their surrounding.
- The most important action was to spread awareness and hope by making it easier for people to take actions in a fun, inclusive and empowering environment.
- It was important to have the intervention placed in a visible but pleasant and nice space.
- The design intervention received a temporary name, Action Hub

3.2.1.7 Workshops summary

The following page sums up the three workshops and explains the decision behind the chosen action the youth voted on.

To sum up the three workshops, the first showed flooding, weather changes and people acting unsustainably was affecting the youth negatively. What had a positive effect on their emotions were when they saw people behaving sustainably and positive measures taken by people in power as well as technological development. They wished to spread awareness to people of all ages to empower them to change their lifestyle when it comes to consuming. Empowering reuse of things instead of throwing them away and buying new. The biggest threat according to them were greenhouse gases from companies and industries as well as shipping things to Sweden. The outcome from the site analysis showed a desire to be in closer connection to nature (trees and water) and not too close to the private dwellings. It was important for the youth to create an inclusive environment that makes everyone feel welcomed and empowered.



Figure 20. Image taken from the first workshop.



Figure 21. Image taken from second workshop.



Figure 22. Image taken from third workshop.

Workshop 1
 Making efforts (by e.g. community and individuals) visible for increased well-being and hope
 Encouraging all to get involved to empower sustainable behaviour
 Raising awareness (lifestyle and flooding) of local and global issues

Workshop 2
 Draw attention and use social media to involve and empower people
 Make activity fun and inclusive
 Create a pleasant space
 Embrace nature

Workshop 3
 Be accessible and available all year around to provide tools to act.
 Use sustainable materials

The program for the Action Hub was inspired by one of the inspiration projects presented during workshop two, a “Fixotek” located in Majorna, Gothenburg.



Figure 23. Image of the entrance to the Fixotek in Majorna, Gothenburg.

A Fixotek is a space where people can go to borrow tools to take home or use there to fix and mend things. The word Fixotek (fix -otek) comes from the Swedish words fixing (fixa) and library (bibliotek) to form a new word “fixinglibrary”. This initiative is relatively new, and got started in Gothenburg after a student project in 2016 from Chalmers University of Technology inspired by similar projects in Copenhagen, Malmö and Lund. The City of Gothenburg in collaboration with Housing cooperatives (Bostadsbolaget, Familjebostäder, Hyresgästföreningen) and Chalmers University of Technology (additional student projects) opened three fixotek in different locations around Gothenburg (Hammarkullen, Majorna and Bergsjön) in 2017. It was implemented and funded by the innovation program RE: Source, which is financed by Vinnova, the Swedish Energy Agency and Formas.

These spaces are driven by the people living in the housing cooperatives that want to share tools instead of everyone buying and owning their own. It promotes sustainable behaviour since people are encouraged to upcycle instead of throwing and buying new. It also creates a sense of community where people can go to have a chat as well as learn and share knowledge. Although it is a great initiative, the limited opening hours caused by being run by people living in the housing cooperatives with limited funding from the housing companies, and the locations not being central, make them difficult for everyone to access.

3.3 DESIGN STRATEGIES

After analysing the drawings and discussions from the workshops with the youth, their wishes and desires were matched with the existing concepts, methods and strategies presented in this section to help shape the design of the Action hub. Short descriptions of these are presented below.

3.3.1 Biophilic Architecture

Biophilic design is a term used in architecture and design and comes from the Greek word “Biophilia” meaning “love of life”. The guiding principle is to increase quality of life and well-being by incorporating natural features and nature in the built environment. This way of designing can also be implemented as a strategy to unconsciously promote a behaviour in people that benefit nature. The design approach seeks to connect the building and users to nature by for example incorporate natural landscape features and other elements for creating a more productive and healthy environment for people. According to a study on access to urban green spaces and sustainable behaviour a survey with 24 000 people showed that frequent visits to nature resulted in increased sustainable behaviour (Alcock et al., 2020). Closeness to nature is also proven to increase well-being and sustainable behaviour in children (Barrera-Hernández, et al 2020). It is however important to be aware and avoid ”Greenwashing”. The word is a pejorative term that identifies the misuse of the idea of sustainability. E.g. a building that appears sustainable without any efforts to achieve social and environmental well-being. (Ghisleni, 2022).

3.3.2 Beauty & Neuro Architecture

Another strategy often used when designing a space for well-being such as a hospital or health facility, is neuro architecture. In the book *Beauty, Neuroscience & Architecture* the architect and author stresses the importance of beauty and how our brain reacts to it. Beauty can be beneficial to our health. Neuro architecture can be defined as a built environment designed with principles of neuroscience, which establishes spaces that encourage memory, improve cognitive abilities, avoid stress and/or stimulate the brain. Although neuroscience reveals various patterns of brain functioning, people are still unique on account of the influence of genetics, culture and individual experiences.(Ruggles, 2018)

3.3.3 Engaging information

There are attempts of making information engaging through a learn by doing mentality, promoting interactions where people use more senses, making it an affective way to learn and memorate at the same time empower people to act. E.g. games or mimicing.(Lidman,Renström, 2011)

3.3.4 Guidance through group belonging

A person that receive personalised information on how to perform the sustainable behaviour and can by mirror other group members activate social and personal norms hopefully leading to positive attitude towards the behaviour and empowerment. (Lidman,Renström, 2011)

3.3.5 Design for Reflection and Discussion

The strategy of Design for Reflection and Discussion aims to create an awareness about environmental issues and evoke reflections and discussions about our behaviours in relation to sustainability. Resulting in stronger or changed attitudes. (Lidman, Renström, 2011)

3.3.6 Goal setting

To set a performance goal for sustainable behaviours has been proved to be efficient. The more difficult a goal is, the greater the resulting achievement will be. Smaller achievements (small victories) along the process can however motivate continuation of the effort towards the larger goal (Lidman, Renström, 2011).

3.3.7 The fun theory

The fun theory aims to design in a way that makes the desired sustainable behaviour fun to perform. By making a behaviour fun to do the strategy aims at facilitating for intrinsic motivation to arise (Lidman, Renström, 2011).

3.3.8 Attention drawing design

The idea behind the strategy Attention Drawing Design is to design in a way that the structure itself or the actions to create positive attention. In this way it is easy for both the user and the surrounding to start talking about the product or the behaviour, which may increase the spread of the sustainable behaviour (Lidman, Renström, 2011).

3.3.9 Simple information

Information that is easy to process is more likely to be accepted. E.g. when behavioural choices are presented with clear and simple information on what is good or bad. (Lidman, Renström, 2011).

3.3.10 Triggering information

Information presented in a way that evokes strong emotional reactions will be more memorable and later recalled (Lidman, Renström, 2011). E.g. An art installation showing the negative impact plastic straws have in the oceans by illustrating turtles' suffering can evoke a strong reaction that will be remembered the next time a straw appears. Another strategy that can have a stronger impact is if it is attention-drawing and perhaps not limited to the space of an exhibition.

4.

Project strategies

"The next big thing will be a lot of small things"
- mural at Gent University

(Van Mol, 2022)

4.1 ACTION HUB

This page contains how the chosen strategies, methods and qualities relate to the workshops with youth and in what way they will shape the Action Hub.

To sum up the three workshops, the first showed flooding, weather changes and people acting unsustainably was affecting the youth negatively. What had a positive effect on their emotions were when they saw people behaving sustainably and positive measures taken by people in power as well as technological development. They wished to spread awareness to people of all ages to empower them to change their lifestyle when it comes to consuming. Empowering reuse of things instead of throwing them away and buying new. The biggest threat according to them were greenhouse gases from companies and industries as well as shipping things to Sweden. The outcome from the site analysis showed a desire to be in closer connection to nature (trees and water) and not too close to the private dwellings. It was important for the youth to create an inclusive environment that makes everyone feel welcomed and empowered.

1. Raising awareness and creating a strong emotional reaction (worry) that triggers action and togetherness. Drawing attention and making it visible for all.



2. Providing a space where people can deal with emotions (discuss and reflect) and take action as well as the tools necessary to do so (e.g. community engagement, knowledge as well as actual physical tools or interaction with the structure).



3. Give positive feedback in the shape of "small victory or group belonging" working together towards a larger goal, empowering the continuation of the behaviour. Creating a pleasant and fun experience providing further positive attitudes towards the action



4. To make the structure inclusive and available for everyone it is important to consider accessibility in the design. Make it easy to understand and interact with. As well as using sustainable materials.



5. By enhancing the spatial qualities of the site and embracing nature the Action hub is also more likely to attract people.



6. To work as a catalyst and reach a global spread and empower climate action and coping with climate anxiety in other places implementing own Action hubs around the world using social media.



5.

Participatory site analysis

"An endless number of green buildings doesn't make a sustainable city"
-Jan Gehl

(Stubbs, 2020)

5. Site analysis



Figure 24. Map showing location of the context in relation to Sweden.

5.1 CONTEXT

This chapter presents the findings of the site analysis of Jubileumsparken in Frihamnen, Gothenburg, made during the participatory workshop with the youth. The visuals presenting the analysis were however made or chosen by the author.



Figure 25. Shows Lindholmens Tekniska Gymnasium in relationship to the public park Jubileumsparken and Gothenburg central highlighting the area under development

The youth attending Lindholmens Tekniska Gymnasium live in different parts of Gothenburg, (see Figure 25.) shows the public transport with bus and tram as well as the ferry.

The Image on the right is an Illustration made by the city planning office showing a suggestion of the future development of the area. This development is considered as a starting point in this thesis.



Figure 26. An illustration by the city planning office in Gothenburg of the future development of Frihamnen in stage 1A (2017)

5.1.1 Jubileumsparken, Gothenburg

The Public Park, Jubileumsparken in Frihamnen is owned by Gothenburg City who have a goal for the park to connect and expand the inner city centre of Gothenburg over the water. As the population is growing, more focus on connectivity is taken into consideration to make the park accessible. The site is an old industrial area with a majority of paved ground and a parking lot. It is now being transformed into a park with different programs with the aim to become a green oasis for the public to connect with the water. The activities that exist include a public bath, a public sauna, a sailing school, an outdoor classroom, a playground and urban farming.

Jubileumsparken has a history of allowing the public to test ideas for the space with pop-up installations and programs to see what works before making anything permanent. An e.g. is Café fluss (see Figure 27. below) that became so popular people signed petitions to make it permanent.

The site was therefore chosen as a place to test the strategies that aim to cope with their climate anxiety. It is also a place that can attract people to get curious about getting involved and take climate action that will have a positive effect on those with climate anxiety experiencing hope and empowerment by seeing community engagement and measures being taken in their surrounding environment.



Figure 27. Photograph by Johannes Isaksson showing temporary Cafe fluss (2020)

The area of Jubileumsparken is, similar to Lindholmen where the students attend their highschool, exposed to the consequence of water rising. Future flooding studies show that extreme water levels will have a significant effect on the park area with a return time of two hundred years. During such events large areas can increase with 0,5-1m in low points. Through Hydrauliska simulations of the future the result shows the water levels will increase +2,3m year 2070 and +2,65m year 2100 (Göteborgs stad trafikkontoret, 2020).

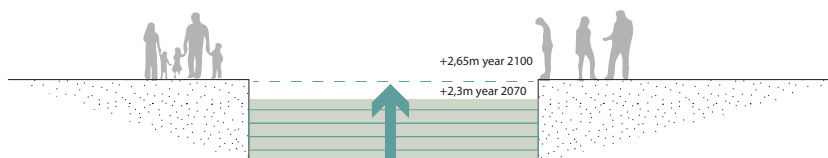


Figure 28. Illustrating water level rising in Jubileumsparken.

5.1.2 Kajskjul 113

The chosen area in Jubileumsparken is in front of the building Kajskjul 113. The building is facing the public park and is therefore the main view from the park, see the image below taken from the public pool (Figure 30). The area in front of the building is also included in the plans of development made by Gothenburg city (see Figure 26) as a space for public functions, almost as an extension of the park. The building Kajskjul 113 is owned by a private corporation, PEAB, that has plans to extend the building vertically and make room for office spaces; the ground floor is however required to hold public functions. The suggestion made during workshop three with the students is for the Action hub to activate the space during summer and move the activity into Kaj skjul 113 during winter. The space also allows for more actions and expansion in the future.

Kajskjul 113 is also known as Magasin 113 and is an old warehouse in Frihamnen with a heavy frame, foundation and balconies adapted for large loads from boats, explaining the appearance. It has cultural-historical values and demolition of the building was therefore not an option. It is currently a warehouse storing summer furniture.



Figure 29. Image of Kajskjul 133 when using the loading balconies (Tony, 2021)

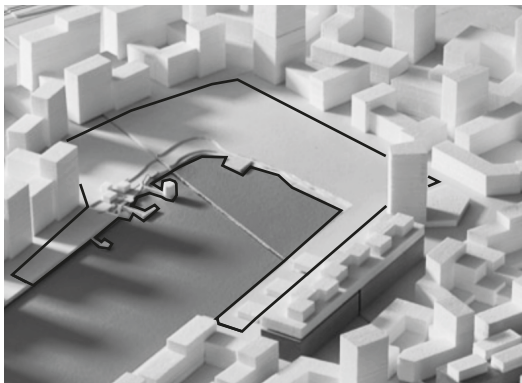


Figure 30. View of Kajskjul 113 from the public pool. Photo taken by Gothenburg City, 2021.

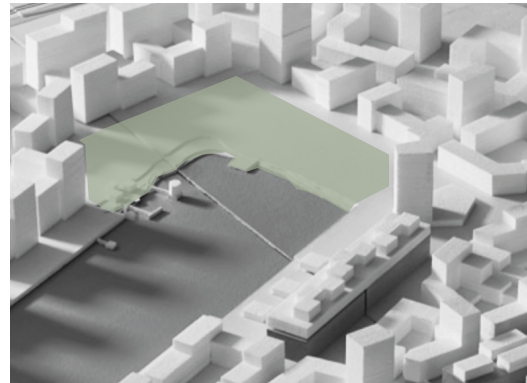
5.2 Site analysis - future development

After visiting the site and learning more regarding the future plans for the area the youth expressed which qualities they liked and disliked. The final decision of the placement of the fixotek was determined by accessibility, visibility, closeness to water and program as well as future plans for expansion.

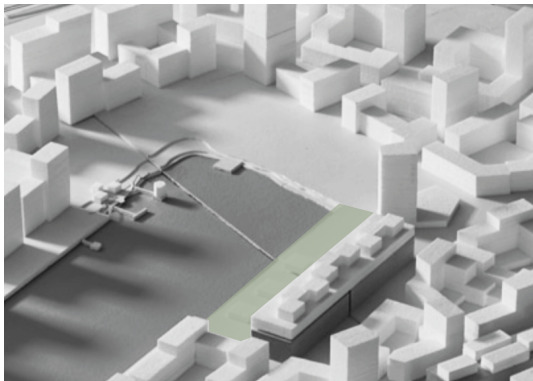
The following diagram analyses the site having the future development in mind. Illustrating the reasoning of the placement for the Action Hub.



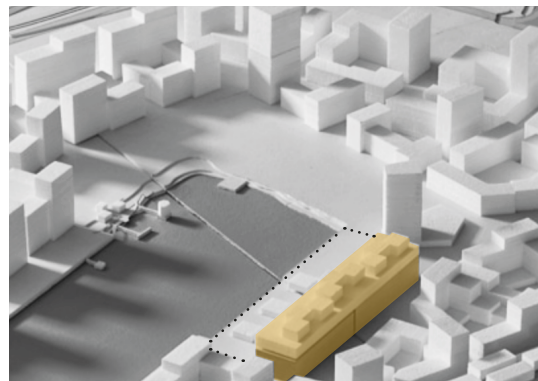
Area dedicated for public space and functions by Gothenburg city



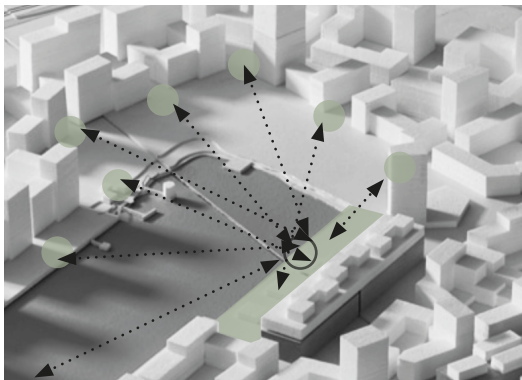
Public park currently under construction.



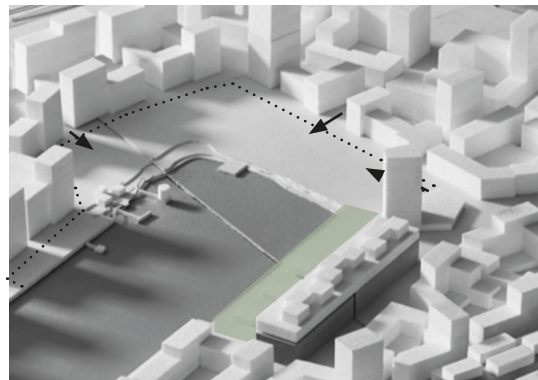
Chosen site for the Action Hub (Area in front of Kajskjul 113)



Eventually the space for the activity during winter (Ground floor of Kajskjul 113)



Views to and from the Action hub.



Entrance to the park area from tram and bus stations.

Figure 31. Showing site analysis.

5.2.1 Site analysis - current situation

Although it is important to have the future in mind, the Action Hub will be a temporary structure with an uncertain future and will be implemented next year. The following map therefore shows the current situation of the site, stakeholders in the area as well as other activities and buildings in and around the park.

Map of Jubileumsparken and surrounding neighbors

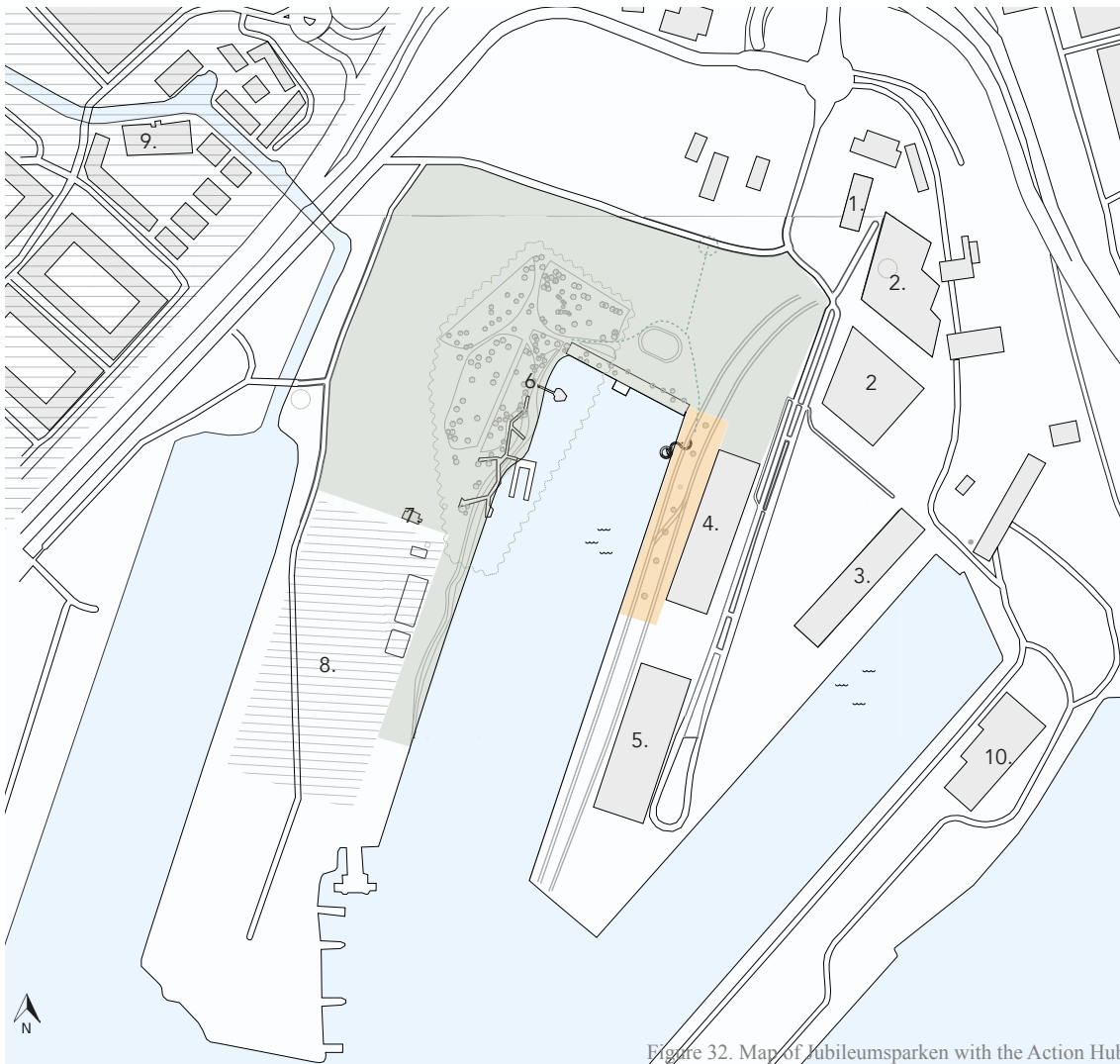


Figure 32. Map of Jubileumsparken with the Action Hub

Park area
 Public space
 Under development
 Path from bus and tram stop

Building owners and programs

1. Passalen office, Gothenburg Park & nature department and more.
2. Magasinet, will house a new tram station in the future.
3. Dansforum (dance forum)
4. Kajskjul 113
5. Padel Arena & Boat Dealer Harry Hanson Marincentrum
6. Public sauna and Changing room
7. Näsan i blöt (outdoor classroom)
8. Waterfront cabins ,temporary housing (15 years) owned by Svenska Hem.
9. Housing (private dwellings)
10. Cafe fluss

5.2.3 Suggested placement of Action Hub

By placing the Action Hub in front of Kajskul 113 it aims to be visible from the public park and the tram station to raise awareness and encourage people to participate in the activities hosted in the structure. It also connects both sides of the water creating a sense of expansion of the park along the water to the other side enhancing the feeling of public space and accessibility. (see figure 31 showing the site analysis) At the same time it brings hope to youth once they see people interacting with the structure inviting further room for discussions and reflections. The ground floor is required to hold public functions (see page 24).

The Action Hub is designed to be a temporary and movable structure and can therefore be moved to activate different parts of the chosen site during the summer season and be moved into Kajskjul 113 during winter.

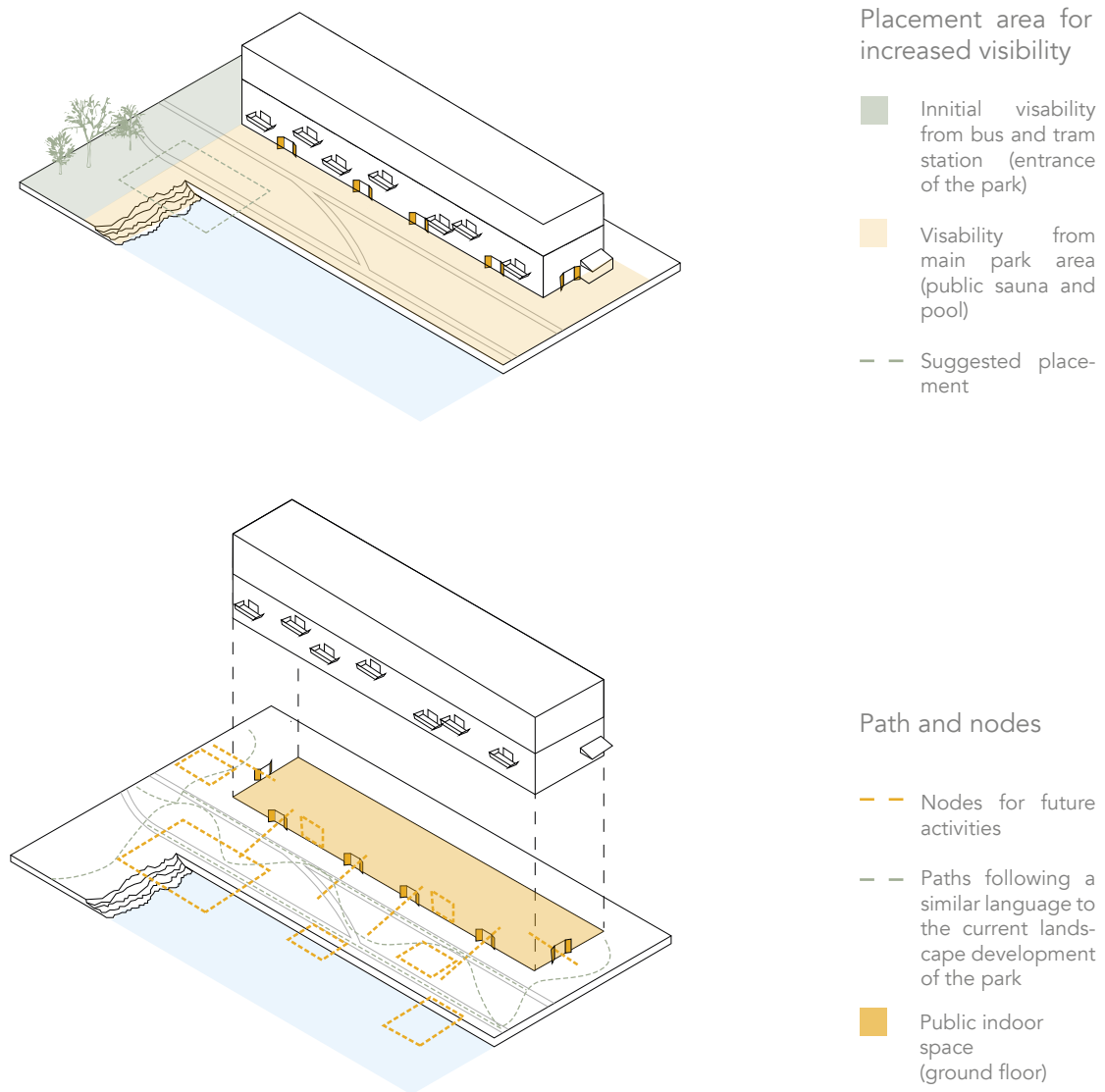


Figure 33. Diagram of suggested placement of Action Hub

6.

Design proposal

*"Being hopeful is much more demanding because then you have no excuse
for not helping."
- Maria Ojala*

(Ojala, 2012, p 555)

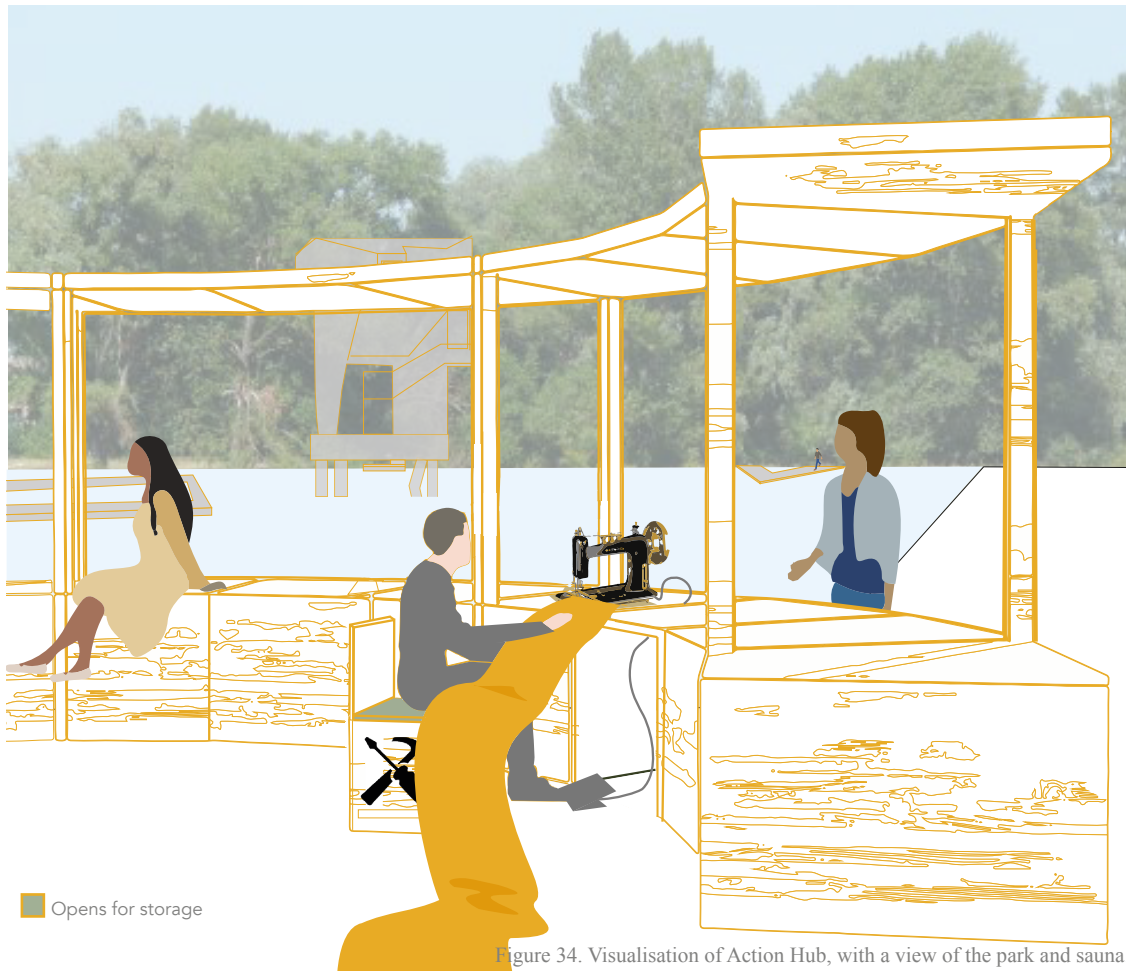


Figure 34. Visualisation of Action Hub, with a view of the park and sauna.

The following chapter presents the design outcome of the Action Hub shaped with the students of Lindholmens Tekniska Gymnasium. The design should not be considered as the final design, it is rather a first draft to be developed further with the summer workers. Through a new series of workshops that will be conducted by the stakeholder Passalen, who will run, maintain and construct The Hub.

6.1 Modular, temporary and interactive structure

To make the Action Hub easy for youth to build and to fulfil the requirements set by the stakeholder Passalen (see page 14). The design is built through assembling a series of modules making it flexible and movable. The module consists of a frame that becomes the workspace (table) and accommodates space for the chairs underneath, which double as storage space.

Once the seating is pulled out leg space is created (see Figure 34). This also shows people when the structure is "open". Users need to move the chairs to access tools. Illustrations on the sides of the chairs reveal which tools are inside creating an interaction between people as well as structure. These steps can be experienced as small victories. All from talking to another person to finding the tools they were looking for. Structural elements providing shading can be a separate module attached or stand on its own.

As expressed by the youth during the workshops, closeness and connection to nature and water is important for their well-being, to attract people and to raise awareness regarding the water level. By taking inspiration from the strategy Biophilic Design with organic shapes and incorporation of natural materials.

6.2 Space for Action and Emotional skill

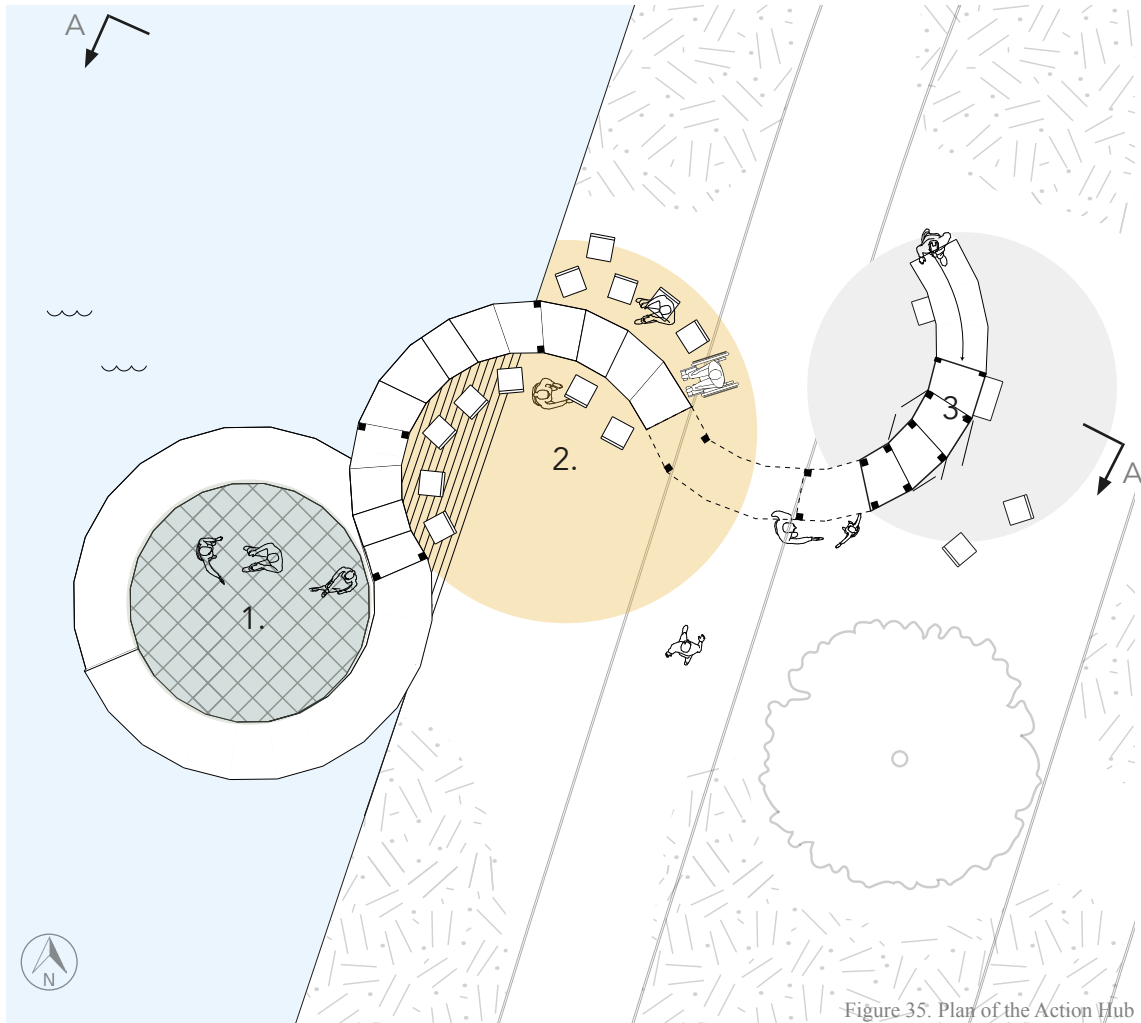


Figure 35. Plan of the Action Hub

Apart from a space promoting action, space for reflection and discussion is necessary to cope with climate anxiety. The following image of the plan shows the division of space dedicated for developing emotional skill and the opportunity to act as well as spreading awareness, hope and empowerment. Making room for different types of gatherings, from large to intimate.

1. Space for interaction with water, reflections and discussions, water level.
2. Work space, storage and access to tools, second level (ground floor).
3. Exhibition space and ramp to third level for further reflections.

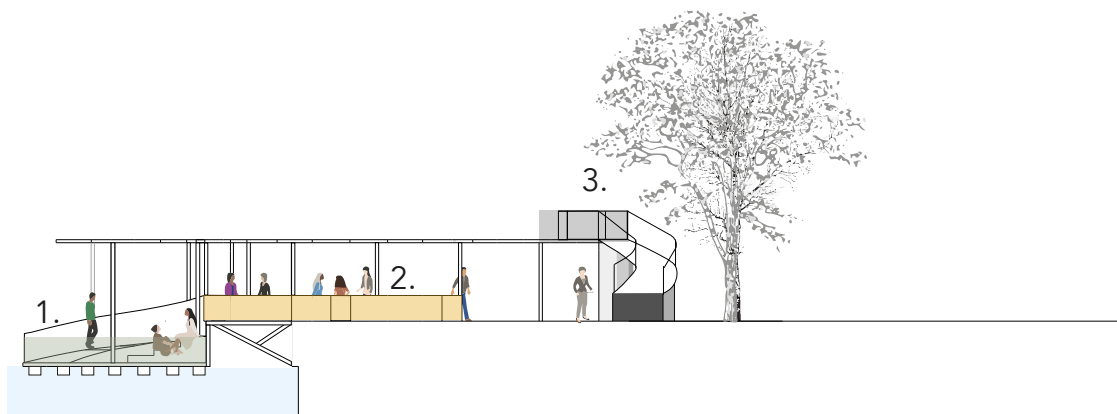


Figure 36. Section A-A

6.3 Raising awareness



Figure 37. Isonometric of Action Hub with net

The aim is for the shape of the structure to create an experience that triggers an emotional reaction and promotes discussions, reflections and action. To be visible and draw attention as well as spark discussions or curiosity encouraging people to participate in activities, the future water levels are made visible through three levels (see figure. 36). The closer you get and the more you interact with the structure the more information you will receive. Lines can be marked with year and the expected water level allowing users to see and experience the future water levels moving upwards. The connection with water also allows for playfulness and familiarisation to the element.

West Elevation showing levels.

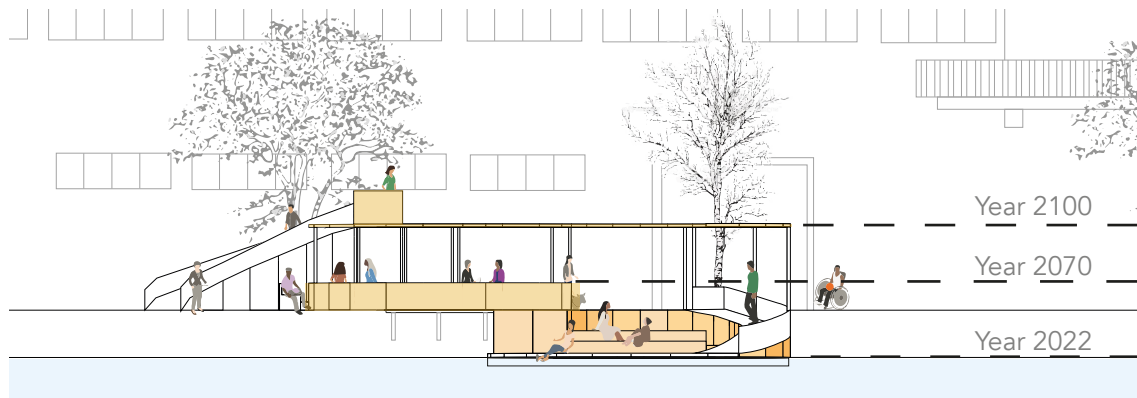


Figure 38. View from park area

6.4 Materiality

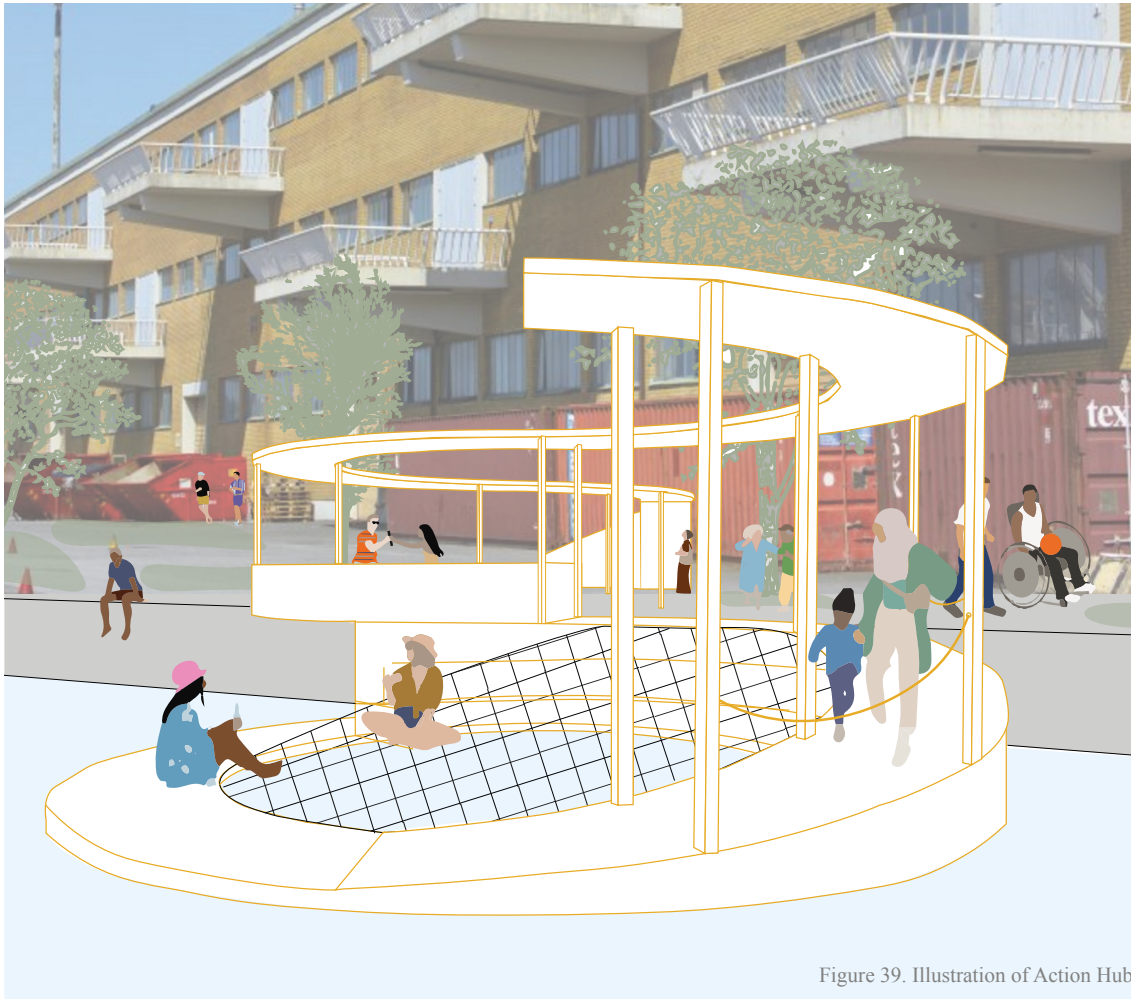


Figure 39. Illustration of Action Hub

For the structure to be as sustainable as possible the aim is to use mostly recycled material e.g. from the deconstruction of old buildings. By moving the structure inside during winter there is also no need for isolation or other materials for shelter. The suggestion for the structure when it comes to material is using recycled wood for the modules, and recycled fabric for the shading. Depending on the material available the shading can give different experiences and possibilities for shapes (see figure 40). By the re-use of old materials the purpose of raising awareness in re-use and fixing things will be strengthened further (see images below). To continue to spread awareness and encourage activity the structure can implement solar powered lights, drawing attention and reminding people of the local challenges that the global crisis will inflict when dark.

Examples on upcycled materials



Figure 40. Storage of reusable materials (Borneke, 2021)



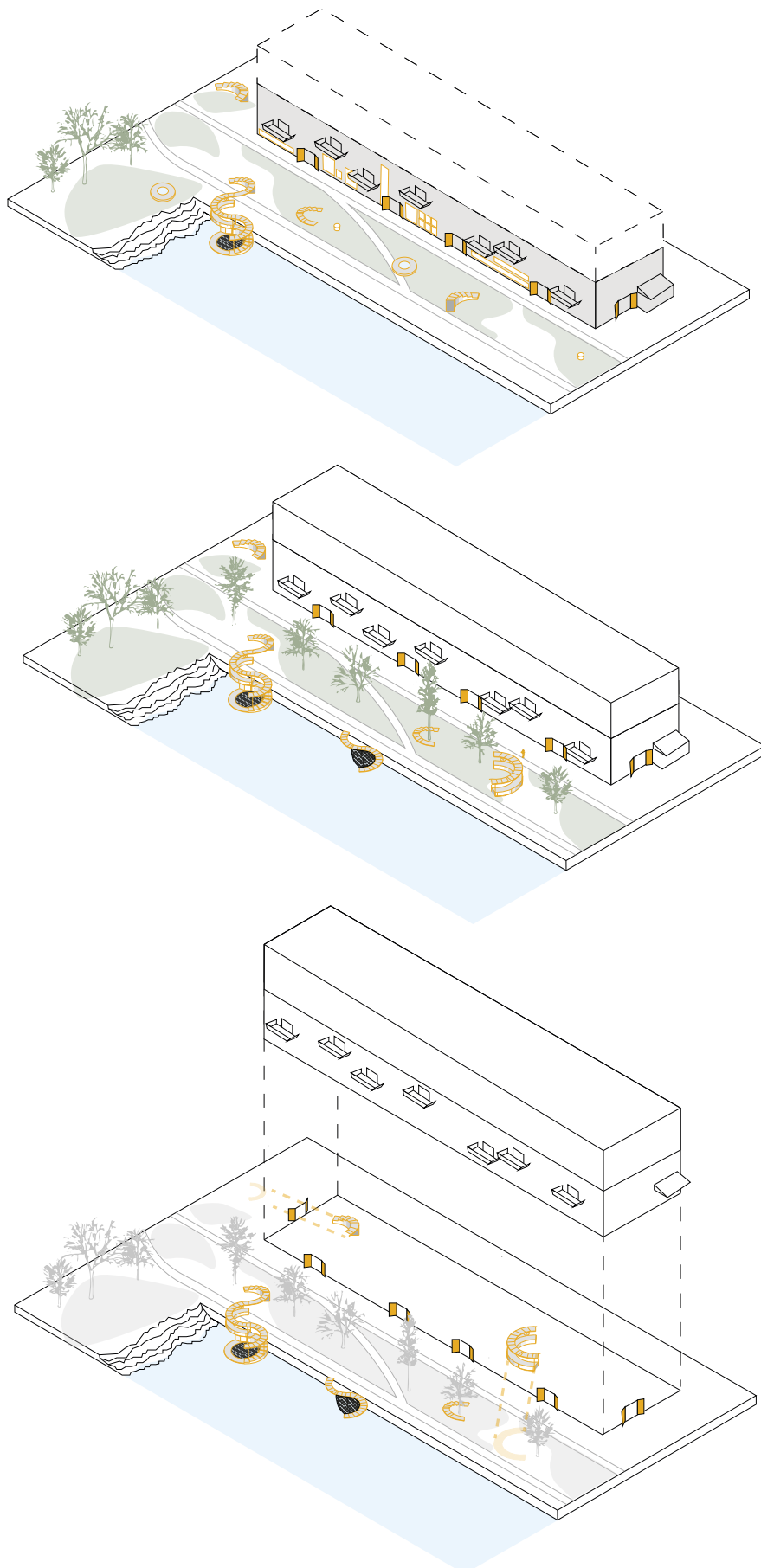
Figure 41. Pavillion out of plastic lids (Porada, 2022)



Figure 42. Picture of repurposed windows (Tran, 2014)

6.5 Seasonality

The following diagram shows the future growth and the Hub's adaptation to seasonality.



Present time:

Youth can move and test where the modules fit the flow of movement to activate the area.

Future summers:

During summer the Action Hub will activate the space and be more visible allowing for spontaneous visits.

Future winters:

If a collaboration with Kajskjul 113 is established pieces of the Action Hub can be moved inside and continue to be available during the winter season.

Figure 43. Isometric of seasonality

6.6 Next steps of participation

The following steps explain the continuation of the participatory process in the building phase involving the youth summer workers in workshops. Through this process the new group of youth can impact the design and continue developing emotional skill and action. The design is made in a series of modules to easily be adapted and shaped after the wishes of the new focus group maintaining the function and purpose.



Step one (1).

Introduce the summer workers (youth ages 16-26) to the design project presenting the outcome and analysis of the previous workshop and how the design was shaped through the strategies.

Provide an opportunity for discussions and sharing emotions regarding the climate crisis and the outcome from the previous workshops.

Allow them to be involved in making improvements and coming with suggestions for the design through materiality and specific placement of modules.

*Importance of feeling involved in decision making and impacting the surrounding environment.

Step two (2).

Do a material inventory. What sustainable materials can we use to build the structural elements and the shading? How will the shading look depending on available material? Can it collect or display water further? (explore together with passalen)

Make changes to design to fit the material and knowledge available.

*Important to be sustainable throughout the whole project in every aspect, including materiality.



Step three (3).

Decide the placement of the modules on site by drawing out modules in scale imagining the actions taking place. Explore the best flow that invites people and makes the structure visible (draws attention and raises awareness) and accessible for everyone to use. Use furniture or yourselves and photograph to test it.



Step four (4).

Construct modules and structural elements in groups starting with assembling the working space and finishing with the shelter.

Step five (5).

Invite the community/ the public to help create shelter modules together with summer workers.

This is an opportunity to raise awareness and talk about the work behind the collaboration of making the Action Hub to empower more people to use the space and spread awareness. At the same time the area will be activated and introduced to future users.



6. Design proposal



Figure 44 Illustration on Action Hub during a rainy day.

7.

Reflections



7.1 REFLECTIONS

The following chapter is a reflection on the process of the thesis exploration, learnings and how the project can be developed further in the future.

The aim was to explore how participatory architecture can aid youth in coping with climate anxiety by changing their perspective from being an observer to a participant. The project aimed to allow the students to have an actual impact on their surrounding environment and to create a design that could continue the meaning focused coping, providing a space for developing emotional skill and taking action.

Due to unforeseen events and change of staff at Passalen the project will not be built during this summer (2022) they are however aiming for next summer (2023). A person has not yet been assigned to take over the project. An important learning outcome taken from this is to always write agreements and assign roles and a timeline, to make sure their plans are fulfilled and put pressure on the stakeholders to develop it within a time frame.

Although the in-depth study and workshops conducted with students of Lindholmens tekniska gymnasium did, according to the student, make them feel more hopeful about the future, the fact that it did not result in what was hoped can increase the sense of mistrust in adults. No promises were made; however, the hope was to implement it this or next summer. Even though this can be seen as a missed opportunity to spread hope, empowerment and for the youth to see actions being taken in their surrounding environment, the process itself allowed them to feel heard and have an impact on my work and future as an architect.

A design activism approach could have been developed further to not rely on a stakeholder. That way the action could have been implemented sooner and perhaps made a difference generating more hope and sense of accomplishment (small victory) for the student focus group. It could also have had a completely different design since Passalen came with requirements for implementation in the Park.

For future participatory processes or the continuation of this project it can be beneficial to have more people involved during the workshops in order to document and lead the sessions more thoroughly and analyse and reflect on the impact on each other's roles. The students were influenced by the inspiration projects (section 2. 1) and discussions, it is therefore important to be aware of the role one takes and try not to interfere or lead, but rather ask follow up questions on the thoughts they have. Adding evaluation methods as a guide can also be helpful.

Architects working with planning and developing urban space have a real opportunity to involve young people in the process and this alone has a positive effect on them. To feel empowered and like they can impact their surrounding environment is important for future involvement. Experiencing democratic power at an age and time where this is lacking. Participatory workshops can also be constructed as an architecture design process as made evident in this thesis. Furthermore, the multidisciplinary collaboration using product design strategies and the use of psychology has been extremely helpful to understand and analyse as well as find spatial responses to needs. These collaborations will only strengthen and bring new valuable insights creating interesting projects.

Making positive efforts visible is also essential in order to bring a sense of hope for the future. What is most important to realise is that although climate anxiety is a great tool, those who suffer the most need the opportunity to learn, talk about and express emotions instead of keeping them inside, suffering in solitude. Once the worry is expressed and shared, ideas are made and implemented with a group it will turn into positive.

Designing public spaces that address the complex emotions of climate anxiety is something that needs to be further investigated and explored. Since the design will not be built this summer it is hard to evaluate if the space co-designed with youth will have an impact and help others to cope with climate anxiety. Creating spaces for climate action and processing emotions outside our homes with others is expressed by youth as essential for their coping.

This particular design outcome had a very realistic approach, to be a temporary and flexible structure that at the same time has the possibility to be involved in the future development plans for the area. It was completely based on the wishes and desires of the focus group and the strategies identified. What can be explored further in the design is how to prepare youth for the new climate and reality that is to come by connecting to the element in a new and different way. Embracing it and realising the severity at the same time. If it is completely embraced, then emotions that trigger action as a response might fade, the aim is rather to start mobilising for the uncertainty of climate change and future environment from a positive perspective.

What became clear is that planning for the participatory workshops requires time and space. That is why the design of the Action Hub has space for further development with a new group of youth. This extra time, until next summer, also allows Passalen to broaden the network and involve more stakeholders working towards similar goals. What can be taken into consideration is that this project did not aim to reduce climate anxiety, rather to maintain meaning focused coping. Climate anxiety is needed for actions to be taken, our society lacks to provide tools to take actions. Some clear actions are often expensive and therefore excludes some groups that do not have the possibility to partake in that sustainable behaviour. Others are labelled as "shameful" and something only under privileged groups do, making those activities unattractive although they benefit the environment. Youth have already made demands and they are aware of the complexity and urgency of climate change. They need adults and authorities to validate and implement those and partake in the common effort. Because, worrying for our planet creates a stronger bond than any religion or cultural belonging and common effort for actions and change will only enhance those.

8.

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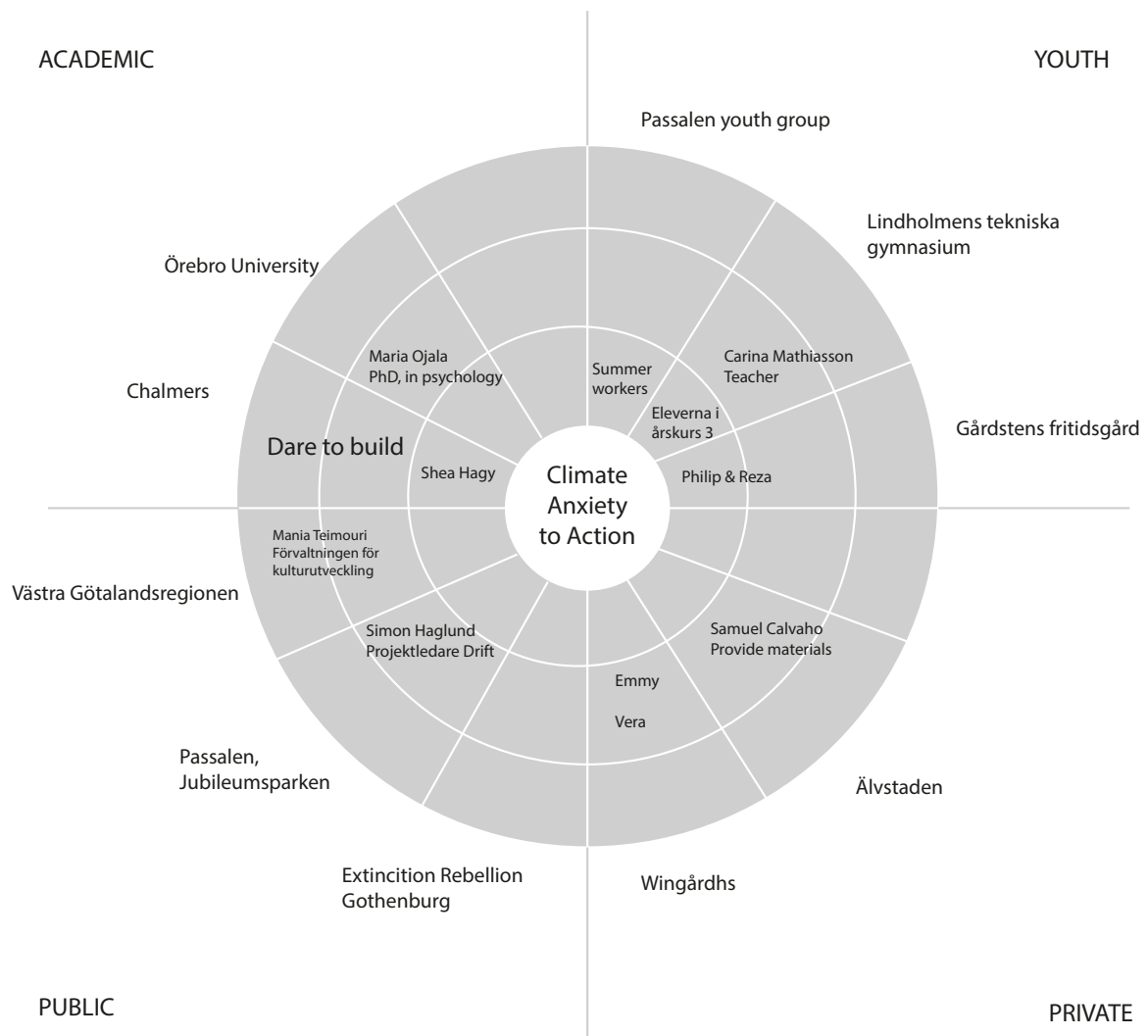
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9.

Appendix

STAKEHOLDER MAPPING



WORKSHOP 1 DYSTOPIAN SKETCHES

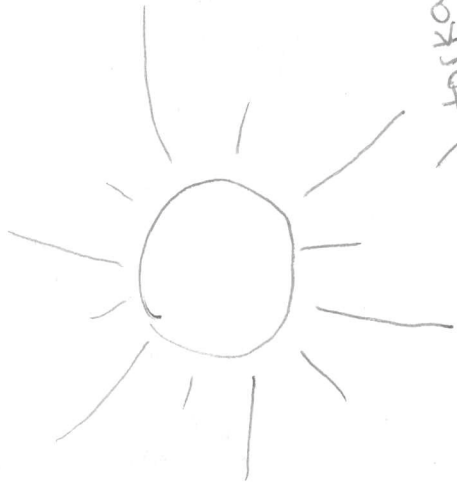


WORKSHOP DRAWINGS

FLIP TO HAVE A LOOK!

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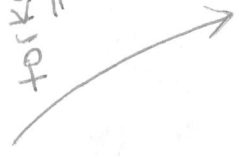
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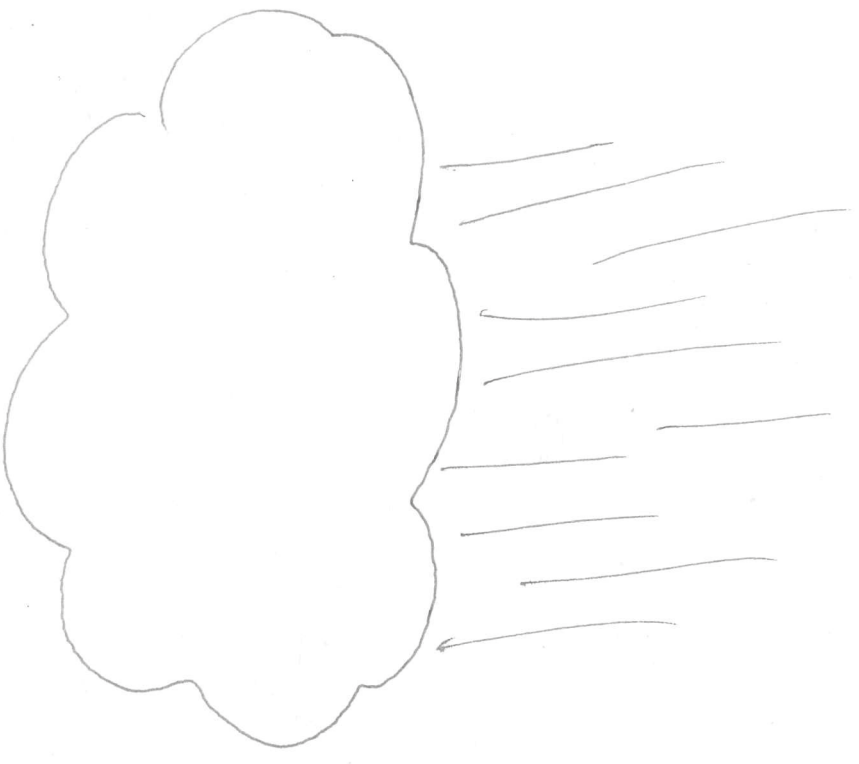
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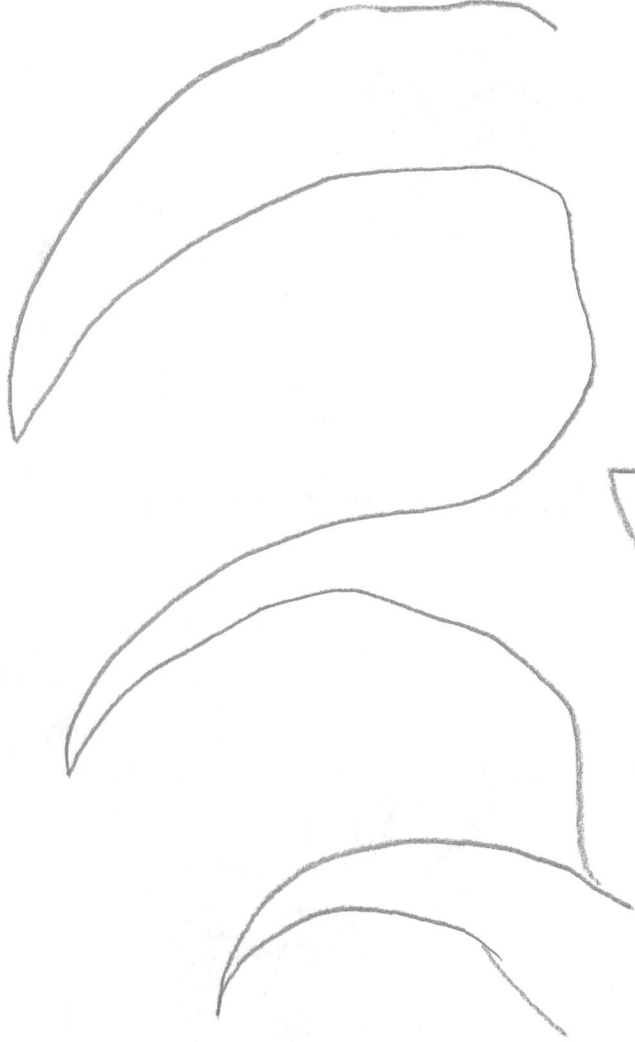


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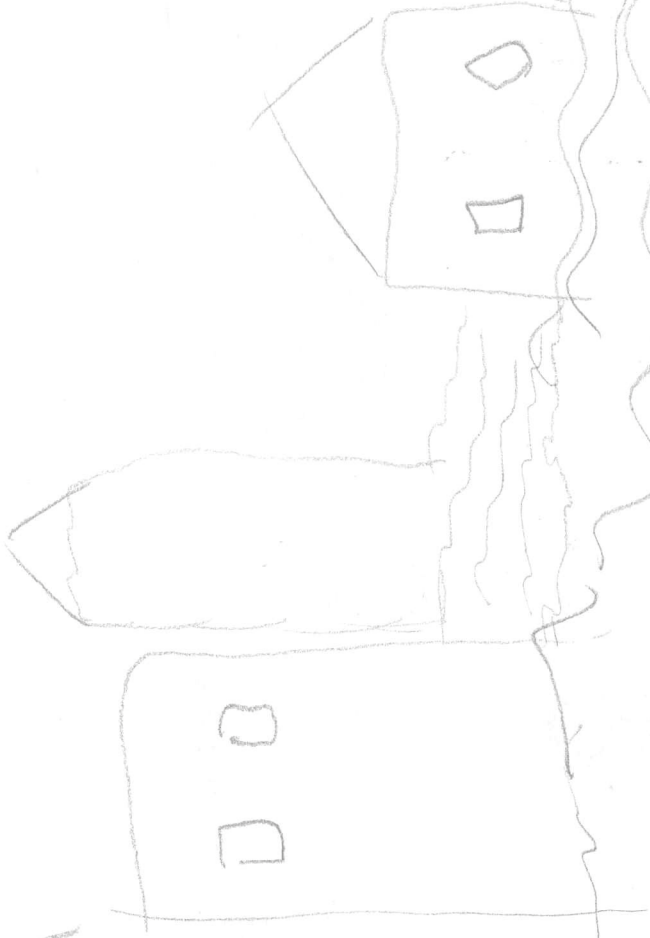
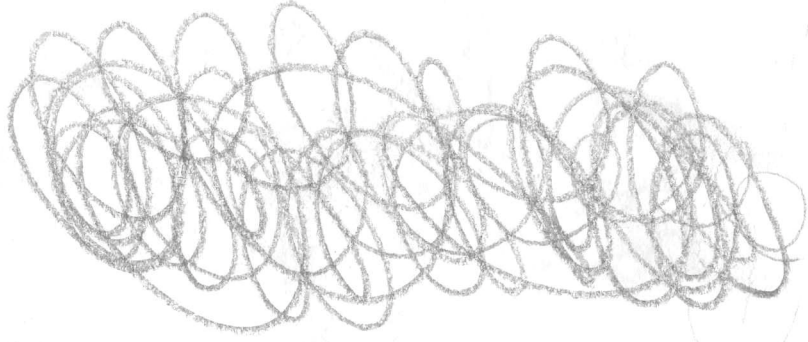
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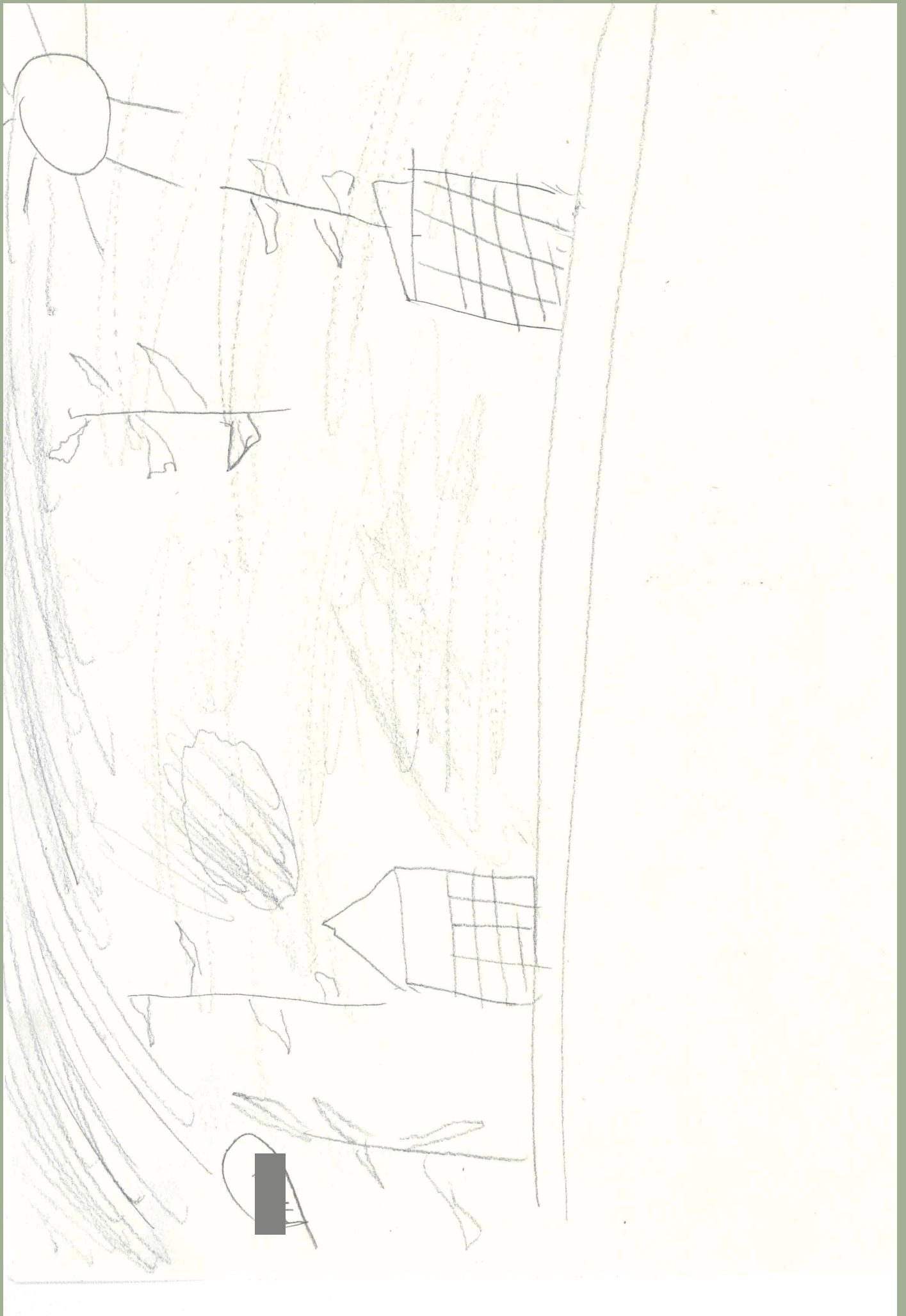
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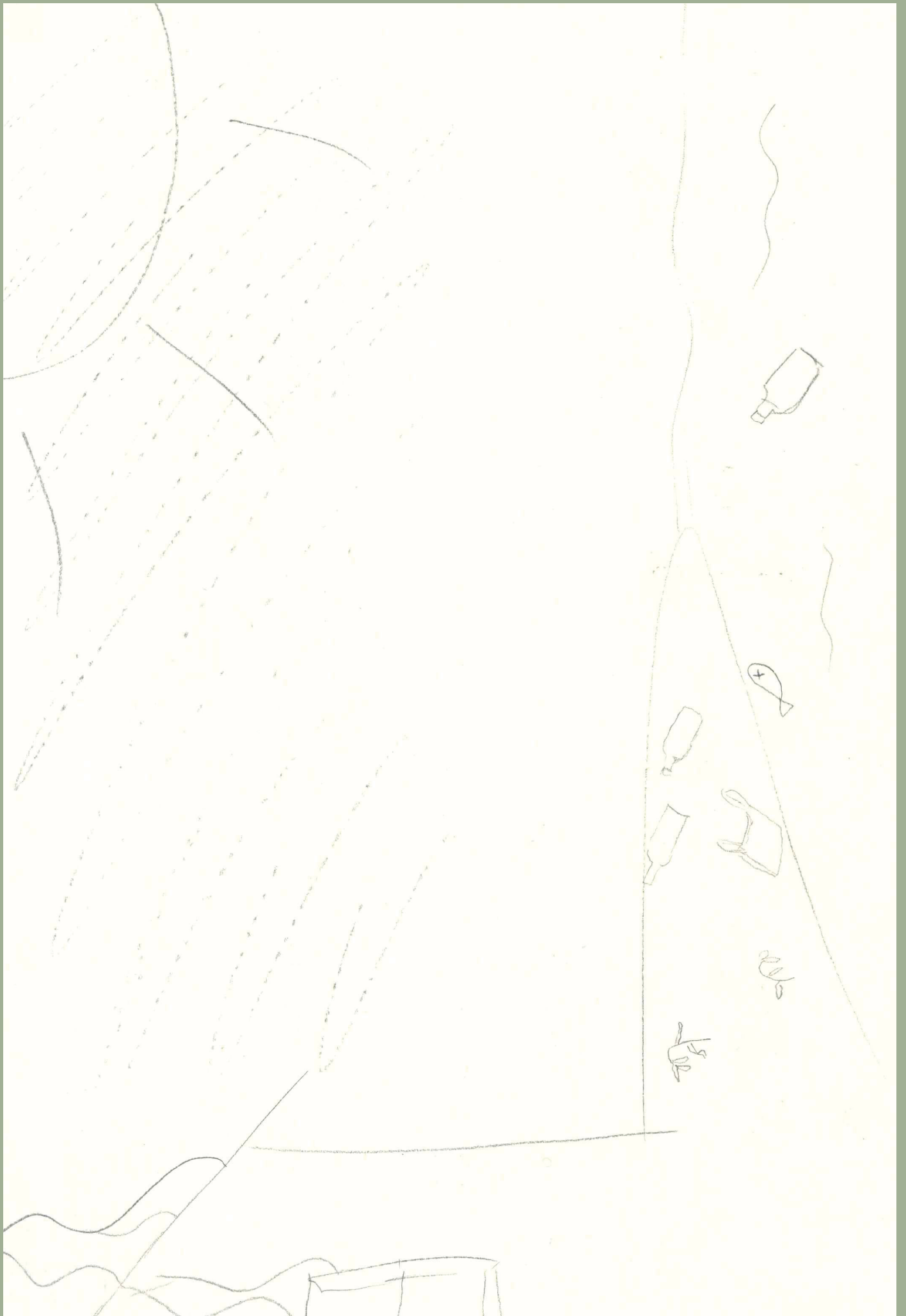


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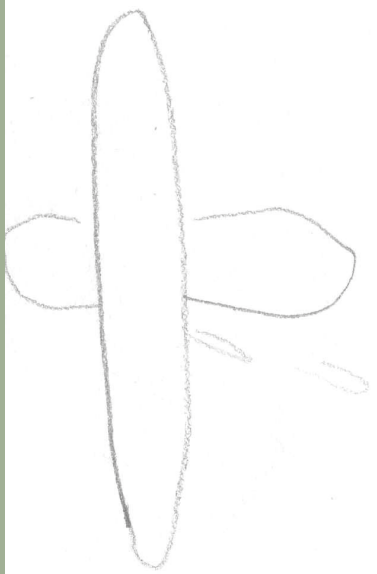
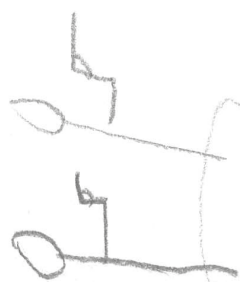


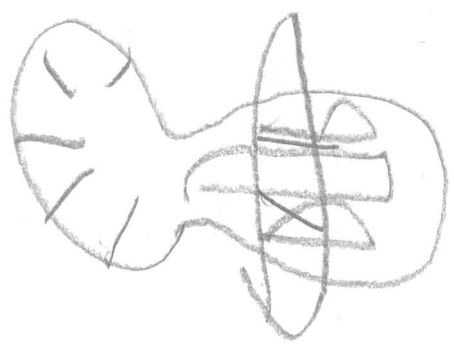




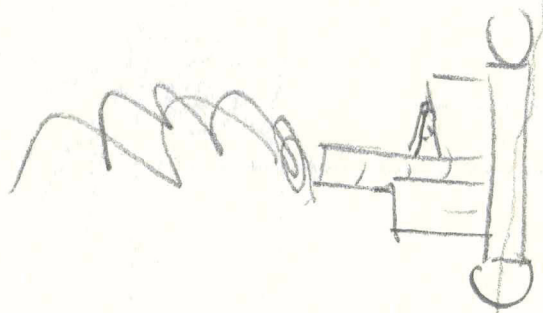
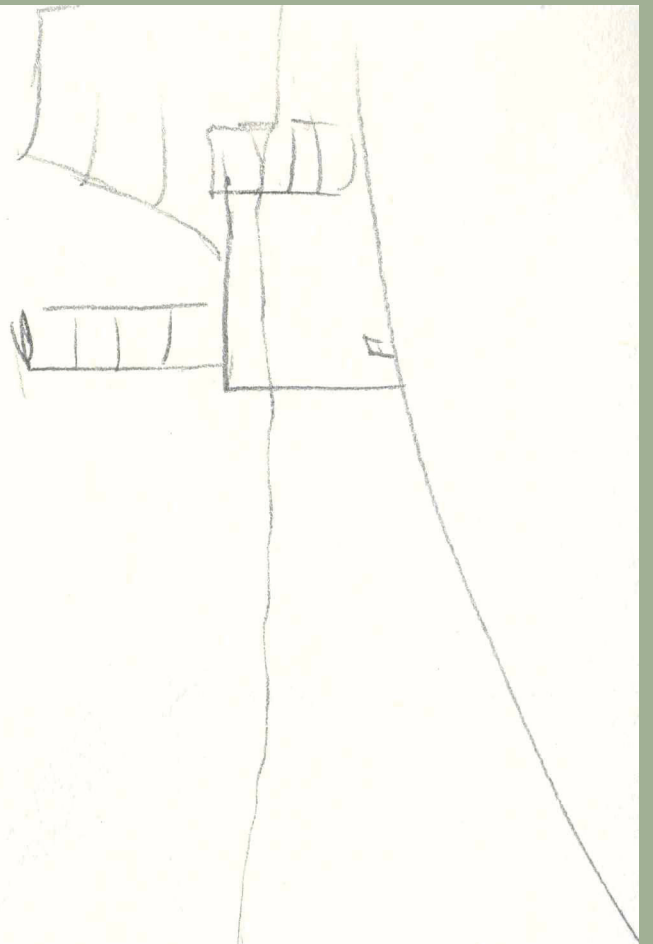
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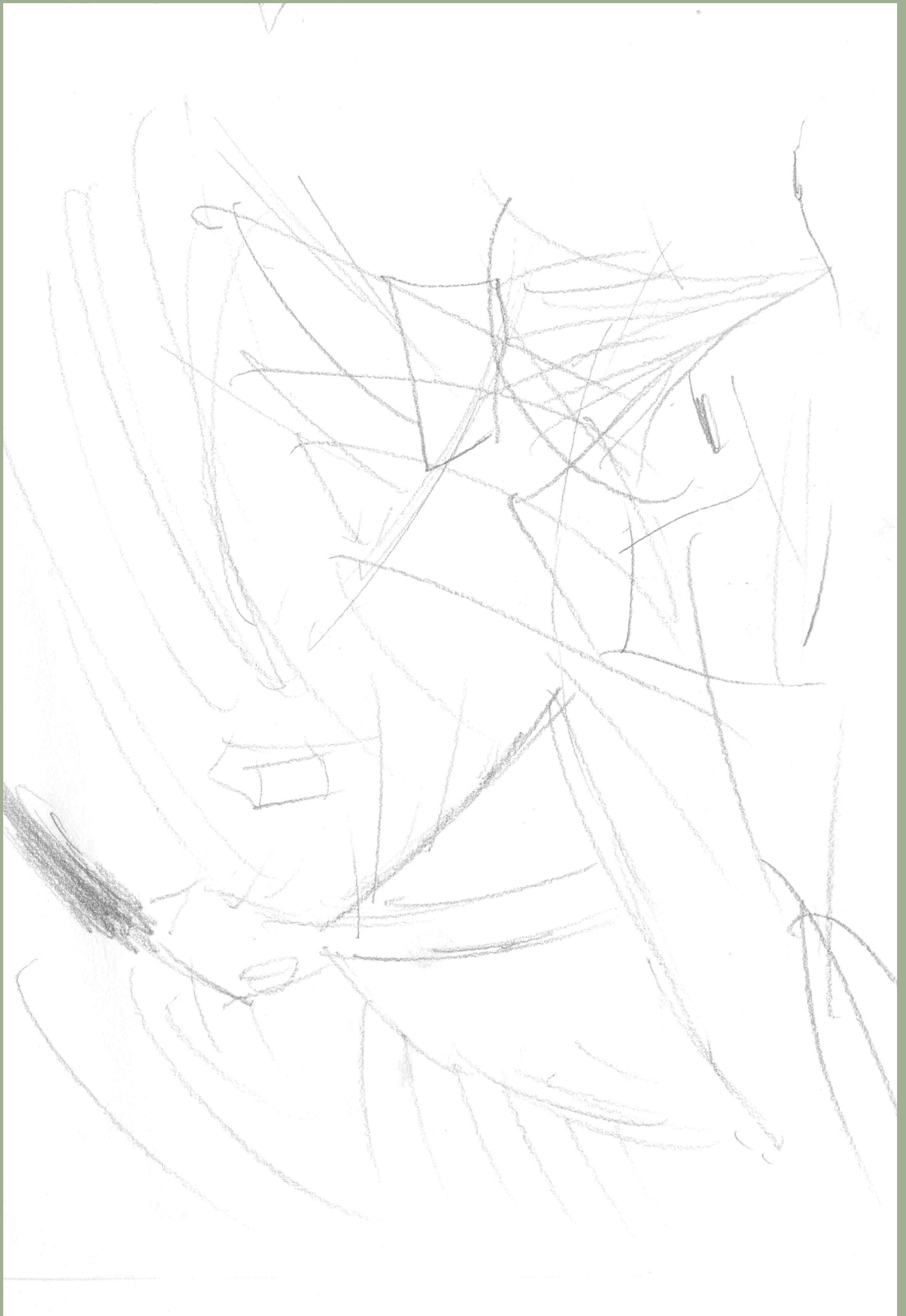
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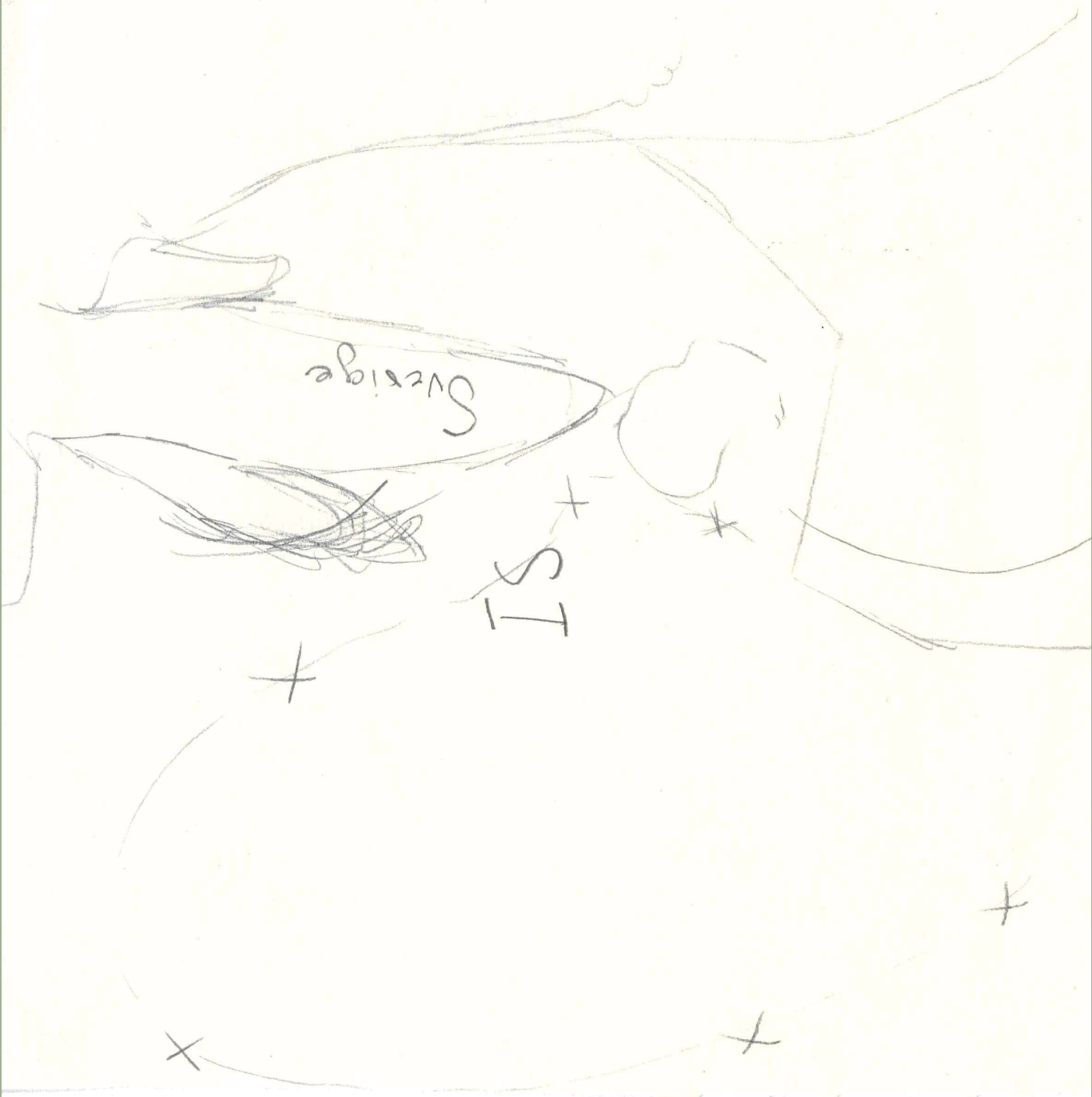




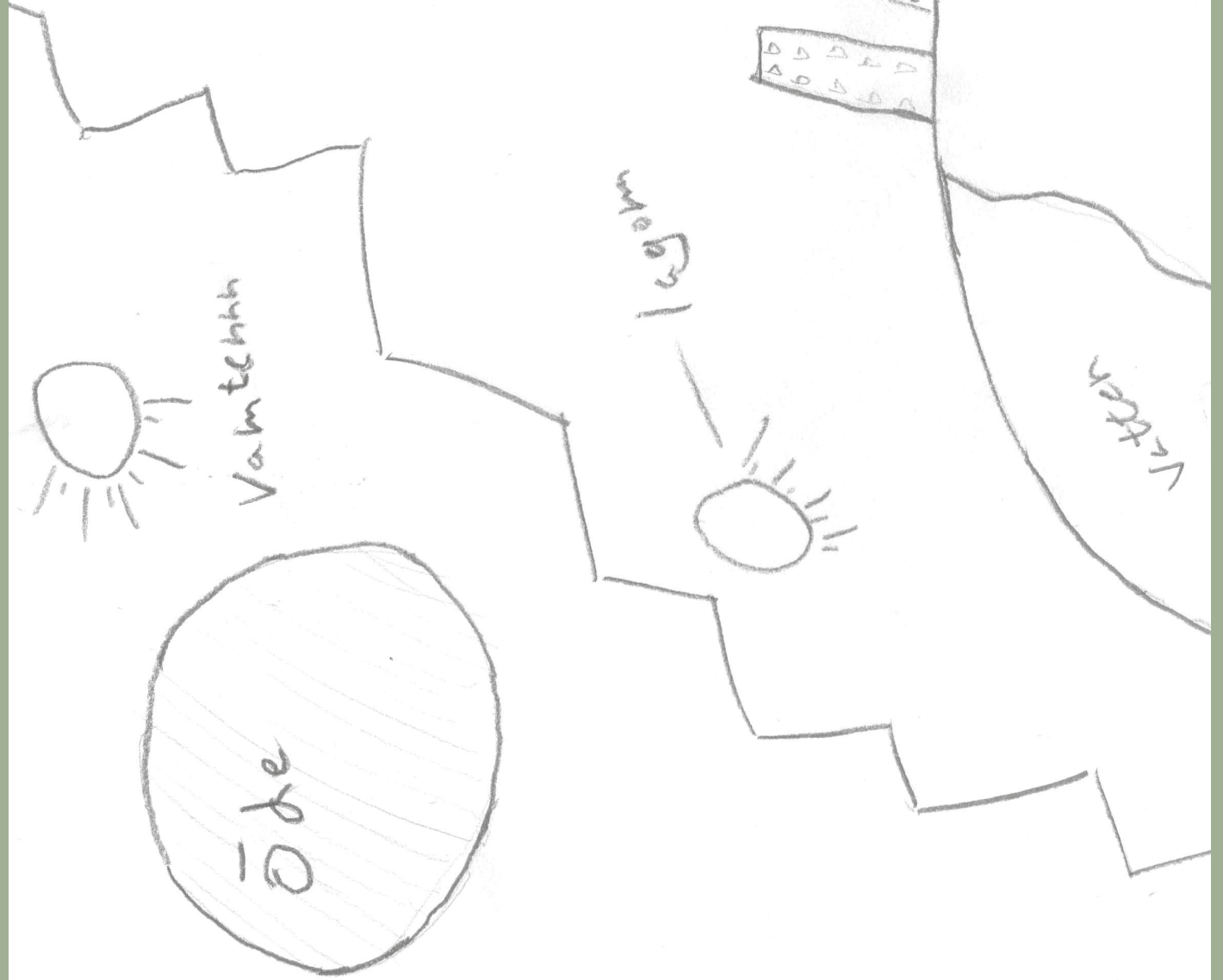
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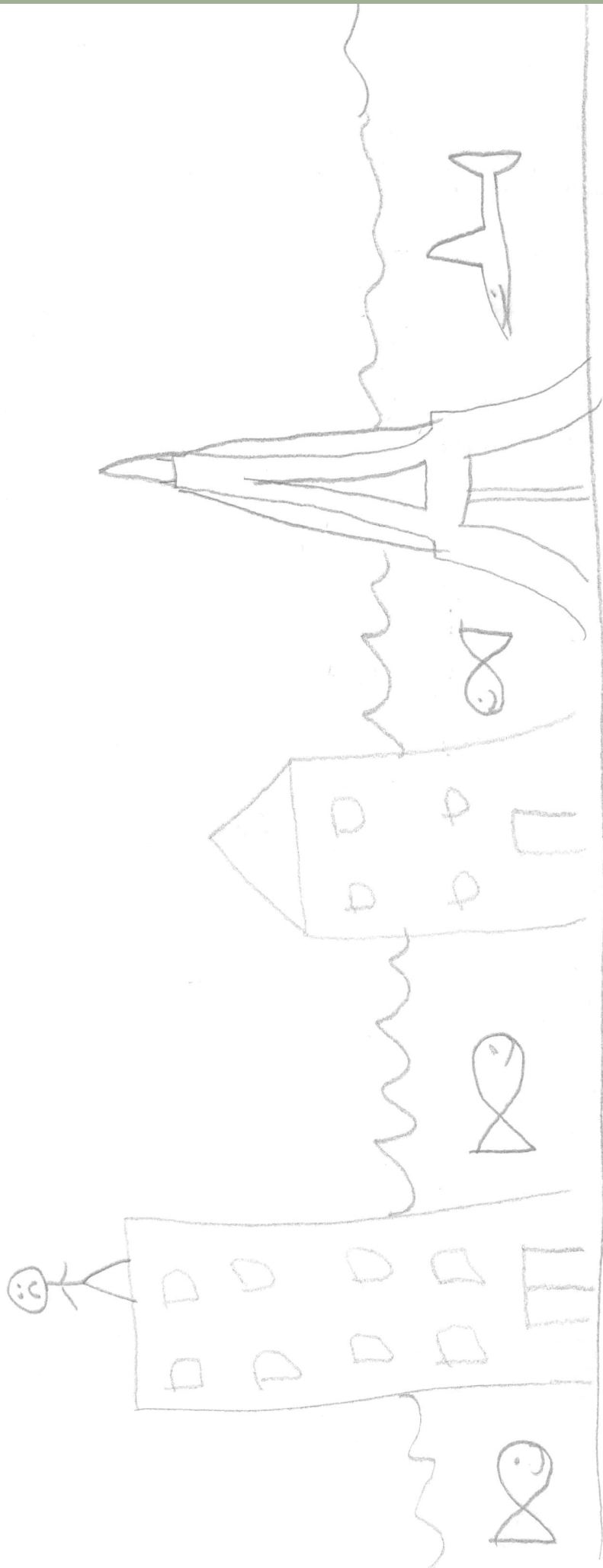


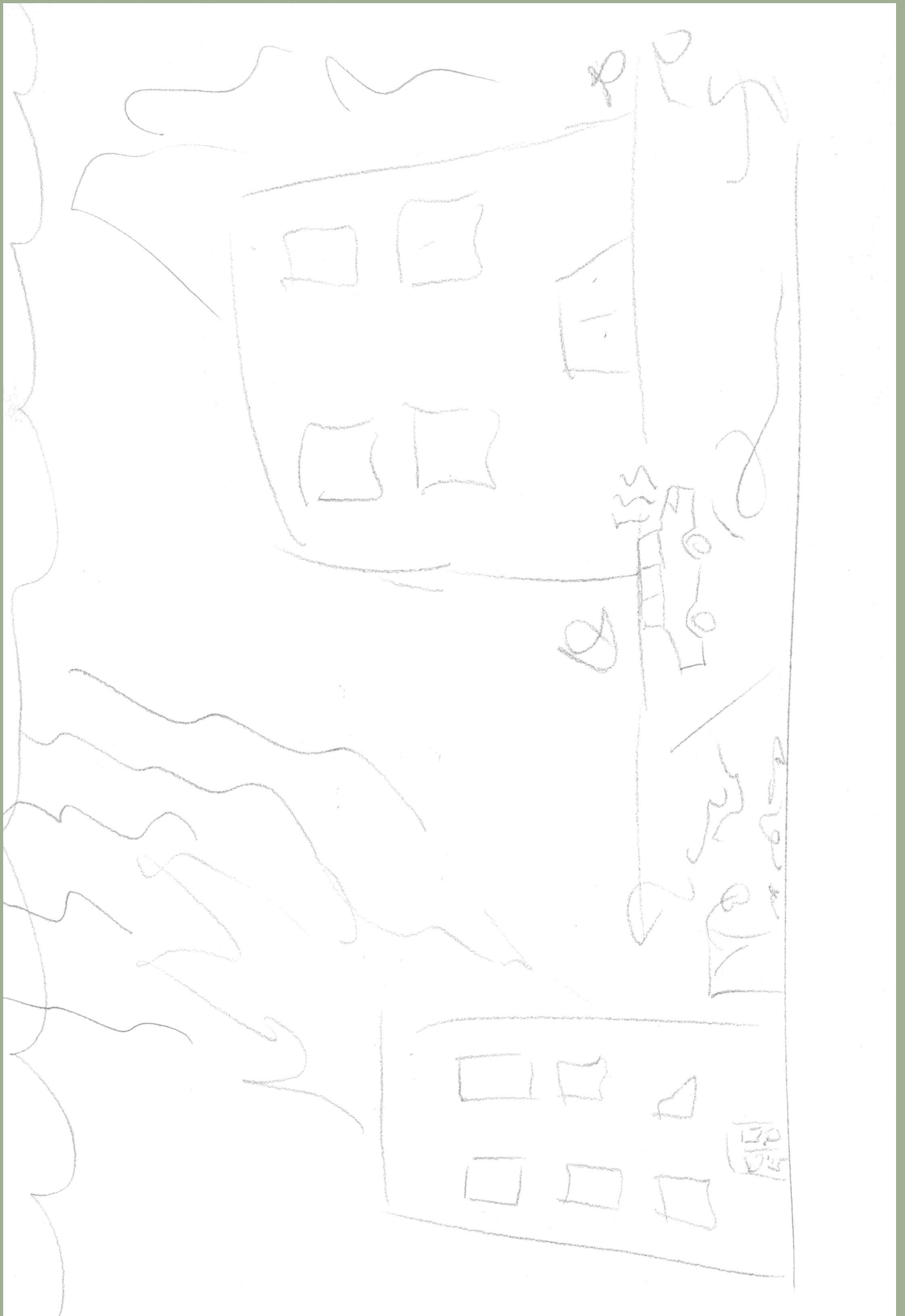
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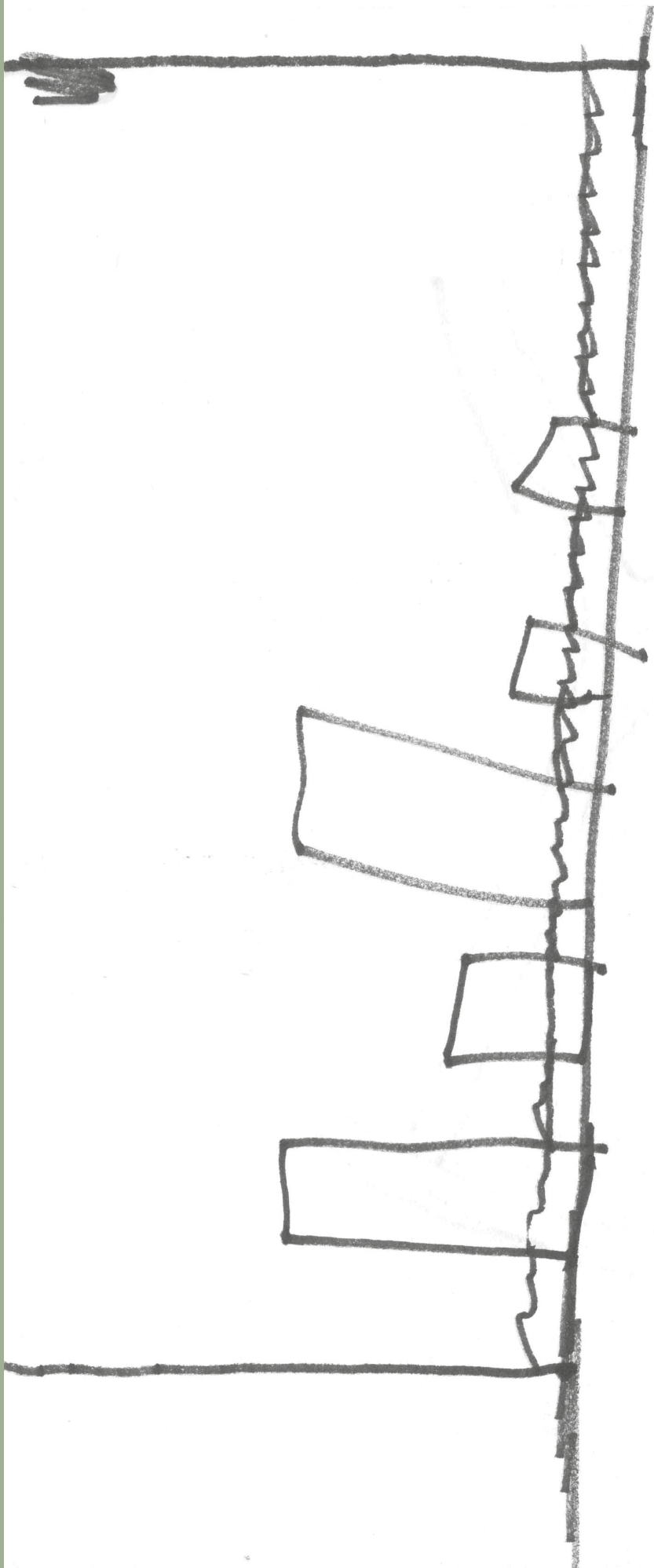


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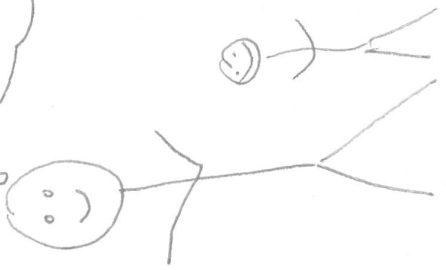
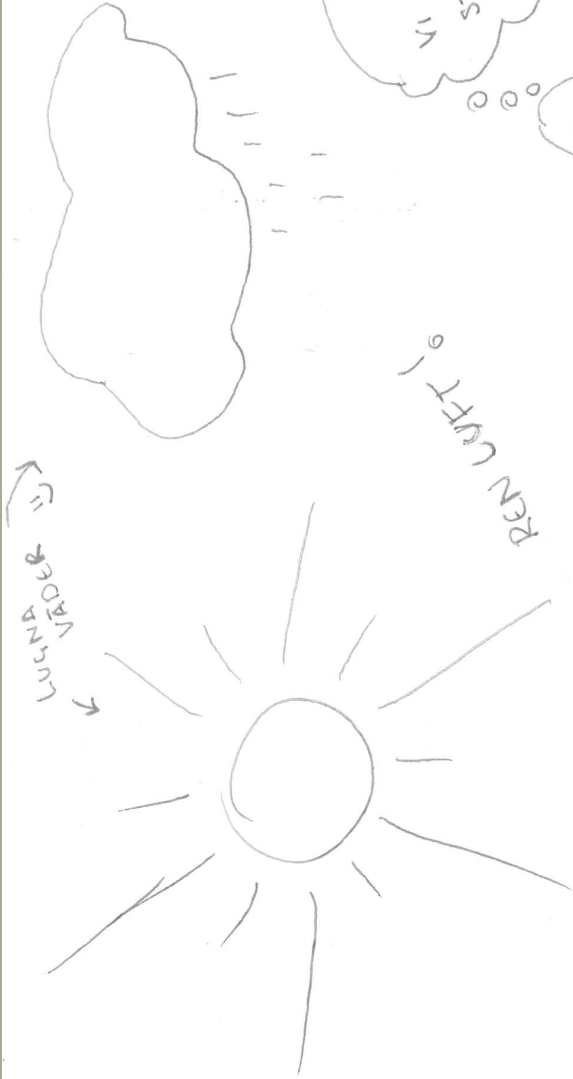
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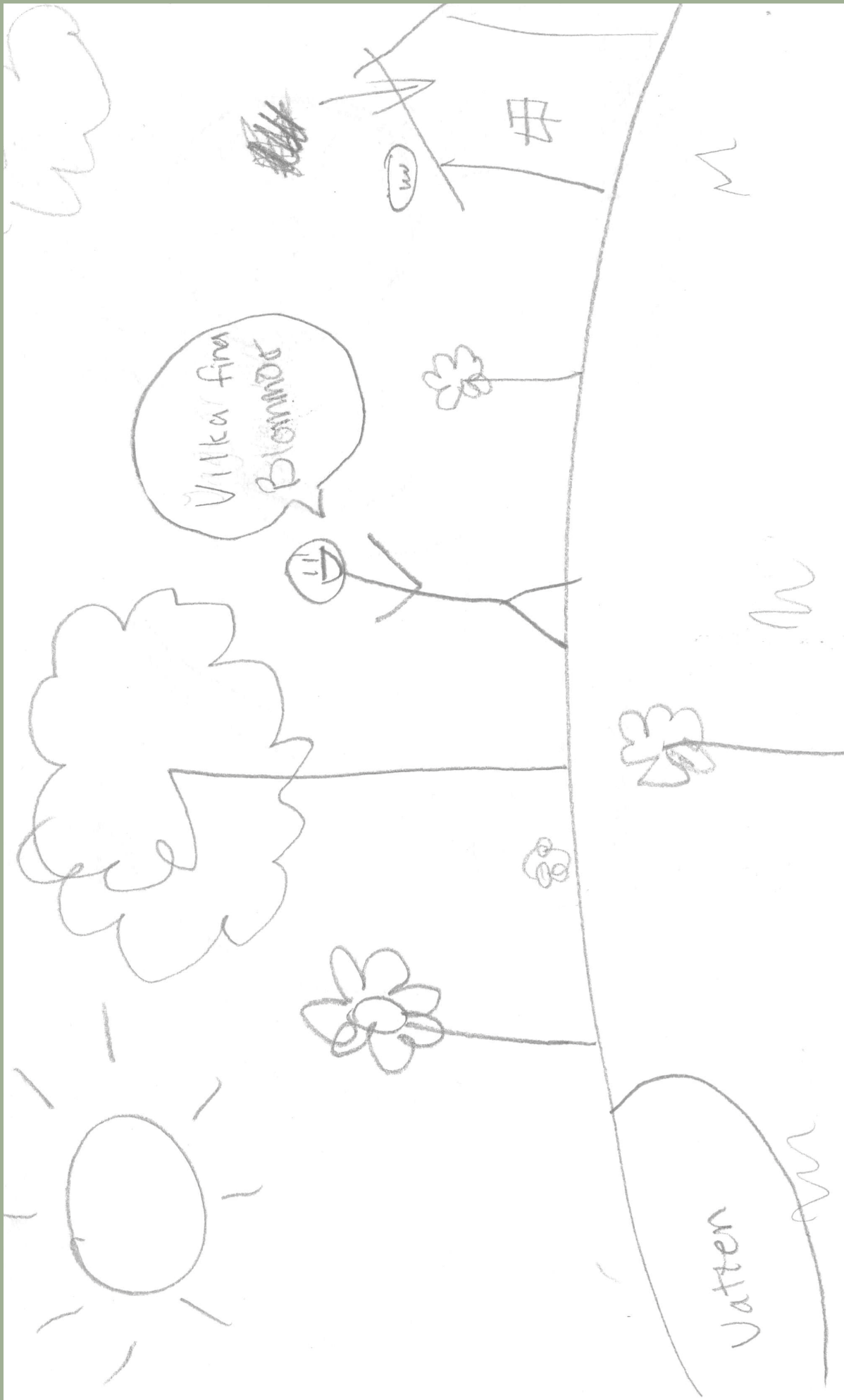
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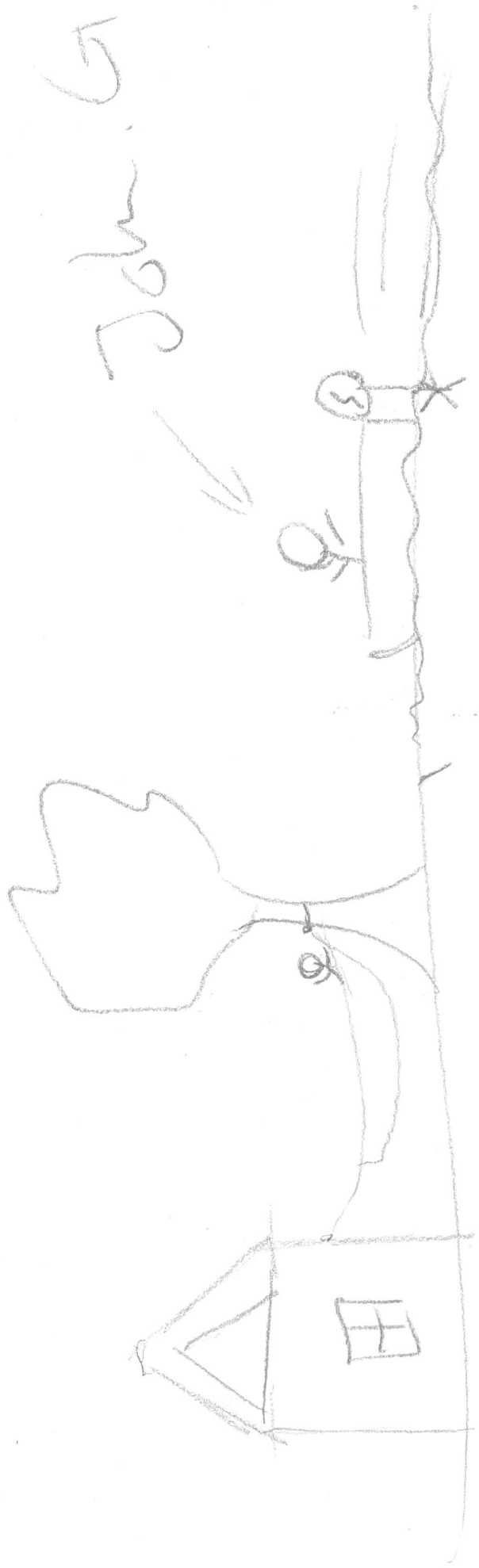
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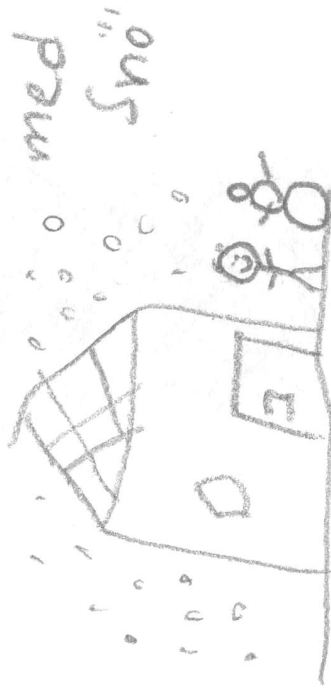




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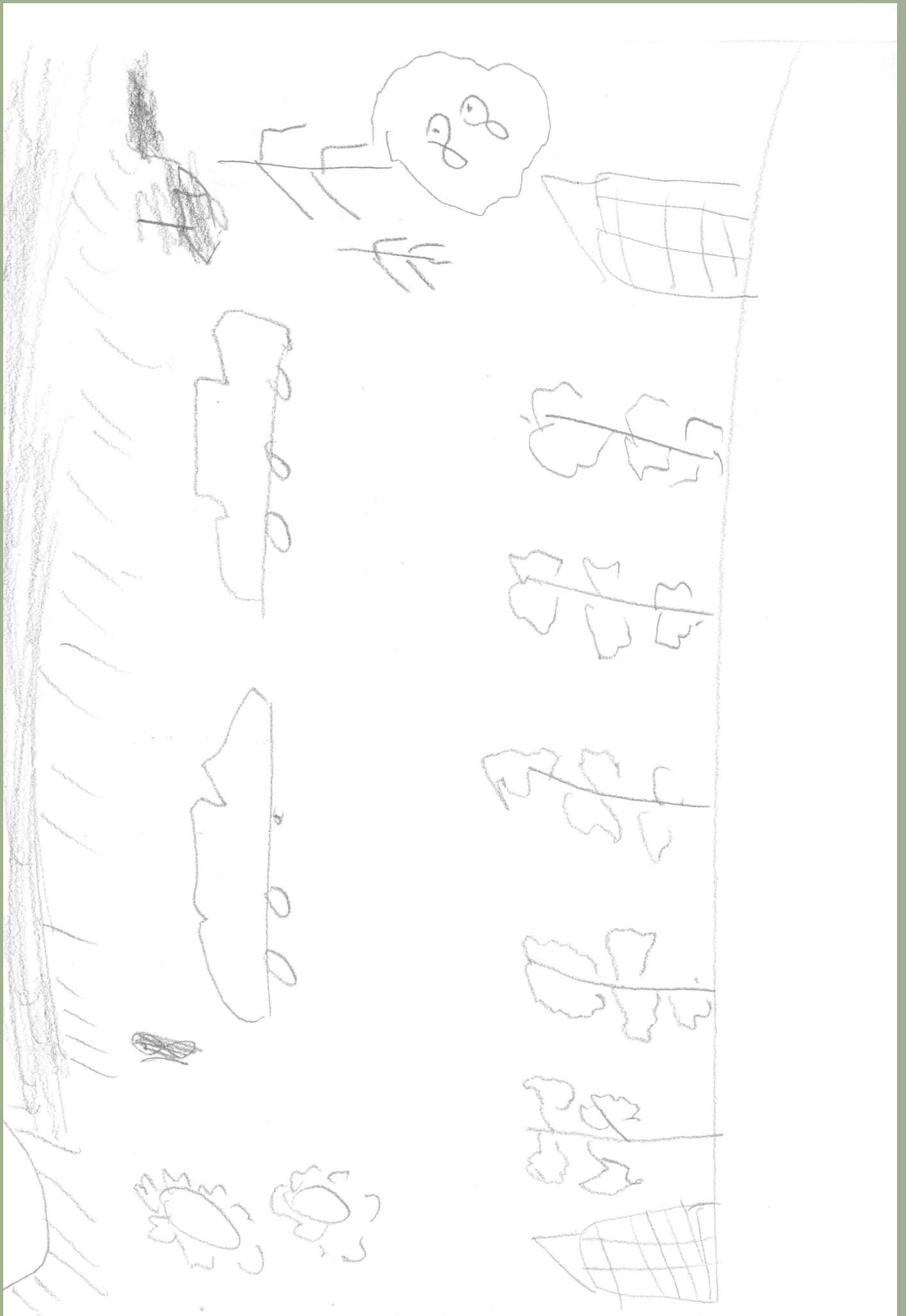
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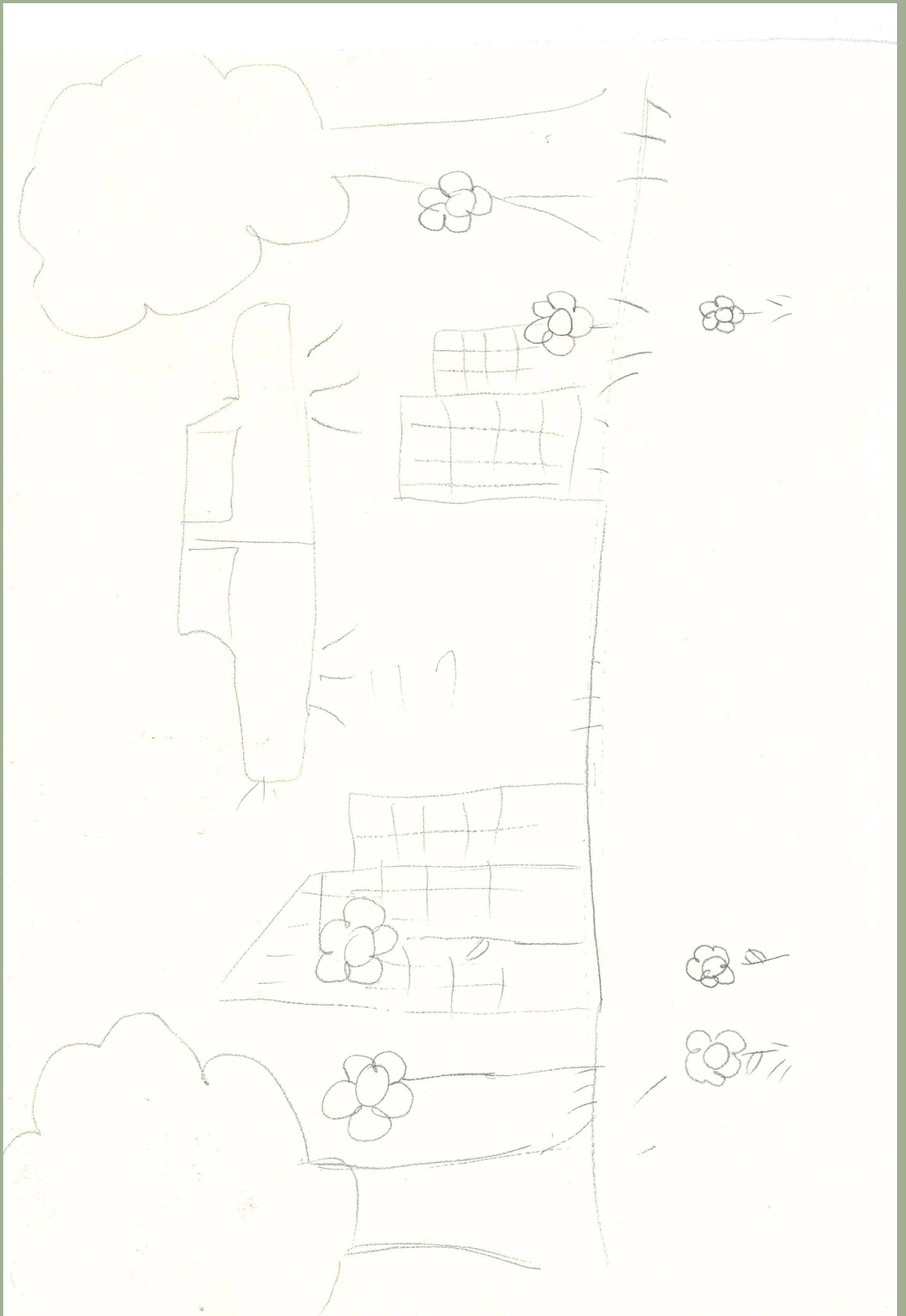


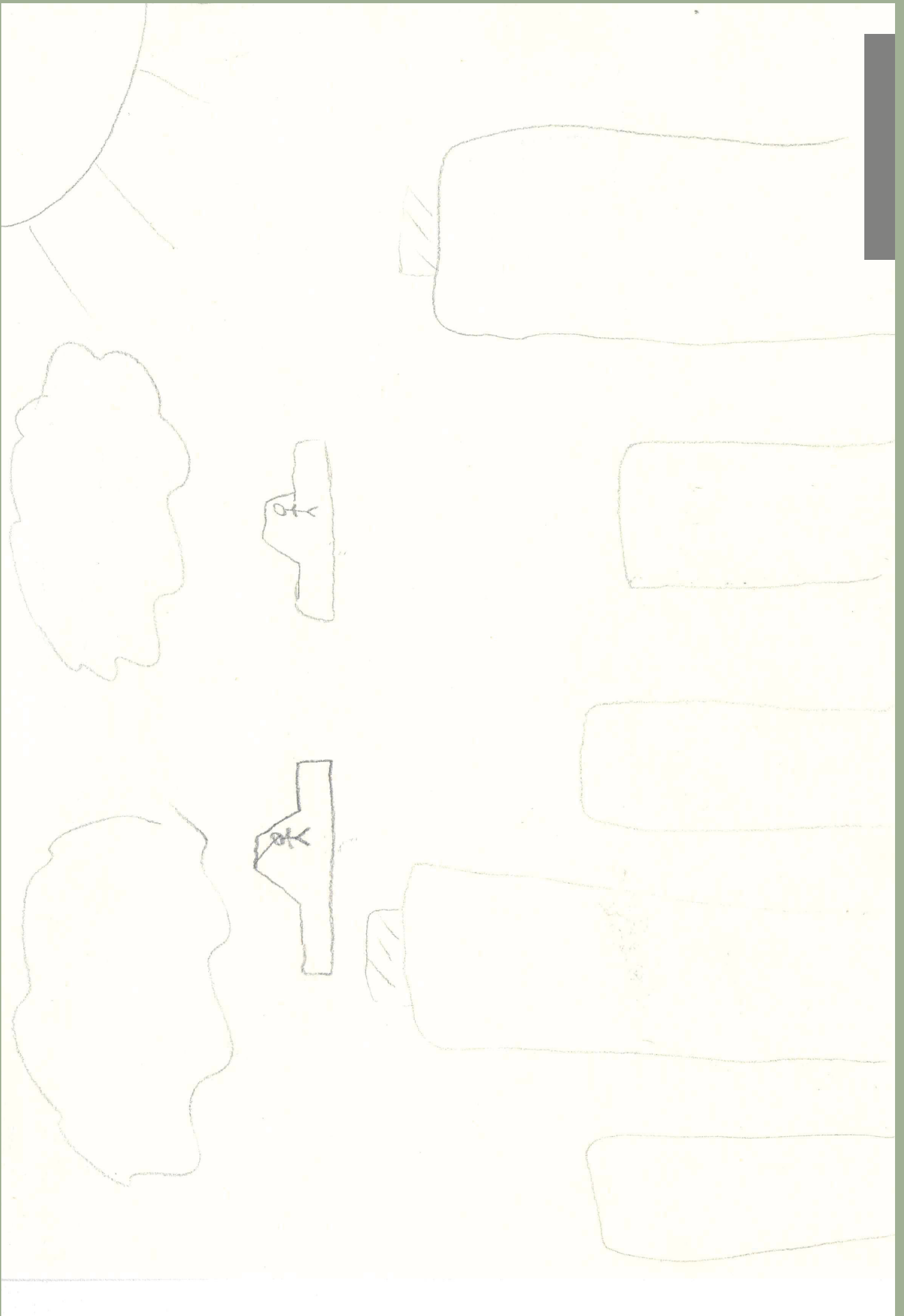
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sno

Varmt på sommaren



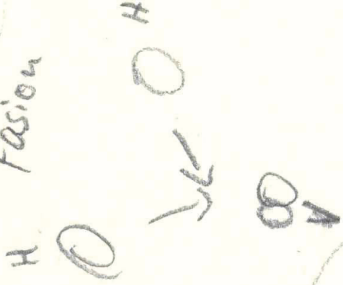






Lockheed

Fusion



Vätgas

H₂O

~~Konspirationer~~

METANOL



Sol

Plan

Planet

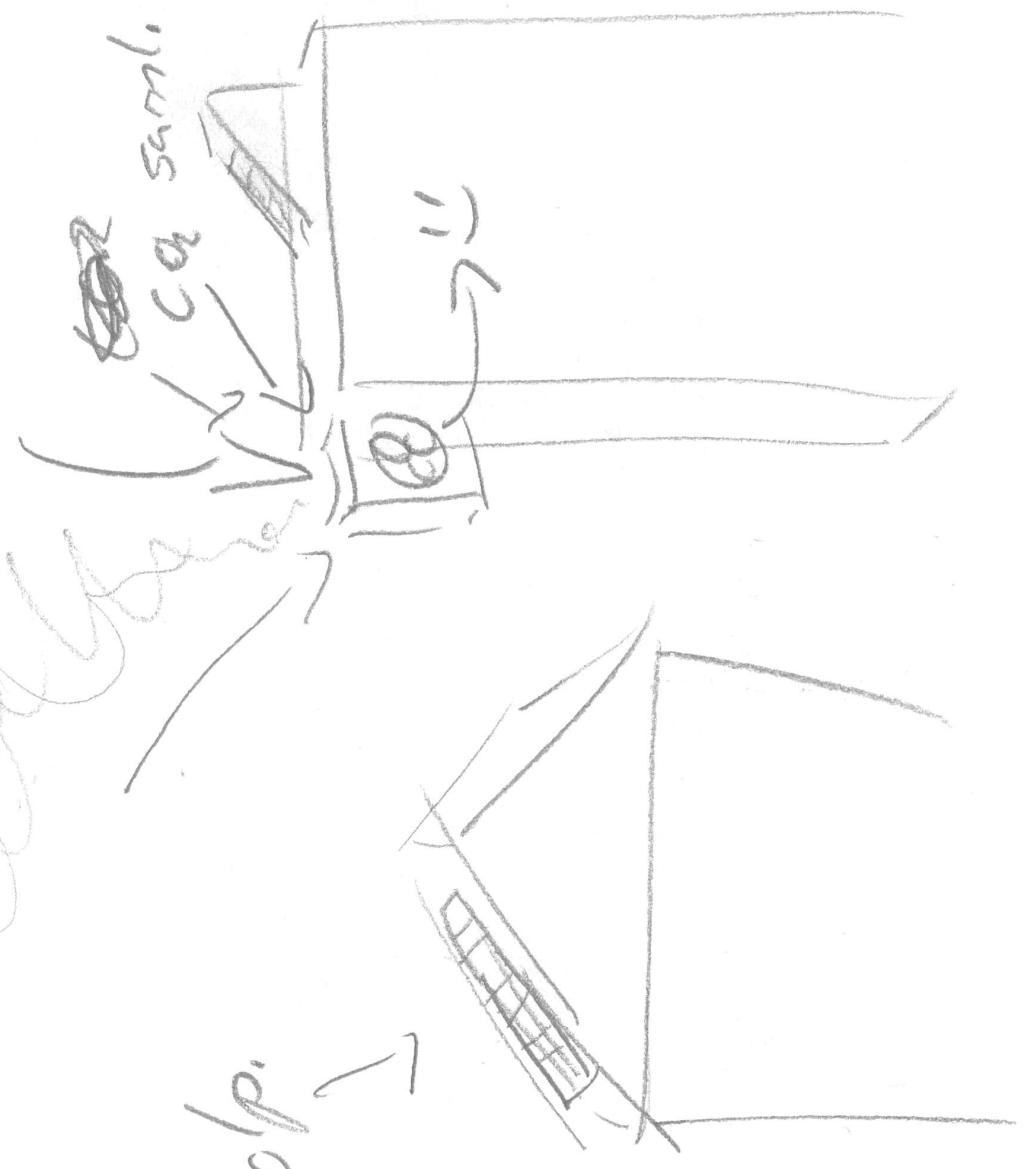


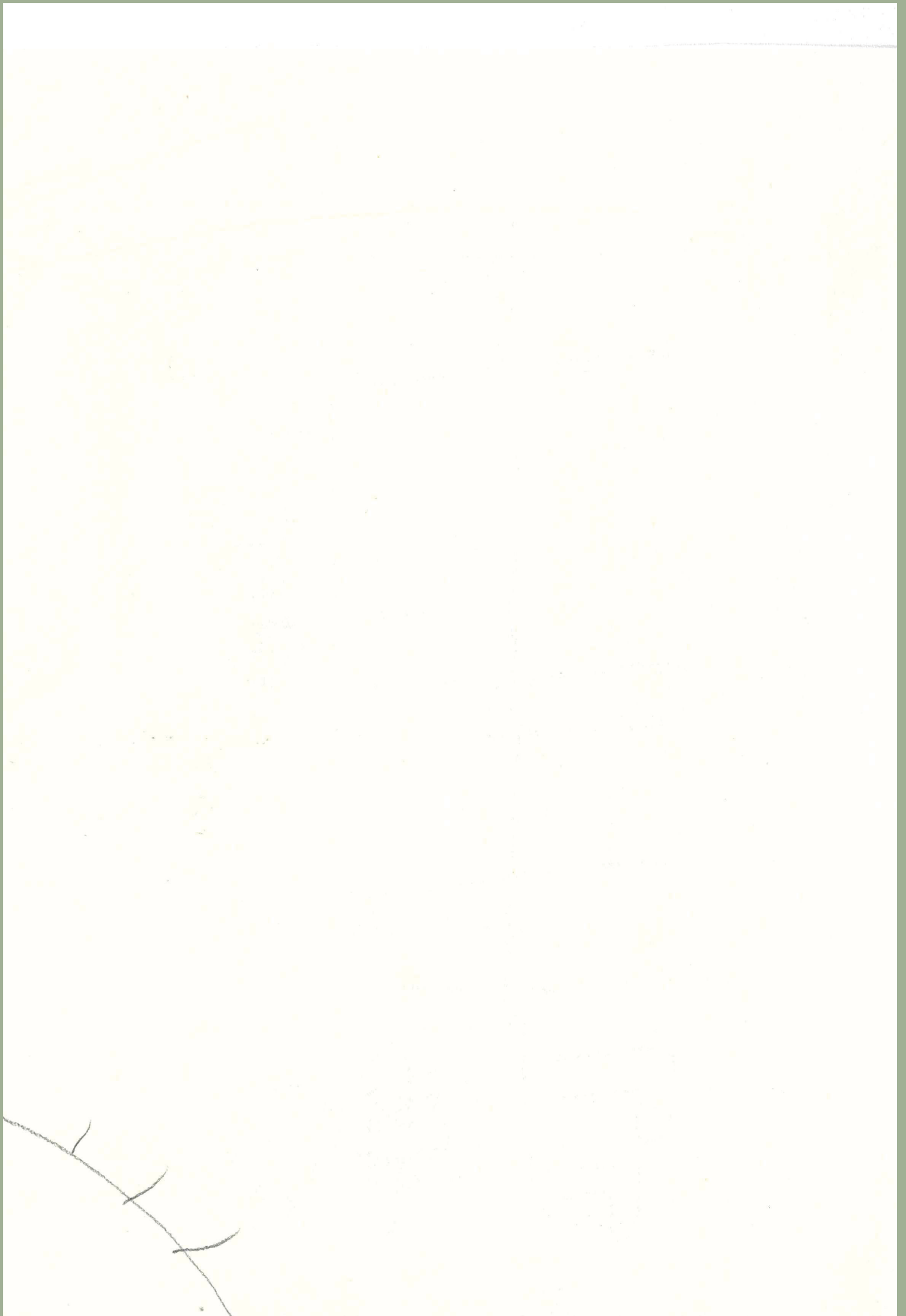
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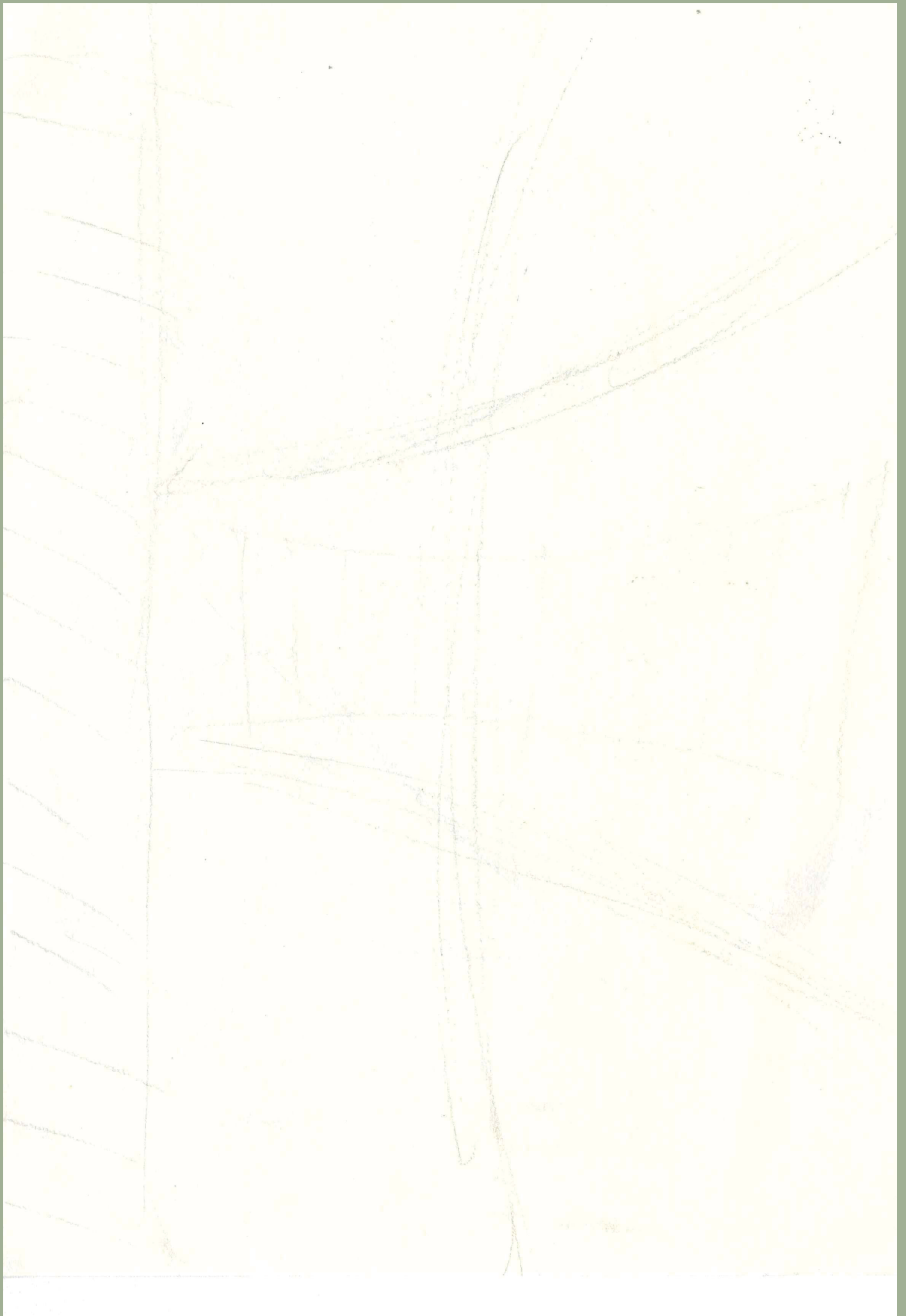
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~~Handwritten scribbles~~

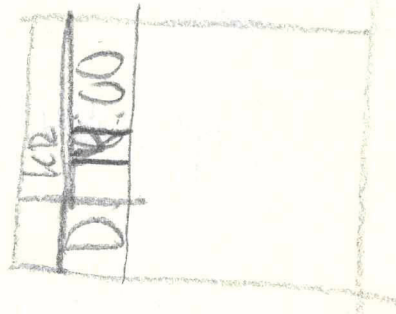
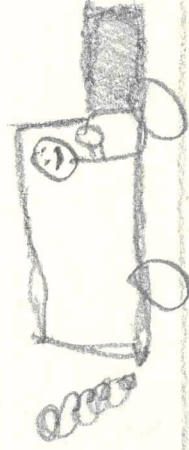
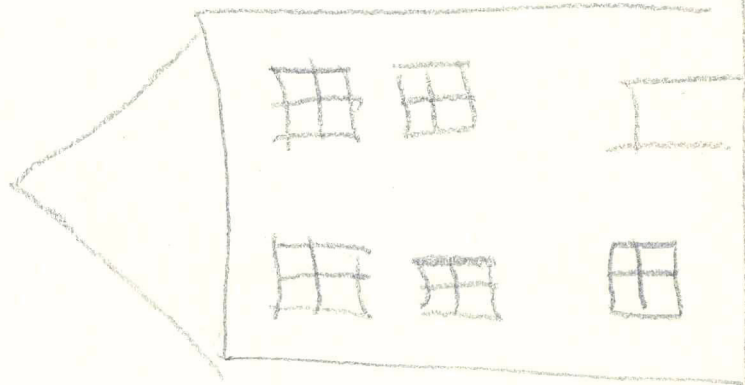
Solp.







Civet liker idg!
Utapi



Ingen skillemur

Vi lever felt bare

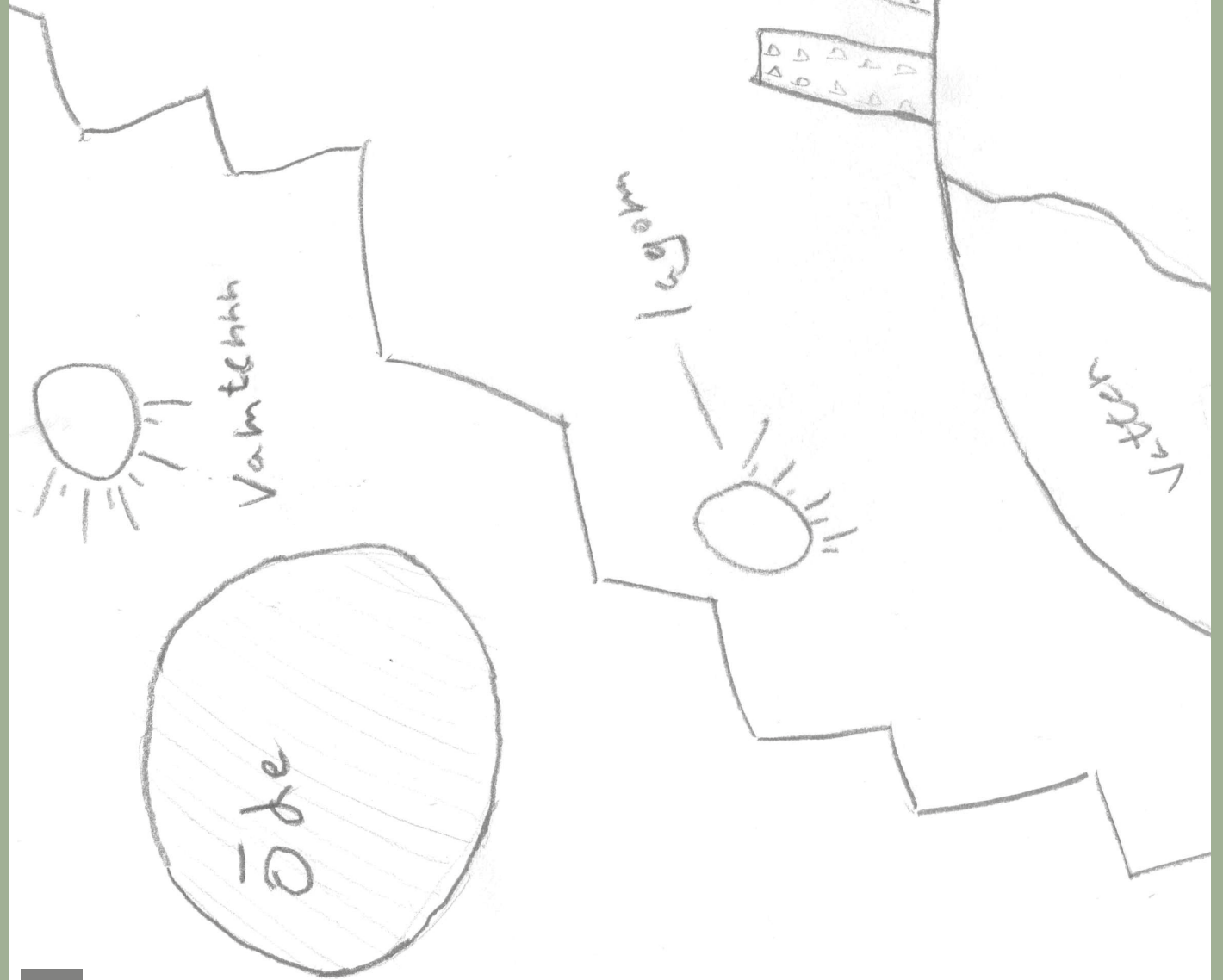
Fusion kraft

fåta ut grundvatten nivan

Samt fuktigdomen

Nya tekniker

GOOD



BAD

bad

smile

Vatfen

Vatfen

Vamtehh

Öde

Glad





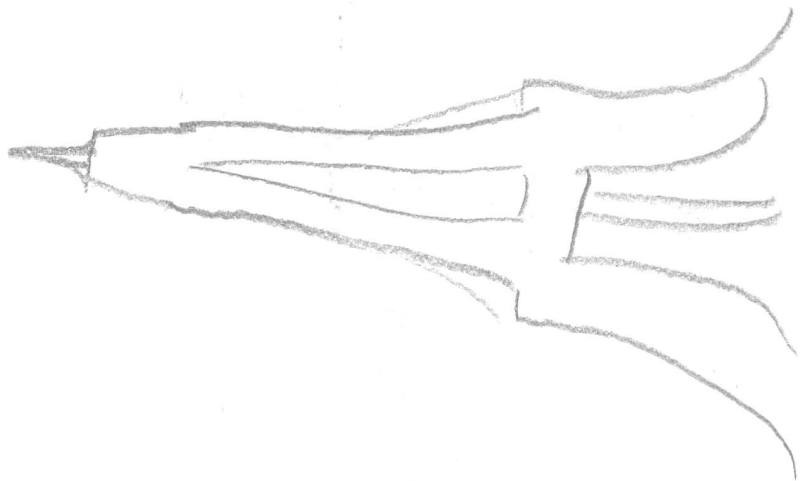
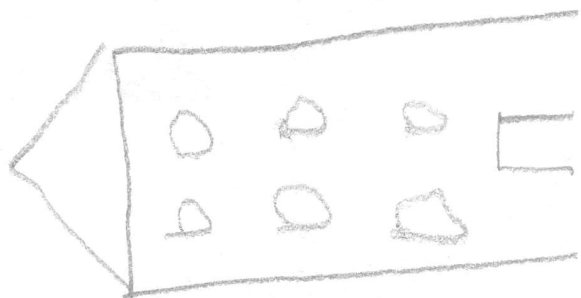
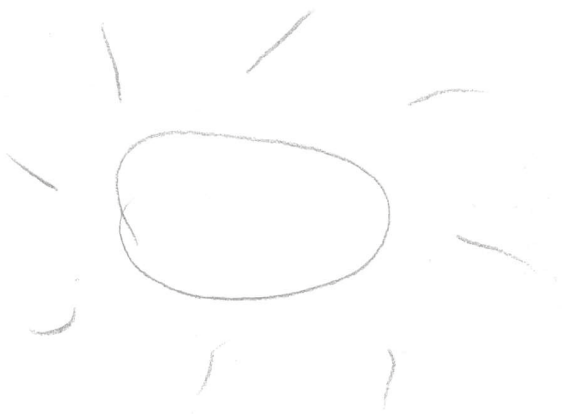
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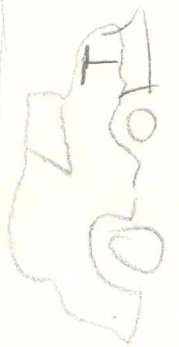
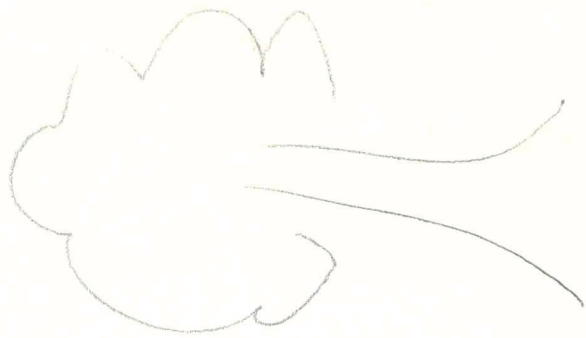
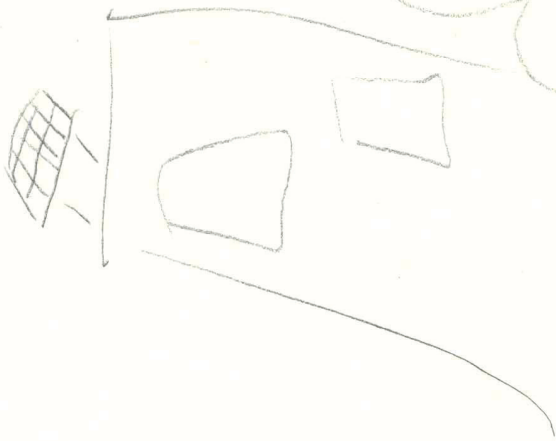
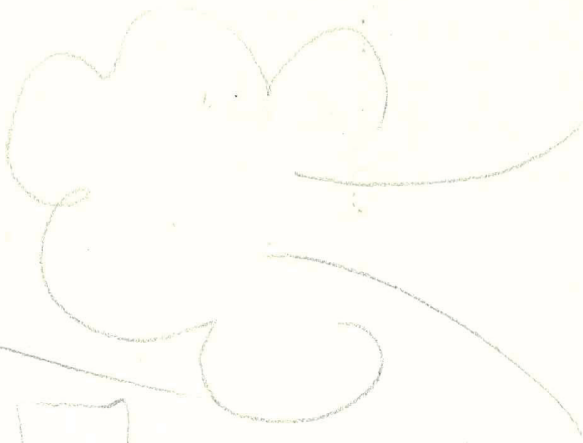
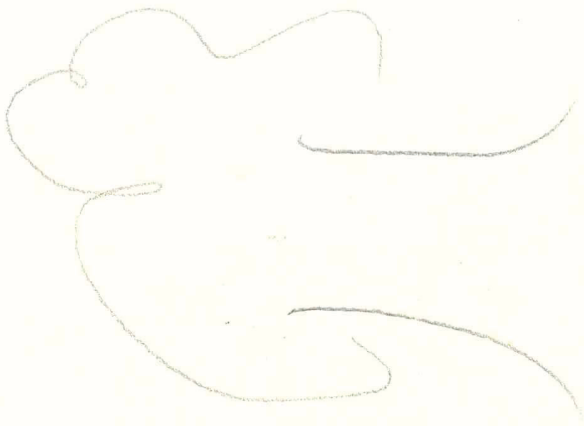
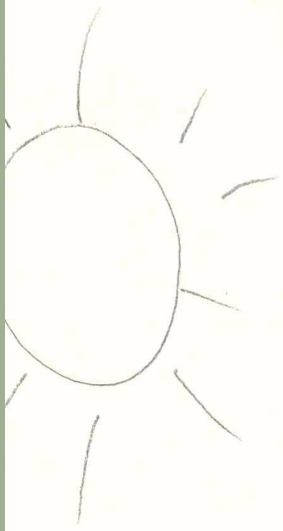


1910-1911

Auguster









1. A SITUATION / ACTIVITY THAT MAKES YOU WORRIED ABOUT THE ENVIRONMENT

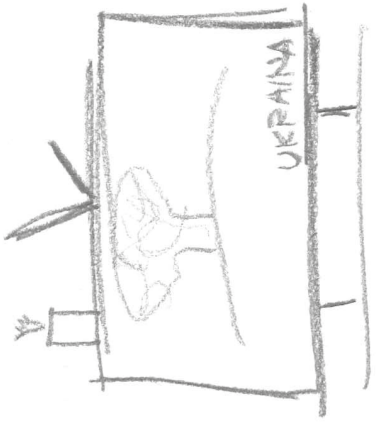
2. THE MAIN PROBLEM CAUSING CLIMATE CHANGE

3. POSITIVE THINGS BEING DONE FOR THE ENVIRONMENT

4. WHAT CAN YOU DO FOR THE ENVIRONMENT

VÄRDSLEDARE

KRIG & BOM



3

Källsortering!

Metall

GLAS

Plast

Second-hand!

Boss

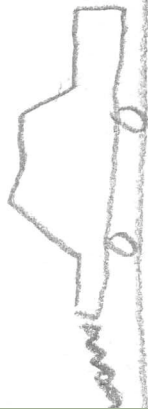
Lånebil ←

4

Samma som föregående.

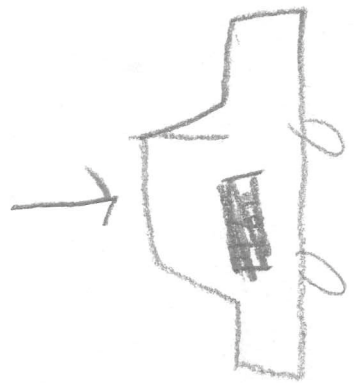
+ OPPMÄRKSAMMA!

Fossil bränslen



3

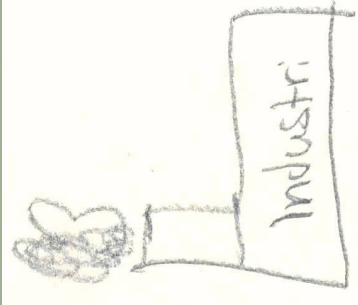
EL BIL



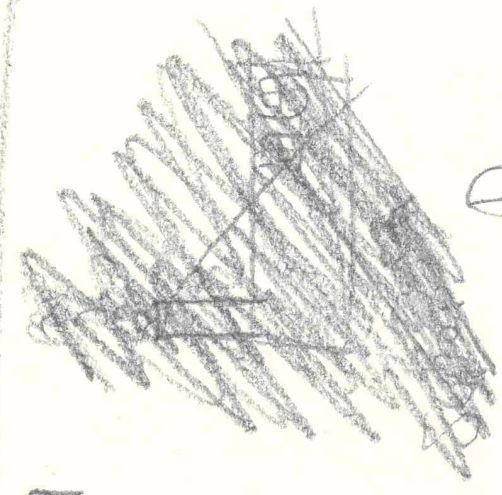
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cykel



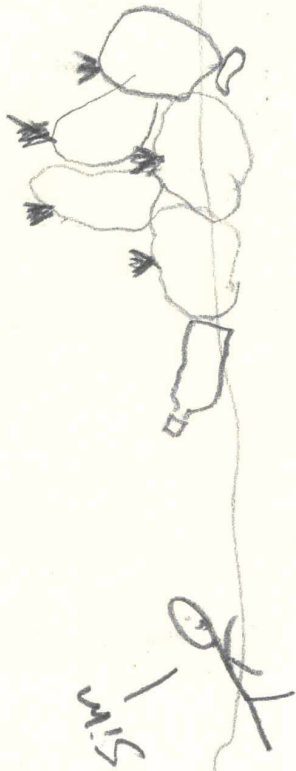


3 Forskning bring nye
drivmedel. Vind og vattenkraft



Recycle

1



Sim

2

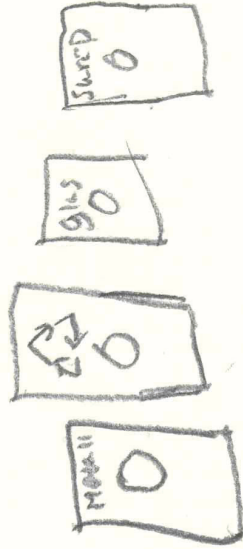
Frakt



3

COP-26

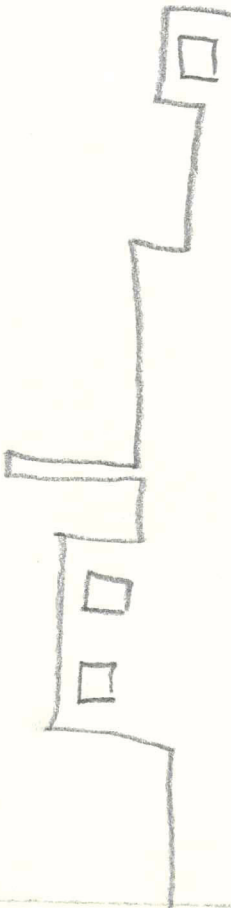
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Köra bil

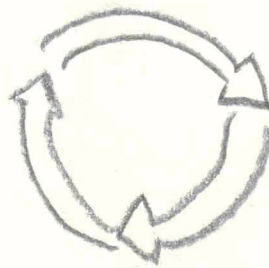
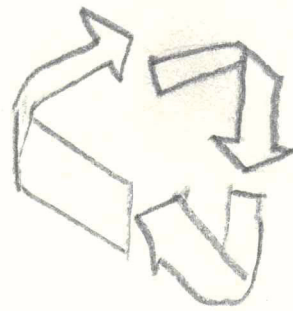


Fabriker



Samåka

~~Samåka~~

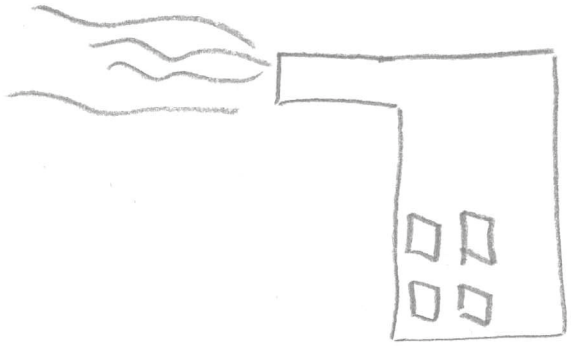


COP-26

Katastrof
Vädres



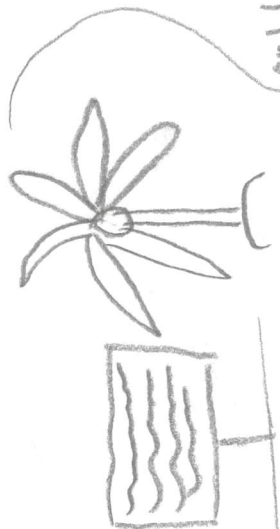
Grundvatten



Container
fartyg



3



andamilljö medvetna
Personer
Ökare



4

Äta när producerar

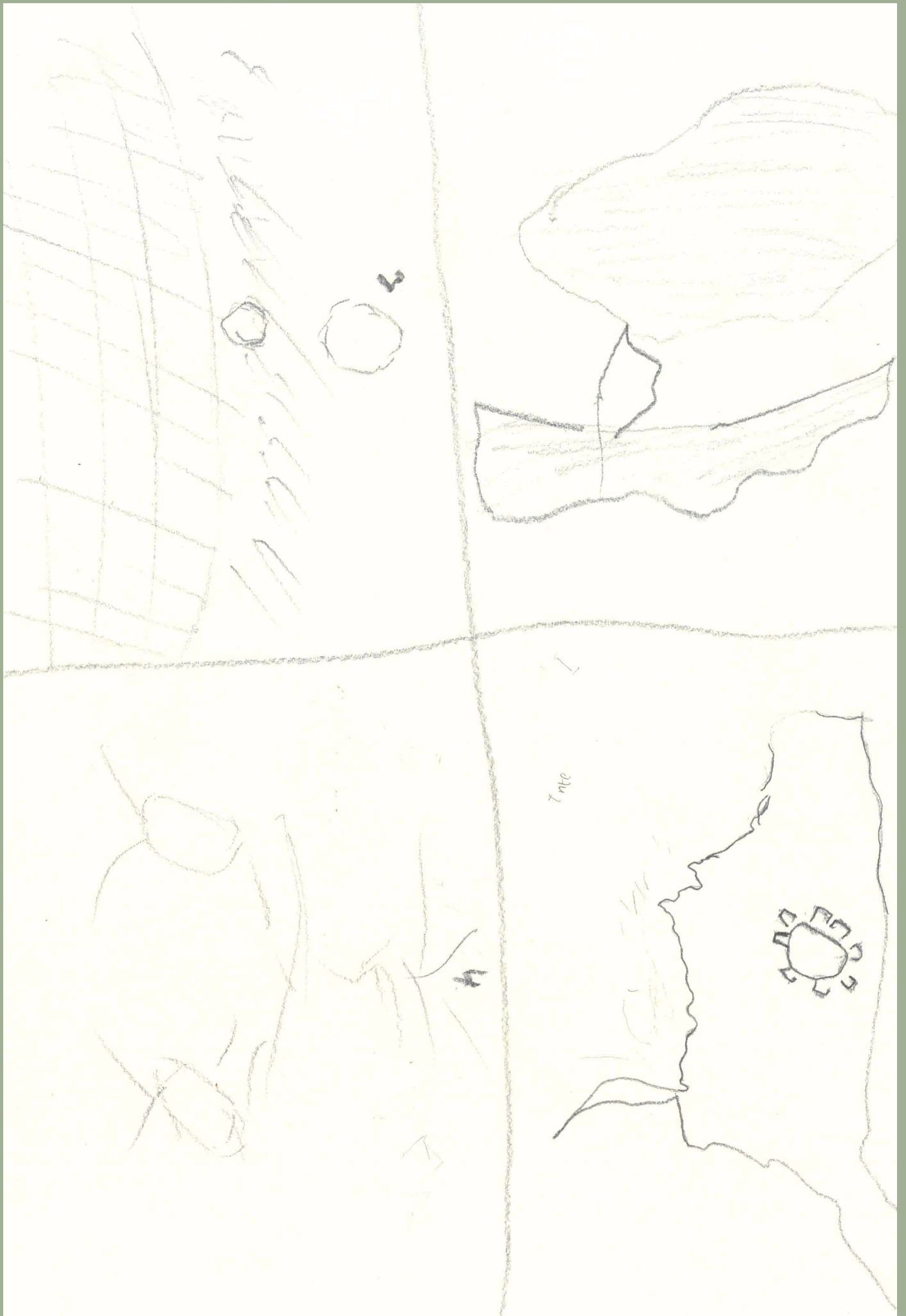


+ kollektiv trafik

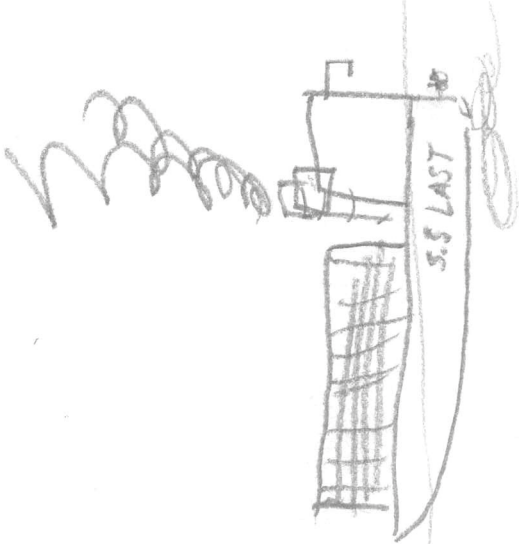
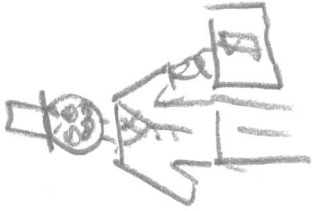


Kolja - Grön el

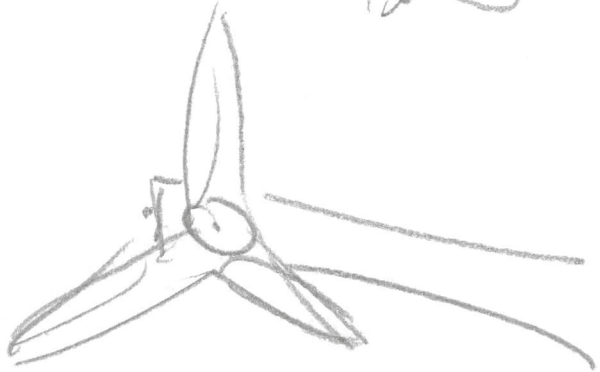
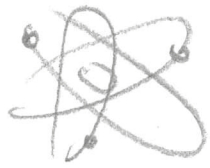
Mindre produktion

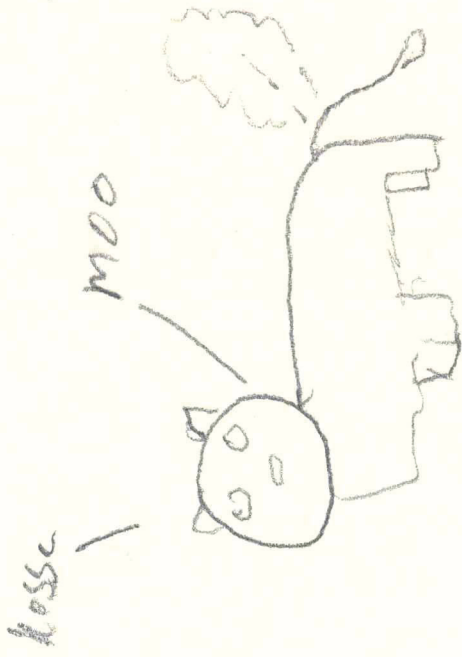
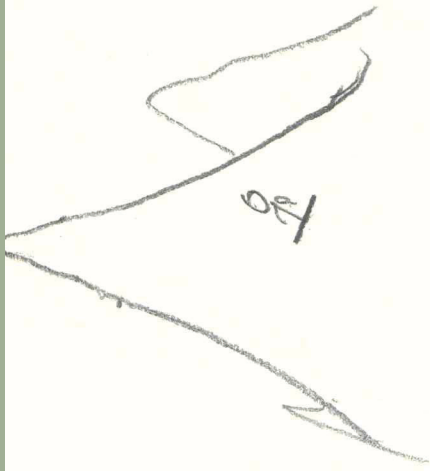


RIK!



Etc. → Plast
E D
G/lcs





4

branded	Pant	Plast	metal	horizost
o	o	o	o	o

serdera

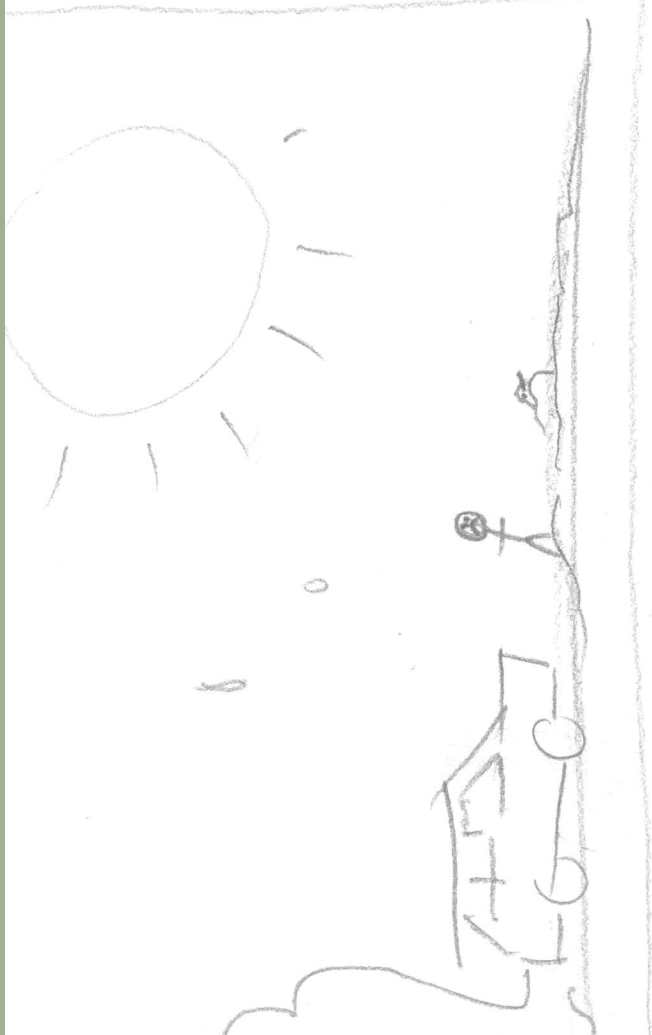


501 Panelar

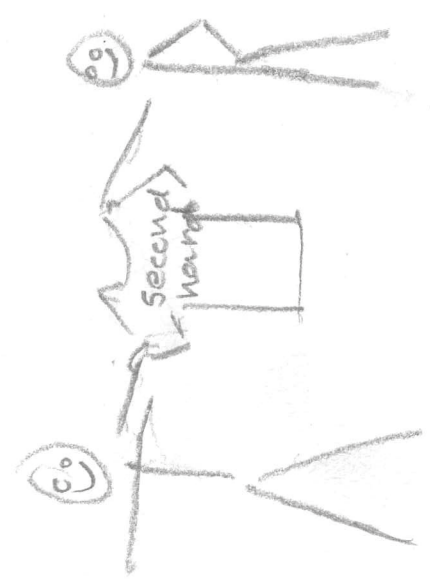
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4



3



Ineffektiv klimatpolitik

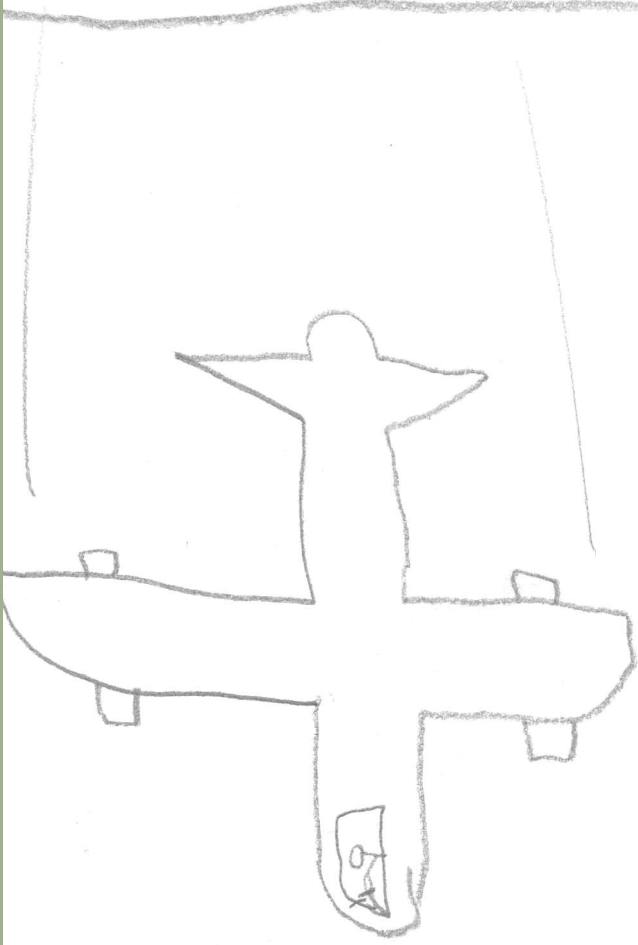
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Rösta på partier som
har internationellt
klimatbistånd som utgångs-
punkt.

3

Internationellt
klimatbistånd

3

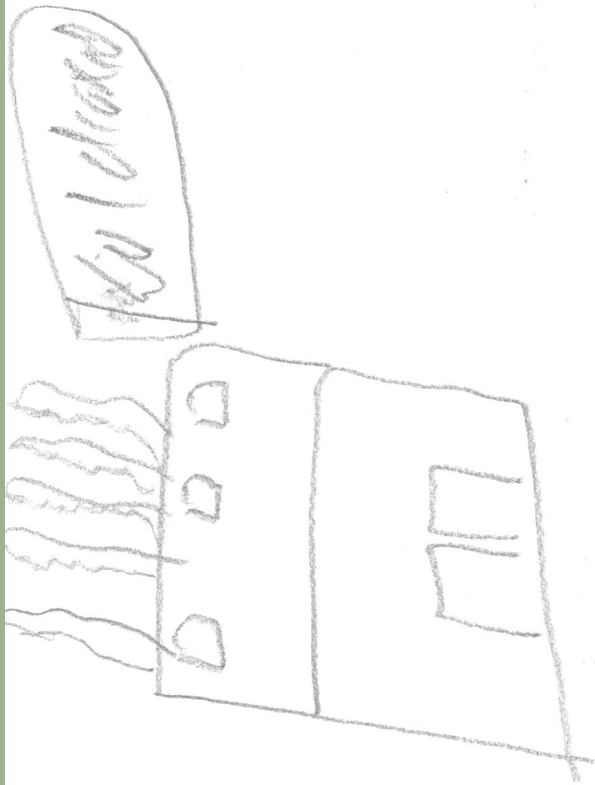


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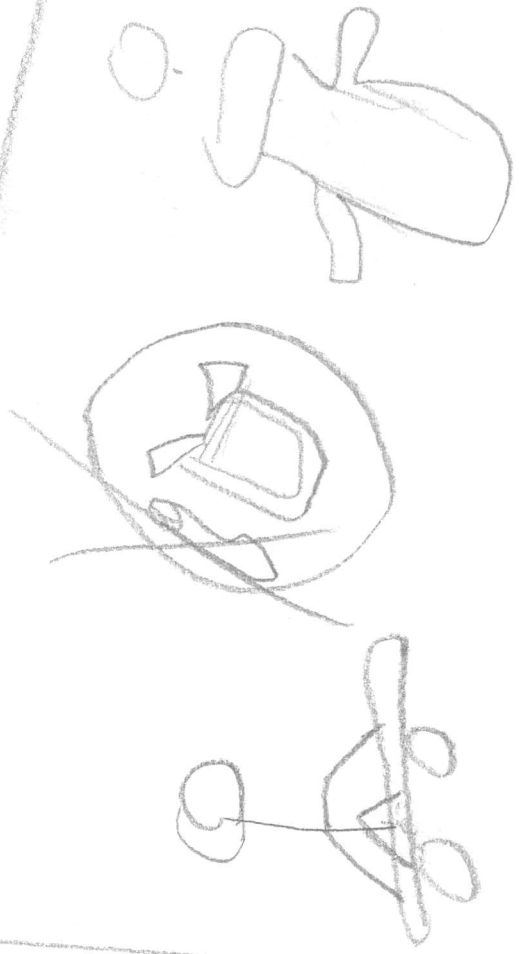


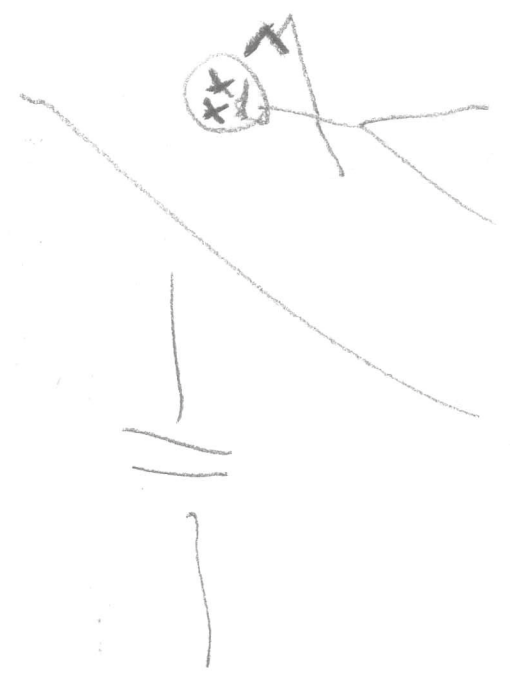
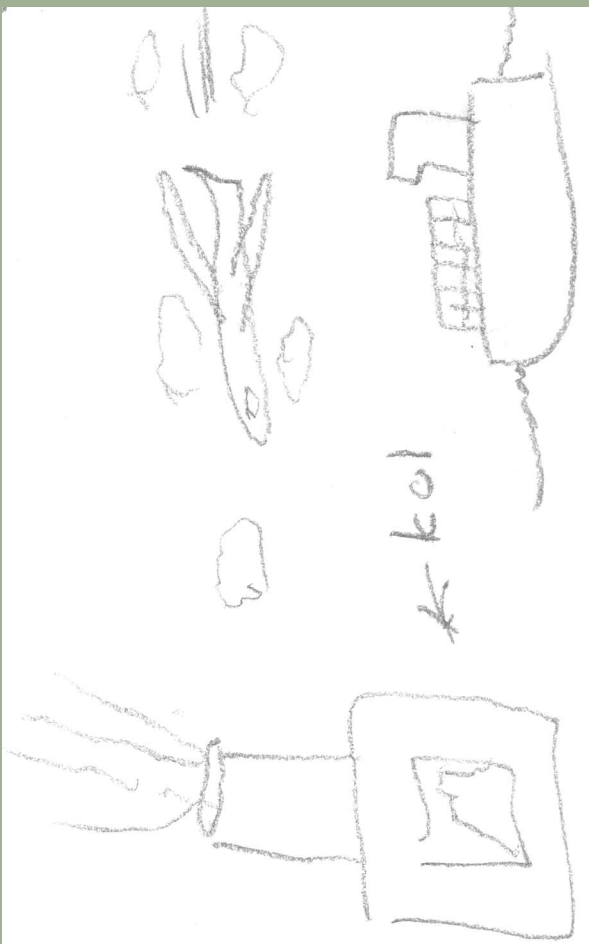
D	D	D
Medien	Konting. BIO	Flasht



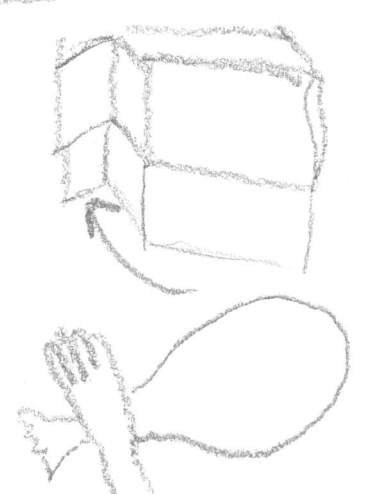


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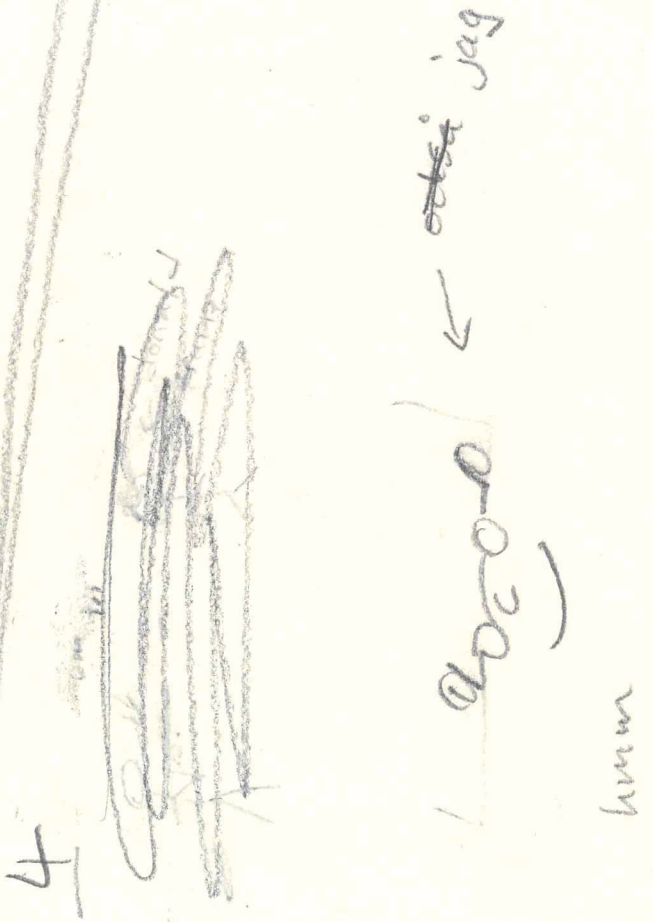
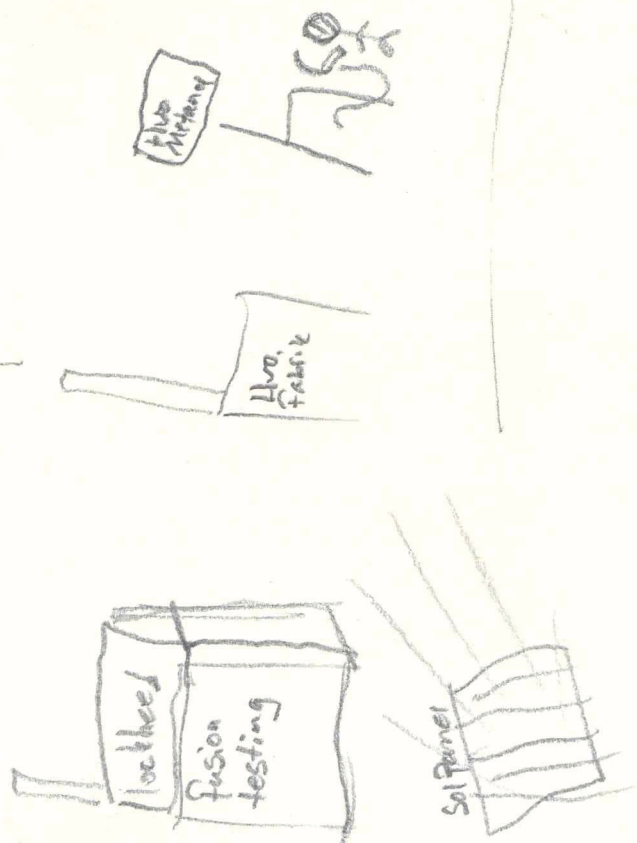
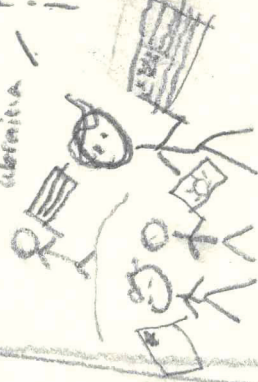
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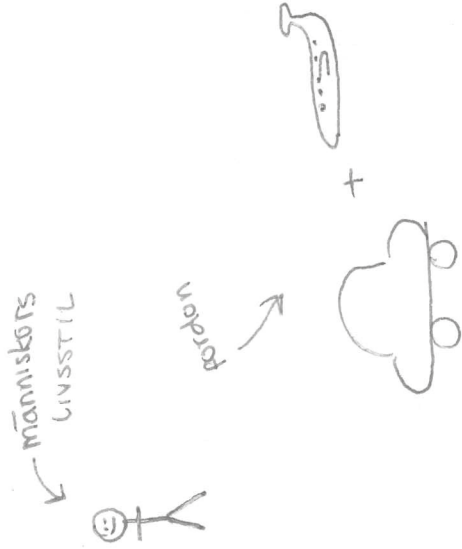
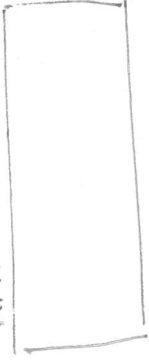
John

Jag
 Facebook:
 allt går
 åt helvete
 kommentarer;
 Skitsnack
 v late på riktigt

Jag ska
 inreda
 utrusta
 Höj, I am
 idiot
 Donald Trump and
 friends.



AFFÄRER => konsumtion



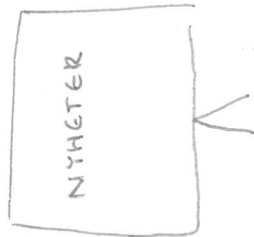
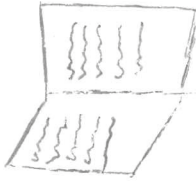
- SLUTA ÖVERKONSUMERA

- TA UPP PROBLEMEN

→ DETTA MED
(aukt i ruta 3)

(4)

ATT LÄRA MÅS OM
KLIMATPROBLEM



→ VÄO
KÄAT



sopsort.

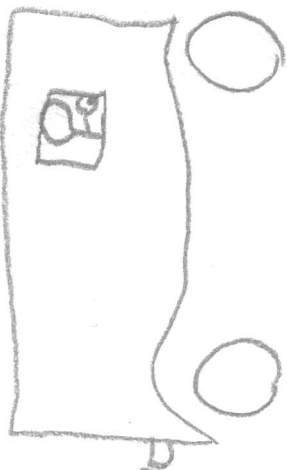


VÄRDA OM
VÄRDE

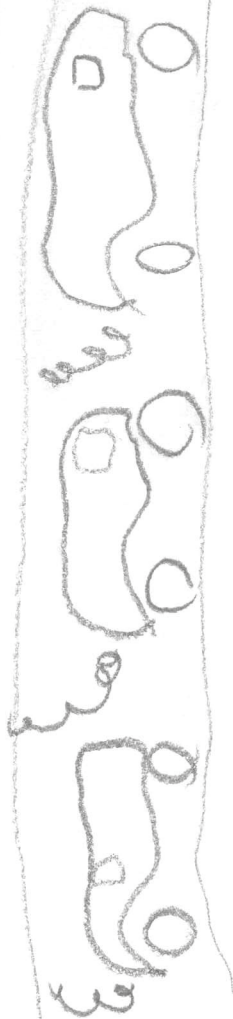
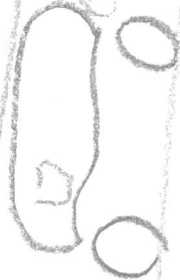
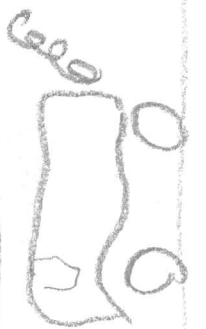


→ S
i
4
+





Fabrik

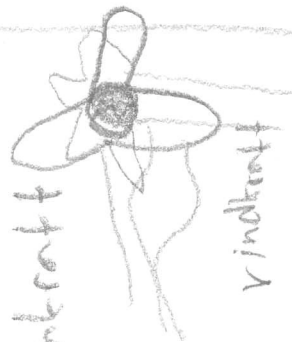


Körkraft

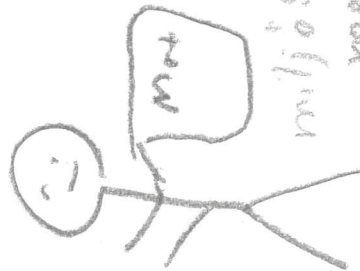
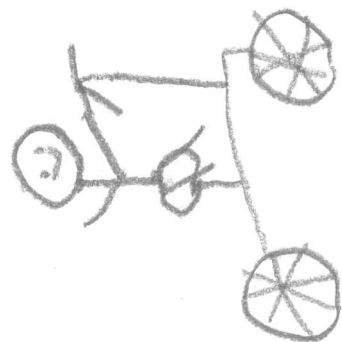
el



rindkraft

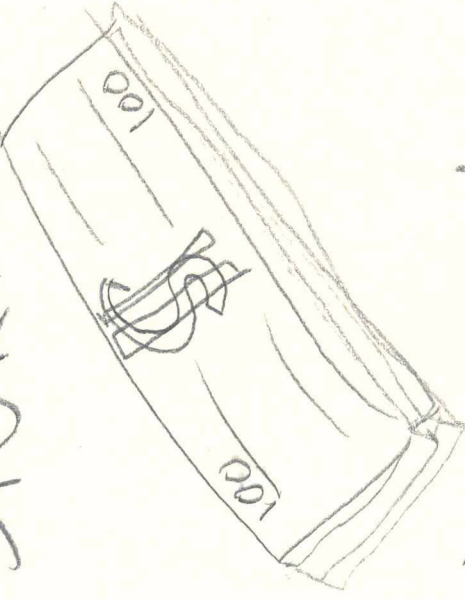


4



miljö smart
vart

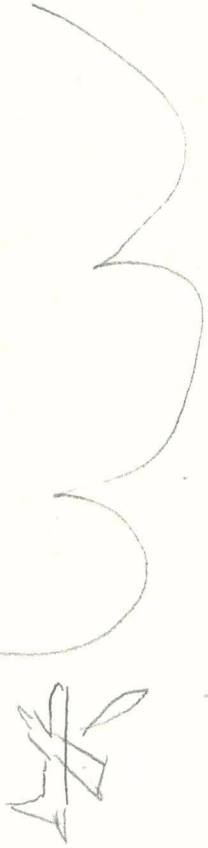
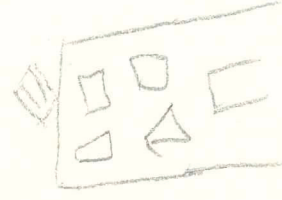
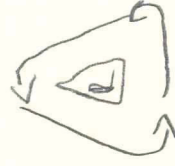
STÖRSTA



BOVEN



3

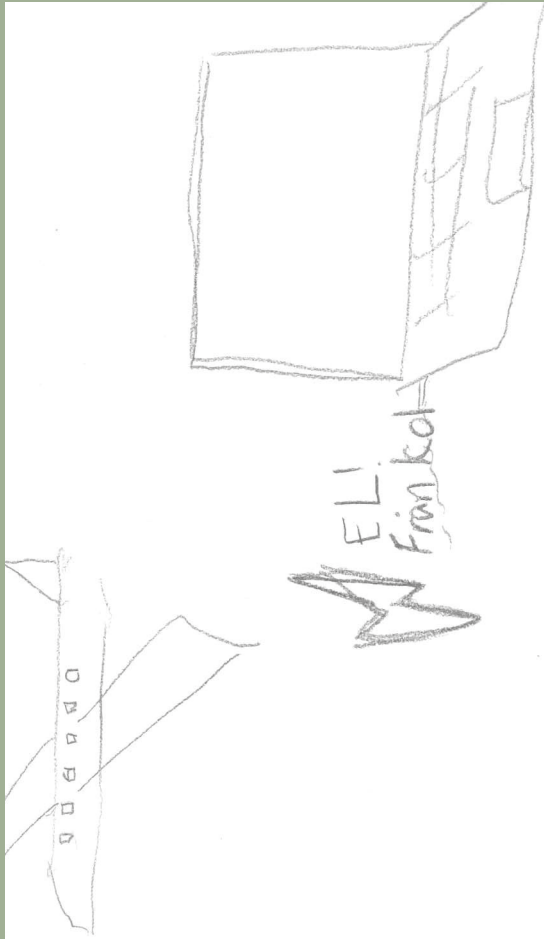


off of

4

ECO





ELI
Från köket

Prata om
ditt sprid
kunskap



3

