SKETCHES
PROCESS
<table>
<thead>
<tr>
<th></th>
<th>TROPICAL RAINFOREST</th>
<th>CLOUD FOREST</th>
<th>MEDITERRANEAN</th>
<th>DESERT</th>
<th>ARCTIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDEAL ORIENTATION</td>
<td>South or southeast</td>
<td>EAST</td>
<td>can be EAST, WEST or even NORTH</td>
<td>SOUTH or SOUTHEAST</td>
<td>NORTH</td>
</tr>
<tr>
<td>AMOUNT OF LIGHT</td>
<td>![Bar Graph]</td>
<td>![Bar Graph]</td>
<td>![Bar Graph]</td>
<td>![Bar Graph]</td>
<td>![Bar Graph]</td>
</tr>
<tr>
<td>TEMPERATURE</td>
<td>![Bar Graph]</td>
<td>![Bar Graph]</td>
<td>![Bar Graph]</td>
<td>![Bar Graph]</td>
<td>![Bar Graph]</td>
</tr>
<tr>
<td>MATERIAL</td>
<td>![Bar Graph]</td>
<td>![Bar Graph]</td>
<td>![Bar Graph]</td>
<td>![Bar Graph]</td>
<td>![Bar Graph]</td>
</tr>
<tr>
<td>ATMOSPHERE</td>
<td>Humidity: 90-98%</td>
<td>Humidity: up to 90%</td>
<td>Humidity: 30-40%</td>
<td>Humidity: less than 30%</td>
<td>Humidity: less than 30%</td>
</tr>
<tr>
<td>BIOME</td>
<td>Forest (tropical)</td>
<td>Forest (tropical)</td>
<td>Forest (temperate)</td>
<td>Forest (tundra)</td>
<td>Tundra</td>
</tr>
<tr>
<td>PLANT COMMUNITY</td>
<td>![Bar Graph]</td>
<td>![Bar Graph]</td>
<td>![Bar Graph]</td>
<td>![Bar Graph]</td>
<td>![Bar Graph]</td>
</tr>
<tr>
<td>PLANT SIZE</td>
<td>![Bar Graph]</td>
<td>![Bar Graph]</td>
<td>![Bar Graph]</td>
<td>![Bar Graph]</td>
<td>![Bar Graph]</td>
</tr>
<tr>
<td>WIND</td>
<td>![Bar Graph]</td>
<td>![Bar Graph]</td>
<td>![Bar Graph]</td>
<td>![Bar Graph]</td>
<td>![Bar Graph]</td>
</tr>
</tbody>
</table>

Cold air carries less moisture than warm air.

OLAFER ELIASON
TOMUJIN YOSHIOKA
PIET UDOLF
DIETER KINAST
GUNTER VOGT
<table>
<thead>
<tr>
<th>Month</th>
<th>Temperature</th>
<th>Rain mm</th>
<th>Sunshine per day</th>
<th>Humidity</th>
<th>Angle of the Sun</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan.</td>
<td>1°C → -2°C</td>
<td>50 mm/12 days</td>
<td>1.6 hours</td>
<td>85 %</td>
<td></td>
</tr>
<tr>
<td>Feb.</td>
<td>2°C → -9°C</td>
<td>40 mm/11 days</td>
<td>2.8 hours</td>
<td>95 %</td>
<td></td>
</tr>
<tr>
<td>Mar.</td>
<td>6°C → -3°C</td>
<td>60 mm/11 days</td>
<td>5 hours</td>
<td>90 %</td>
<td></td>
</tr>
<tr>
<td>Apr.</td>
<td>9°C → 1°C</td>
<td>40 mm/15 days</td>
<td>6 hours</td>
<td>65 %</td>
<td></td>
</tr>
<tr>
<td>May</td>
<td>16°C → 7°C</td>
<td>50 mm/14 days</td>
<td>7.4 hours</td>
<td>60 %</td>
<td></td>
</tr>
<tr>
<td>June</td>
<td>20°C → 17°C</td>
<td>80 mm/16 days</td>
<td>8.8 hours</td>
<td>62 %</td>
<td></td>
</tr>
<tr>
<td>July</td>
<td>22°C → 13°C</td>
<td>70 mm/15 days</td>
<td>6.9 hours</td>
<td>65 %</td>
<td></td>
</tr>
<tr>
<td>Aug.</td>
<td>20°C → 12°C</td>
<td>90 mm/17 days</td>
<td>5.8 hours</td>
<td>70 %</td>
<td></td>
</tr>
<tr>
<td>Sept.</td>
<td>16°C → 7°C</td>
<td>70 mm/14 days</td>
<td>4.6 hours</td>
<td>75 %</td>
<td></td>
</tr>
<tr>
<td>Oct.</td>
<td>10°C → 4°C</td>
<td>90 mm/14 days</td>
<td>2.9 hours</td>
<td>80 %</td>
<td></td>
</tr>
<tr>
<td>Nov.</td>
<td>4°C → -7°C</td>
<td>70 mm/16 days</td>
<td>1.3 hours</td>
<td>70 %</td>
<td></td>
</tr>
<tr>
<td>Dec.</td>
<td>-10°C → -5°C</td>
<td>50 mm/11 days</td>
<td>0.8 hours</td>
<td>85 %</td>
<td></td>
</tr>
<tr>
<td>PLANT</td>
<td>SIZE OF PLANT</td>
<td>WATER LILY</td>
<td>MOSS</td>
<td>ALOE VERA</td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>---------------</td>
<td>------------</td>
<td>------</td>
<td>-----------</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>tropical</td>
<td>moist-hot</td>
<td>desert</td>
<td>dry-hot</td>
</tr>
<tr>
<td>CHARACTER</td>
<td></td>
<td>Aquatic plant</td>
<td>Flowerless</td>
<td>Spreading by offsets</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Spread arrangement</td>
<td>- Soft</td>
<td>- Thorns and thistles</td>
<td></td>
</tr>
<tr>
<td>ARCHITECTURE</td>
<td></td>
<td>- Grow small space</td>
<td>- Spreads across ground</td>
<td>- Succulent</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Water elements</td>
<td>- One space, with several views from one point</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PLANT</td>
<td>PURPOSE/USE</td>
<td>Helps reduce algae growth in ponds</td>
<td>Insulation</td>
<td>Medicinal use</td>
<td></td>
</tr>
<tr>
<td>ARCHITECTURE</td>
<td></td>
<td>clean</td>
<td>Protect</td>
<td>heal</td>
<td></td>
</tr>
<tr>
<td>PLANT</td>
<td>LIGHT</td>
<td>Partially shaded</td>
<td>Grows in the shade</td>
<td>Grows in full landscape with a lot of sun</td>
<td></td>
</tr>
<tr>
<td>ARCHITECTURE</td>
<td></td>
<td>water-temperature around 21°C</td>
<td>Almost to windows, almost completely covered with glass</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PLANT</td>
<td>STRUCTURE</td>
<td>Floating structure</td>
<td>Ground hugging carpet, like moss</td>
<td>Short-stemmed, thick and fleshy leaves</td>
<td></td>
</tr>
<tr>
<td>ARCHITECTURE</td>
<td></td>
<td>Smooth flat surface on pond, creating underwater systems</td>
<td>Ground hugging carpet, like moss</td>
<td>Layer of glass panels that create a mile long since effect</td>
<td></td>
</tr>
</tbody>
</table>
Episk rommet

- samle planter
- generatio Physalis
- experimentværelse
- tilbehørskabinet
- forskningsrum
- dessinationssforheder
- Lino: Zingibul - Terepigul
- temperaturkontakt
- trykturzellen
- tilbøjelige skema
- mvest
- gstenes mikrobiens
- bakteriorde sp.
- fungenerde crop
- tilladet visse

Victoria rommet

- papaya: Corya papaya
- Euphorbia regalis
- Polygynium leucanthum
- Lino: ovale: Seme
- Seme: Acer, Persic - Seme tillej
- Musa: sp. banana
- Angham: styrax - citrin madelis
området blir brukt til forstoring av planter, som mellomstasjon (planter blir fraktet hit når det er for kaldt ute eller ved avstillingene i veltektuane skifter) og som rom for beskjeving av sprøydde og ulykkede arter.

Oppvarmingen av rommene skjer gjennom vanntønne. Varme legt i et vertikalt system på innsiden av glassfasaden.

Temperaturen er mer stabil på vinteren enn på sommeren, først det konstante klimaet kan fungere optimalt uten at solen värmer opp rommet i trøsteg. Svarer innstallert en holde det stabilt på sommeren på grunn av skiftende former. Selv med gode sensorer som sender signaler om temperatur endringer.

I den tropiske tåkesteggen er det et stort problem med fukt som alltid samler seg på betong gulvet, dette gjør at alger og svømmeer seg lett, lokaliser må derefor hoytrykk spøyler vedlig olde, holde på gulvet og bordene i metall. SOMMERTUL SOMMET METEN er en rimelig, men har oppstår ikke de samme problemene, fordi underlaget er grus og inntre et
the plants in the center have the ability to create vital, the way we organize the climates according to the rules that can help us create stable climate

RESEARCH CENTER

WORK

NEW FACILITIES
FOR THE WORKERS
IN THE GREENHOUSE
AND
THE SCIENTISTS.

today's climate is organized in a certain structure, like an evaporation

the temperature is more stable in the winter than in the summer, because the artificial climate can work optimal when the sun does not heat the room in addition to the heating system.

the plants are not organized at a composition, but systematically arranged according to specific climates.

NEW FACILITIES
FOR THE WORKERS
IN THE GREENHOUSE
AND
THE SCIENTISTS.

NEEDS TO HAVE ALL CLIMATE REGIONS

ARCTIC

DESERT

MEDITERRANEAN CLIMATE

CLOUD FOREST

RAINFOREST

today's climate is about 1700 mm of inside space, 600 m² of outside space.

the specialists only gather pollen from one or a few species or genera of closely related plants.

some bees are specialists, they gather only a huge variety of pollen.

individual building that are connected

INSECTARIUM

VISIT

the building would be different for each condition

movement in the building would be different for each condition

flower field

ants

bees

butterflies

colonies above ground

underground

various plants in a hot and humid climate

earth's magnetic field

for a few specific insects and the habitat they thrive in.

the bees navigate in three different ways: by the sun, by the polarization pattern of the blue sky, by the earth's magnetic field

the challenge is how to create a stable climate all year.
The soil inside is separated from the soil outside. This creates a new environment outside. This creates a new environment.

Sink the structure partially under ground because the temperature of the earth is more stable.

One frame for the heat creator.

Simple glass frame.

Open roof to let fresh air in.

Curved roof inside to transport air.

Inner frame for plants.

Spaces for plants.
You go through the arctic climate and directly into the mediterranean.
Here you have an open floor, earth floor, flowers and trees from the mediterranean. A section with library, auditorium space.
SKETCH BOOK 1
The Schoneberg Botanical Gardens, Berlin, Germany.

Can I take an indigenous plant from each climate and develop a special concept around the properties of that plant?

Week 34: Constructions / Technical Solutions

- How can we construct large open spaces?
- What kind of conditions does each climate need?
- What kind of ventilation, material, climate of atmosphere (warm, humid, dry, etc.) makes sense?
- How can I use plants in different ways, degree of transparency, different fenestration?
- How can we ventilate such spaces?
- How can we warm up / cool down such spaces?

Workshop Result:
- Make a list of conditions
- Make a series of drawings that illustrates the different aspects of the project
- Gather all information in one document.

Water reflecting surfaces are very good for the indigenous plant in the glasshouse. It collects and distributes light in a very good and effective way.

The roof rainwater flows from the gutter down through the hollow iron columns that support the roof. The water runs off the roof down to a large water tank underground.

The water is then brought to the plants with a forcing pump. Maybe some plants can have the rainwater from the roof, while others can be pumped from a warm water source, distributing it heating.

<table>
<thead>
<tr>
<th>Ideal Plantation</th>
<th>Desert</th>
<th>North-Tundra</th>
<th>Wasteland</th>
<th>East-West</th>
<th>Middle East</th>
<th>South Coast</th>
<th>Arctic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount of Light</td>
<td>High</td>
<td>Moderation</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Material</td>
<td>Translucent</td>
<td>Partly Translucent</td>
<td>Translucent</td>
<td>Translucent</td>
<td>Translucent</td>
<td>Translucent</td>
<td>Ice</td>
</tr>
<tr>
<td>Atmosphere</td>
<td>WET</td>
<td>HOT</td>
<td>HUMID-MIST</td>
<td>WARM</td>
<td>DRY</td>
<td>DRY</td>
<td>COLD</td>
</tr>
<tr>
<td>Plant Commonly</td>
<td>Trees</td>
<td>Plants</td>
<td>Shrubs</td>
<td>Trees</td>
<td>Shrubs</td>
<td>Shrubs</td>
<td>Trees</td>
</tr>
</tbody>
</table>

Table representing the ideal conditions for different plantations.
1760-1780
* First greenhouses were small, had a massive retaining wall to earth and solid roof. Used from fire stones or scorch tiles, to maintain uniform temperature distribution of heat.
* Evolved with more glass in the facade and solid walls, with no windows, but now a freestanding building, single glazed windows created heat loss.

1820
* Development of hot-water and steam heating made possible for free-standing houses with glass on all sides. The system spread in steam.
* Hot-water heating - Water is boiled in a heater placed outside the house, and was fed through pipes below the plants. Water circulation, hot and cold water as in a system of interconnected pipes in which water stands at equal levels and are branched.
* Hot-water heating: uniform and continuous heating of the space. The heating system consists of clay or fire-clay ducts, of circular or square sections inserted into each other, so that they are gas-tight. They lay flat horizontally, partly in the ground and partly above.
* The circulation could only go horizontally, but the discovery of pumps led to the use of vertical circulation too.

1850: A.M. Perkins' high pressure system. Before water could not be heated above boiling point now the pipes were thermally sealed and strong enough not to burst. The system allowed for higher temperature and better circulation.
* Steam heating uses perforated pipes to release and distribute heat. To lay the pipes on a bed of stone so that the stone in heated. The stone were warmed it to higher temperature and the heat spread in them as efficient to heat a plantation that is small. The steam heating system remained at a deficient because it exposed to high temperatures in the main. The air dried out gaining the high level of radiation heat damaged the plants.

A hybrid was later developed, steam pipes surrounded by pipes containing water. System that of heat exchange between steam and water.
* Hot-air heating.
"CLIMATE & ARCHITECTURE.

HOT AND COLD.

The building primarily receives its heat from solar heat, earth's heat by day (geothermal and radiant) and the heat from heat sinks (heating system, water, concrete and human body heat).

The heat losses through heat conduction, convection, radiation and evaporation.

Some amount of heat is transferred directly to the building through internal and external surfaces. The internal surfaces absorb and transfer the heat to the envelope space. The effect of the insulating materials with the local conditions, structure and surface properties of the materials.

In the relatively constant temperature zone, the outdoor air's energy (geothermal energy) can be expected for part of the cooling. The high level of energy demand would be expected by forcing hot water up to the building while sending cold water back to the ground.

Max absorption (cooling) is due to primary reasons for heat loss, direct or indirect through the building's exterior walls and roof and lost to the surroundings. Insulation is needed in buildings as it helps to keep the heat in or outside the building.

Heat radiation that helps a surface will either absorb or reflect the heat; light and shiny materials (surfaces) absorb heat and light glossy materials (surfaces) absorb heat. Hot and cold are not just water temperature.

THE DECAY EFFECT FROM EVAPORATION IS DEPENDENT ON THE NATURE OF THE MATERIAL (SOIL, SWEAT). IT OCCURS WHEN HIGH EXTERNAL TEMPERATURES.

The sweat acts on the skin and evaporates during head, releasing this head into the decay effect. In buildings, we can see similar effects. When walls evaporate in the room of the building due to the air temperature, we can also spray water over the building's porous materials to create the same effect.

Buildings with many walls have a poor insulating capacity. It is a direct reflection of the surrounding climate. The building works up quickly in the morning and cool down quickly after. The sun sets, the thickness of the facade increases, a little, it changes the temperature variation by several hours. This can be done by creating a facade with several sections, separated by air and layers of glass.

The combination of materials (light and heavy) can optimize the thermal mass of the building. We can see the difference between the old and the new buildings. The new buildings are designed to reflect the temperature over the atmosphere that is needed.

Hot and cold have great heat accumulating capacity. High daytime temperatures, heavy absorption, cool and clear nights.

Just as a heavy stone requires materials with great heat accumulating capacity, very light, airy fill materials may reduce heat transfer through an external wall. Almost air is a very high-heat-conducting and can therefore have an insulating effect.

HUMIDITY & PRECIPITATION

Water is a fundamental aspect to consider in architecture. On one hand, it helps to protect against destructive and destructive forces, and on the other, the fluid and reflective character can be used to benefit the architecture. It is a reason that we can now control the climate and use water storage.

Water is also used for building cooling by utilizing water's evaporation energy and for air cleaning, and binding of our particles through water humidification in air conditioning systems.

The ability for water to store and emit heat by means of radiator's (radiation heat) and connectors (air heat). An equal principle can be used for cooling by means of evaporative cooling.

Material like glass and metal are completely solid and unable to absorb humidity. Only a few materials are resistant to permanent high humidity. Many types of stone and porous bricks in themselves can absorb water saturation, but in combination with frost, the risk of erosion and degradation increases.

WIND AND VENTILATION

Ventilation and climate systems are energy demanding; they are quickly outdated and expensive to install. Buildings that are based on natural systems of climate control must correspondingly be planned accordingly. This gives the facade new tasks as an interactive provider of outdoor air and heat. The critical transition between indoor and outside.

Throughout the day, the sun heats up the earth, while the sea remains cool, and the wind rises. The cold breeze flows toward the land to replace the warm air. During the night, the opposite happens, and the wind turns.

Being able to use wind in buildings is the base of fresh air and wind. Dynamics can be a positive parameter in architecture consideration.
Air can be drawn in via cold seal clay or sintered steel ducts or hollow building parts in walls and floors. Air can be cooled by sun or filtered by water evaporation. Cooling by evaporation happens by heat from the air being met with water evaporated and leaves from liquid state to water vapor in a reflective water surface creates a condition where air passes across the water surface and humidity, at air now cooled and purified of small particles.

The result was warm air rising because of its less dense, white cool air will drop correspondingly. We can use thermal statics by making transport the air from the warm fibre building to the top.

Light and shadow:
We receive three types of light:
- Sunlight brings a lot of heat and hard shadows.
- Backlight comes from the entire skylight, hard, strong, where it breaks from a dense black sky, where it dives down clouds.
- Reflected light comes from all the surrounding surfaces. Reflected light is always weaker than the light that hits the surface.

Santika and Nexten 24-B
Igen er nuvel som hun, bare Heliusen & land Hagen driver med 56 på 10.000 m². Joker med denne bygningen på en mar omtalt møde. Især noteringsvis de form, hvor vi ser små forlydender i stedet for grædlen ender i fjeld i syna.

En ulike til et innbyggertilbud har Philosophie med, hvor de ikke tenker noen her. I henhold til forholdet som ommer hvor jeg trajter.

St. m. på Heliusenes vei, har vi fortsett ved eksperimentering med klimaanlegg. Mange av det mest spennende som opptrer var de rommene under bebygget. De fleste av husene forutgjør et hele innbyggertilbud.

DIETER KURST
BÜNDNER VOGT

Pietro da Wolf, John Fosters.

Pietro da Wolf, John Fosters.
Stephen Swallow experimented with sloped glass. The house should be oriented to the south, and the wall should incline 20° to east.
Skriv av tankekart

Kaktus
aloe vera
Butterfly room

Press
flowers with lower light (underground)
winter room with snow?

Roterplan och
flower room for bees

Platsv不锈en ut arkitektur
namn ska inte leva "för" liv (i helhet beroende

Plante typ
växter som bär
eller specifika
vilda arter av plantor.

Regel terräng
högsteren
söknings
mineralen
mosaiksten

Skogshagen
vasssträde

Joanong
Bolle Mosse

Söder
ter Bolle Mosse

Lage en duks
för plantering
 setObject

Norrsträke på planter

nedsänkning i form av
en existerande
utställning av byggnader

under gränsen
planter?

Temperatur
för illustration

skall mark
radiation

en plantebark

Cactaceae
Zygocactus
Echinocactus

Euphorbium
Sedum

I poter: Ibiscus sinensis

Trompetvegety
Träcker
Porrformade makrofyller

Lönngräs

Kaktus blad
week 3a

Further focus on registration

Make a more general dast of site trees so that the drawing can appear more coherent throughout the project.

Pick up the sketches for the final model

Draw the trees I have registered so far in the sketch plan.

The trees and flowers (or arbos) are more important than being detailed.

The detail should include a way to complement the story of the garden.

Finish like small models with trees and houses make the big models. Should be finished this week.

Yakhchal: Persian "ice pile", an ancient type of evaporative cooler. The building appears above ground, but most of the space is underground. The storage space. It was often used as storage for ice and sometimes food as well. The ice created steam during the cold season of the year. The water is channeled from the garden (Romanian expression) into the yakhchal, and a freezer upon resting inside the structure. Usually a wall is made along one wall of direction close to the yakhchal and the water is channeled from the north side of this wall so that the shadow of this wall keeps the water cool.

The building allows cold air to be forced in from the entries at the base of this structure.

The yakhchal is built by a water-resistant material called SARQAD. Sand, clay, egg whitish, lime, sand, hair and ash. The material is resistant to heat transfer and completely water tight. Good insulation all year.

The walls at the base are timeless thick.

Great tunnel system to extract ground water in the spring

YAKH-AL

DARAT

A qanat is an underground stream that contains water. The temperature near the ground is more stable and therefore the water is kept cool. When the hot dry air enters the vertical shafts at the ceiling, the water flows at a steady flow along the water. The wind tunnel is placed so that wind flowing through the largest hole of the tunnel passes over the top of the great channel. When the water from a large pressure (the bowl) through a smaller one (the drum), wind pressure decreases. The movement of the air from the tunnel as is diminished when air passes over the top of the channel. In other conditions, moist air from the shaft is influenced by the wind of moist air from the bowl. The mixture of the air from the bus and the water circulates through the movement. Hypothesis is wrong. This is because the dry air rises.
1. How can architecture be defined as a science or art? What are its characteristics?

2. Discuss the role of architecture in society. How does it influence human behavior?

3. Architectural design principles are often based on historical precedents. How relevant are these principles in contemporary design?

4. How do buildings relate to their environment? Discuss the concept of sustainability in architectural design.

5.探讨 architectonic structures as a metaphor for human experience. What parallels can be drawn between architectural design and human thought processes?
14. september

Redegørelse for de tre (eller fire) forskellige kategorier:

- Krav og实际情况 for programmet
- Hvis slags sten de eller fælles
- Vilken relation til hagen de har

Gjore ferdig 1:50 model

Gjore velkendte med de ulike kategorier

- Dokumentation med billeder og kommentarer til hvordan
  de diskuterer hvordan de ulike kategorier følger hagen.

Efterfølgende hoved forhold, uafhængigt af form

Starte på at tegne diagrammerne for forhold i hagen:

- Sæsoner = tæthed
- Vandlukning = udførlighed

- Monolitisk

Udsnit:

long: om sti

en sti

eri til

Dit botanical high rise
The English Garden

The English garden idealizes the view of the natural world, including a central lake, temple, grotto, rockery, and terraces. The garden is divided into sections by water features, paths, and walls.

Deirdre Mason

Do I want to fundamentally change the garden or enhance it as it is today?

Two concepts:

1. Environment for the garden: the atmosphere of nature, flower spaces. The human moves in between, and relates to the flower spaces in different ways. Seen from the outside, the buildings are the same, but how they work internally is completely different.

2. Interior climate: each space in dimensionally according to the plant and the structure that will host it. How the plants are grown, varying on what is interesting to the user. Some places come to rest, protected by surrounding walls, others can be partially visible and partial, while others can be completely visible of yet another can be separated from the garden and among the buildings.

How can we use science to add to the landscape of the garden? Plants that are managed in the garden, while buildings are designed to be dynamic and deal with the plants. The most dynamic are parts of the garden that are interacted with the plants, while the plants are interacted with the users.

How can we use architecture to design spaces for the interaction of man, the elements of nature such as air, water, space?

The structure is the climate, the landscape is the climate...

The temperature of the earth is more stable...
Potensialprosjektutvikling

- Velg et av prosjektet
- Løse problemet i: 1-20 part 1:10

- Jo er mer interessant å lære mange små høyder i hagen. Det er programmet for meg mange større friluftsreiser å utforske med typologi og hvordan planter kan opptre i forskjellige drikker.

- Hvordan kan planter og deres egenskaper være med på å forme arkitektur? Kan de diversifisere våre egenskaper og virke på de formene av arkitektur? Parametere som planter og andre organismer kan også i noen forstyrre direkte på hvordan arkitektur ser ut, selv om det er likt. Komme en viss subjektivitet inn i bilde

- Hvordan kan vanlige rommekost for planter blander med magisk

- Jo er det som planter kan betyr for verdens natur? Jo er det vi trenger å vite opprinnelige for verdens natur?

- Characteristics of plant shape?
- Size of plant leaf?
- Shape of leaf base?
- Main purpose?
- Can we extract something from this plant?
- What stage of nature/substrate?
- Amount of light?
- Can they be alone or do they need to be in groups?
- Texture?
- Colour?
- Changes in season?
- Roots of plant? Structure

- Water lily -> aquatic plant -> tropical climate
- Magnolia -> deciduous
- Pine -> spruce -> spread out
- Mosses -> mosses plant -> domina
- 0.2 - 0.15m tall + spreadable = arch + arches
- Desert

- Aloe vera -> bo-hoche -> spread out -> desert climate
Insectarium and re-search center

museum shop and ticket 1 200m²
research 4 200m²
insectarium 1 800m²

The insectarium is an exhibit of live insects and their habitat. It can look very similar to a palm house, but the plants are mainly composed because of their usefulness for the insect that is inside. In many cases the insectarium is also just a museum building that shows the different species and tells their story of evolution.

The re-search center is organized as a systematic matter. Table with specific size and materials has to be easy to wash.
SKETCH BOOK 2
Et nytt forsknings- og arbeidssenter i Universitetslelsens Botaniske Hage.
Området på ca. 600 m² inneholder flere dypres og 1100 m² inneholdt med verktøy i ulike hjørner.

Vegger
- Polysortment
- Mulig
- Mediterranean
- Tropisk
- Arkitektur

En sommerbygning

Røm

- Røm med forskjellige planter
  - Labrom
  - Kjøkken
  - Oppbevaring

- Plant samme culture lab (underground)
  - Has it be correctly controlled area vs natural light!

- Lagring av før
Jeg føler mig nødt til at forstå og acceptere de forløbende skifte i min vej. Jeg ønsker at vise, at jeg er villig til ændringer og at jeg kan anerkende og forstå de resultater, jeg har nået frem til. Jeg erkender, at det vil føre mig til at skifte mine forventninger og mål. Jeg velger at se på disse ændringer som et mulighed for at vokse og lære. Jeg er villig til at tage ansvar for min egne følelser og at finde ord til mine følelser.

Allé konkrete løsninger kan vi ikke skrive.

Set man atmosfæren om plantemæssige er helt forskellig og plantene er forskellige. Et system af rejsebeskrivelser kan hurtigt som denne, men skift en om helt inden.

Når jeg vejer et stort ombygning.

Den stabile struktur

med flere punkter

første og trekk på

møderen.
føre oppvakte veggler

flere oppvakte vlemmer

jekke med felse av store
strukturer og mur med hager
og avheng av de eksisterende
visitors center

An active central part of the building
context with the outside space
context within lab and greenhouses
in section of the plants flora

The visitors part of the meeting between the inside world and
the research center. It consists of smaller and larger modules,
with a library and meeting area, function. They are the spaces in
functional and provides views of research and the garden.

greenhouses

A new way of mixing between the different climates
wet/dry environments for conditioned buildings

created with the public plan
Contact with the laboratories and the offices
in connection to the visitor center

The green part near greenhouse spaces for research and should be placed
as a way to lead there in constant good light conditions, a
more visible part of the balconied garden.

industries

A new area of plants and
progress short spaces

the area must include
analytical areas
the plant culture room must be completely sealed in daylight
clean and ventilated spaces.
The spaces are a catalog of plants organized in a particular order and according to seasonal zones.

**LIBRARY OF PLANTS**

**THE BOTANICAL HIGHRISE**

KOERRIT FREN EM KLINERE

Korrespondere meg om frem for frem klimaer

kali bagget er ett eksempel på frem ikke andre korrespondence er felles nåværende

red oat plaa
FLERE KUMBER 8801
KUMBER SMART BIA
SMART MABE
1. Hvordan kommer man ind når hele byggeriet er et museum?
2. Hvordan kommer man ind når det er et andet museum?

- Friluftsråd
- Bibliotek
- Transek
- Hytteområde eller demarkation

"Alt afhængigt af venstre"
Fem separate klimaanlegg, behandlet

Hvor mye glas vs. held?
SKETCH BOOK 3
the wall
- the columns
- the vertical structure

what is the first floor?
How do we order the space?
What do we see when we enter?
A sketch or drawing showing an interior space, possibly a room or an architectural detail. The text appears to be a description or a note related to the sketch, possibly discussing the use or function of the space.
Vertical landscape:
The botanical highrise
Botanical center
Library of plants

EX SITU, IN SITU:
Research center in the Botanical garden in Oslo.
Conserving plants from all around the world.

Arctic climate with moss growing on the walls and samples of culture scattered in the room.
I mælt for de fire venstre er planer over bunden og fjorden og separat fællessenge fra sin generelle natur og alt omkring natur. Den mæltte naturen er planlævet som en fællessenge, skabt for at

**Klima omkring klima som klima**

Hvordan er dette, at der er klima for opgaven min? Hvordan vil det være om de hemsedele, beliggende om den øde?

Et konseptet er et bygge som er bundet prægnet. Her findes det mest naturlige elementer i et sluttede bygge der planlævet som en fællessenge. Ligeledes kunne det påvirke underdrætten. Der findes en skærm på bakken og planlævet på aluminiums bord.


**Første etage**

- højgangsparti
- trappe
- gæstehus
- auditorium
- bibliotek
- trappe og hus
problemer med de skilttørre uddører er at det bør kunne
være planlænet inden projekteringsstart. De skilttænde fjer
vælger sig ved at bygge en arkitekturplads, da det skilt tænder
for det intime rummet på grunden af fordeligheden.
Også de skilttørre indvendige rammer er vigtige i
infrastructuren.

625 m² per rm.

om ikke kan i
rum med uddører
og vinder.

BETING OS HVITJ STÅL

TAK

Bjælkevejering i
hvert sæt 1-2 sl.

væggen ved væggen
ophængt i væggen.

Væggen er ved væggen
ophængt i væggen.

Væggen er ved væggen
ophængt i væggen.
[Handwritten text partially visible]

- et stykke
- det, navnlig
- en sjælden
- stift
- glasinde
- med
- beboende
- støl.
- bestemt hjørne.
BASE STRUCTURE

CROSS COLUMN IN THE CENTER
Har vi ikke planlægner med snitt?

Gør i detaljene i en av planerne. Hvordan kommer man tilbage til alle? Kender man bygger som arbejdsstedsplan?

Lage en illustration med alle avsnitene.

Større navn om programmet/oppgaven i pro-diplomar.

Antal puncher/mad for diplomar.

Lage en ekonomi af skitseren.
Ejendommens møbler er af metal og tæppe.

Værker fra: "Sørensen. Sortiment.

Detaljer om: Møbler og møbelhuse

Bemærkere over: Design og funktion

Generelle kommentarer nedad mod andre komiteter i møderhallen.

Hvor kan der hælken

Hvordan kan det

Kan der hælken?

Bemærk.

500 mm

Vejr

500 mm

im. del gavnebor

Vendt og svindlem
Hva er det vi skal addede og hvordan kan det forandre den egna rummet?

- Minste bibliotek
- Minst 1 antall
- Plass til papper og dokumenter
- Kan det være en separat rom for
  - Nytt kommunikasjonsrom
  - Kan det være en separat
    - Liten, men stille
    - Til å møte
    - Kan det være en separat
      - Til små møter
      - Til å skrive
      - Til å les
- Minst 1 antall skriveplasser
- Kan også være en separat
  - Til arbeid og studie
Reservec facility in the Botanical garden in 1860

Mediterranean
Fylle under skjærm
Røyke skjær

kan vi normal høyde (5-7m)? Træjer
bør være en barndom kan ha en guldfrog
orden? kan være et fart som trenger bare
bord.

regulerer = store rom, høyt vekst felt, trenger ikke
bord.
likstilling = store rom, kan være høyt under skjærm,
trenger ikke bord og mpe guldfrog.
Mediterranean kan ha normal høyde (5-7m). Træjer
bør være i barndom kan ha en guldfrog.
orden? kan være et fart som trenger bare
bord.

prosje tekkvans
= gade, galleri, in plan.
oldenbær somme

segre i en am
5,5m.
15 m. std. length

- skjermet fra

- høy gen

- los gregg
Office space for 15 people

ca. 800 m² of floor space
ca. 1200 greenhouse working area

En sitelink and lounges
Club room
9 tiered floor level

Architect's model of greenhouse

When you walk in the area of the museum buildings you see the research building in the end.

The enclosed character of the space gives it a sense of place and a real feel for the area. It gives a sense of something very special yet something that regards this garden work.
SKETCH BOOK 4
The concept plan works very good for the different programs of the building. But the greenhouse spaces are a completely different world, it lacks character. Perhaps it needs a stronger concept/special relation between the two (line of vision).
FAKE Industries architectural agonism

Alert - desert
Dust - mediterranean
Tilt - cloud forest
Riddle - arctic
Today - rainforest

Can the arctic area be separated by chambers with different temperatures? Kind of like large storage spaces for the season.
You take out their plants and store them in a common working space.

Make the industrial area stronger and move industrial fitted shitty zone, where the soil and the plants are coming and out from the garden.

Diagram mar temperatures mair vorman filletten
**TRE VIKTIGE BILDER**

1. SETTE VI SPEN
2. TØM OG OPPENbare
3. Fra et Ferdigskammert

**LAGE EN INSTRUKSJON**

*Instillingsmulighet i planen. Trutning? Hurtigkomponering?

**Dei egen komposisjon.**

**Diagrama**

- **construction**
  - Articulate the rooms of cool climates
  - Column space - climate
  - One space in principle
  - Column structure?
  - Clear structural attitude should it be the same or difference? Stil eller åpent?
  - Hayen som ikke som en avslutning, men som noe mer...
  - Vise form i avslutning, men med form...

- **steplinien**
  - Steplinien børde...
  - Viste vi detaljene...
  - Viste mer detaljer...
  - Viste mer detaljer...
hestende-bredden forhold

\[ \frac{L}{b} = 18 \]

\[ \frac{18}{0.65} = 18.4 \]

\[ \frac{18}{0.55} = 18.1 \]

hesten hænger på 11m

vest qvadrer verv

0.65m dybde.
Where does the beam go? the beam as a space defining element.

BAUKUN - Three projects, 22 November

The house of memory.

How is it possible to make a modern monument?

- simple
- brick
- images formed as symbols, relational representatives.

The relation between four climates, four sides of the building.

Auditorium - Kan være i kjeller uten døs. Eller først stort vindu.
A1: 549 x 841
A2: 420 x 594
A3: 297 x 420

Til notateringen
A1: 1300 sækplanten i øverste hagen (højsten).
A3: 1500 mikroplanerne i jordstyringen ved hagen.
A3: 1800 uddeler plante i hagen med hyppel.
A3: 1500 bløvskell i hagen med mikroplaner.

- Kort med nabo på træerne.
- Kort med alle planter.
- Kort med hyppel i træerne.
- Kort med hagen som jeg fjer 1.
- 1500 delplaner i hagen.
- 1500 mikroplaner i hagen.
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- 1500 mikroplaner i hagen.
- 1500 mikroplaner i hagen.
hvit stålkład
expanded metal
Elements like material
made filters the light.
Stål konstruksjon

Jør det dukke som er snudd
i fasaden kan være dynt.
Stål på underen av fasaden som tar
stor stol.
Levering betong på
innside som tar
stor stol.
bjelkerist med strekkmetall
25 cm vanntak

boringe system
fermodell

Kirksall
huldekke

modell 1:50
vigtig at taket
har en rigid
struktur som
svæver godt ud
der det træff
meget.

Kun vare

fra kulør.

[Diagram]

den asimetriske
plader har potensiale

men reaktor i forhold

bogen sluk

med at bygge
Primærbearingen som gestalter ned ål skjeringsystemet i mitten av konstruktjoner. Betong

Sekundær-bearingen fungerer som en mengde rødt hele. Konstruktjoner er støpset bundet ihvel. Bear i fasader og er med på å berge konstruktjoner. Stål

Tertiær-bearingen er med på å stabilisere hele taket og gave hele konstruktjoner, mer spesielt BEFØRERE STÅL

- merk fasade
Køthager i alle ørter. Køkken rett på.

Andre
1945 3508

Anm. fra skrivemester.
The garden follows the same structure as the rest of the garden, connecting to existing paths and as a continuation of the garden structure.

The building is a clear architectural object standing freely in the garden. It is placed so that it is not a destination, but rather something that you discover along the way.

The relationship between work and the visiting part of the program is only the separating wall. The arrangement of the plan creates four zones within one space.

THE RELATION BETWEEN POOR CLIMATES

the two first floors are straight forward all the plans are straight forward except for the spaces in the roof.

the ceiling as a house
Dipлома
2017