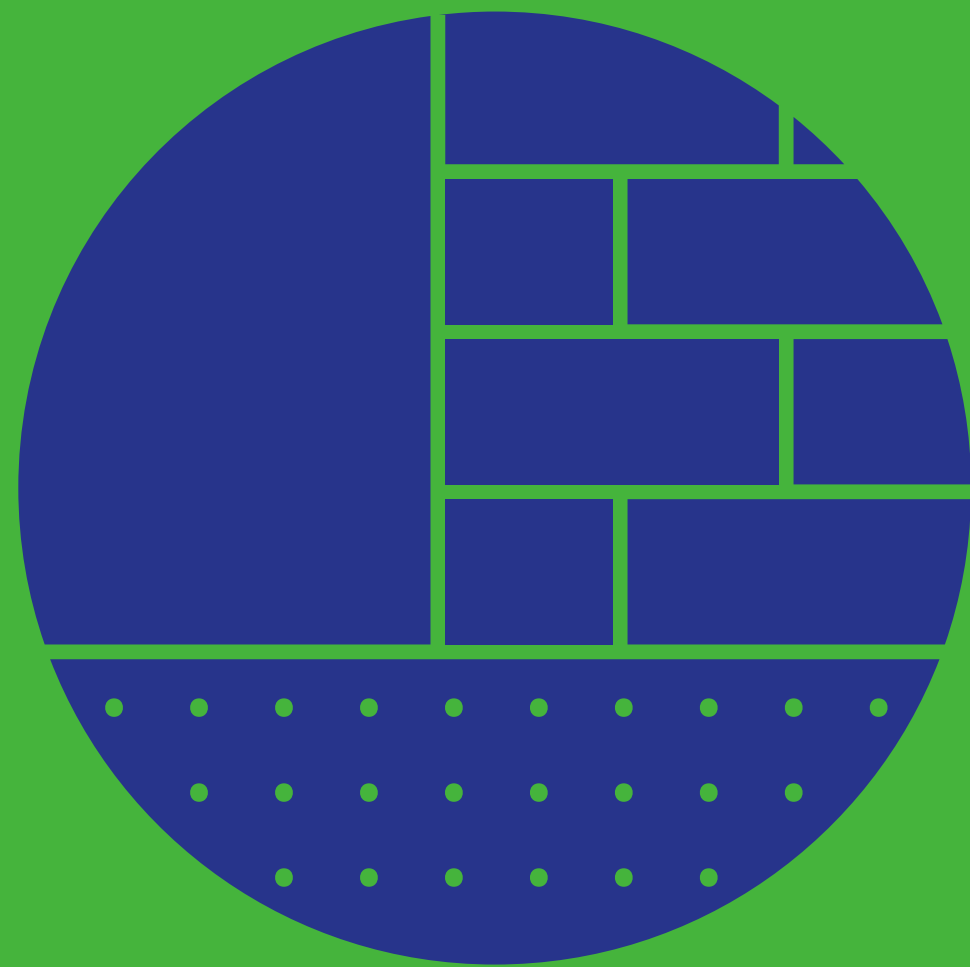


The School Space 2016–2020 creative project



What is School Space?

School Space is a playful project based on research and creativity, in the course of which students will use different scientific and design methods to explore the school of today in order to create a vision for the school of tomorrow.

After starting as a pilot project in 2015–2016, the School Space project has grown into an annual tradition that invites students and teachers to explore the built environment, offers students interested in architecture and design self-realization through creative work, and gives school leaders, educators, and architects a look at the schoolhouse through students' eyes.

For whom?

The project is aimed mostly at primary school graduates and high school students, but there is no age restriction for participants.

The material is available in English, Estonian, Finnish, and Russian.

Teachers of any subject can become tutors. So far, most of the tutors have been art teachers, but many groups have been led by teachers of mathematics, Estonian, science, and history instead, as well by extracurricular activity managers, headmasters, and other education workers. The teacher's role is to tutor the students if necessary. The project's handbook serves as support and guidance for the teacher.

Why?

As a result of the project, we will learn how students experience their everyday school environment, what they find important, and what they lack.

Students are the largest user group of the schoolhouse and also the most affected by its environment. In the course of the project, they will learn to notice and analyse the space around them, and, as a result, are better equipped to have a say in shaping their daily surroundings.

Studying the spatial environment of schools combines knowledge of many different fields closely related to everyday life. While accomplishing the tasks, students will notice how space affects their state of mind and the process of studying during the school day.

How?

The School Space project contains eight research and creative tasks on the functions of everyday life in the school building, which are characterized by the project's catchphrase, "Research like a scientist. Observe like an artist. Think like an architect."

The tasks are completed throughout the school year, from October to April, and are submitted all together at the end of the project.

Students will receive feedback from professionals of the field who will comment on the works submitted by the students. The feedback motivates, inspires, sprouts new ideas, and cheers on the participants. The project concludes with youth architecture conference, where the teams present their work to others.

School Space in numbers throughout the years:

	Students	Tutors	Schools
SS'16	200	35	35
SS'17	100	20	20
SS'18	102	14	11
SS'19	209	31	26
SS'20	274	35	28

* Starting from the K'19 season, the project has also taken place in Russian language.

Feedback from teachers

Feedback

“The project was enjoyable from beginning to end. Step by step, the tasks guided the students from the birth of an idea to the most beautiful and practical solution. Everything was executable and inspiring.”

“The School Space project is a very nice project. In 2016, a group of students chose it as their curricular creative project, and it was a great experience that led to real changes in our school’s foyer. The space is now rebuilt, and the wall is decorated with a viking-themed painting.”

“The project is very lovely, educating and empowering. It brought along a change in attitude towards the school environment, especially among students. But the headmaster also started to notice how colours affect the mood and motivation to study.”

“The study materials that come with different tasks provide support and expand horizons.”

“An opportunity to create something extraordinary and use your imagination.”

“Enough work for the whole year.”

“I especially like the introductory tasks. They make both the children and myself see and experience space in a new way. It is great to be in touch with the way my students experience the space and to see how much excitement some topics and places create in them.”

Feedback from students

Feedback

“It is interesting and inspiring to imagine and design something for your own school.”

“We learned to read instructions, plan time, listen to each other, observe the surroundings, use different research methods and design programs, and to present our work.”

"We learned to cope well in a tense situation."

"We definitely encourage younger students to take part in this project in the future."

"Thanks to this project, we learned a lot about teamwork, and after finishing the project we see the spaces of our school in a different way.”

“We discovered how many ideas it is possible to have about one space. Looking at a random space now, I can think of so many ways to make it better or more interesting.”

"We learned to meet deadlines."

“Thanks to the project, we are able to imagine different ways to make our classroom a more comfortable and fun place to study.”

“We found out how big and interesting our school building actually is.”

"The tasks helped us develop leadership skills.”

Why do people participate?

Feedback

“I have participated in the programme with my students for several years. I like that a majority of the introductory tasks involve sending the students out of the classroom. It is very rewarding for them to be able to work independently and to present their work in interesting new formats. As a teacher, I always find something that gives me a fresh perspective on things and brings up interesting discussions. I feel like I’m getting better as a tutor every year.”

“The desire to participate in the project is based on the 21st century changes in both teaching and the school environment – a digital environment plus open study spaces.”

“We would like to make one classroom in our school more modern, friendly, and youth-oriented. We hope that renovation will take place next year and our ideas will be considered when rebuilding this space.”

"An extension will be built to Koeru Secondary School, and both the school management and the students themselves feel that they should contribute in order to create a nicer environment."

“St. John's School is planning to build a new school building. Obviously, the students' point of view is also important. Unfortunately, discussion is hindered by a kind of ‘language barrier’ that can be described as a lack of knowledge of design vocabulary and design techniques.

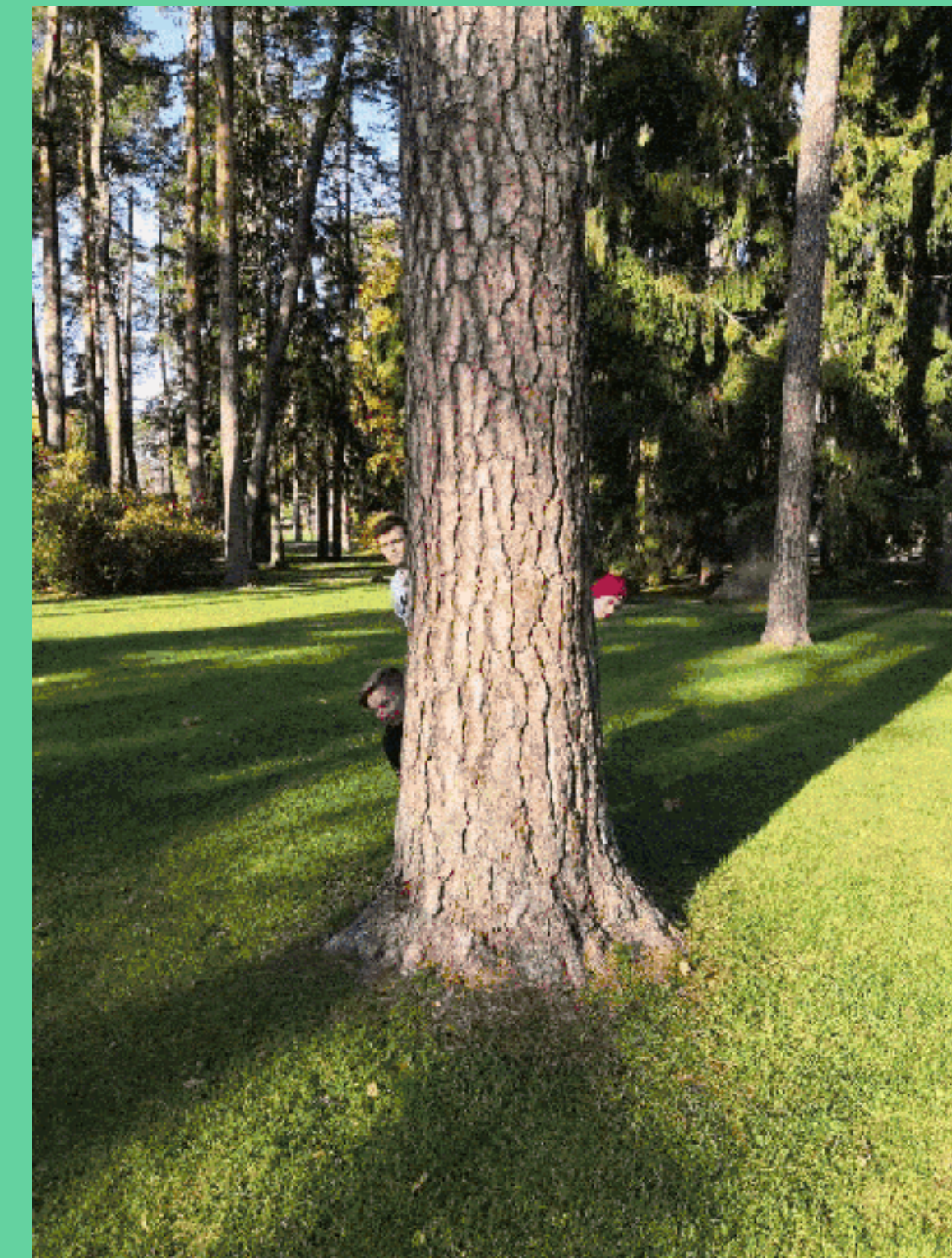
We believe that analysis of the surrounding space, which consists of eight tasks, helps to translate the perspectives of young people and create a compact design input for the architects of the building. In the introduction to the project, the concept of divergent thinking is repeatedly pointed out. We believe that mastering this is essential in today's dynamic environment."

Task #1: Hello!

Tasks

The first task is to make a GIF image against the background of a nice and extraordinary place in your school to introduce your team.

In this task, most students have chosen an outdoor area as a nice or extraordinary place, including **places related to sports activities**, such as swings, a stadium, a chess grid drawn on the pavement, a bike path, or just the main entrance to the school or a monument in front of the building.



Example: [click here!](#)

School Space '20 Elva Gymnasium /
Team Elva Pine Sprouts

Task #1: Hello!

Tasks

Indoors, **places where one can enjoy movement** are preferred: a gym, a corner with bean bags, or a stairwell. The students enjoy climbing on windowsills and lounging on the couch. Big, spacious rooms where one can move around vigorously are also appreciated. Students mostly mention places where breaks between classes are spent.



Example: [click here!](#)

School Space '20. Salme Secondary School /
Team Salmekad

Task #1: Hello!

It gets noticed when the room is decorated with elements that add character to it, such as a tapestry on the wall woven by the teacher, or national-style ornaments on the doors. **Students appreciate homeliness and places where their teachers or fellow students have contributed to the design.** They also like to see the achievements of the students exhibited, such as sports trophies, paintings, and other student creations.

Often, various **colourful decorated walls** were chosen for the background of the GIF image as the nice or extraordinary place. These include murals outdoors, fun closets with painted doors, a large map on the wall, and abstract circles on the exterior wall of a school building. Students conceptualize the message of the paintings.



Example: [click here!](#)

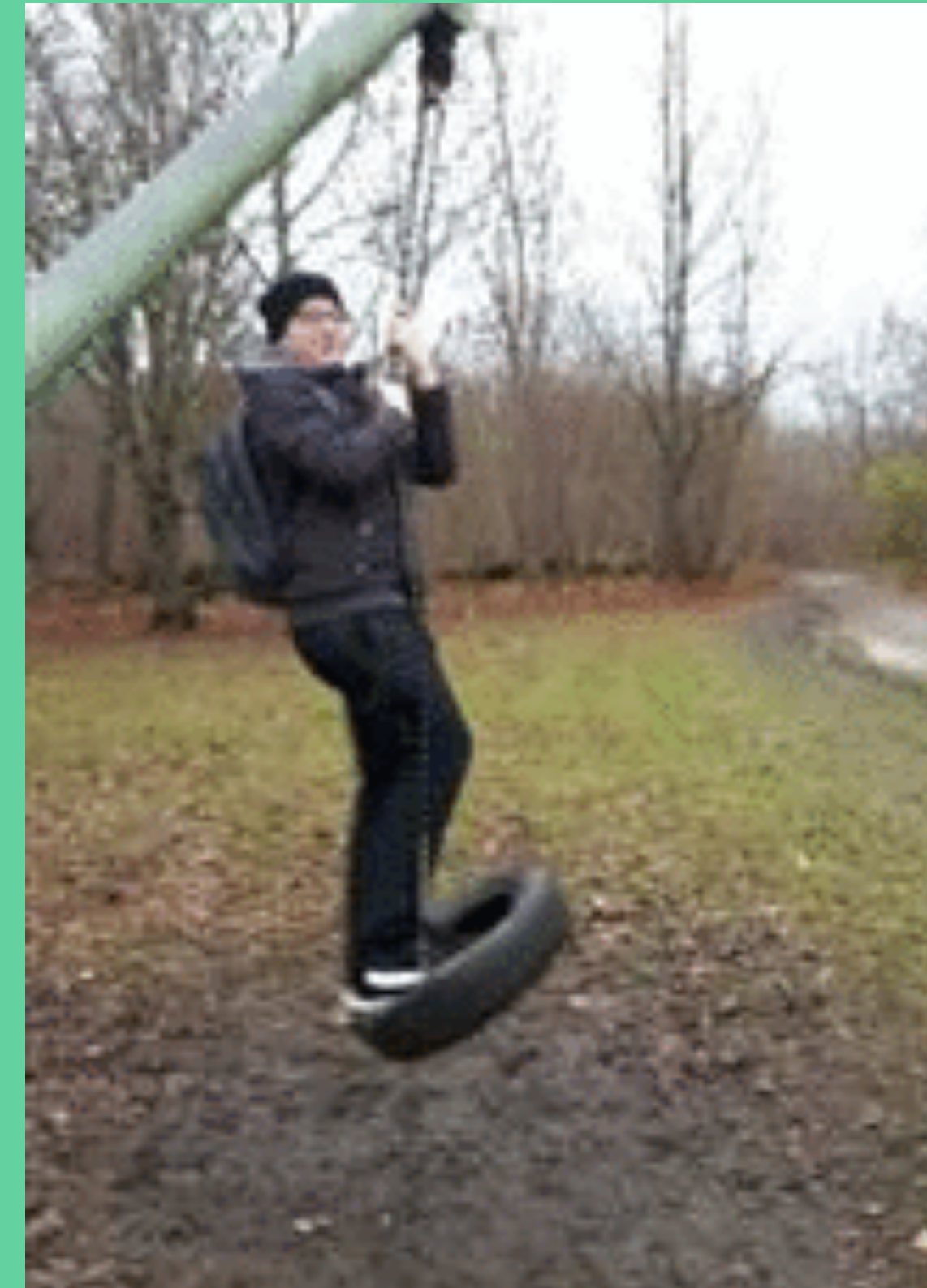
School Space '20. Põltsamaa Co-Educational
Gymnasium / Team PÜG 7b

Task #1: Hello!

Tasks

The possibility to engage in sports and be outdoors dominates the choice of the place. Most of the works depict the outdoors, being physically active, or both at the same time.

If the students are not allowed to exert themselves physically or the space doesn't facilitate that, they will get along by lounging on the couch and spending time on their phones.



“We did this because swinging is a lot of fun for us. We often get new ideas and creative impulses while swinging. It feels like being inside a small and nice cloud that moves back and forth.”

Example: [click here!](#)

School Space '18. Saue Gymnasium / Team H.E.A

Task #1: Hello!

Tasks



“The drawings in the background are creative work done by students as a gift to our school. All of this depicts our relationship to one another and the school.”

Example: [click here!](#)

School Space '19. Pähklimäe Gymnasium /
Team Archicrab



Brightly coloured, striking decorative elements stand out in the chosen places. For example, a colourful wall or a mural adds variety to the space and helps to shape the identity of the school, thus creating a sense of belonging among the students.

Example: [click here!](#)

School Space '19. Koeru Gymnasium / Team Goofdogs

Task #2a: Manwatching

Tasks

Focusing on the relationship between the body and the spatial environment

In this task, the children will observe their fellow students, their movement, and different body postures throughout the school day.

The task made it clear that most of the day is spent sitting, which is not good for physical fitness. The children noticed that many of their fellow students sit with a hunched back or in an otherwise wrong posture which could cause back pain in the future. During the class, some students placed their backpacks on their seats or raised their legs on the chairs in front of them to **create a change in posture**. Sitting posture is also affected by the mood and level of fatigue.



Some teams explored unexpected places and different body positions evoked by those places.

School Space '20. Tallinn Linnamäe Russian Lyceum / TLVL TEAM

Task #2a: Manwatching

Students enjoyed this task because it made them see how many different postures someone can take while simply sitting or standing. During a break, vigorous movement is common, but being immersed in one's smartphone is also prevalent. The phone is an inseparable companion during breaks and sometimes during classes as well. Depending on the mood, the break is mostly seen as a possibility for active communication with friends or as an opportunity to separate and be alone.

While experimenting with alternative ways of movement in the school building, students often try to find places to climb, lie down, hide, or to be alone or with friends. Thus, spatial variety is important for students. They appreciate both narrow and wide spaces, but for different reasons.

Physical space is connected to psychological space; therefore, even the best school environment feels restrictive if the student doesn't have enough freedom for self-realization.



"I want to show one of the best hiding places in the school: under the stairs. It's very good to hide there and no one will find me."

School Space '18 / Puhja School

Task #2a: Manwatching

The students' investigation shows that even simple furniture, such as benches, can be used in a creative way. They like to climb and lounge – windowsills are suitable for that, for example. It also feels nice to slide down the stair handrail.

We can conclude that students are eager to take different body postures and move in various ways, but unfortunately the possibilities for that are limited: running is forbidden, there is little space or resources for vigorous activity, and not enough time to go outside during a break. As a result, the children, even though already tired of sitting, are spending their breaks passively, sitting on the floor or leaning against a wall, looking for a place to lie down, eventually using tables, benches, and the floor for that purpose. However, physical activity and variety of movement are important for restoring cognitive resources, so enabling young people to move adequately during the school day needs special attention.

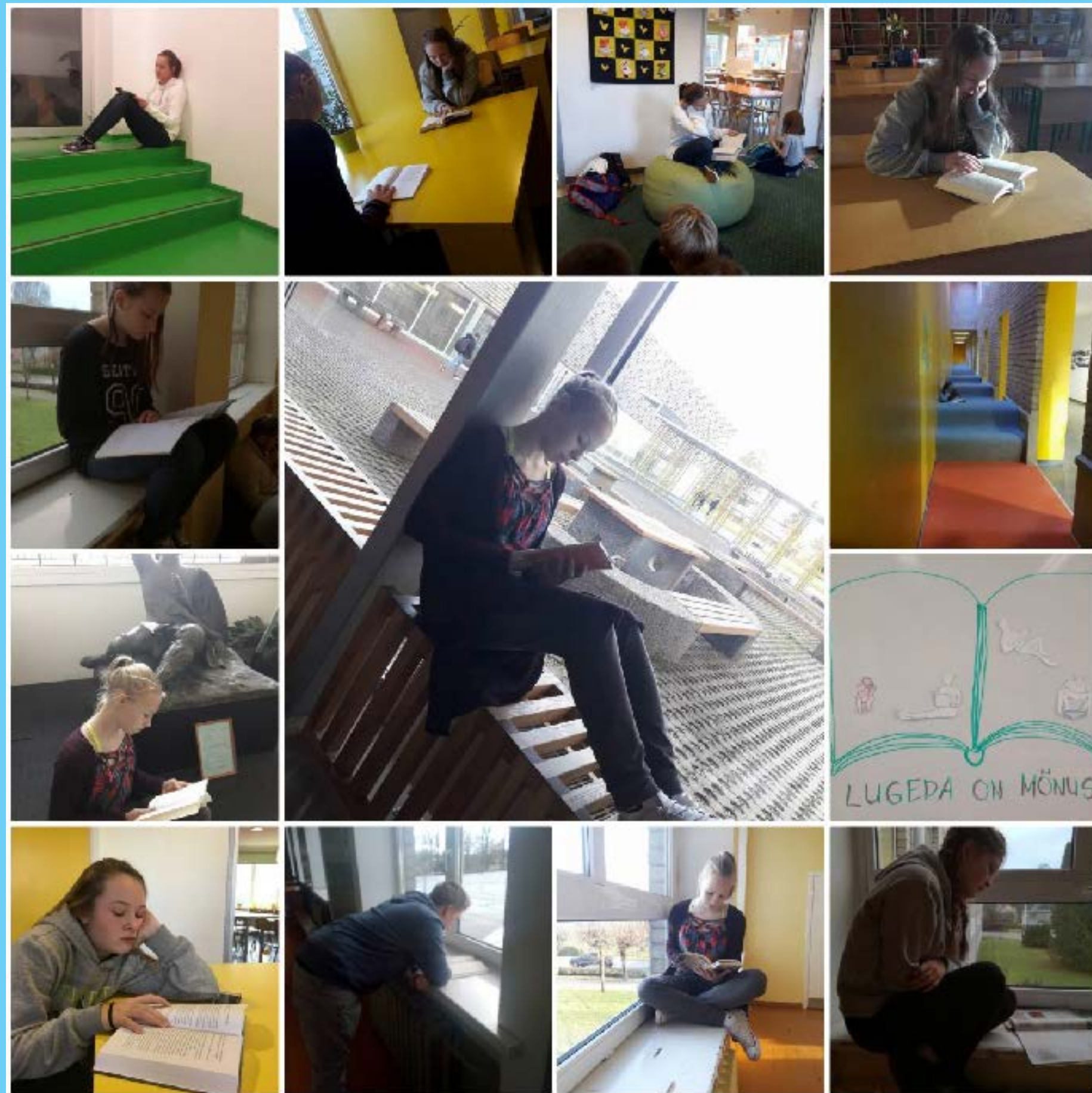


Different places and postures for reading preferred by the students during the break or after the school day.

School Space' 18. Suure-Jaani School

Task #2a: Manwatching

Tasks



“Reading spots – quiet, comfortable and equipped with natural light – could be an integral part of any school, making reading a norm alongside other enjoyable activities,”

comments educational researcher and psychologist
Grete Arro,

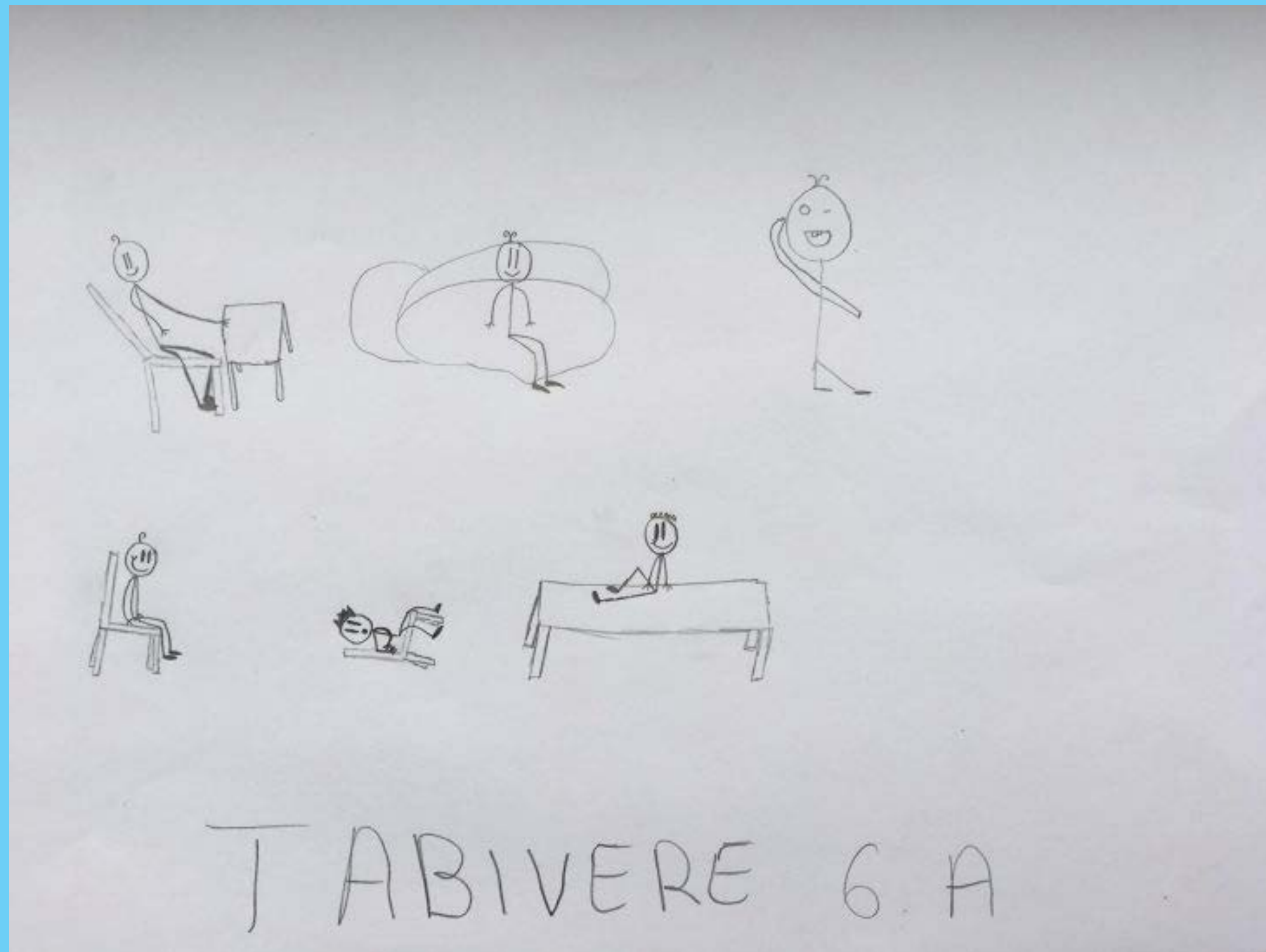
“and for those who think of reading as a passive activity – no activity that engages the brain in such an intense way is passive :)”

"It is noticeable how the subject is completely tired by the end of the class."

Rahumäe Secondary School / TeamRahukas

Task #2a: Manwatching

Tasks



“This work has guessed the central needs that we have during a busy school day: the need to relax from time to time, to be quiet, to choose one's own position, to chill, to lounge, to laugh and chat with friends, to read, to stare out the window. Those moments of rest, even though short, charge us with new energy that we need in order to pay attention and concentrate, give us an opportunity to connect with others, to relax and “escape” for a moment. The more consciously we work to create such places in schools, in addition to the library, the better the school premises will support learning.”

comments educational researcher and psychologist
Grete Arro,

Task #2a: Manwatching

Tasks



“It seems like a lot of fun on top of the pouffes. Playing with the pouffes and climbing on top of them is also a good exercise for the body. This could be a great inspiration for making the school building more customizable by students, giving them the opportunity to reorganize spaces. As a bonus, it is emotionally rewarding as well.”

Anne Tamm-Kivimets

“As a result of the observation, we have come to the conclusion that the best places in school are always the ones where you can snuggle up by yourself or communicate with friends.”

School Space '19. Koeru Secondary School /
Team Goofdogs

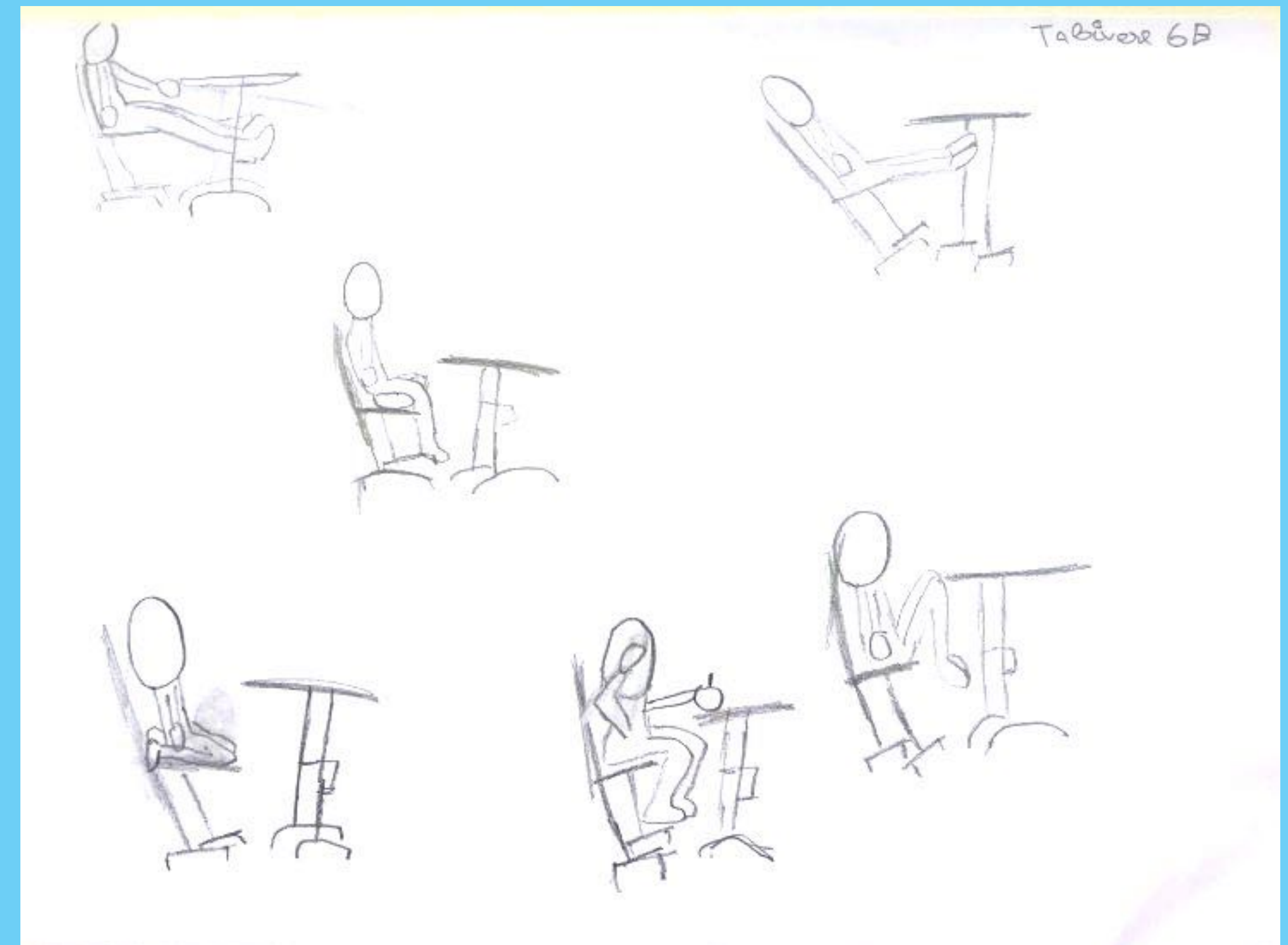
Task #2a: Manwatching

Tasks



“None of the benches has a full backrest and this directly affects people’s body posture and even behaviour. Students who sit on a part of a bench with a backrest support their back or sit straight without using a backrest. But students who do not have a backrest often feel uncomfortable and sometimes lean against the wall instead. For some reason, the wardrobe lady feels uneasy about this and, thanks to those chairs, she goes around every break and rebukes everyone who leans with their back against the wall.”

School Space ‘20. Põltsamaa Co-Educational
Gymnasium / Team STEN



“It seems almost impossible to sit in a classroom with all four feet of the chair touching the ground.”

School Space ’18. Tabivere Secondary School / Team 6B

Task #2b: Bio-logic!

In this task, students study other species that inhabit the school.

Many different houseplants are found in the school – mostly in the classrooms and in the teachers' room. Everybody is used to large houseplants in a schoolhouse, and they often feel like a natural part of the building. Larger and more prominent plants provide refreshment on a difficult day. Drawn nature, such as nature-themed paintings on the walls, are also perceived as nature.



"The picture shows the inanimate nature of our school."

School Space '19. Pähklimäe Gymnasium / Team DAP

Task #2b: Bio-logic!

Tasks

Students find great joy in houseplants, and they get to know their names and characteristics. For example, they learned that plants replenish air humidity, kill pathogens, and clean the room of toxic compounds.

In one schools' example, there is a little "zoo" in the nature class, where you can find rodents, turtles, parrots, snails, and other small creatures. This is a very popular place among primary school students, who often ask permission to spend more time there.



“Humans have an inherent need to connect with nature, and therefore the greenery of plants calms the cluttered mind and allows for better concentration. Thus, closely studying houseplants and taking care of them is an area of the future,”

Kino landscape architects say, as they comment on the students' work.

“When there are plants in the classroom, it feels better and calmer.”

GIF: [click here!](#)

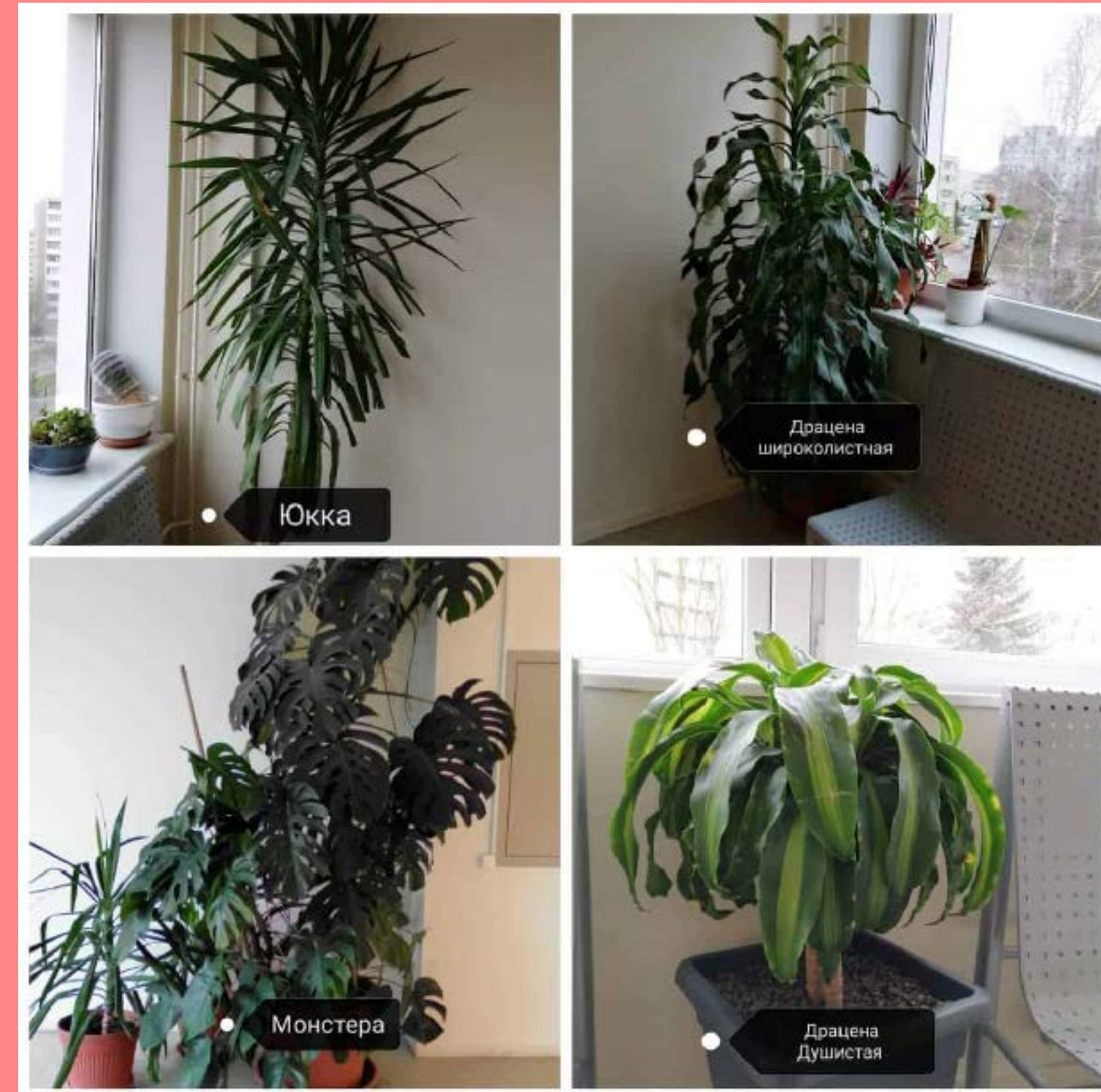
School Space '20. Põltsamaa Co-Educational Gymnasium /
Team PÜG 7c

Task #2b: Bio-logic!

Students are interested in nature; it is attractive to them and has stress-relieving benefits. Despite all of this, real interaction with nature is still rare at school.

School yards and the natural environment around school buildings were seldom reflected in the works. We can conclude from this that an unplanned school yard, which does not offer good opportunities for activity and is not attractive, is not even seen as a part of the school space. However, it is a place that has great potential for making the school day healthier and more exciting. A well-planned school yard shapes the image of the school, which in turn influences the students' attitude towards their school.

For example, by adding elements of nature, such as a plant wall indoors and flower beds outdoors, and giving students an opportunity to take care of them, we are creating a possibility for practical learning.



“There are plenty of flowers and plants in our school. We explored the corridors in order to find out the most common types of plants.”

School Space '20. Tallinn Linnamäe Russian Lyceum / Team TLVL

Task #3a: Megalomania

Measuring the schoolhouse.

In this task, students get creative to measure the schoolhouse – the spaces in it or the perimeter of the entire building. But the point of the task is not to figure out the size of the building, but to present a mathematical challenge to the students. Various methods and fictional units of measurement are used to develop a personal sense of spatial dimensions and to broaden the concept of measurement. The aim is to measure something enormous in order to find an answer to a big question.

For example, a school building may have a circumference of 127 cartwheels and a height of 8 people standing on each other's shoulders. The perimeter of the schoolhouse can accommodate 804 people sitting on chairs side by side.

Task #3a: Megalomania

The presence of various elements in the school was also measured. For example, 32 rubbish bins were found outside the classrooms in one school, which made students wonder how rubbish still ends up on the floors. In another school, stairs were counted to find out how much a secondary school student moves in a day.

“A good example of how a human being takes up more space than his or her immediate corporeal dimensions. This has to be taken into account in the design process. A human needs space to move and breathe, to fit his or her overclothes and bag somewhere, and so on,”

comments Mart Laanpere, Tallinn University’s senior researcher, former mathematics teacher and headmaster.



“In the course of our experiment, we found out that a small classroom accommodates 62 students and a big one 96 students. It follows that theoretically our school can accommodate 2156 students. The experiment showed that a lot of people can fit in a classroom, but there is enough air to breathe normally for barely ten minutes. If we put the usual number of 27 students in one classroom, there will be 1.3 m² accordingly per student in a small classroom and 2 m² per student in a big one. If we try to fit in the maximum number of students, the floor area per student would be 0.36 m² in a small classroom and 0.56 m² in a large classroom.”

School Space '18. Elva Gymnasium

Task #3a: Megalomania

Tasks

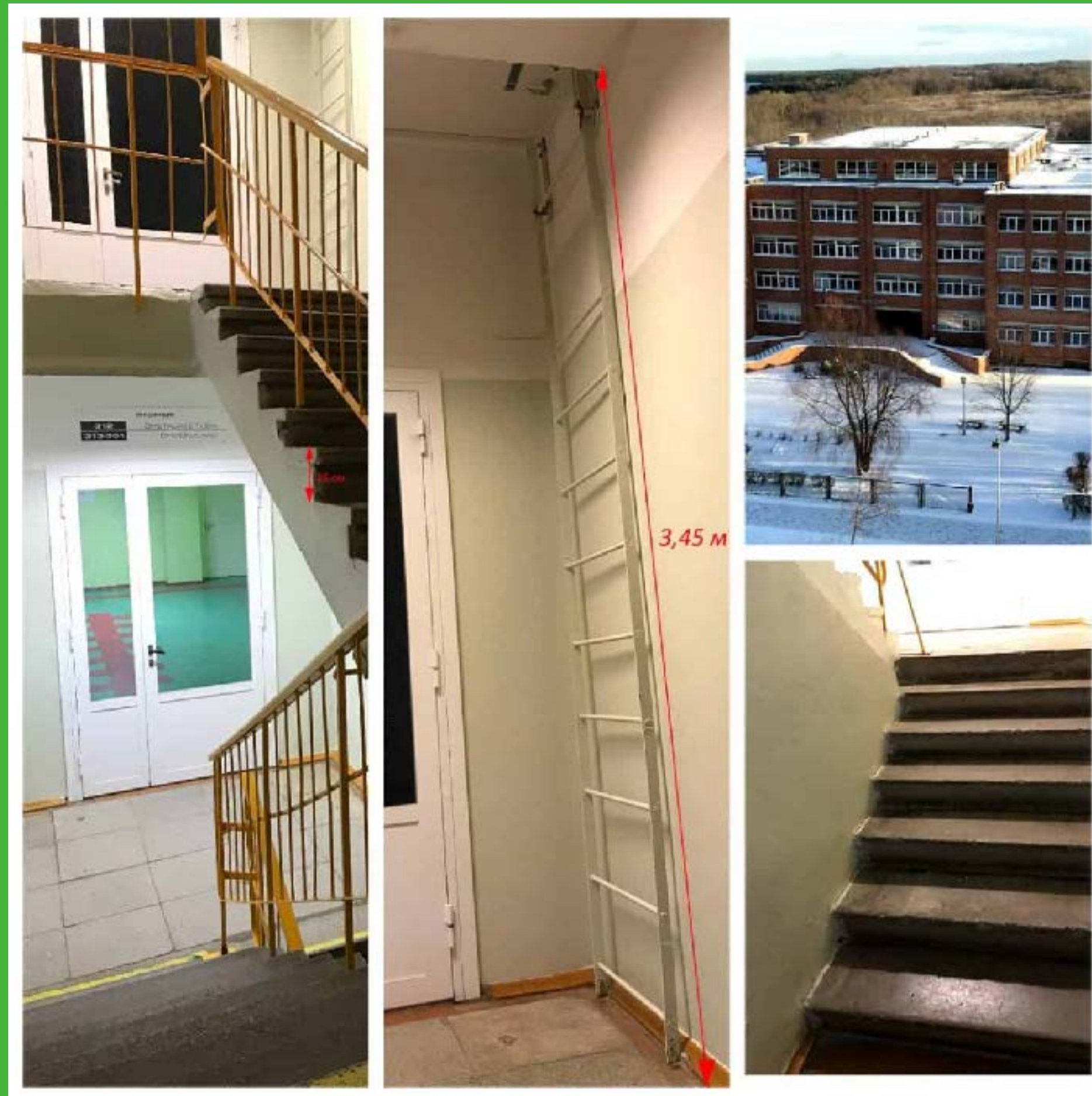
Every year some of the teams choose to use one of their team members as a measuring tool. Such units of measure draw attention to the human scale that should be part of every building where people spend time daily.



"We decided to measure our classroom using Chris, the most flexible member of our team. He likes to experiment and comes up with fun ideas all the time. We started out measuring his height, which was 1,45 metres. The height of the classroom is 2 times Chris: 2,9 metres. After this, the teacher gave us a blueprint of the classroom, from which we found out that the space is 11,86 metres long, which is approximately 8 times Chris. And the width is 5,52 metres, or approximately 4 times Chris. We also found the volume of the classroom by multiplying 2 by 8 by 4 and we got 64 Chris in a cube. Result: The Crafts classroom is 8 Chris long, 4 Chris wide, and 2 Chris high."

School Space '20. Narva Language Lyceum /
Team Sägad

Task #3a: Megalomania



The task illustrates how architecture can be integrated with other study subjects and shows how to connect physical movement with various tasks. It also provides experience solving a real-life problem (how to measure something very big).

There are 4 floors in my school. I decided to measure its interior height using the stairs. There are 2 stairs in between each two floors. Altogether there are 6 stairs. Every stair has 11 steps, each of which is 15 cm high. Therefore, the distance between the ground floor and third floor is $6 \times 11 \times 15 \text{ cm} = 990 \text{ cm} = 9,9 \text{ m}$. I added the distance between the third floor's floor and ceiling. To get the distance, I measured the stairs going from the third floor to the rooftop. It turned out to be 3,45 metres. And last, I added the height of the 7 steps leading to the 1st floor (you have to climb 7 steps in order to enter the building): $7 \times 15 = 105 \text{ cm} = 1,05 \text{ m}$. Therefore, the height of the building is $9,9 \text{ m} + 3,45 \text{ m} + 1,05 \text{ m} = 14,4 \text{ m}$. I also asked for the real height of the building from the school manager – 14,7 m. The margin of error was only 0.3 m.

School Space '20. Sillamäe-Kannuka School /
Team Kannuka-Shek.

Task #3b: Inventory

In this task, students explore the furniture and interior of a school building.

Various objects from a school's property were examined, from fire extinguishers to Christmas decorations, but most attention was paid to **chairs**. In most cases, according to the students, the chairs were **ordinary and monotonous**. When looking for something special, chairs with colourfully painted backrests, redesigned by a fellow student as a curricular creative project, were pointed out.



“There are a lot of chairs in our school, as in all schools, but they are all the same. We wanted to find something new and unusual.”

School Space '19. Pähklimäe Gymnasium / Team DAP

Task #3b: Inventory

Tasks

Students tend to value **new furniture** more highly because it creates **the feeling of a modern school**. Old furniture is reportedly uncomfortable for students, while new furniture is more comfortable. Old furniture is significant when it tells a story about the school's history. For example, the students of Rääma Secondary School draw attention to church chairs in the schools' hall, which date back to the time when a church was operating in the premises.

What is the motivation behind students' thirst for something new? Students hope that new furniture will make their school a better place, without realizing that merely replacing an old wooden chair with a new plastic chair doesn't really make a difference. Therefore, when choosing new furniture, one should analyse which real changes the new object brings to the room as a whole and how it makes the room better.



"In today's dynamic world, tracking time is very difficult. What helps us to be everywhere on time? The clock, obviously! After going through an inventory at school, we decided to compile an index or a handbook of all the schools' clocks.

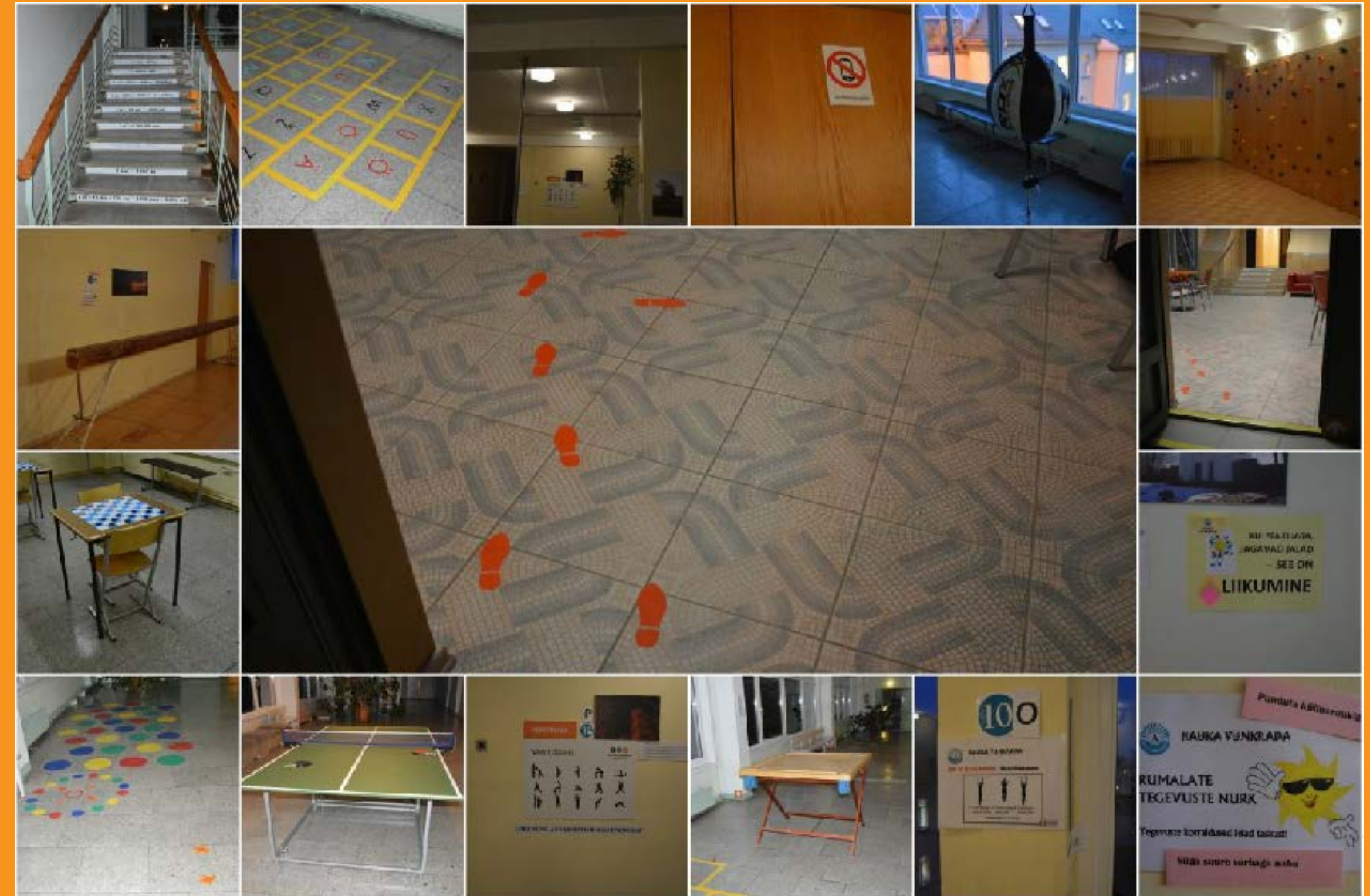
Our handbook incorporates more than 490 specimens from the kingdom of clocks. Representatives of different species are described by size, shape, colour, habitat, and distribution in the territory of Lasnamäe Secondary School."

Task #3b: Inventory

Tasks

Students often adapt windowsills, stairsteps, tables, and backpacks as spontaneous seating furniture. “In a cross-legged posture it is possible to sit anywhere, and while sitting on a table, you will be on the level with those who are standing up.”

Generally, the children like when furniture is multifunctional and allows active use; for example, they enjoy spinning in a chair. Students noticed when walls were decorated in art and were happy about the possibility to enjoy it.



“There are many possibilities and resources to spend extracurricular time in a healthy and active way, as this is a priority in our school. We mapped different possibilities of movement in corridors, stairs, and chillout spaces.”

School Space '18. Antsla Gymnasium

Task #4a: Psst!

Tasks

Exploring the sounds of the schoolhouse

In this task, students will use their ears to study architecture. They listen to the sounds produced by the building and study how the sounds echo in it.

"The sounds we noticed were new to us, and now it feels unbelievable that we had never before paid attention to the sounds that are constantly around us."

School Space '18. Miina Härma Gymnasium / Team Härmakad 2

"It was interesting to listen to the sounds and pay special attention to them because we don't notice them every day. On the one hand, the sounds around us may seem like noise, but if you listen, you can understand that this is how the school lives."

School Space '20. Soldino Gymnasium / Team Girls

"We learned that small spaces, where there is no echo, are quieter and better places for studying."

School Space '20. Elva Gymnasium / Team Elva Pine Sprouts

Task #4a: Psst!

The students are surprised by the diversity of sounds that can be found in the schoolhouse: some of them are pleasant, some not so pleasant, and many of them make concentrating difficult. In most cases the school is described as a **noisy and loud** place. It is reported that noise makes it difficult to recover and rest during a break.

Thus, it is important to pay attention to carefully designed acoustic solutions when planning a new school building or renovating an old one. But sometimes even minor changes help – art on the walls, zoning, outdoor breaks, etc.

Example: [Click here!](#)

Kooliruum '20. Elva Gümnaasium / Elva Männikaskvud

Example: [Click here!](#)

“Sounds are different. Most students don’t think of the daily soundscape as something diverse and interesting. But it turned out that you can create a whole piece of music from all these sounds!”

School Space '20. Ehte Humanities Gymnasium /
Team Seven Colour Blossoms

Task #4b: Journey to School

Tasks

Students investigate the routes and possibilities to arrive at school

People come to school on foot, by car, scooter, bicycle, train, and bus. In case of rainy and cold weather, many students do not always consider bicycles a good means of transportation, but there are exceptions.

Students notice the level of maintenance of the roads and tend to prefer the routes that are in better condition. For example, if they can choose between going home through the city streets or the park, they might prefer the natural environment of the park, but since the roads and lighting are better on the streets, they choose the streets instead. Children appreciate when a previously unkempt road is repaired.

Näide: [Vaata siia!](#)

Kooliruum '20. Pähklmäe Gümnaasium / Kunst



"Surprisingly, a huge amount of snow had fallen this morning. We imagined our way to school on a snowplow. So that all the students in our class can go to school, the plow must clean 95 kilometres of roads. In the photo, each snowball represents one kilometre."

School Space '18. Suure-Jaani School

Task #4b: Journey to School

Tasks

Even though the route to school is mostly not part of the school premises, it still shapes the daily life and habits of children and teachers. For children, whose habits are still developing, it is especially important that the environment surrounding the school is pedestrian-friendly.

In the course of the experiment, the students changed their usual means of transport for a day.

“I usually walk to school, but for a change I decided to go to school by car, so my arrival to school became much easier. It was nice to wake up and leave home later, but I still prefer to walk to school in the morning. Walking to school in the morning is important to me because it gives me energy before a long school day.”



Task #4b: Journey to School

Tasks



“This is exactly the mindset we need to cultivate – bicycles are an everyday means of transport, not only for sports or entertainment. A high number of cyclists motivates the cities to tidy up and create more bicycle lanes, and this in turn will solve the problems caused by excessive car use and low physical activity.”

Landscape architects Karin Bachmann and Mirko Traks

“You arrive on foot, with your parents or in your own car, but the most popular means of transport is a bicycle. The weather doesn't matter.”

School Space '18. Elva Gymnasium

Task #5: Site Visit

In this task, students choose a place in their school that needs a transformation.

During the site visit, students will analyse the dimensions of space, directions of movement, cognitive characteristics, possible problems, and bottlenecks.

Among the chosen sites, library and resting areas are popular choices. These places are valued for the possibility to **relax in a quiet space** or to **take up homework** before the class starts. Places for being together and communicating were also dealt with. “Being on one’s phone” is highlighted as a distinct activity while waiting for a class to start. It is reported very often that there are no places to spend time during the break, and it is very common that the children are sitting on the floor. This should be acceptable only when alternative activities and seatings are guaranteed, and sitting on the floor is a conscious choice rather than an inevitability.



“Many students stand by the door, talk to each other, repeat homework or are immersed in their phones as they are waiting for the next lesson. The walls are decorated with drawings made by students. They are generally not changed. Some pictures have been there for a long time. We think the corridor is a bit colourless, desolate, and boring; therefore, we want to make it more impressive. There could be places to sit.”

School Space '18. Kärddla Secondary School

Task #5: Site Visit

As the most problematic places, students mainly point out wardrobes and corridors, which are often **noisy and lack adequate seats**. The most uncomfortable and least popular seems to be the “prison” type wardrobe, which is often crowded, loud, and dirty. Some children wished for personal lockers for things and textbooks. Control over one’s personal belongings, having a safe place to leave them, and the opportunity to organize and look after those places is important for them. The solution doesn't necessarily have to be a locker, but the existing wardrobes are clearly too cramped in many cases.



The library is the most important place in our school. There you can relax quietly, spend your free time, communicate with friends, or do your homework. We feel comfortable in the library, because there it is possible to do what you like. It is quiet and peaceful, nobody is making noise. School Space '19.

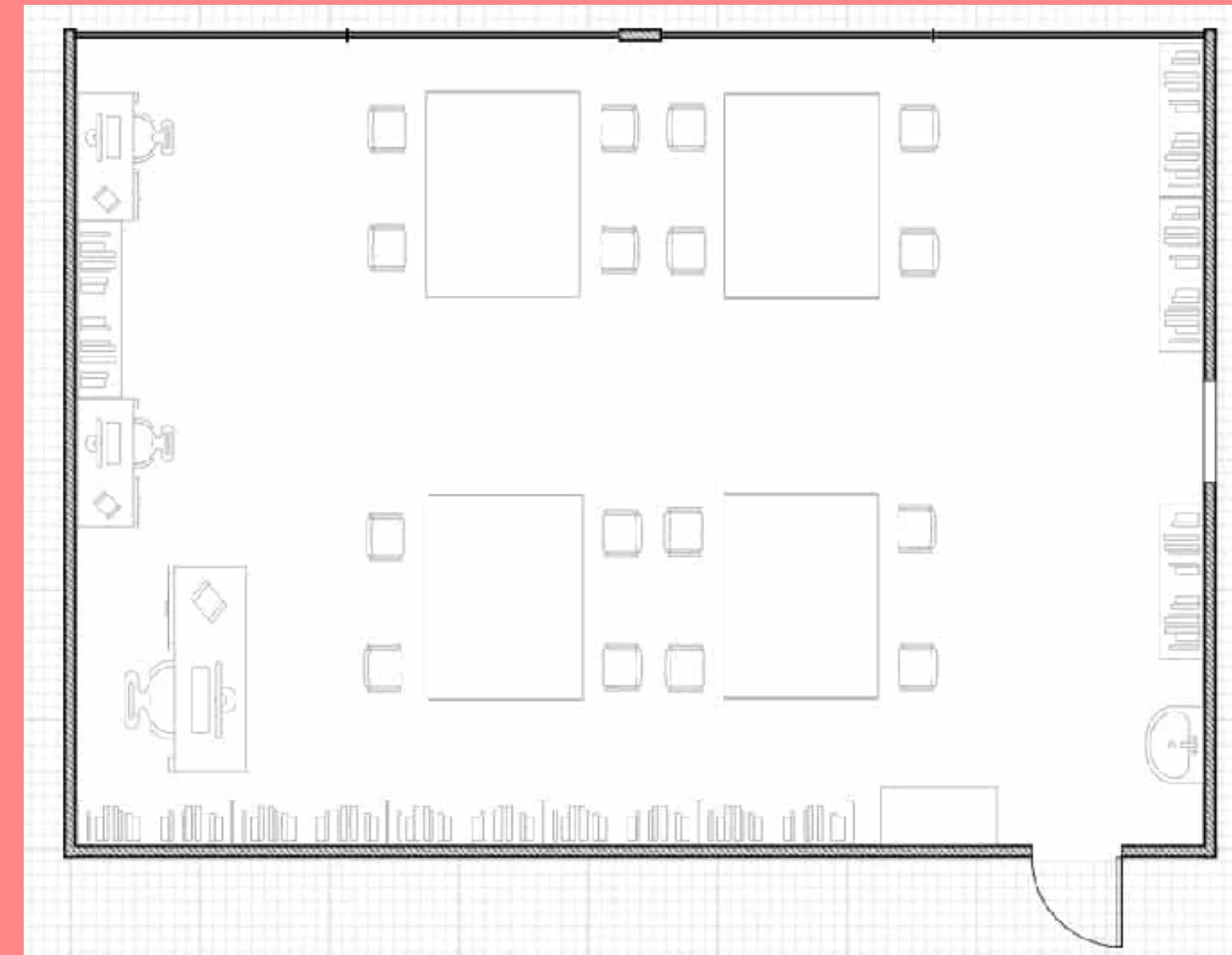
Pähklimäe Gymnasium / Team Dragon.

Task #5: Site Visit

Some students chose to focus on classrooms as well. They pointed out that the rooms are **boring** and they would prefer them to accommodate more different activities. The children found that if the room only offers the opportunity to sit, they will spend their free time on the phone. Classrooms are ugly, old-fashioned, and anonymous for many students. Noise and excessive echo are noted in most of them.

Students dream of **more comfortable seats, movement games, and board games**. Thus, one is ready to give up sitting if there were more exciting activities instead.

Places that students found interesting included a stairwell niche with undefined function, a place under the canopy in a courtyard, the hallway of the secondary entrance, etc.



Children describe the space: “Prison-like, sad, ferocious, mundane. There are always a lot of people in the wardrobe, but very little space. Everyone is trying to change clothes quickly. We wish it weren’t such a sad and boring place. We feel embarrassed and awkward here, always trying not to hurt other people. Very inconvenient.”

School Space '20. Soldino Gymnasium / Team Kakukene

Task #5: Site Visit



Students describe the chemistry and physics classroom: Old, faded, worn, uninteresting. There are 20 tables, a computer, a projector, and tables of chemical elements on the wall. It must have looked exactly the same in the last century. We feel a little uncomfortable here, even though it doesn't interfere with schoolwork.

School Space 18. Antsla Gymnasium

"You say that you feel uncomfortable in this classroom, but it does not interfere with schoolwork. Are you sure? Imagine if it were an extraordinarily pleasant space where you feel nice and comfortable. Maybe this could change your attitude towards chemistry and physics as well?"

asks the teacher of the School of Architecture, who comments on the students' analysis.

Task #5: Site Visit

Tasks



“People wait here until the lesson starts. They use their phones, study, or read. The students think this place lacks colour, details, and good layout of furniture. The space is noisy and boring.”

School Space ‘20. Saue Gymnasium / Team Nora



Although there are benches by the wall, students like to sit and lie down on the wardrobe counter. "I like to lounge on that big counter and talk to my friends. We often also eat. A very nice place to spend time after the school day."

School Space ‘18. Puhja School

Task #5: Site Visit

Tasks



The students of Antsla Gymnasium chose to create a new design for the school's former cafeteria. "This place is important for people, because there is space and freedom to spend time by oneself. The school could easily exist without this place, but then there would be no place to spend time while waiting for the bus. People mostly sit here and spend time on their phones. There could be more colour and variety and less mediocrity in this space, comfortable chairs and games that make students move."

School Space '20. Antsla Gymnasium /
Team Hauka Architects

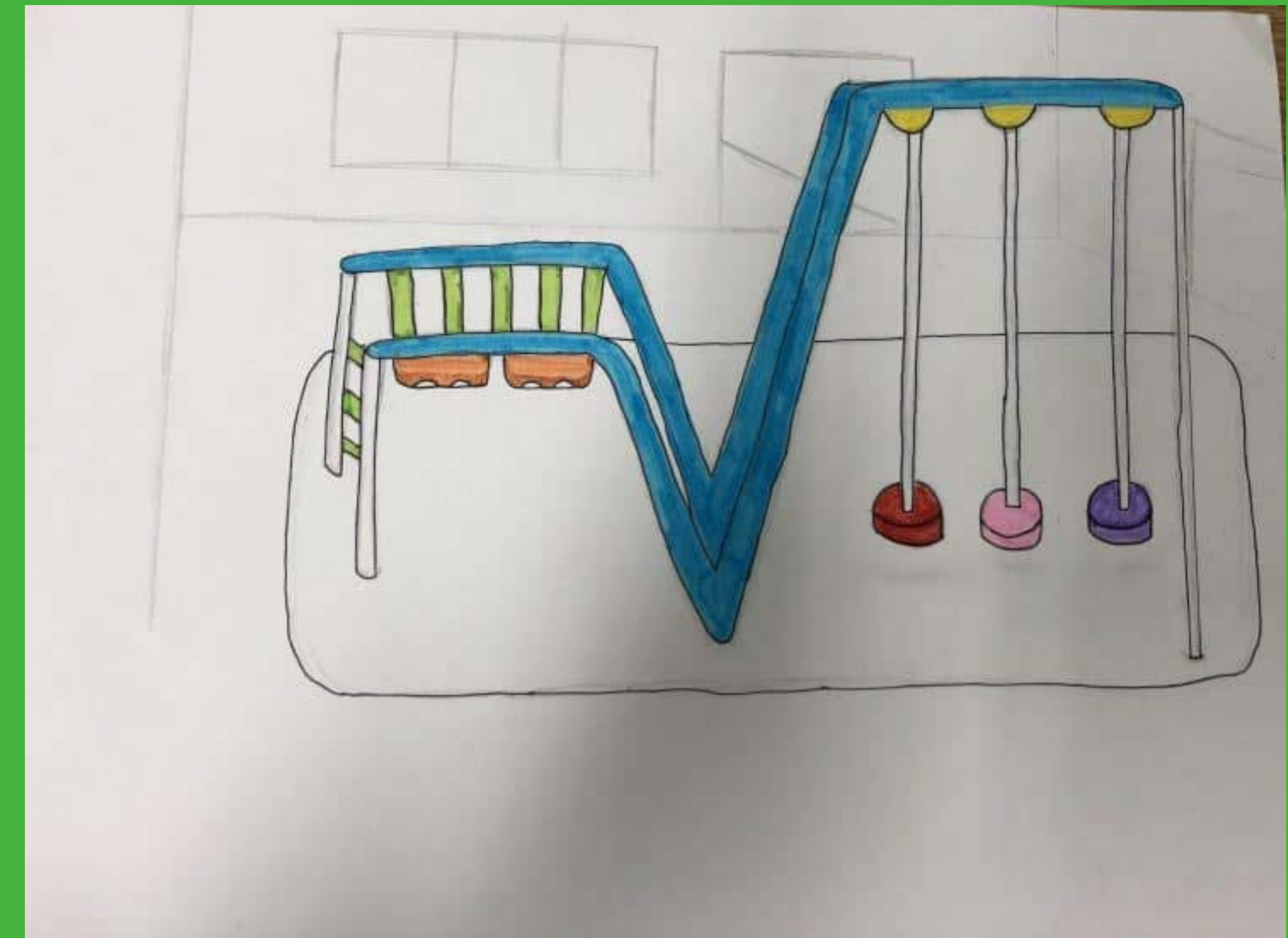
Task #6: Design sketch

Tasks

Sketching the initial ideas

In the initial stage of the design, students gather ideas about what their chosen place could look like in the future. Before diving into the process, students gather inspiration, look at a slide programme about various school buildings around the world, and have a discussion.

Many submitted designs are about creating better opportunities for relaxing during the break. Students wish there were more places for relaxing, communicating with friends, vigorous movement, or reading books. In the children's vision, a good school space should definitely have bean bag chairs, ping pong tables, bouldering walls, and house plants. They also long for interactive digital blackboards and screens for educational and entertainment purposes (including virtual reality tools).



A colourful climbing-tree, decorated with formulas, making it easier to remember them as you do other, more fun things.

School Space '19. Pähklimäe Gymnasium /
Team Artflight

Task #6: Design sketch

Soft armchairs, couches, and even massage chairs are on the wishlist. A couch would be nice for reading, watching television, or spending time on the phone, they say. Places where it is possible to **be alone and feel both mentally and physically free** are appreciated. They dream of resting pods or shelves to hide in, rest, and be alone.

Such work by students refers to fatigue, which may be due to lack of nighttime sleep, or the physiological specificity of teenage years, when children have difficulties being fully functional in early mornings. When we add this to substandard opportunities to relax or refresh during a break, and a poor indoor climate, it is not surprising that the children are tired and dream of sofas. If sufficient movement and restoration of attention was ensured during the breaks, as well as fresh air and adequate rest, then perhaps we could expect different proposals.



A colourful library with hammocks and plants. In the students' vision, bright walls are energising and motivate them to study. The library is divided into two zones: the keywords for the green zone are yoga, relaxation, sleeping in a hammock, and developmental or educational games; the other zone has tablets instead of books and soundproof capsules for reading or resting.

School Space '19. Pähklimäe Gymnasium / Team DAP

Task #6: Design sketch

Tasks

Students also pay attention to **being healthy and physically more active**. They come up with different possibilities for climbing to bring more movement into the school day. To make sitting more healthy, they propose fitness balls or chair-trainers, or using a standing desk instead.

The children want to bring **more nature and cosiness** to school, proposing more plants and natural materials, for example. They say that boring and ordinary spaces do not motivate them to study, and they would like to see more cheerful colours in their surroundings. Looking at students' design sketches, bringing new colours to the classroom is one of the first solutions which students turn to in order to make a boring and deficient environment more pleasant.



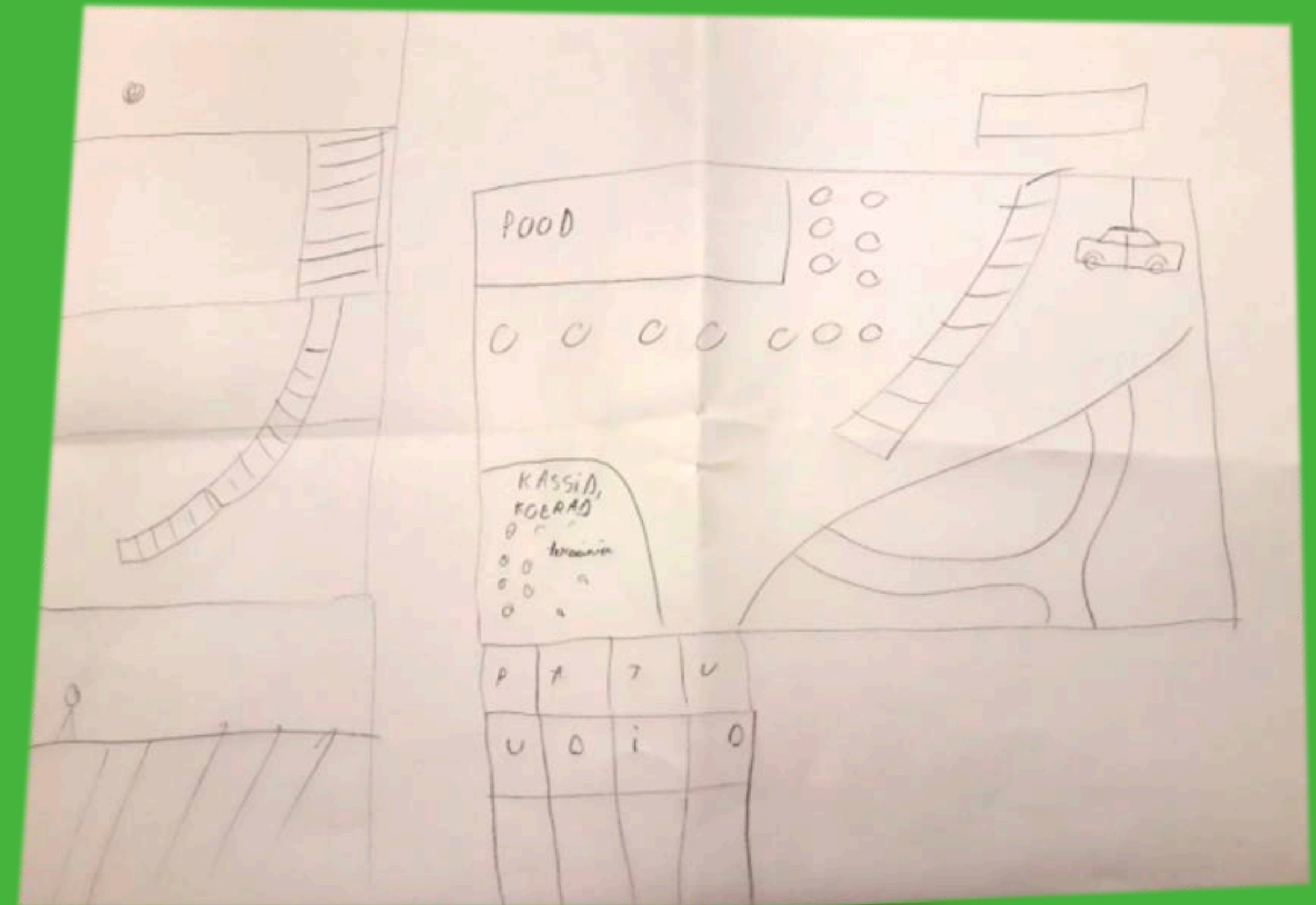
A colourful nature-inspired classroom that has an aquarium floor. "All these bright colours help to lift the mood, give energy, and trigger interest in learning."

School Space '19. Pähklimäe Gymnasium /
Team Sparta

Task #6: Design sketch

Tasks

Larger windows, more spacious rooms, vending machines for snacks and drinks, or even just for water, are also desired. Dreaming of something so elementary as drinking water signals how inefficient our school environments can be in supporting learning. Students' sketches envision other **practical items** as well, such as a shelf to put backpacks on during a break, a bench to sit on while tying shoelaces, etc.



"You enter the space through a pipe slide and take an elevator to get back up. There is a park where you can breathe fresh air, a shop, cat and dog therapy, a car hanging on the ceiling, and trampolines."

School Space '18. Saue Gymnasium /
Team Ida Siberi Kuumpepslased

Task #6: Design sketch

Tasks

Some of the more adventurous designs propose a pool full of soft cubes, swings, trampolines, a maze of mirrors, a mystic room, stairs that lead to special places, a climbing net between two floors, a house pet living in the class, a place for dog and cat therapy, and moving between spaces by sliding down a pole.

The children are also motivated by ideas that they can actually execute themselves, such as benches and pillows or a simple design of wind and sunshades for an outdoor classroom.



Task #6: Design sketch

Tasks



Mood Board and schematic plan of the classroom's new design. The safety mats under the bouldering wall can also be used for napping, if one should feel tired.

School Space '19 Tallinn German Gymnasium

Task #6: Design sketch

Tasks



“Solving this task made us practice spatial thinking. At first, it was not easy, but in the end the work went quickly. During the process, new and more exciting ideas came up, such as the wish to add more movement-promoting activities into the corridor and an idea to use one of the windowsills as the relaxing spot instead of taking up a lot of floor space. It was very difficult to break out of habitual thinking.”

School Space '20. Salme Secondary School /
Team Salmekad

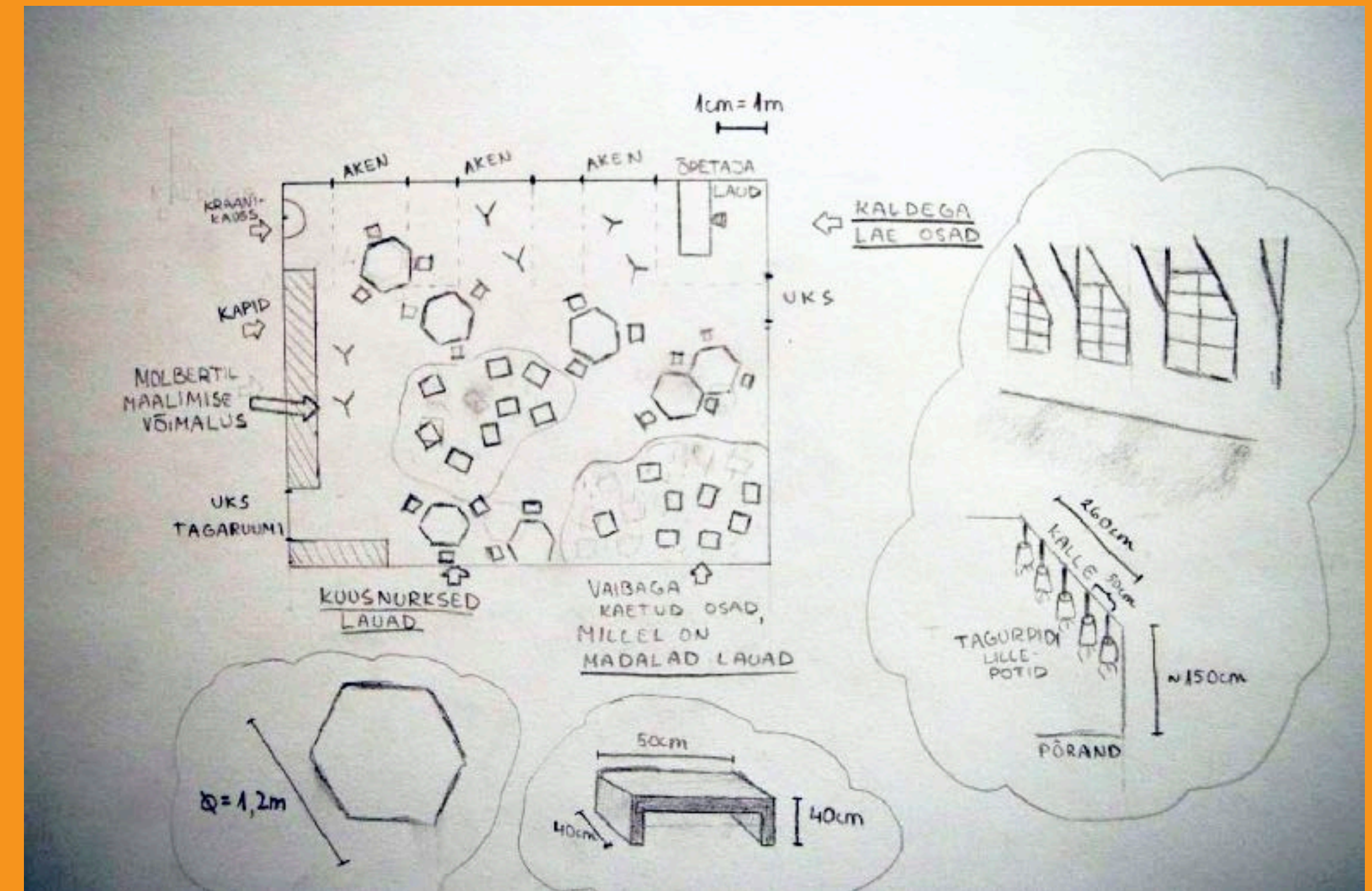
“The streamlined seating and rest area create possibilities for relaxing in a variety of body postures. Connecting it to the windowsill is a good idea. You can experiment with the form even more boldly! An island that gets higher layer by layer is a good concept. You could even try to amplify this feature by adding a third layer or creating another similar islet near the window. This way, you would have two fortresses to climb on. There are many possibilities.”

Merilin Kaup, an architecture student at Estonian Academy of Arts, supervises the students.

Task #7: Project

Elaborating the ideas and drawing the floorplan

Part of the task of creating the final design project was to critically analyse their work and decide which ideas to keep from the sketch phase, what to change or replace. At this stage, more specific plans are drawn of the new design, and some teams try their hand at drawing or 3D modelling with a computer program.



"We decided to give up the idea of bean bag chairs. We found that they take up too much space and are difficult to design in such a way that it would be suitable for manual work. We replaced them with hexagonal tables for three people, each of which can accommodate three people. They are convenient for making accurate drawings and are suitable for those who prefer a classic school bench."

School Space '18. Miina Härma Gymnasium,
Team Härmakad 2

Task #7: Project

In critically analysing their initial ideas, students often take a step back from their wild ideas towards more practical solutions. Soft armchairs in the library are replaced by simple chairs and soft carpets are judged impractical, as they might get dirty too quickly. As one solution, artificial turf is proposed for the recreation area as a compromise.

Students take designing their school space seriously and rightly so, but sometimes they tend to be even too conservative and turn to safer and somewhat boring solutions compared to those initially proposed in the sketch phase. They are afraid that their solution will be impractical, confusing, or difficult to take care of (cleaning, proper use). For example, a pool of soft cubes is replaced by simply a sofa and a guard table is brought into the lobby instead of swings.

At this point, the tutor can encourage students to push their visionary ideas ahead instead of retreating towards conventional, habitual solutions.



Jooonallid võiksid asuda ringikujulise laua taga, mille välimine diameeter on 250cm, sisemine 175cm ning laua ümbermõõd 950cm (laua alla mahub 15 joonapalli).



Treeningulauad (klassi ruumis 5tk)
Mõeldud laua kõrgus 60cm, laius 50cm, pikkus 65cm ning tooli kõrgus on reguleeritav, sest inimesed on erineva pikkusega. Ma olin väga üllatunud, kui leidsin internetis et 10-lise idolaekale on lausa müügil, sest ma elin üpris kindel, et sellist seja ei ole veel välja mõeldud. Pärsku jäi see mulle nii sõbrasse, et ma ei suutnud sel eest aru loobuda.



Lugemisnurg
Kaks kotti toodi, suur tamm (nt kuumipuu, draakonipuu vna), mis tekitaks tunde, et sa istud õues put all ning oled mõnusalt rahutat ning lisaks raamatutüüdkõrgus 88,5cm ja laius 250cm)



Interaktiivsed tahvlid
Mõõtted: laius 130cm, pikkus 220cm, kõrgus põrandast 32cm ja kõrgus laest 70cm. Tahvlid võiksid olla mõlemal pool seina, et ringis istujad ei peaks seja taga küürutama, vaid saaksid keskenduda tunnitööle.



TASAKAALULAUD
180cm
60cm
110cm



Seisulauad
Mina otsustasin loobuda seisulaudade eest, sest internetis leidsin sellele ruumide ja ruumide vastel ning tulesand üks eesmärk oligi oma ideedest loobuda ja asendada need riitloogi uuema või paremaga.
Täna mõtlemise tulemusena otsustasin ma asendada selle tasakaalulanaga, kus lisaks õppimisele tuleb keskenduda püsti püsimisele. Laua mõõtmed on märgitud joonisele ning on mõeldud kirinale õpilasele.

Ideas for new classroom furnishings. Among other things, a student proposes a self-designed balance table. “I was surprised how difficult it is to let go of my ideas or to change them. I decided to give up the standing desks and replace them with more complicated balance-desks.

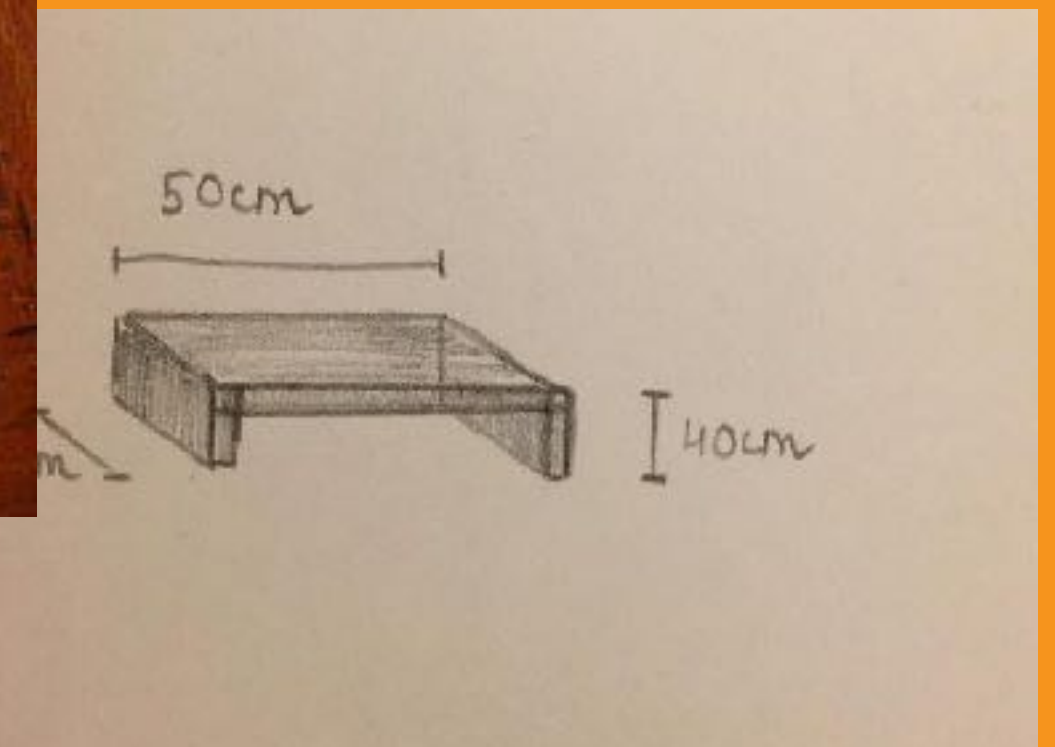
School Space ‘18. Rahumäe Secondary School /
Team Rahukas

Task #7: Project

Tasks

It is important for students, though, to keep their ground when it comes to **physical activities** they imagined, such as bouldering walls, even if on a smaller scale than originally planned. The idea that is repeated many times is to turn windowsills into seating or to put up hammocks. Some bean bag chairs are replaced by a pool table. They dream of **well-planned lightning** in the classroom.

The idea of bean bag chairs and other places where you can sprawl out cosily remains popular. Sometimes it comes with a TV, a projector with a screen, or a bookshelf. Sofas are also a much coveted piece of furniture in today's school room. This, once again, is a sign of fatigue that could be mitigated by a diverse spatial environment and physical movement that helps to restore attention.



"Part of the room is covered with a soft carpet for sitting. The rug resembles forest undergrowth to give students a sense of being in nature while they are engaging in art practice. There are low, 40-cm-high tables in the carpeted area, behind which you can work while sitting on the floor. This type of seating offers a change from traditional school benches and adds stretching space."

School Space '18. Miina Härma Gymnasium,
Team Härmakad 2

Task #7: Project

Tasks

Small details are used to enhance cosiness, such as changing the motif of the bars of the wardrobe reminiscent of a prison cell to a different geometry; decorating the door with coloured stained glass; and bringing wall lamps, plants, carpets, and sofas into the room. Interesting design elements are added, such as inverted plant pots, various lighting fixtures, and outstanding wall coverings and paintings.

As the most grandiose idea, a meticulous solution for an indoor skating rink with palm trees and a cafeteria is proposed. Among the most fascinating ideas, we also find voice-activated reading capsules in an outdoor rainforest area, or wardrobe lockers that emerge from the floor only when you need them, thus saving space in a narrow wardrobe.



“The idea we gave up is the rolling office chair. The class is quite small, and if everyone starts to move and spin around, it can distract the teacher as well as other students. It can also be a bit dangerous. That’s why we chose chairs without wheels.”

School Space '19. Pähklimäe Gymnasium /
Team Sparta

Task #7: Project

In some cases young people get carried away in a detail or a single object and it is difficult to grasp the whole picture. Sometimes it is worth remembering what the problem was in the first place and to think critically whether the design improves the situation.



“We have been thinking about the feedback we received about the previous task we submitted... We imagined how our glass wall might look from the outside. We weighed different possibilities and discussed pros and cons. Then it struck us! We gave up strict triangular windows. We extended the glass wall from one classroom to the entire facade of the building. And our window turned into an extraordinary, colourful 3-storey mosaic.”

School Space '20. Valga Priimetsa School /
Team NICE WINDOW

Task #7: Project

Tasks



A well-planned lighting scheme for a classroom involves many special solutions: General light for the learning area, directional light in the recreation and climbing area, adjustable light for reading or relaxing in the capsules. LED strips are installed on the resting capsules to create mood.

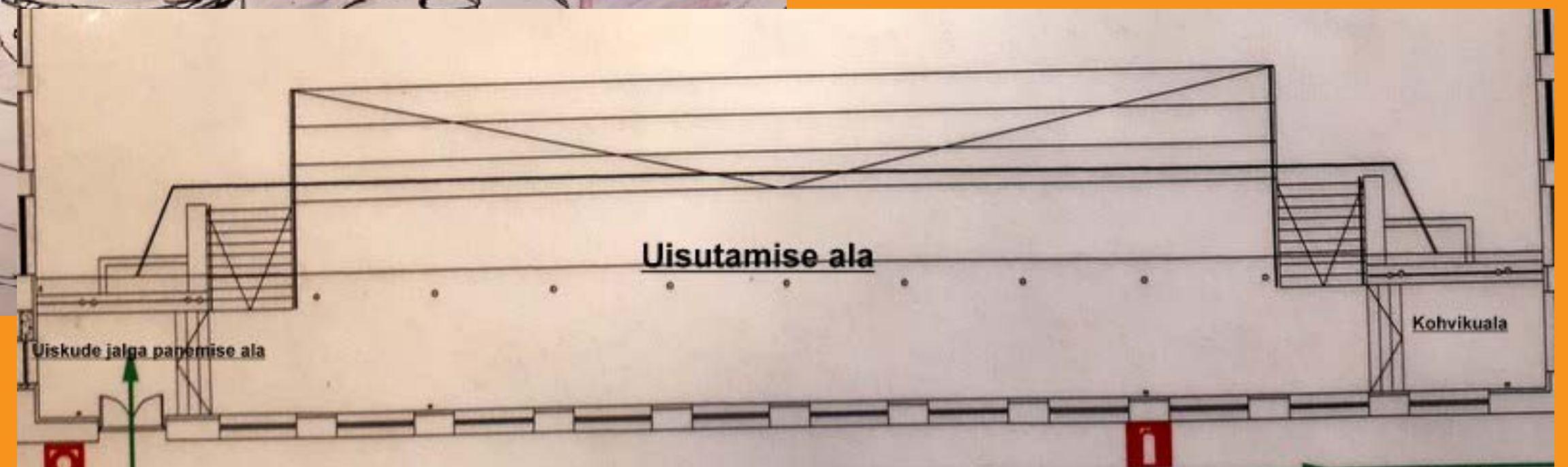
School Space '19. Tallinna Saksa Gymnasium

“Moving from one classroom to another is a great way to relax and prepare for the next lesson. Recreation areas with artificial turf might encourage passive activities instead. I like how you have designed every recreation capsule in a different way, providing an environment for different activities. The lighting solution is well thought out,”

says a teacher of the School of Architecture guiding the young people.

Task #7: Project

Tasks



Ice rink and cafe under the existing canopy.

School Space '20. Pelgulinna Gymnasium / Team PelguRUUM

Task #8: Scale Model

Tasks

In this task, the students will make a scale model based on the design developed during the previous tasks.

Some teams tried their hand at 3D-modelling instead of making a physical scale model.

“The most difficult task” – many teams say that this task really made them work hard.



New design for a classroom.

School Space '18. Miina-Härma Gymnasium /
Team Härmakad 2

Task #8: Scale Model

Tasks



"Our idea is to design wardrobes that emerge from under the floor when needed and where students can put their outerwear and shoes."

School Space '18. Rääma Secondary School /
Team Smartbrains



A classroom divided into two zones – a study and recreation area. Students have printed the furniture using a 3D printer.

School Space '19. Tallinn German Gymnasium

Task #8: Scale Model

Tasks



New design for a corridor.

School Space '20. Narva Soldino Gymnasium /
Team Girls

Task #8: Scale Model

Tasks



“You seem to have thought about the effects of different materials and chosen natural tones and elements that have a psychologically calming and soothing effect on the user. You have nicely reached the goal originally set, which was to create a place that supports focus,”

comments Andrea Miku, an interior architecture student.

New design for a corridor.

School Space '20. Saue Gymnasium / Team Nora

Task #8: Scale Model

Tasks

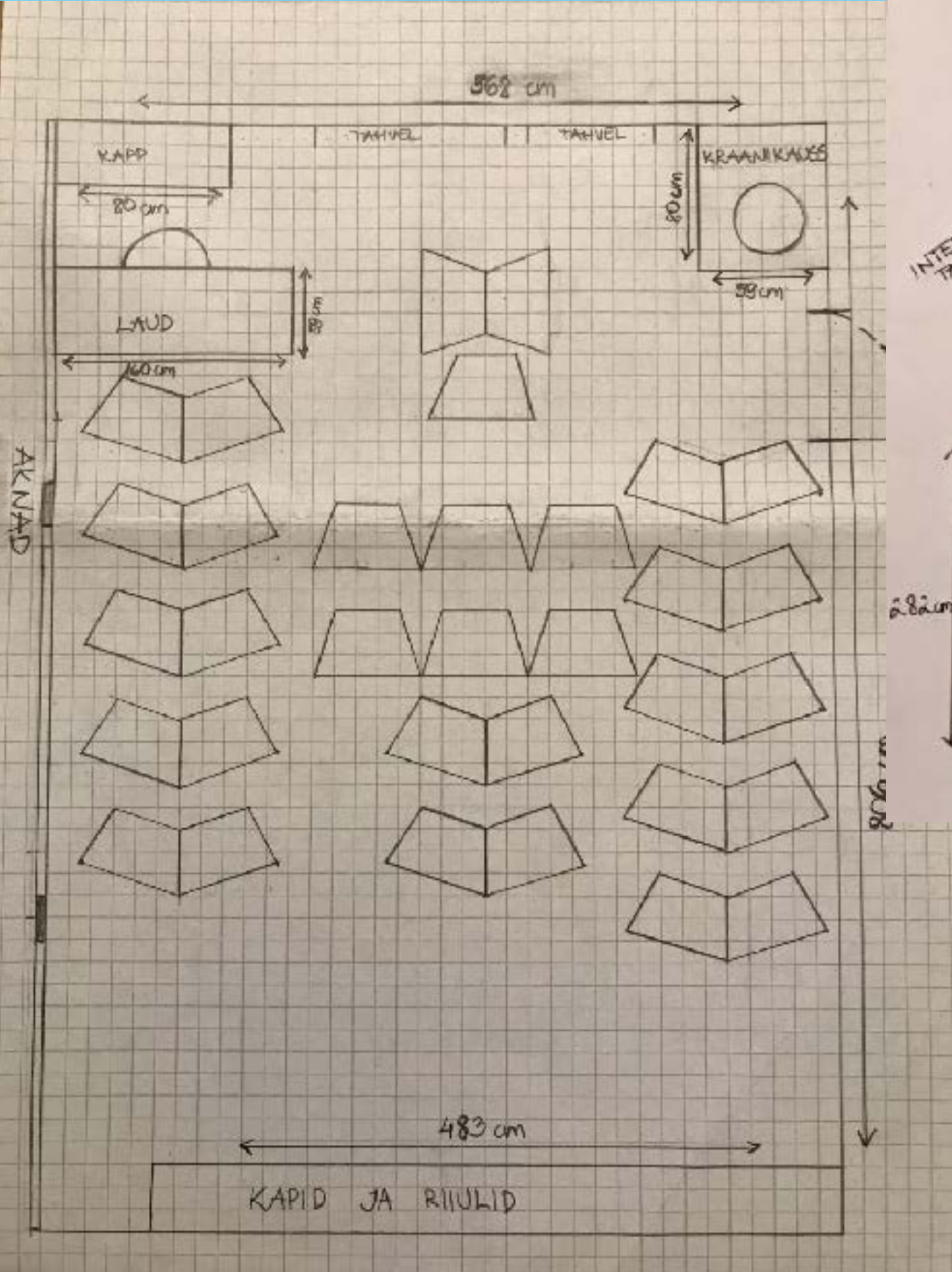


School Space '20. Ehte Gymnasium of Humanities /
Team Seven Colour Blossoms

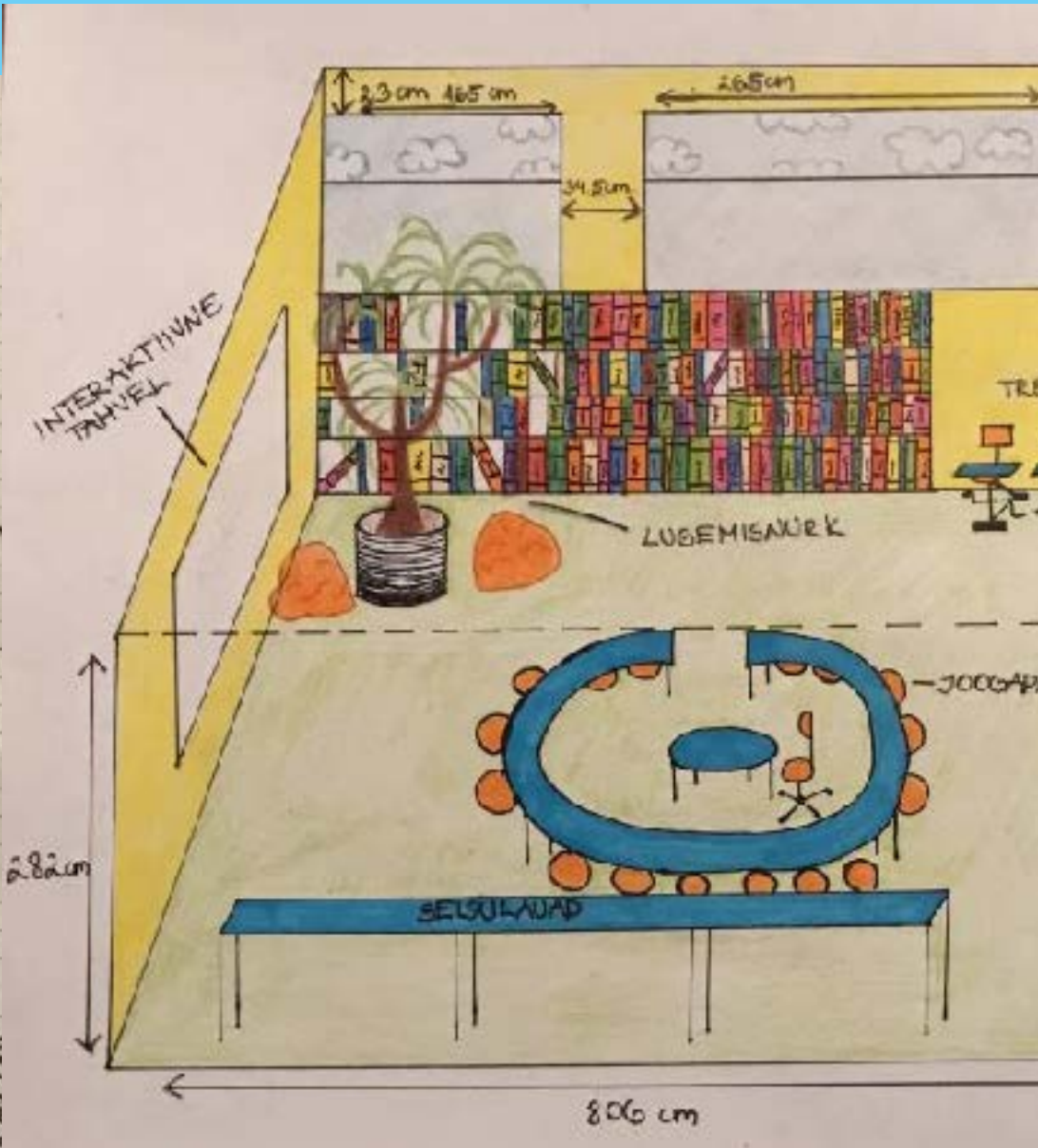
Design Process

Tasks

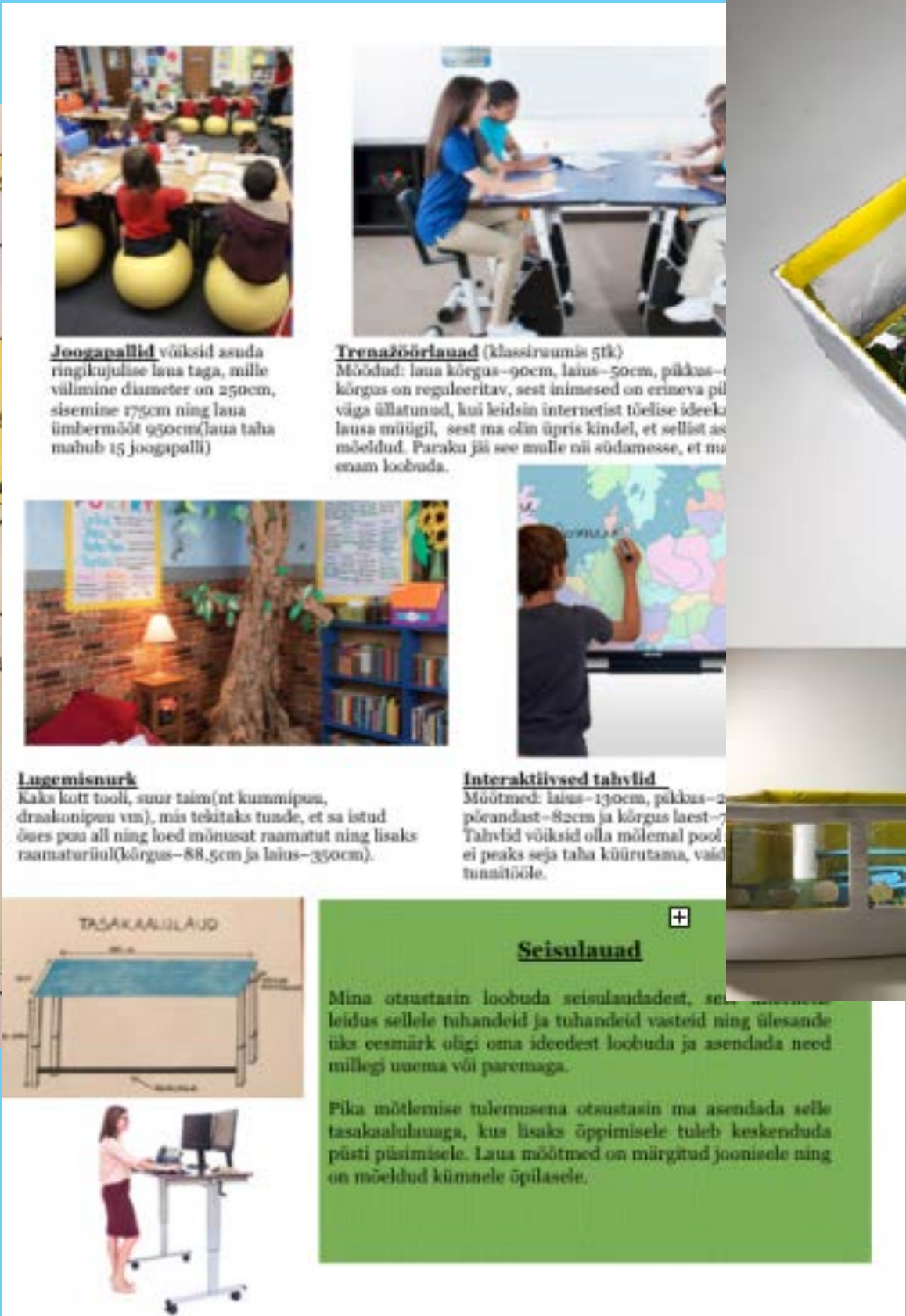
#5: Site Visit



#6: Design Sketch



#7: Project



#8: Scale Model



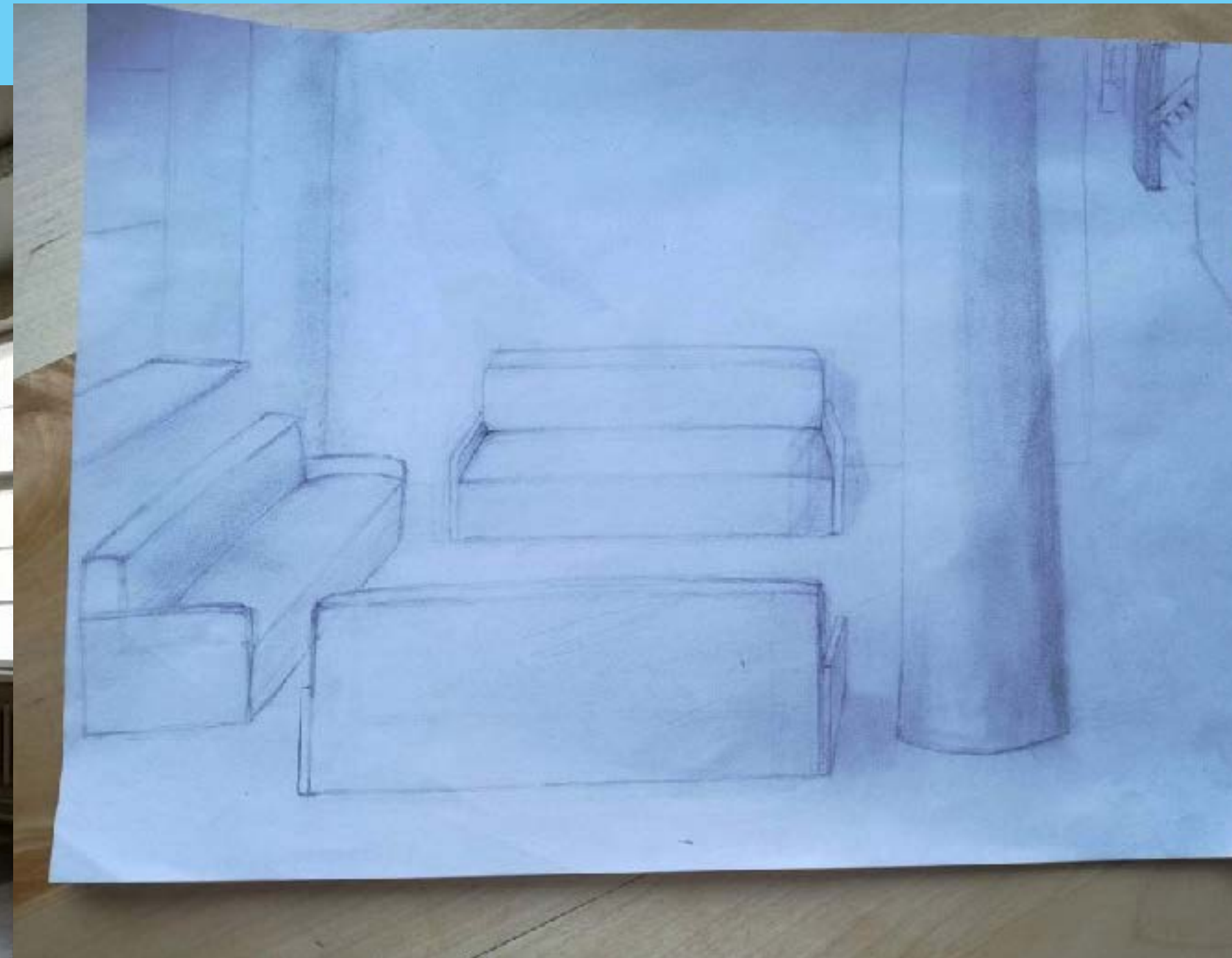
Design Process

Tasks

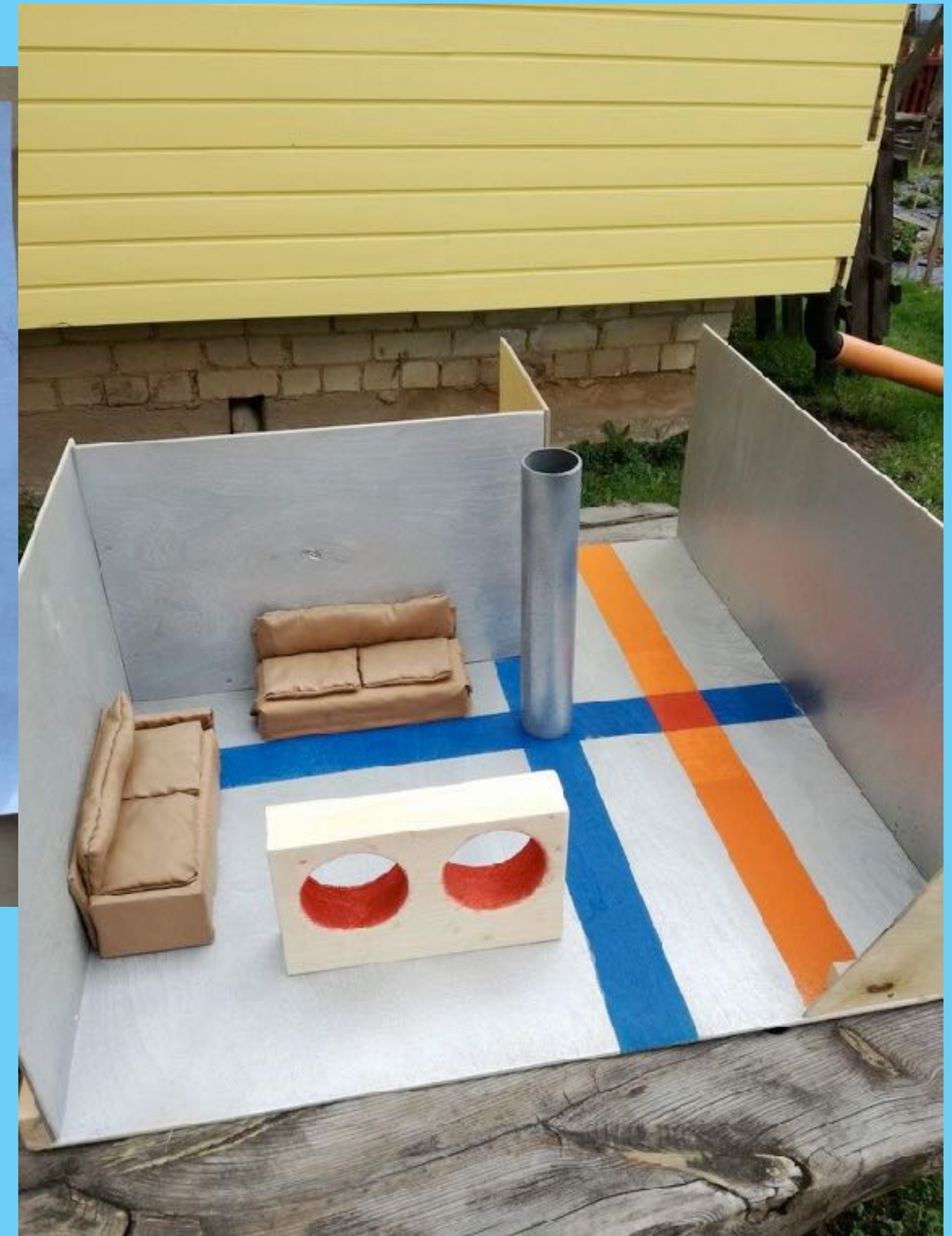
#5: Site Visit



#6: Design Sketch



#7: Scale Model



Design Process

Tasks

#5: Site Visit



#6: Design Sketch



#8: Scale Model



Design Process

Tasks

#5: Site Visit



#6: Design Sketch



#8: Scale Model



Design Process

Tasks

#5: Site Visit



Miks on see koht koolimajas oluline?

See on oluline kuna seal saab puhata, tundide jaoks õppida, raamatuid lugeda, teistega rääkida ja ka tundi läbi viia. Kool ilma selle kohaga oleks igavam kuna oleks vähem koosolemise kohtasid.

Kes seda kohta kõige rohkem kasutavad?

Seda kasutavad eriti 5-9 klassi õpilased kuna selle lähedal on looduseõpetuse-, kunst- ja tüdrukute käsitöö klassid, vahetevahel ka mõni õpetaja tunni läbiviimiseks.

10 minutit vaatlust.

Kell on 11:10 (vahetund) hetkel on seal 8 inimest, 6 õpilast 8. klassist õpivad geograafia kontrolltööks, 2 tüdrukut koovad kuna neil hakkab käitöö.

Millised kolm erilist asja kirjeldaksid just seda kohta koolimajas?

Vaikne, mugav ja kasulik.

Kas ruum mõjubki siin aega veetrate või siit läbi liikuvate inimeste asendele või liigutust?

Kui oled väsinud saad minna ja jaleu puhata. Kui on vaja õppida saad seal rahus olla ja õppida, teiselt abi küsida.

Kuidas siin liigutakse?

See koht on mõeldud õppimiseks, lugemiseks, teistega asjade arutamiseks seega enamasti seal istutakse, ollakse vaiksest, et testi mitte segada.

Milline on selle koha siuutus?

Akraarium, padjad ja vaip mis sobivad sinna väga hästi. Puudu pole eriti midagi, kuigi seal võiks olla diivanid.

Kuidas see koht kõlab?

Siin räägitakse vaiksest, enamasti räägitakse õppimise ja vahet ainet

Mismoodi siin lõhnab?

Siin on värske õhk, vahetpeal kui aknad on lahti võib tunda sööklaua toidu lõhna.

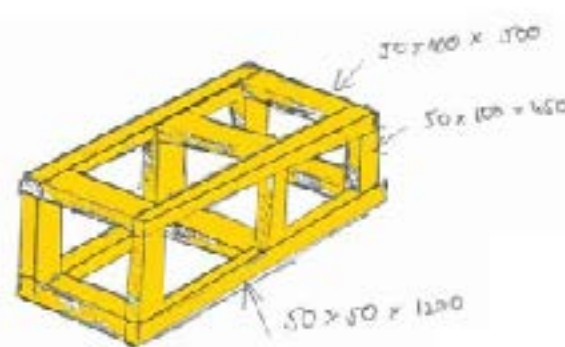
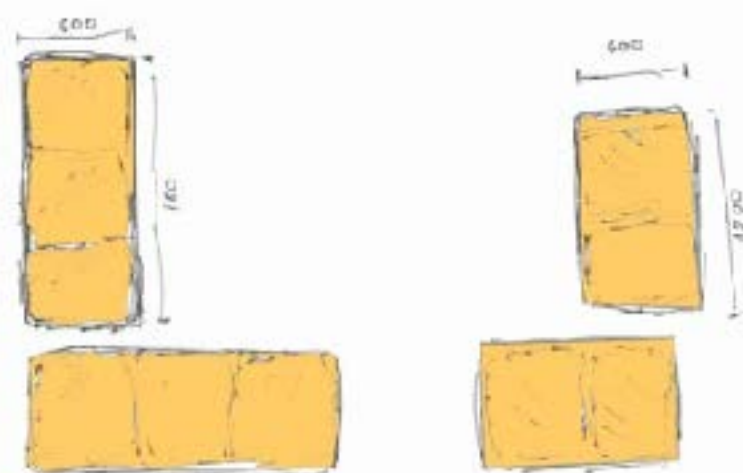
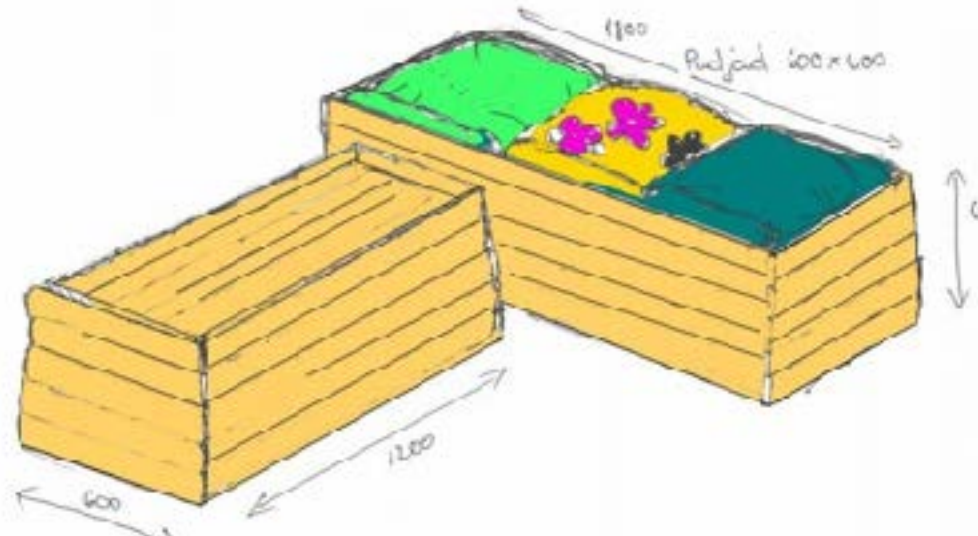
Milline on valgus?

Aknast tuleb valgust aga kui on pimedad linnad saab ka lambid põlema panna

Kuidas sa ennast siin tunned?

Tunnen ennast mugavalt kuna siin on vaikne, saab rahus olla.

#6: Design Sketch



#8: Scale Model



#: Real life execution



Design Process

Tasks

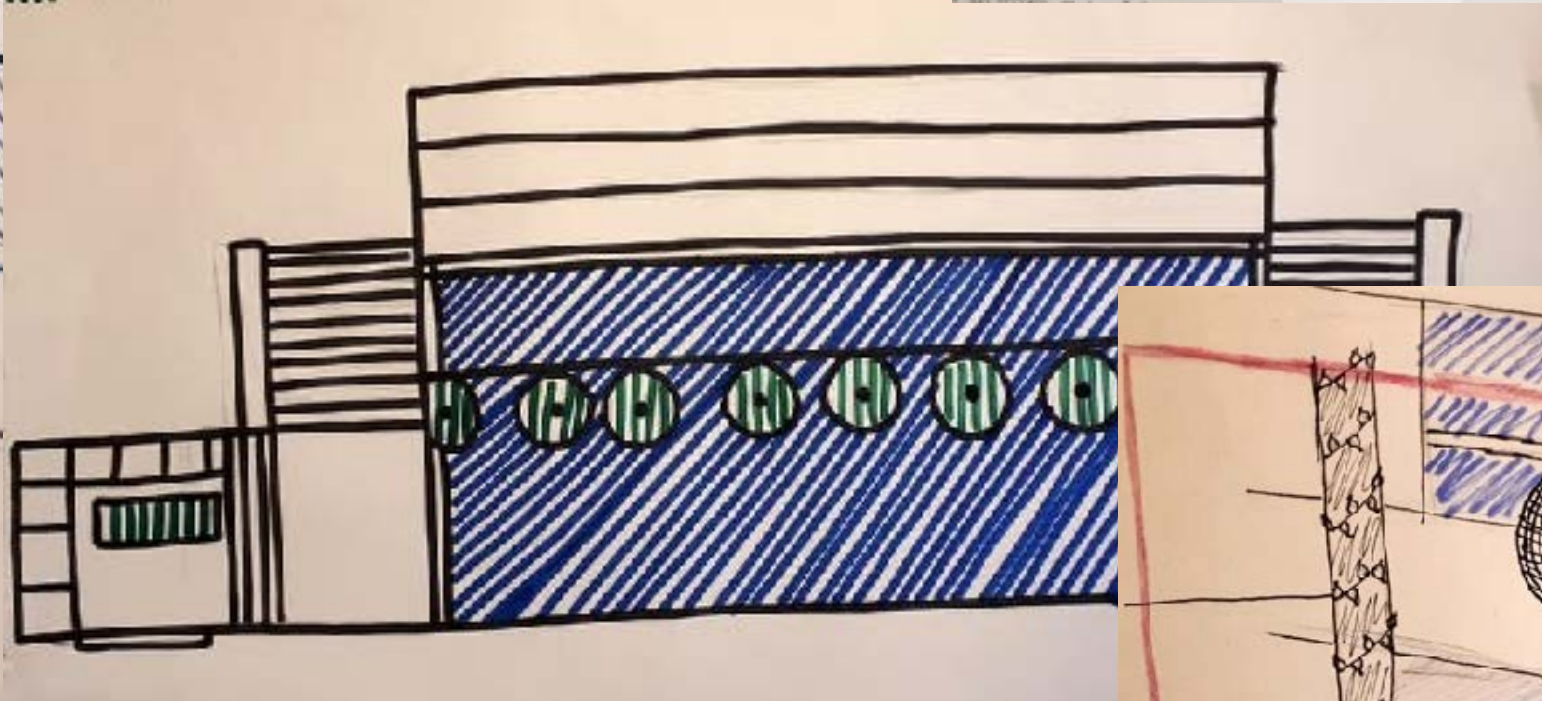
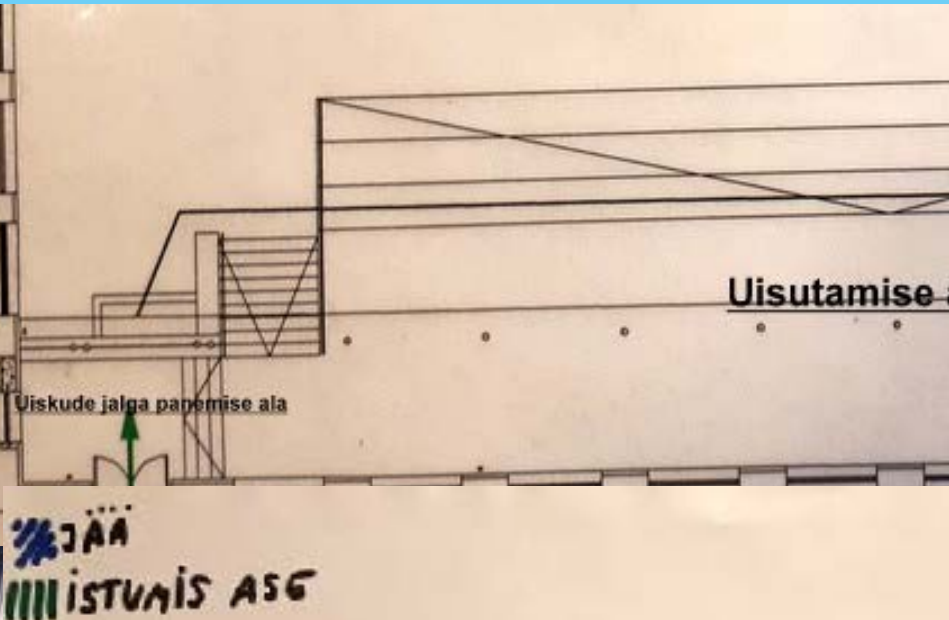
#5: Site Visit



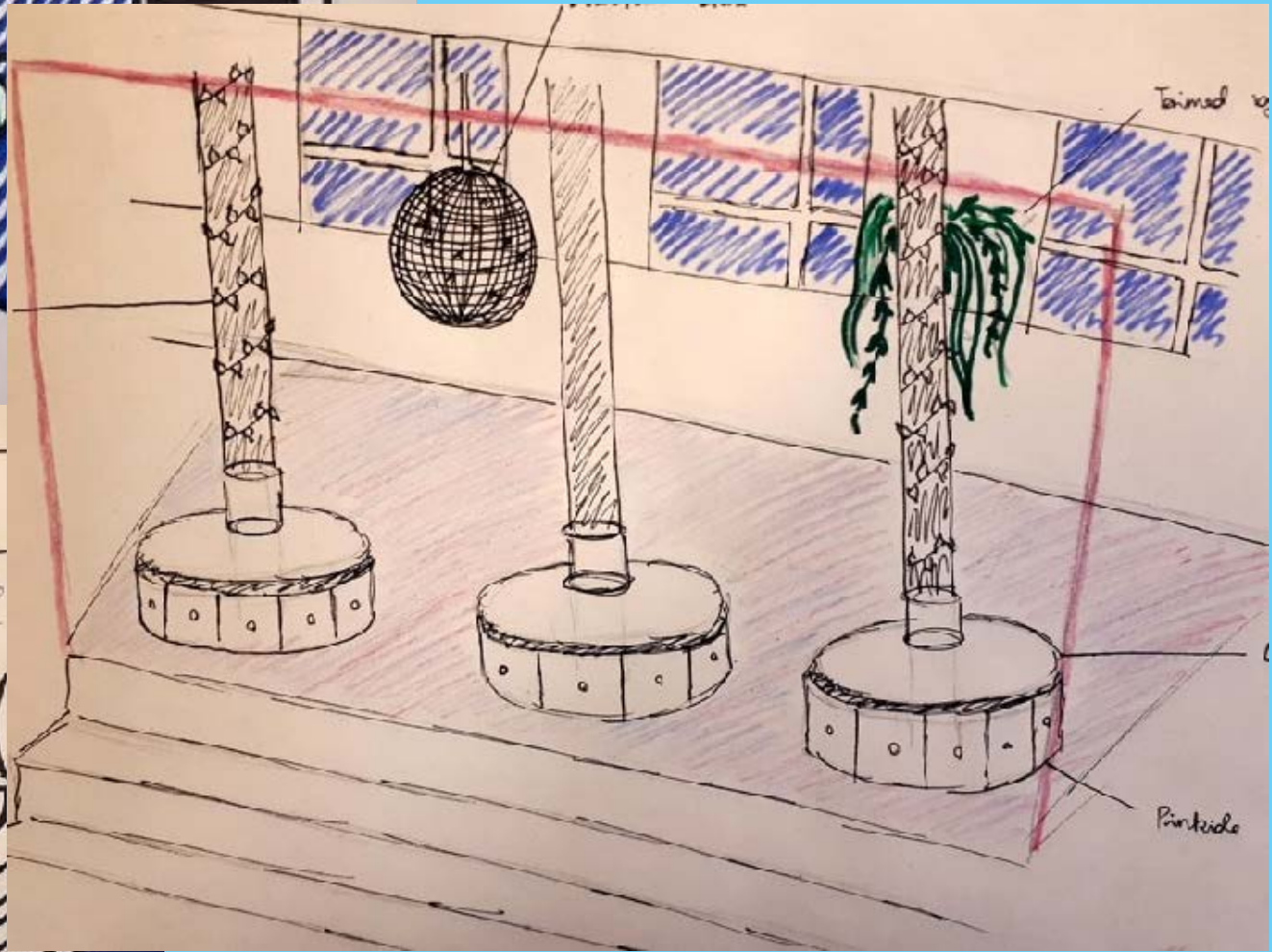
#6: Design Sketch



#7: Project



#8: Scale Model



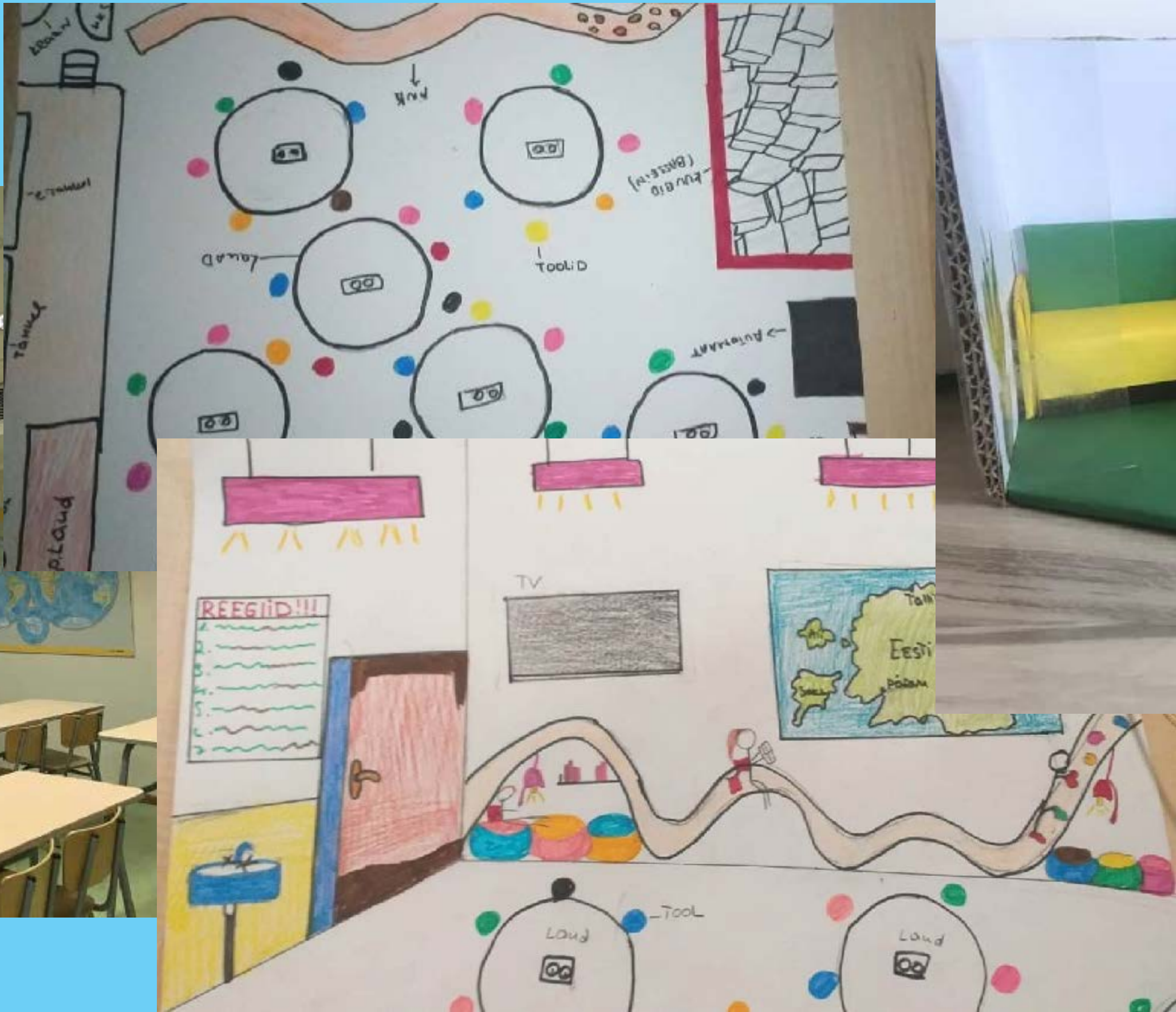
Design Process

Tasks

#5: Site Visit



#6: Design Sketch



#8: Scale Model



Schools that participated in the School Space project from 2016–2020:

Antsla Gymnasium
Are School
Audru School
Avinurme Gymnasium
Ehte Gymnasium of Humanities
Elva Gymnasium
Haabersti Russian Gymnasium
Haljala Gymnasium
Iisaku Gymnasium
Imavere Secondary School
Jõhvi Gymnasium
Kadrina High School
Kärdla Secondary School
Karjamaa Secondary School
Kehra Gymnasium
Kiviõli I High School
Koeru High School
Kohtla-Järve Downtown Secondary School
Konguta School
Kuuste School
Lasnamäe Secondary School
Lasnamäe Vene Gymnasium
Loo High School
Miina Härma Gymnasium
Narva Language Lyceum

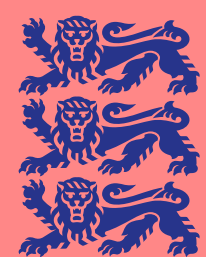
Narva Downtown Gymnasium
Narva Pähklimäe Gymnasium
Narva Soldino Gymnasium
Narva Adult School
Otepää Gymnasium
Parksepa High School
Pärnu Koidula Gymnasium
Pärnu Rääma Secondary School
Pärnu Co-Educational Gymnasium
Pärnu-Jaagupi Gymnasium
Pelgulinna Gymnasium
Põltsamaa Co-Educational Gymnasium
Püha Johannes' School
Puhja School
Rapla Vesiroosi Gymnasium
Saaremaa Co-Educational Gymnasium
Salme Secondary School
Saue Gymnasium
Sillamäe Kannuka School
Suure-Jaani Gymnasium
Suure-Jaani School
Tabivere Secondary School
Tallinn's 21st School
Tallinn's 53rd High School
Tallinn Gymnasium of Humanities

Tallinn Downtown Russian Gymnasium
Tallinn Linnamäe Russian Lyceum
Tallinn Mahtra Secondary School
Tallinn Mustamäe Gymnasium of the Humanities
Tallinn Õismäe Russian Lyceum
Tallinn Pae Gymnasium
Tallinn Rahumäe Secondary School
Tallinn German Gymnasium
Tallinn Centre of Industrial Education
Tartu Private School
Tartu Vocational Education Center
Tartu Mart Reinik School
Tartu Miina Härma Gymnasium
Vääna Manor School
Väätša Secondary School
Valga Priimetsa School
Viimsi School
Viljandi Gymnasium
Viljandi Hobby School
Viljandi Jakobson School
Virtsu School
Võru Kreutzwald School

885 students have participated in the project.

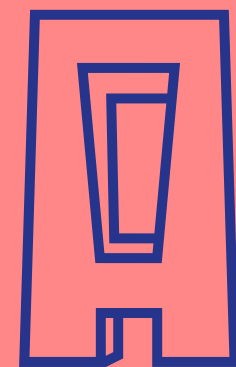
The completion of the compendium was funded by the Estonian Ministry of Culture.

Organized by the Architecture School.



KULTUURIMINISTEERIUM

ARHITEKTUURIKOO



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