

# Project Documentation

Educational Escape Room - Snails! Watch out!

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# Acknowledgment

First and foremost we would like to thank our key stakeholder Christina, for her guidance, patience and support throughout the entire semester. We would also thank our lecturers and guest lectures that provided insights into escape rooms, teaching children through gamification and providing constructive feedback.

Special thanks goes to everyone who participated in our surveys, took part in our playtesting and visited us at the project fair.

Without all of you we would not have been able to create this Escape Room the way it turned out.

# Design process

The Design process was one of the main parts of this project. With the help of many brainstorm sessions a lot of ideas were designed, selected and refined.

## Start of the work process

At the start of the project the first requirements were defined. The goal was set to create an educational escape room to teach teenagers about info visualization. Further definitions were the specific age (14-19), the number of players (20-30) and a timeframe of about one to two hours playtime.

To specify the target audience a persona was made.

Florian Gruber, age 17 represents a somewhat average teenager. To back up this persona a survey was made (see chapter [First Survey](#)).

In regard to this persona the brainstorming and further research continued.

The research for escape rooms and info visualization was on one side supported by the lectures and information provided throughout the various courses. On the other side with individual research and practical experience, including two visits to recommended escape rooms.

In the same timeframe a lot of brainstorming sessions were conducted. Most of those as a group and with the use of the double diamond method.



*Persona of the target audience*

The result of these various brainstorming sessions were concepts for puzzles, a story draft and an escape room structure concept.

## Story and order

The story of the escape room is set around the year 1900 in a fictional world. A virus which turns people into snails is rampaging through the country. Whole cities got turned into snails in a matter of a month. Now also the leading scientists were turned into snails as well, leaving their research unfinished. The last report from their lab indicates that they were close to finding a cure. The only hope left is for a specialist team of scientists to go to the lab to finish what their colleagues started.

The story gets told in multiple phases and ways. The first two pieces of information are given by the instructors of the escape room. The rest of the story gets discovered with the puzzles and their instructions.



*Example - story involved in the instructions of the puzzle*

## First information and group building

The students get a brief introduction from the assistant on the escape room. Containing the following:

- There is a virus transforming people into snails
- They have to divide into groups
- (optional) the groups can decide on the field of expertise for further immersion (doctors; physicists; chemists; sociologists; geographics)
- Every group gets their clipboard (and card) - information on how they work and what they need to do every station

## Setting the mood with an audio-/ text-log:

When they enter the escape room the players receive their mission. A well created audio log could possibly enhance the immersion.

→ Military voice (clearly spoken, rustling audio)

*„First and foremost—thank you! This mission could easily be the key to containing this spreading disease. The risk and sacrifices you make today will hopefully make history. You will shortly land near the epicenter of the outbreak where you can enter the now empty laboratory containing the abandoned research of your predecessors. From there on out, you are in snail territory - which means you will be on your own; the flight crew will remain in the zepilin. They can only fly you home again if you manage to find the cure. We can't risk bringing you back without results; the chance that any of you could get infected in there is just too high. Your colleagues are outstanding experts in their respective fields. Every team should find a station according to their expertise. You have (1) hour to find a cure for this virus. We know from trustworthy sources that the scientists in this lab were close to a breakthrough. Thank you for your service. I wish you a safe return. Good luck, and Godspeed!“*

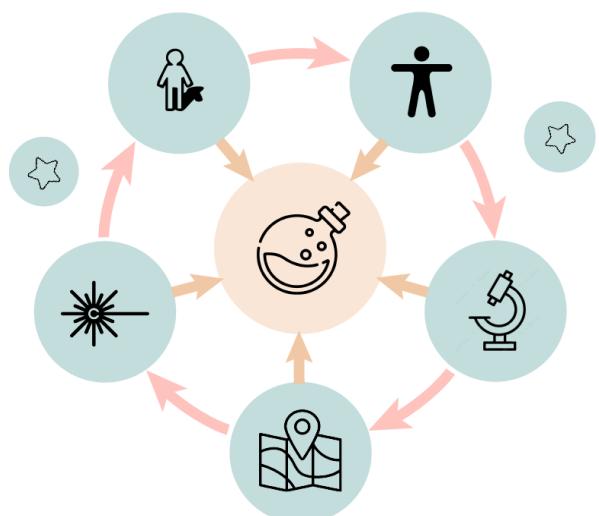
## Room concept

The room concept was designed for a class of around 20-30 students. With an average of five students per group. The escape room should also be doable in one to two periods, and every student should learn approximately the same. With these requirements the concept for the room contains:

- 5 puzzle stations
- 1-2 additional room puzzles
- 1 final puzzle station

Every station contains 5 keys/clues for the end puzzle. Every group has to do every puzzle station to get all the clues. Only then the endpuzzle can be done.

If a group is finished early they can do additional room puzzles for extra clues and even more datavis fun. The order in which the puzzles get solved does not matter. The students can switch between stations whenever one is available.



Escape room concept

To navigate the room, every group starts with a clipboard containing their individual information to all the puzzles (as well as a keycard to activate certain puzzles).

- Every group has to analyse/interpret their own data/task in the puzzle station.
- The puzzles can be done multiple times without assistance to reset them!
- The solution of one group does not give too many hints for the next group!



*clipboard and id for every group*

## Puzzle concepts

As a concept a total of 10 puzzles were created.

- 5 main puzzles that the students rotate on
- 1 final puzzle the students can do with the solution of the 5 main puzzles
- 4 optional side puzzles the students can do while waiting for a puzzle station

This chapter describes the concept of the puzzles. The three chosen for creating are also included in their concept phase but are further explained in separate chapters.

### Main Puzzles

#### Puzzle 1 – Heatmap – Light Sensitive, Touch Puzzle

**The visualization type:** Areemap

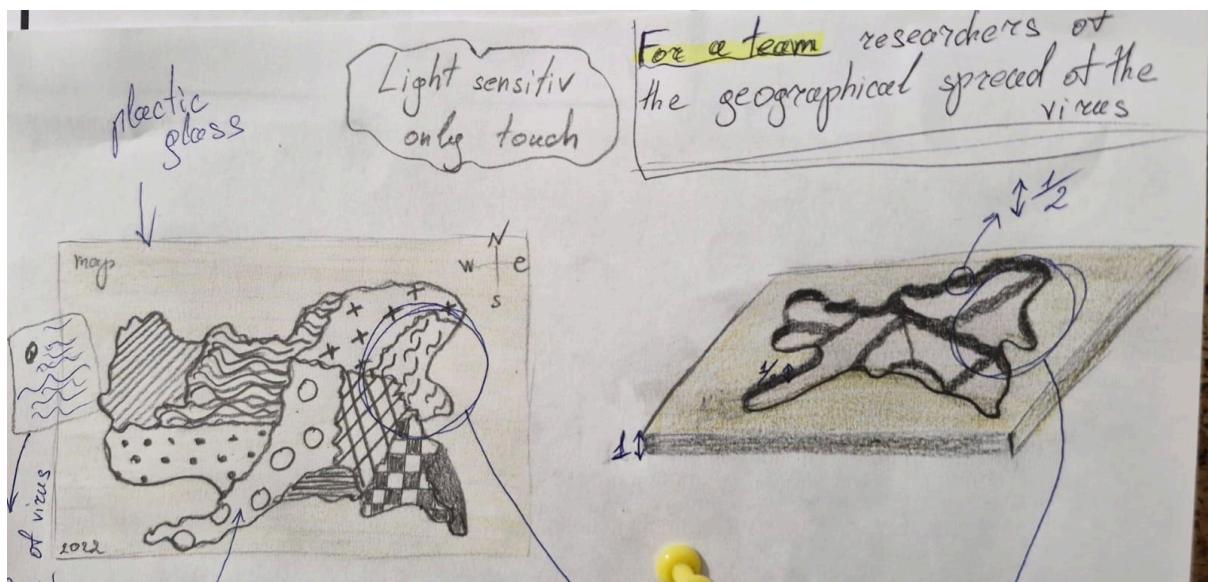
**What will the players learn?**

- Interpret an Areemap
- Work with a scale

## How to get the key?:

Interpret the data and unlock a box with clues - the key is inside the clues

### OPTION 1:



### The Puzzle:

This version uses a physical, light-based heatmap. The puzzle consists of a transparent plastic glass plate with the outlines of a mainland and several regions carved into it. In each region, a recess is carved halfway into the material. At the bottom of these recesses, different textures and engravings are applied. Separately, there is a set of individual region pieces that match the carved recesses in shape and texture. These pieces can be placed into the corresponding areas of the main plate.

When a region is placed in its place according to its texture, a light bulb illuminating that region turns on. And so on for each one. All regions glow in the same colour but with different brightness.

The brighter the region, the higher the number of deaths.

**The player have to interpret the brightness of the region with the help of a scale.**

**The players have to find a certain region to unlock the key for more information about the cause of the virus spread.** The number of deaths in this region is the code to the lock on the drawer/box.

The box contains a map of the region that became the key to the box, with various notes and annotations from the scientist who once researched it. There are also a couple of papers with possible carriers of the disease, one of which is a bird.

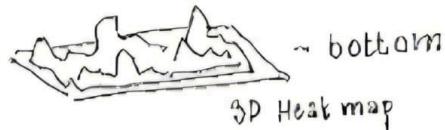
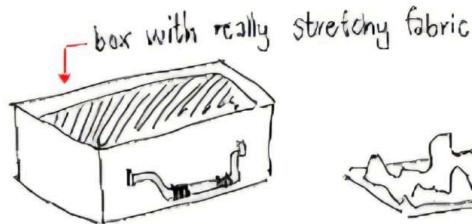
There is some information about each carrier. And there is a sheet of notes from the same scientist where he expressed his assumption that birds are carriers of the disease.

On the sheets with 2-3 possible carriers, there are numbers veiled, for example, under the gene number or species number.

And this number is one of the keys to the final puzzle.

## OPTION 2:

Touch Puzzle



→ Players will have to touch an Invisible heatmap

## The Puzzle:

The station has a few (3-4) touch puzzle boxes. Every Team gets their own data/quest to analyse. The Players look at a map and need to find out data about the regions. The data is represented on a 3d heatmap. The heatmap is inside a box and can't be seen - by touching it the player can get the data.

## Puzzle 2 – Scatterplot – Microscopes

**The visualization type:** Network Diagram

### What will the players learn?

The players will learn how to identify a network diagram and how to read it.

### The puzzle

#### Setup:

a microscope with 3 zoom options

three to five petri dishes with different kinds of charts in there. Looking similar to virus infected cells (plaque) since viruses are not spottable in regular microscopes.

The players find a clue on their clipboard. Which makes them look for the network diagram. They have to combine different names on the paper to get to the key.

How to make it suitable for more than one team:

Option 1: use the same chart on different Zoom stages

Option 2: let them look for different characteristics within the same chart

Option 3: each team gets to handle a different type of chart e.g. Charddiagram, Scatterplot and interpret them and find their clue for the clipboard.

### How do they get the key?

Option1: the players will get the key by solving a riddle on the clipboard. and by combining names on the paper, the connected lines will show a number

Option 2: same principle but different setup: they see the chart and interpret it, see the word they have to connect on the paper and they have to physically connect it on a pegboard wood.

## **Data**

Superspreaders: Who infected whom  
Contact Persons

## **Technologies and possible obstacles**

Microscopes

## Puzzle 3 - Bubble chart – The Body

### OPTION 1:

#### **The visualization type:**

Bubble chart.

Each “bubble” can represent an organ, and its:  
size shows the level of virus infection,  
color changes from green (healthy) to red (most affected).

#### **What will the players learn?**

During the game, players will learn how to read and understand data visualizations, connect visual data such as colors and charts with real situations, and use this information to make logical decisions. They will also see how data visualization helps identify patterns and find the most critical points, like the organ most affected by the virus.

#### **The puzzles?**

Players work in teams, and each team is responsible for analyzing the data visualization to identify which organ their group needs to cure. By studying the chart and interpreting the colors or values, they determine how severely each organ is affected. Using this information, the team must find the correct organ on the biomechanical body and insert a marker or component to activate the cleaning system. When the correct choice is made, the body reacts with lights or sounds, showing that the infection has been cleared. Multiple teams can play at once, each focusing on different organs and learning to interpret visual data accurately to complete their task.

#### **How do they get the key?**

Players obtain the key by carefully analyzing the data visualization. They study the chart to interpret colors, shapes, or numbers that show the infection levels of different organs. Based on this data, each team identifies which organ they need to treat and interacts with the biomechanical body to activate the cleaning system. When the correct organ is restored, the system responds with light or sound feedback, and the team receives a new clue or key to move on to the next stage.

#### **(Data)**

Infection levels for each organ shown as colors or values on the chart.

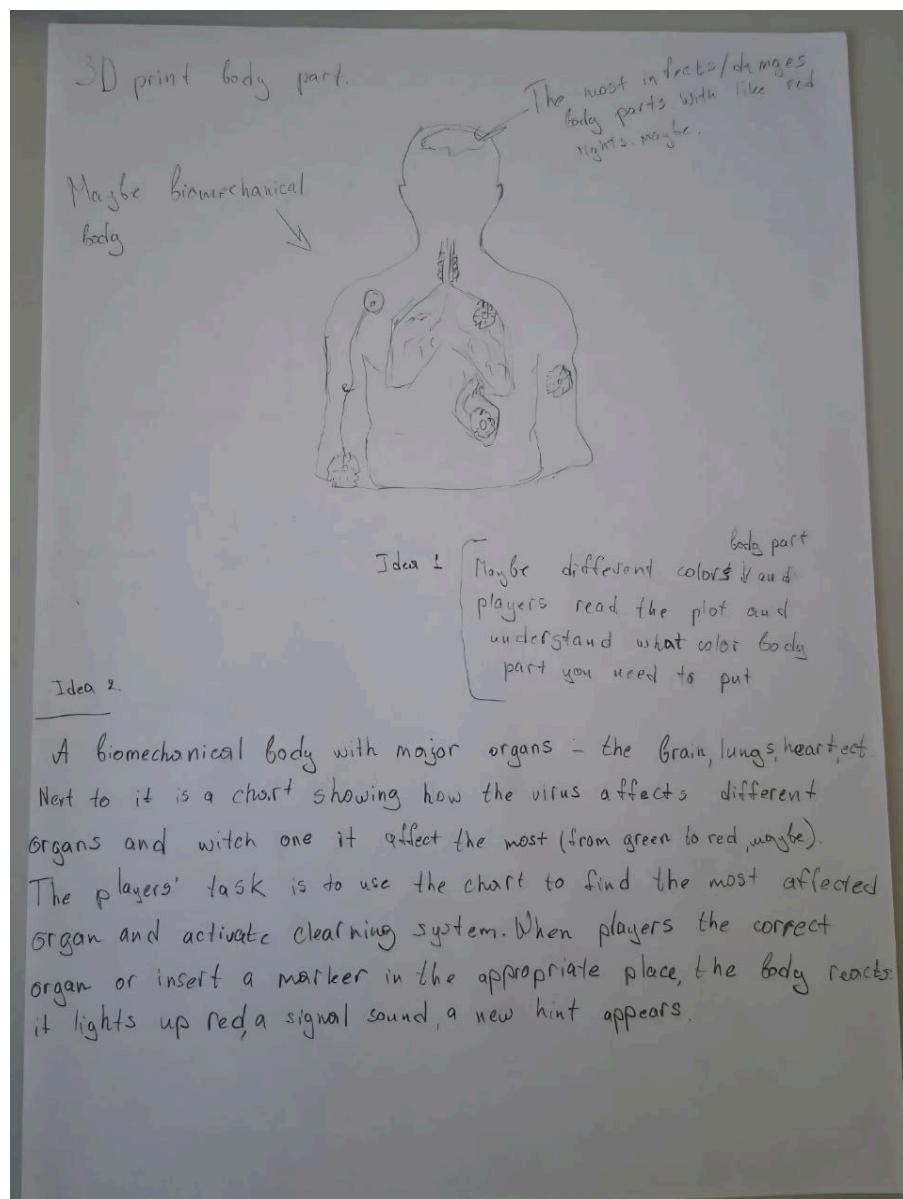
Visual data used to guide players' actions and decisions.

Each team works with a different data set linked to their assigned organ.

#### **(Technologies and possible obstacles)**

Technologies: interactive bubble chart, sensors, LED lights.

Obstacles: syncing data with physical reactions, sensor calibration, stable connections between digital and physical parts.



## OPTION 2:

### **The visualization type:**

Bubble chart showing how time affects the snail's internal mechanisms. Each section or bubble represents a system inside the snail (like gears, energy flow, or mechanical pressure). The colors and sizes change depending on how stable or overloaded each part is.

### **What will the players learn?**

Players will learn how to read visual data connected to time and motion — understanding how colors, shapes, and graphs represent energy balance and mechanical performance. They will also see how data visualizations can show changes over time and help predict when a system might fail or need repair.

### **The puzzles?**

Players must analyze the visual chart that tracks the snail's mechanical rhythm. Each team receives data about specific parts — gears, pipes, or clock systems — and must restore balance by adjusting them in the right order. To do this, they interpret data from the timeline or bubble chart to match visual signals (like pressure levels or timing cycles) with physical parts on the steampunk snail. When the correct combination is set, the snail's clock starts ticking again, and lights or sounds confirm success.

### **How do they get the key?**

The data from the visualization reveals timing errors or power imbalances. Teams decode these visual clues to adjust the snail's internal mechanisms. When they correct the data patterns, the snail's gears align, unlocking a new compartment or revealing the next code or clue.

### **(Data)**

Time-based mechanical data (pressure, rotation speed, or power flow).  
Visualization shows system balance through color, motion, or shape changes.  
Each team focuses on different data points linked to separate systems.

### **(Technologies and possible obstacles)**

Technologies: motion sensors, LED indicators, small servos for moving parts, projection or screen for data visualization.

Obstacles: synchronizing real-time data with physical movement, maintaining timing precision, mechanical design stability.



## Puzzle 4 - Line Chart – Laser and Mirrors

### **Visualization type:** Linegraph

What will the players learn:

- build a line chart with a data set
- use the right grid (logarithmic; has the right start and numbers)

### The Puzzle:

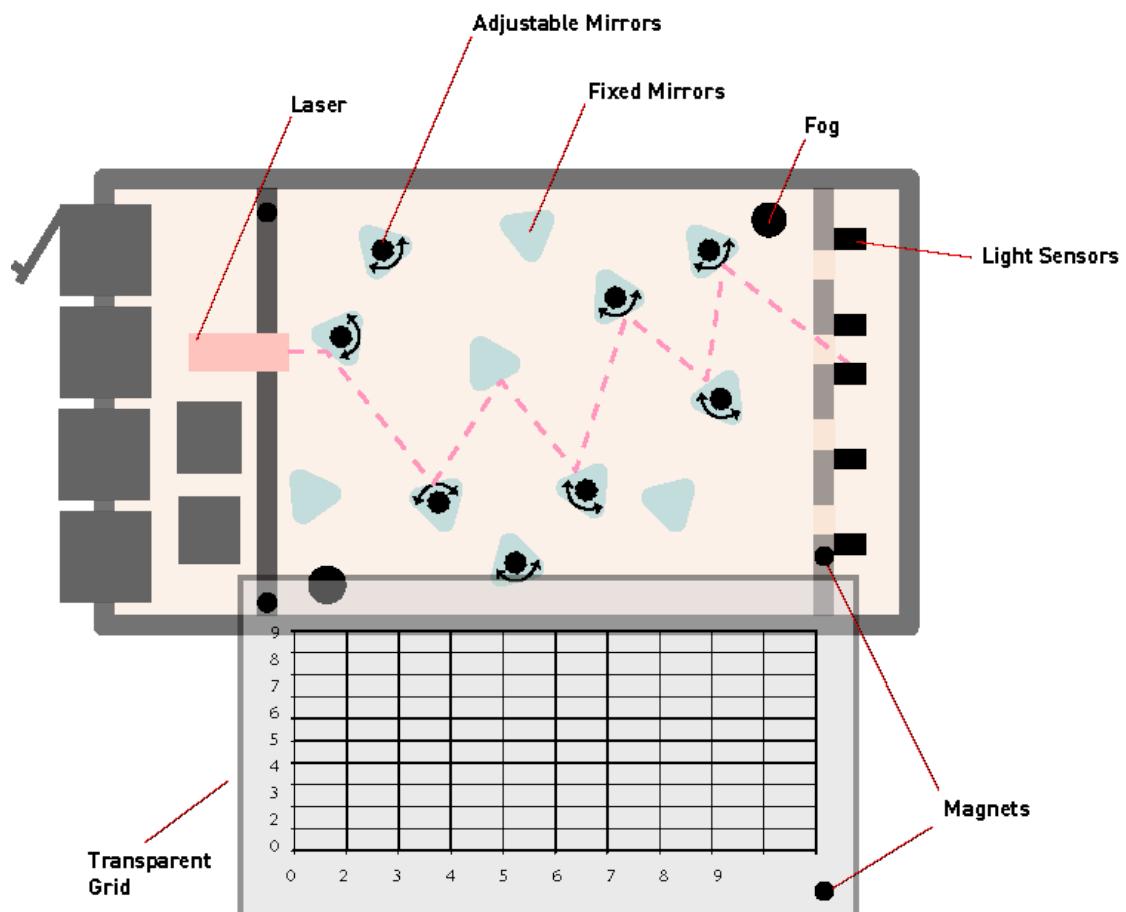
Each group gets their own data set and has to log into the puzzle using their card.

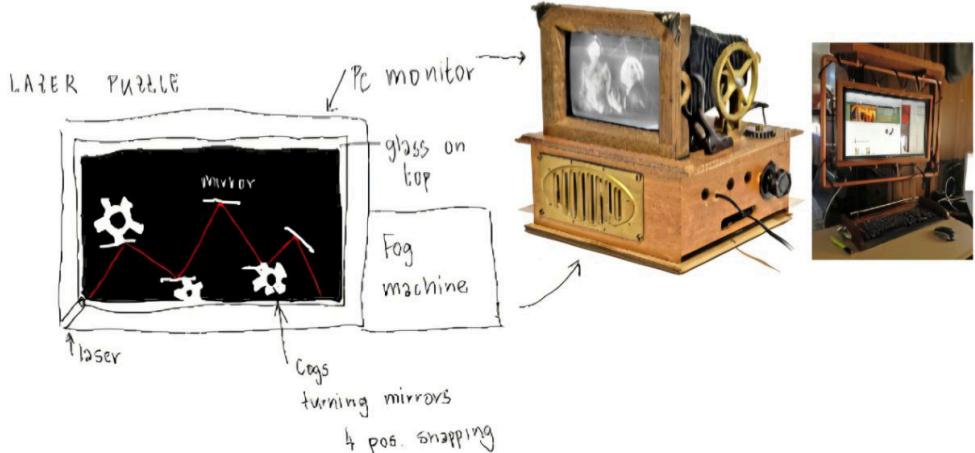
The players have to build a line chart with the lasers. They have to use the right grid to make sense of the data they are using.

With the mirrors they can guide the laser from the left side to the right. On the right side there are several holes - only by triggering the correct one in the correct angle the puzzle is solved.

### How to get the key?

When the correct light sensor is triggered (>2 sec) a door opens with the key.





## Puzzle 5 - (Stacked) Bar-/Area Chart – Shadowpuppets

**OPTION 1:**

**Visualization type:** Stacked Area

**What will the players learn:**

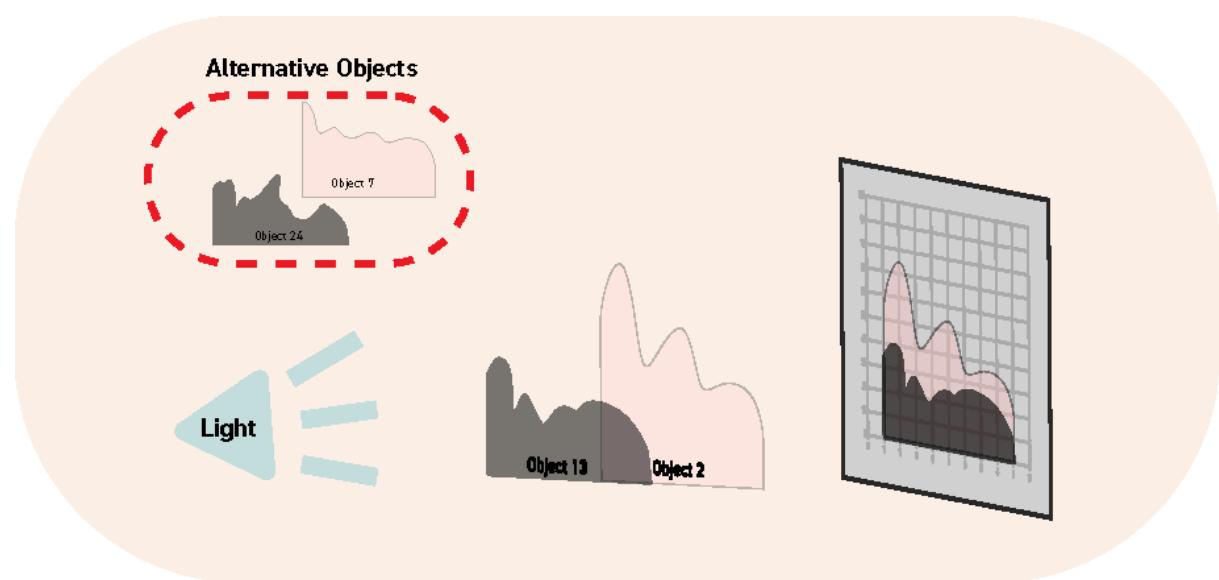
- How to build an Area chart
- Total value vs stacked value

**The Puzzle:**

Every group gets a dataset. They need to build a stacked area chart according to their data by moving the correct objects in front of the flashlight.

**How to get the key?**

The objects are numbered - the numbers are a clue to unlock the final puzzle.



## OPTION 2:

**Visualization type:** Stacked Barchart

**What will the players learn:**

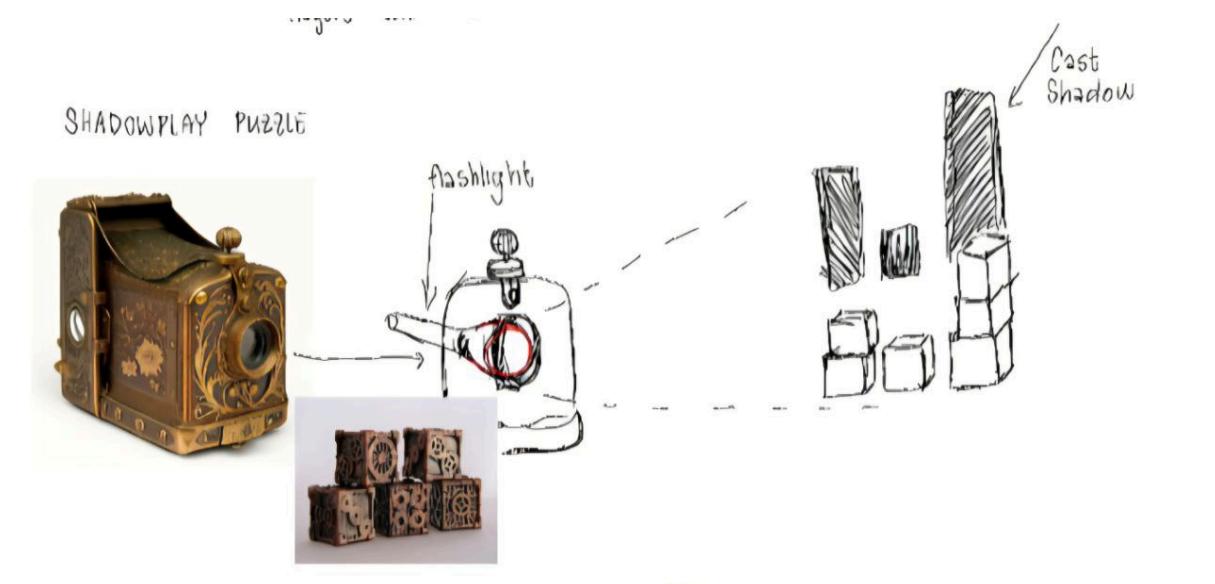
- How to build a stacked Bar chart
- Total value vs stacked value

**The Puzzle:**

Every group gets a dataset. They need to build a stacked bar chart according to their data by stacking the cubes in front of the flashlight.

**How to get the key?**

The cubes have values - by adding the values of the used cubes the player get a clue that helps unlock the final puzzle.



## Final Puzzle – Isotype&Piechart

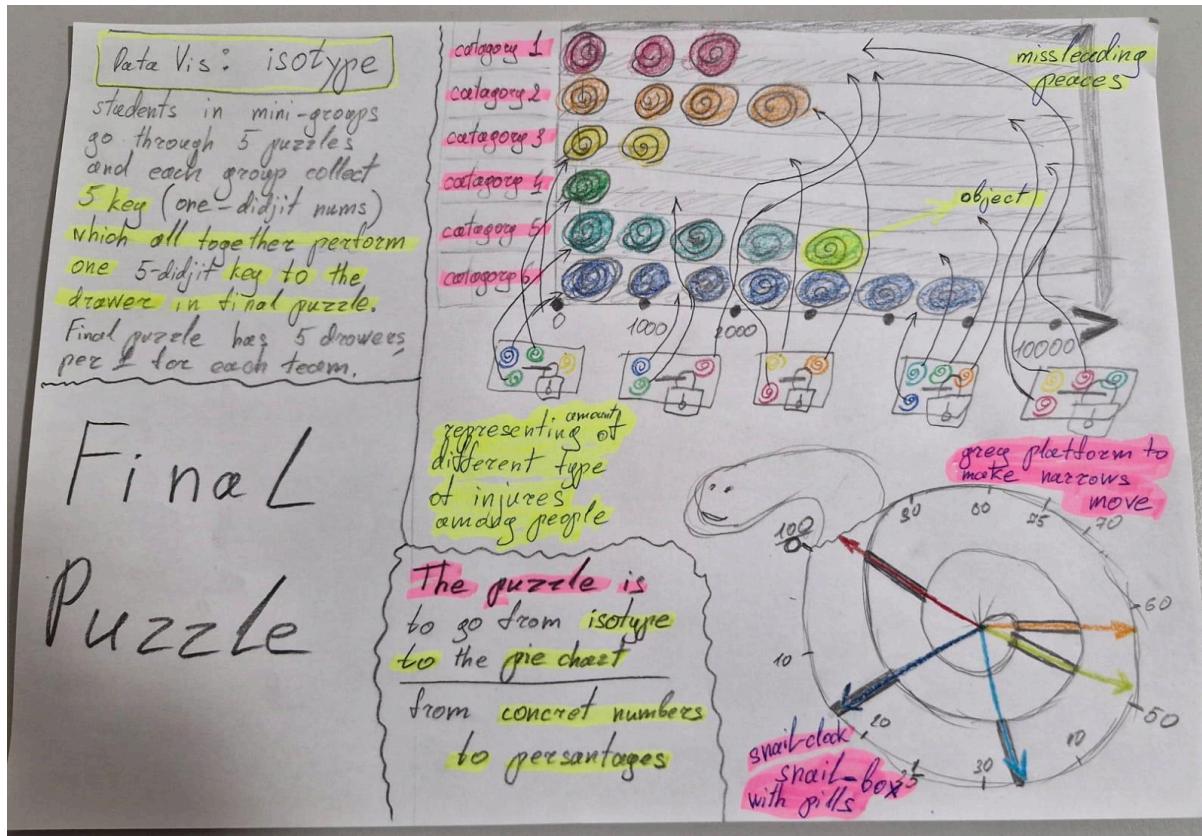
**The visualization type:** Isotype&piechart

**What will the players learn?:** Isotype, pie chart visualizations. Converting from a proportion to a percentage.

**The puzzle:** to convert data from an isotype chart to a pie chart. From certain numbers/proportions to percentages.

**Data:** flexible, group structure kind of

**Technologies and possible obstacles:** magnet turtle-clock-box, shelves with snails, 5 locked drawers.



## Additional Puzzles

### Stars on the Ceiling

**Visualization type:** Scatter plot

**What will players learn:** They learn how scatter plots show the relationship between data points and how patterns or clusters can be recognized visually.

**What the puzzle is:** Players look at a ceiling full of stars in different colors. The slightly different colors form a hidden scatter plot.

**How they get the reward/clue:** The slightly differently colored stars reveal a scatter plot which then corresponds to a piece of a story/ a next clue.

**Data:**

**Technologies and possible obstacles:** Glow-in-the-dark or projected stars on the ceiling; lighting control is important. It might be tricky to make the pattern clear enough to recognize

without giving it away too easily.



## Pie Chart Clock - Clock Arms version

**Visualization type:** Pie chart

**What will players learn:**

They learn that pie charts represent parts of a whole and how proportions relate to data categories.

**What the puzzle is:** Players set the clock hands to specific times that divide the clock face into sectors — the clock becomes a pie chart

**Reward/Clue:** When the correct times are set, a hidden mark or compartment reveals the next clue.

**Data:**

**Technologies & Obstacles:** Modified clock or transparent colored overlays; precise alignment might be tricky.

## Pie Chart Clock – Color Wheel version

**Visualization type:** Pie chart

**What players learn:** How to visualize proportions correctly and understand how parts combine to form a whole.

**Puzzle:**

Players get clues about different data values and must rotate the colored wheels to match those proportions, forming a correct pie chart.

**Reward / Clue:** When the pie chart is aligned correctly, the colored wheels together reveal a hidden message, number, or symbol that leads to the next step.

**Data:**

**Technologies & Possible Obstacles:** Uses color-coded, rotatable wheels; accuracy in alignment and color visibility will be important so players can clearly see when the chart is correct.

## PIE CHART PUZZLES



sets exact time  
2nd clock arms show pieces of pie chart



to fall  
burnable snaps (doesn't turn smoothly)  
reveals pie chart

to fall



## Magnet Puzzle (Scatterplot Box)

**Visualization type:** Scatter plot

**What players learn:** How individual data points create patterns and how scatter plots show relationships between two variables.

### Puzzle:

Players move or tilt a box filled with iron shavings that react to hidden magnets underneath. When positioned correctly, the shavings form a visible scatter plot.

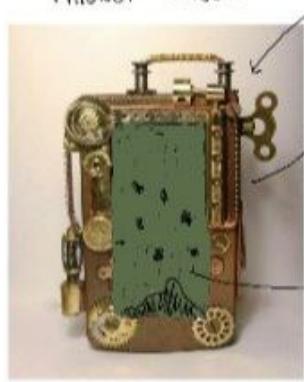
### Reward / Clue:

Once the pattern is correct, the full graph appears, revealing the next clue or data visualization players need to continue.

### Data:

**Technologies & Obstacles:** Uses magnets/electromagnets behind or inside a box and iron shavings to visualize the data. The challenge is finding the right magnetic strength and visibility so the scatter plot forms clearly without too much shaking.

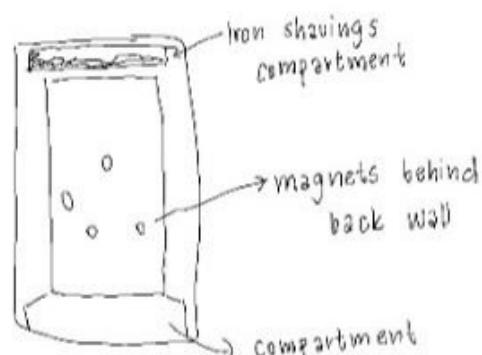
## MAGNET PUZZLE



Radio/Phone

Players have to shake it to release iron shavings

creates scatter plot



## PIE CHART PUZZLES

# Survey results

The development process of the DataVis Escapa Room - Snails watch out! was accompanied by multiple surveys and feedback rounds by the target group as well as instructors. Four surveys were conducted during the term of the project to make sure the needs of the target group were met. The first survey was all about evaluating their prior knowledge on data visualization and their experience with escape rooms.

After the first playtesting with supervisors and lecturers, a second survey took place, to evaluate the prototypes of the puzzles in regards to playability, readability and enjoyment. A third smaller survey was conducted during the project fair where the puzzles were displayed. The last survey took place at the playtesting in Linz where the puzzles were taken to a final test.

## First survey

The first survey was conducted at the beginning of the project to evaluate prior knowledge and expectation of the target group. Its main goal was to examine their familiarity with data visualization, what kind of charts they already know and whether they have an interest in playing an escape room focusing on data literacy. The outcome presented a starting point for creating the escape room with its story and puzzles.

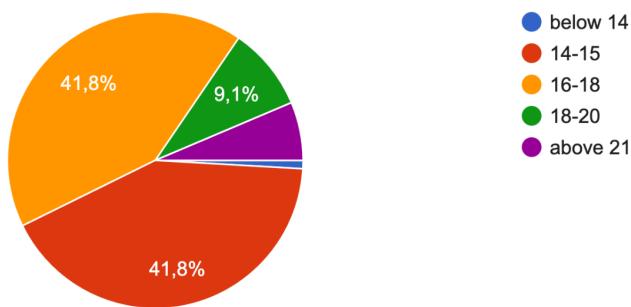
110 people participated, a majority of which aged within the target group. The survey revealed that the participants are mostly unfamiliar with the term "data visualization". 57,3% had never heard of the term before. This suggests a clear gap between everyday exposure to charts and understanding data visualization as a concept.

Although the term itself was unfamiliar, most students recognize common visualizations like pie charts, bar charts and line charts. More complex visualizations like histograms, heatmaps and scatter plots were significantly lesser known.

Even though the participants had limited prior knowledge, they declared interest in, or were at least open to, learning by playing in an escape room.

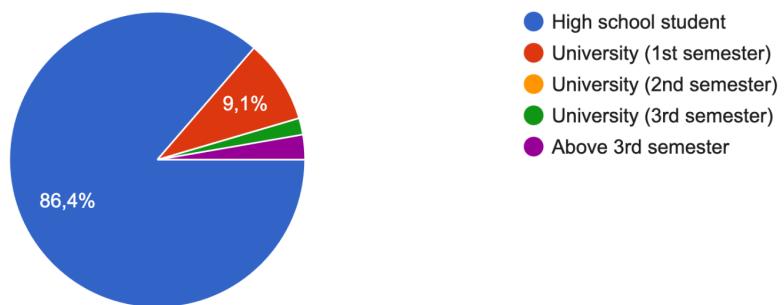
### 1. What is your age?

110 Antworten



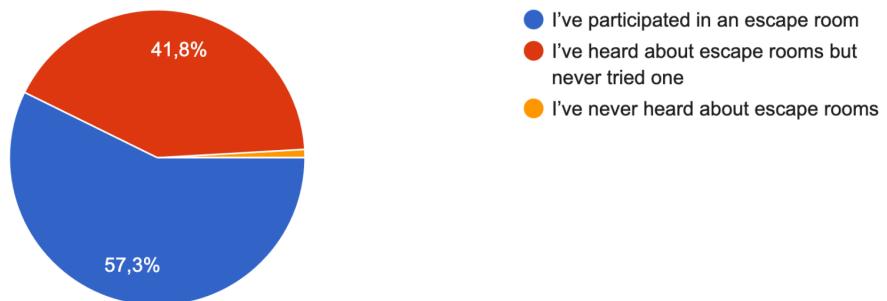
## 2. What is your current level of education?

110 Antworten



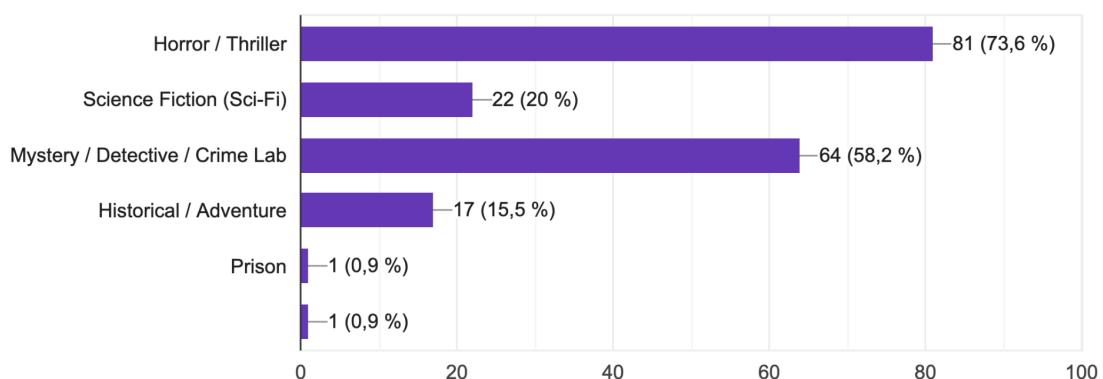
## 4. Which of the following best describes your familiarity with escape rooms?

110 Antworten



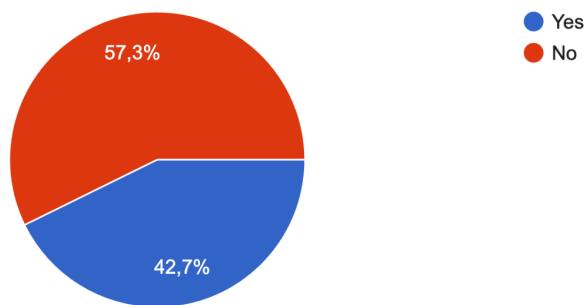
## 8. Which type of escape room would you enjoy the most?

110 Antworten



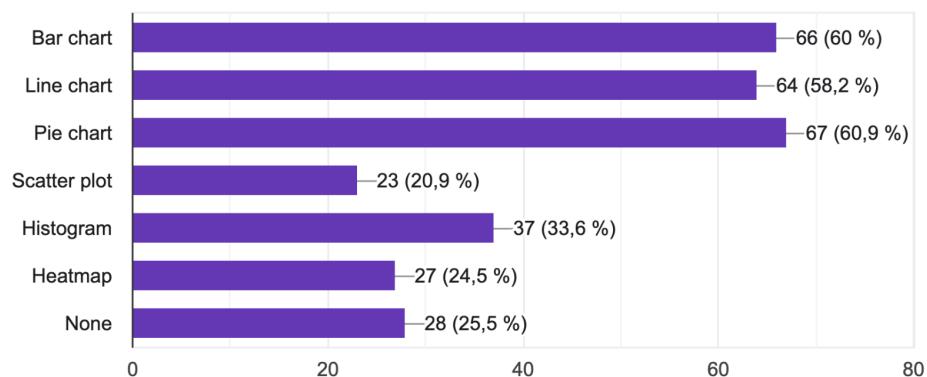
9. Have you heard about "data visualization"?

110 Antworten



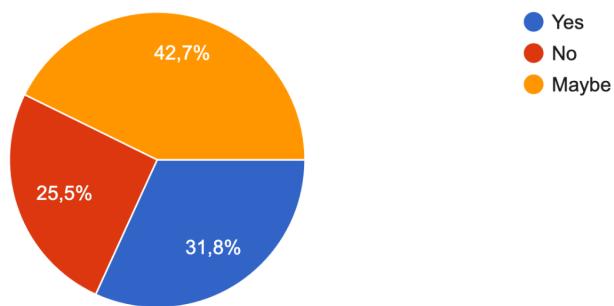
10. Which of the following data visualizations are you familiar with? (Select all that apply)

110 Antworten



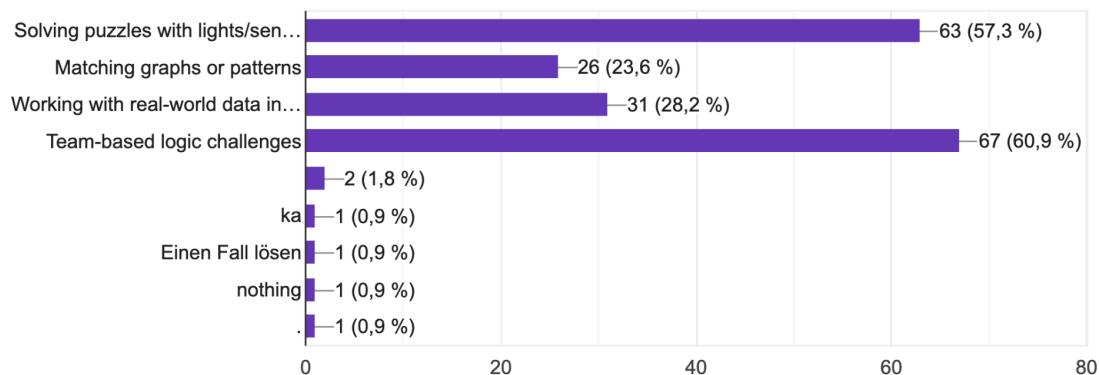
13. Would you be interested in an escape room that helps you learn data visualization through physical puzzles and visuals?

110 Antworten



#### 14. Which type of activity sounds most engaging to you?

110 Antworten



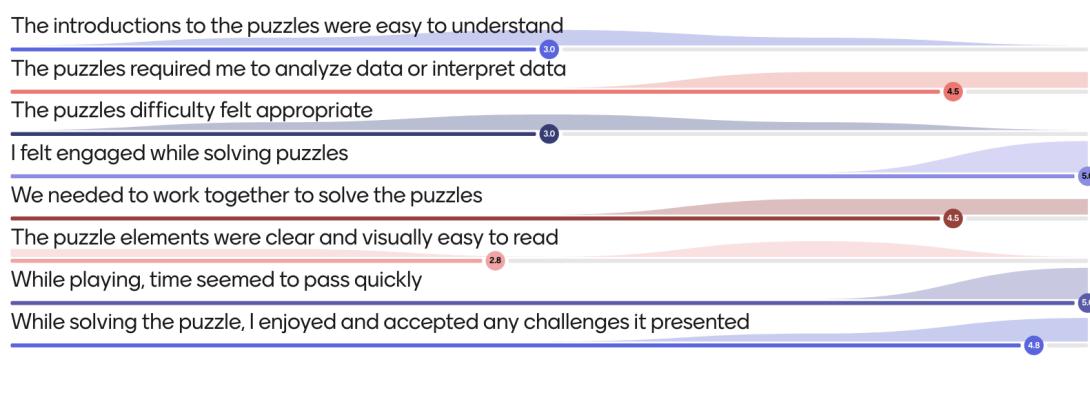
## Playtesting 1 St.Pölten survey

The second survey took place after the first playtesting at university of applied sciences St. Pölten. Overall, the results indicate a positive reception of the three prototyped puzzles and suggest that the core goals were met.

Participants rated the clarity of the introductions with an average score of 3,0 which indicates that there was still room for improvements. Additionally the statement “The puzzle elements were clear and visually easy to read” received a lower average score of 2,8, which suggests that some visual elements or data visualizations may have been confusing or too complex at the first glance.

On the other hand, engagement levels were extremely high. Participants felt that time seemed to pass quickly, they enjoyed the challenge and difficulty of the puzzles. They confirmed that teamwork was an essential part of the puzzles and thought it to be interesting, novel and fresh.

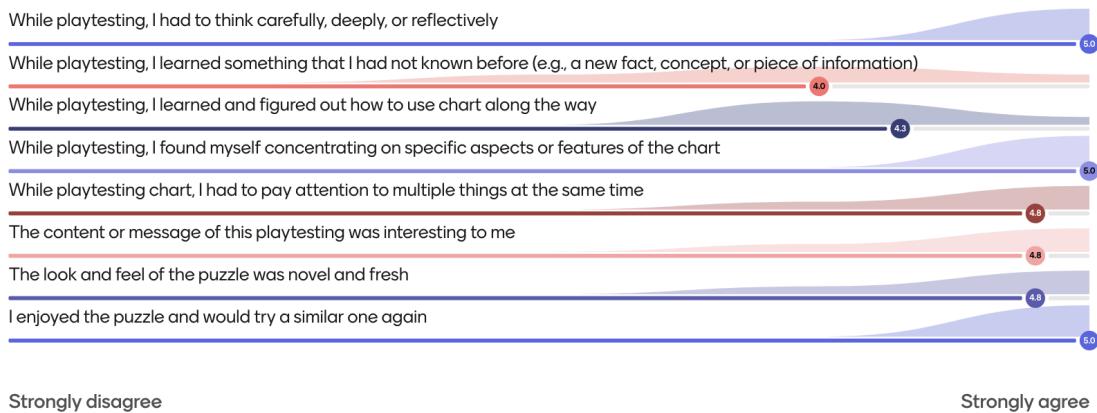
## Likert Scale



Strongly disagree

Strongly agree

## Likert Scale



Strongly disagree (left) and Strongly agree (right) are indicated at the ends of the scale.

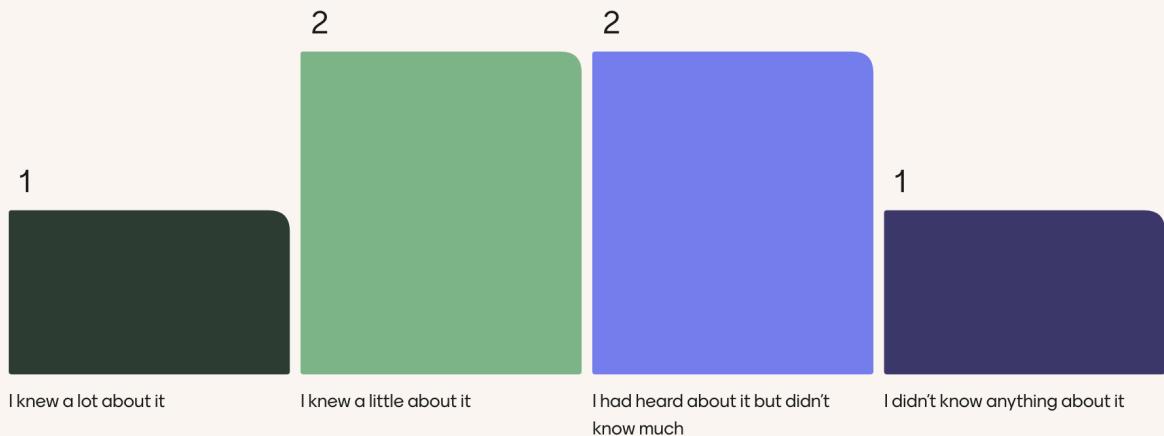
## Project fair survey

The third survey was conducted during the project fair at university of applied sciences St. Pölten. Out of all the people who came by to see the project, seven participated in the survey. Participants were again asked about their prior knowledge which was a generally moderate level.

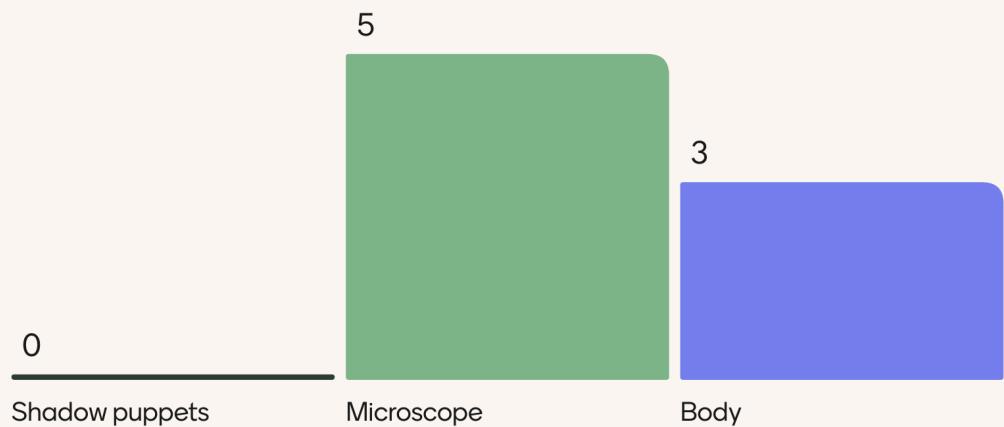
Participants stated high levels of enjoyment and engagement. Also, they agreed that the puzzles helped them learn about data visualization. The clarity of the instructions received a moderate rating of 6,0 out of 10. This indicates that while the participants enjoyed the experience, onboarding and explanation remain an area of improvement.

Open-ended questions emphasized two main strengths of the escape room: the narrative framing and the physical design elements. Plus, they loved the snails :)

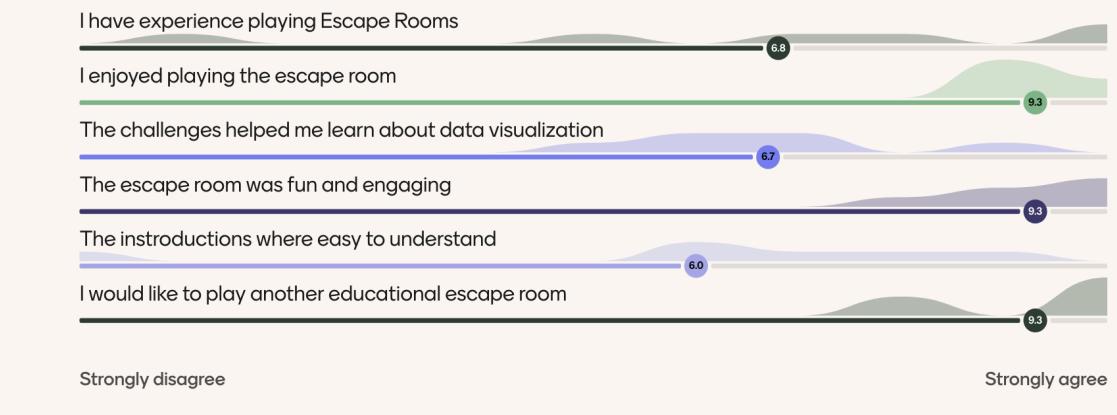
Before playing the escape room, how would you rate your knowledge of data visualization?



## Which puzzle did you play



Please rate how much you agree with these statements about the escape room experience:



## What was your favorite part of the escape room?

The LOVELY snails!! 🐌 I also loved the ongoing storyline connecting the games and made the gameplay more enjoyable

Diese große Schnecke mit den Knöpfen zum drücken und den Lichern als Auflösung, ob man es richtig gemacht. Aber auch, dass man eine Story dazu hat mit dem "Tagebucheintrag".

## Do you have any ideas to make the escape room better?

Maybe one clean sheet explaining the whole storyline? And another one for ever individual game. Also differentiate what is Storyline and what is important for gameplay

## Playtesting 2 Linz survey

The fourth and final survey (so far) was conducted after the last playtesting with real live teenagers in Linz. It focused on participants' prior knowledge, overall experience, learning outcomes and qualitative feedback. The survey aimed to evaluate whether the (so far) final version of the escape room successfully met its requirements.

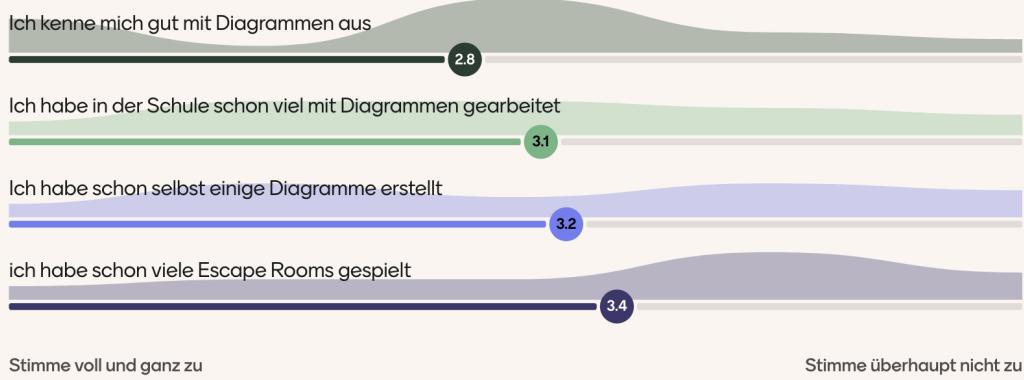
Participants reported moderate prior knowledge with both escape rooms and data visualization. These results indicate that most participants entered the experience with basic but not advanced knowledge.

The Likert-scale results indicate an overall positive experience. They slightly to moderately agreed that they enjoyed working on the puzzles, that the instructions were clear and that teamwork was an important part of the game. They might even want to do another educational escape room in the future.

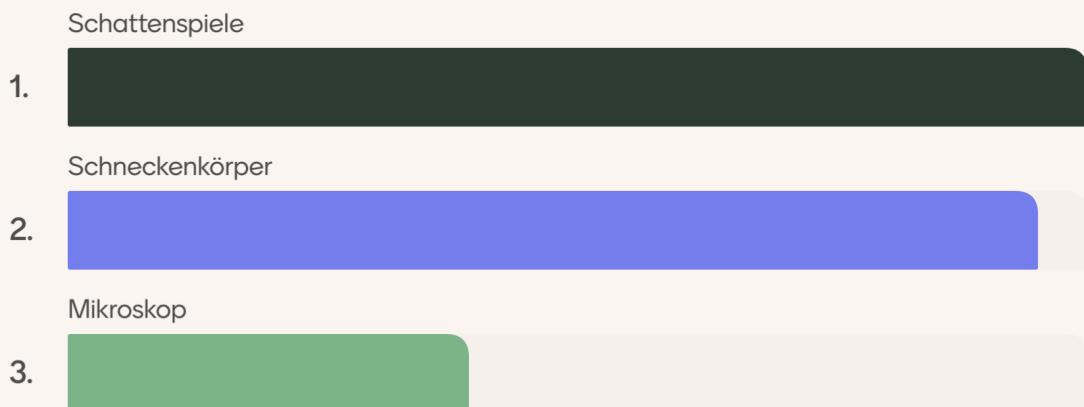
When asked what they enjoyed most within the game, the most frequent answer was teamwork. Other commonly mentioned elements included the variety of tasks, the snail theme and the overall concept of the escape room. They also mentioned that the experience didn't feel like everyday class.

Suggestions for improvement mainly focused on organizational aspects rather than core gameplay. Some participants expressed a desire to choose their own teams, to have more puzzles, or to increase the difficulty of certain puzzles. One participant suggested that the theme might not be age appropriate to teenagers.

## Vorwissen



## Dieses Puzzle hat mir am meisten Spaß gemacht



## Retrospektive



## Was hat dir am Spiel am meisten gefallen?

tschenlampen spiel  
spiel  
leider nichts diagrammspiel praxis  
die aufgaben das rätseln gar nix ich war nicht beg  
teamarbeit die teile allgemein teamwork escape room  
die einzelnen stationen dasd das mut lichr die herausforderung  
das thema schnecken der konzept gute rätsel  
die aufgaben waren vielfä kein unterricht spaß  
abwechslung zum normalen

## Was würdest du verbessern und wie?

nichts	Ich fand es ziemlich cool, da es sehr verständlich waren und wir hatten nicht wirklich probleme	
Die Teamenteilung	Dass wir uns die Teams selber aussuchen können.	Eigentlich fällt mir nicht wirklich was rin
Bisschen anderes Thema für die Teenager denn glaube nicht dass das Thema Schnecken richtig interessant war für alle 😊	Wir sollten uns die Teams selber aussuchen dürfen	Mehr Aufgaben beim Escape Room
Nichts	Nichts	Nichts
	Das Diagrammspiel schwieriger machen	Alles. Es war so Volksschule mäßig.

## Requirements

The main requirement was to develop the concept of a physical escape room that could be implemented in a classroom and be played by approximately 20 to 30 high school students. The escape room is also required to promote teamwork. In addition to the concept, at least three puzzles were to be created in a playable format.

The design was also strongly influenced by the results of the conducted surveys. Since many students haven't heard of the term data visualization but knew the basic charts like bar charts, line charts and pie charts, the puzzles included those familiar charts. However the students should not just work with what they already know but also learn new types of visualizations. Therefore, some more advanced or lesser known charts were introduced as well.

Another important requirement that came from surveys after the playtests was the need for clear visual elements and instructions.

# Puzzle structure and variations

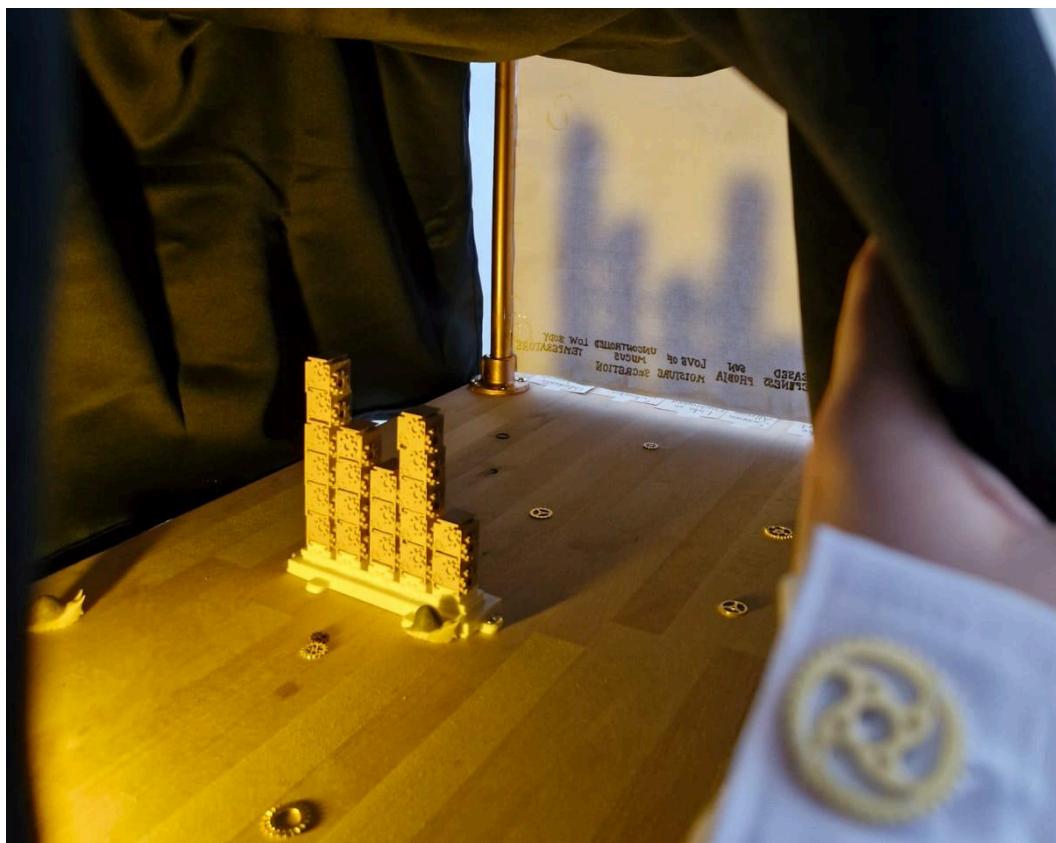
Out of the puzzles mentioned in the concept, three finally got to see the light of the day. This section provides a clear instruction on how to manage the puzzle stations, the materials needed and how to play them.

## Shadow Puppet Puzzle

The Shadow Puppet Puzzle is a physical bar-chart and shadow game inside our escape room where players analyze an “Infection Spread Report,” build a 3D bar chart with blocks, and use its shadow to find a solution.

A strange virus has spread through a population of 112.000 people, causing different snail-like symptoms. According to the research notes, five different symptoms exist: Increased Sleepiness, Low Body Temperature, Love for Moisture, Excessive Mucus Secretion, and Sun Phobia. The exact number of affected patients for each symptom is hidden inside short textual descriptions and word problems, such as “half of the population” or “patients per day over a period of time”.

Players act as investigators. Their task is to read the InfectionSpread Report (aka Dr. Serins note), calculate how many people are affected by each symptom, and translate these numbers into a visual representation using physical blocks and use the shadow to discover which reference chart matches their data and which code to use.



## Materials used

This section is intentionally general so future builders can adapt to their own materials and space.

The materials used for the Shadow Puppet puzzle include:

- A dark booth or corner (frame + black cloth).
- One fixed torch or spotlight pointing at the block area. Make sure it is charged.
- A flat base with five marked positions for the symptoms and a set of stackable blocks. (Disclaimer: the base might need a reprint due to printer malfunctions)
- A clear plastic sheet in front of the blocks with an X-Y grid taped behind it for reading bar heights.
- Printed Infection Spread Report sheets
- a Population Symptom Charts poster with several possible bar charts and their codes.
- the printed label for the shadowpuppet puzzle

The setup consists of a darkened area where external light is minimized using black cloth or curtains. The block base is placed in front of a fixed torch, which is aligned so that the shadows fall cleanly onto the transparent screen. The X-Y grid is placed behind the screen to help players read and compare bar heights. The Population Symptom Chart poster is placed next to the station, allowing players to directly compare their solution with the reference visualizations.

## How to play

When players get to the station, they read the Infection Spread Report on their clipboard. This document contains notes with all relevant numbers and clues. The group must first extract the total number of patients for each symptom.

Next the players have to build the bar chart. They have to look at the block base with five positions (one per symptom). Using a predefined unit (for example, 1 block = 14k people) to decide how many blocks each symptom needs. They have to stack the blocks carefully on each position, keeping them straight and stable to create a physical bar chart.

Once the chart is built, a fixed torch is turned on. The stacked blocks cast a shadow onto the transparent screen with an X-Y grid. This shadow forms a two-dimensional bar chart that can be compared to a poster containing several reference charts.

The players' goal is to identify which reference chart matches their shadow exactly. Each chart is accompanied by a four-digit code. The correct one is then entered into the project website to get a number for the locket for the final puzzle.

## Quick tips for players

- Share the work: different teammates can calculate different symptoms at the same time.
- Double-check numbers before stacking blocks; one wrong total leads to the wrong shadow.
- If stuck, re-read the experiment notes for one symptom at a time or ask the facilitator for a small hint.

The Shadow Puppet puzzle trains fundamental data literacy skills. Players learn how to extract numerical information from text, translate abstract numbers into visualizations and verify results by matching patterns. Additionally, the puzzle promotes teamwork.

## Possible future development

Since the prototype carries quite some weight, future versions of this puzzle might be out of different, lighter material. Ideally, the puzzle can be deconstructed and carried around more easily to make sure schools are able to store and set it up more easily.

A quick addition to ensure easier transportation could be to add handles to the side of the plate. This could improve the transportability.

Currently the screws of the tube frame need to be checked regularly. When transporting the puzzle they get loose easily.

As mentioned above the base plate could benefit from a redesign and reprint. The space between the mounted cubes is too small on the current installed version. Enlarging the space in between the cubes could benefit the playability of the puzzle.



*recommended redesign of the base plate*

Overall, the Shadow Puppet puzzle is one of the more physical and visually expressive puzzles in this escape room. Players work to create charts they are already familiar with and use them in a completely new context.

## Microscope

For the microscope puzzle each subgroup receives an instruction sheet with a log book note revealing a story about the earlier stages of the virus and how it got transmitted. Giving the players an insight on how viruses spread and what kind of data can be established. Additionally, there is a table and several different charts spread across the table. To find the solution, players find clues in the note, and work with the table and the various charts. Eventually, they have to enter their solution into the website to make sure if their solution is the right one. The puzzle is designed as an analytical task, where success depends on correctly reading and interpreting the visualizations rather than guessing or trial and error.



## Materials used

The main materials used for the puzzle are:

- the introductions sheets printed on paper
- a table chart with all the data included, prepped in a transparent cover to enable taking notes on it with a whiteboard marker
- a magnifying glass to take a deeper insight into the data
- (at this stage) a sheet with various visualizations describing the data
- a microscope and lasercutted charts on acrylic glass as decoration (or for further refinement)
- the label for the microscope

## How to play

The puzzle focuses on developing data literacy skills using charts the players might not be familiar with yet. It aims for the participants to learn how to read and interpret different types of charts, compare values and identify patterns, understand relationships between variables and combine information to find a solution. Additionally, the puzzle promotes teamwork, communication and critical thinking.

When the players enter the microscope station, they read the log book note they got on their clipboard, which includes the task they have to solve. Next the group has to analyze the charts and find answers to the questions, such as identifying the superspreaders and looking for similarities between variables. Finally they enter their solution into the website where the group receives immediate feedback and can proceed to the next stage of the escape room.

The setup consists of a dedicated table with the chart sheet and the table sheet stucked on either ends of the table to encourage teamwork. The magnifying glass is placed close to the chart sheet. Additionally, the microscope and the acrylic glass charts chips are placed on the table for decoration to elaborate the lab-theme.

The microscope puzzle is highly adaptable and can be modified easily and even can be played by several groups at the same time. At the moment three different tasks for the microscope puzzle exist.

The first one works in different phases. First they have to find the person that infected the most people, then they have to look for the people that were infected by that very person and lastly they have to figure out what those have in common and put their solution on the website. For this task they must identify the charts that represent their case the best but could also solve it by using solely the table sheet. There are multiple ways to solve this puzzle.

The second group is supposed to look for the job with the highest average virus infection and identify the odd man out within this occupational group. That person's name is their answer. They can find it by looking at the box plot chart or the histogram in combination with the table.

The third group has to identify at what time the most people were infected and what most of them have in common. For this task they might look for the line chart and the beeswarm plot. The final solutions are the following:

- Group 1. Answer to the puzzle - (Malakologe), lock code - (7).
- Group 2. Answer to the puzzle - (Tizian), lock code - (1).
- Group 3. Answer to the puzzle - (Leber), lock code - (3).

## Possible future development

For future development, the microscope puzzle might need even more adjustment in case of difficulty. The first two seem to be easier than the third group. It would be amazing if the microscope could somehow be part of the game after all, maybe by more precise laser cutting or a lesser zoom factor. Furthermore, the data can be expanded to make even more visualizations.

Overall, the microscope puzzle is one of the more analytical and difficult puzzles due to lesser known visualisations, and the need to really go deep into analyzing multiple charts and tables.

## The Body

For the Body puzzle each subgroup receives an instruction sheet with two log book notes. The first sheet reveals the story of a doctor documenting symptoms of patients that get transformed to snails - the detailed information of the documentation is shown on a scatter plot the players need to analyse. The second page of the log book note is the actual instruction sheet. It is about a nameless doctor who tried to cure the patients based on the research of the transformation with a step by step treatment plan. The players gain knowledge on how the infection transforms a person and are provided with a way to treat them. The step by step treatment plan is solved with the help of the scatter plot. The puzzle is designed to understand the use of scatter plot diagrams - to use legends and also to interpret different types of visual variables on a diagram.

## Materials used

The materials used include:

- Two instruction sheets per subgroup printed on paper (A4 for the clipboard)
- Scatter plot diagram (A3 - best printed on light-brown paper)
- Legends: “Organ damage” & “Organs and Patients” (A4 - best printed on light-brown paper)
  - both should be placed next to the scatter plot to suggest their relation
- The snail set with the correct program per group
- A computer/laptop - connected to the snail for power and group switch
- A pen for the player to take notes on the instruction sheet
- The label for the Body puzzle



*Setup at the Linz playtesting*

## How to play

When the players enter the Body station, they read the log book notes they got on their clipboard. The first page sets the mood and gives context to the story. The second page contains the instructions to solve the puzzle. The group has to interpret the step by step plan to find the correct order to treat the organs of the patient. To do that the players have to analyze the scatter plot and find answers to each question. Such as to search for the damage level on a specific organ, to look at a specific sector on the diagram or to select an organ based on an exclusion process.

The answers can be checked by pressing the buttons on the snail-body. When pressed the lights start to glow in blue light. If the player's solution is wrong the light turns red for 10 seconds and no input can be made in that timeframe - after that the snail resets and the players can try again. If the players find the correct sequence the light turns green - to reset the green light any button needs to be pushed.

Finally they enter the first letter of each organ (written together without any punctuation marks; it doesn't matter if uppercase or lowercase) into the website where the group receives feedback and can proceed to the next stage of the escape room.

The final solutions are the following:

(The answer to the puzzle on the website is currently set for the german version)

- Group 1. Answer to the puzzle website- (LHLN), lock code - (6).
  - On snail-body: Lung → Heart → Liver → Kidney
- Group 2. Answer to the puzzle website- (GHNL), lock code - (9).
  - On snail-body: Brain → Heart → Kidney → Lung
- Group 3. Answer to the puzzle website- (LLGN), lock code - (2).
  - On snail-body: Liver → Lung → Brain → Kidney

## How to adjust the code and switch group

The code is written with “Visual Studio Code” and the addition of “PlatformIO” to support the use of microcontrollers. The program runs on an “Arduino UNO”. The code has commentary and is structured to ensure easy understandability.

Important for playing the Body station are lines 24-42. This section is dedicated to adjust solutions or to add new groups.

Currently this section is used to switch the groups manually. Each group has their own solution. To switch between the solutions - two of the coded group solutions need to be commented out and only the group playing remains active in the code. After switching the group the code needs to be uploaded to the snail again.

```
//GRP 1 - inactive
//const byte solution[] = {4, 2, 5, 3};
//GRP 2 - inactive
//const byte solution[] = {1, 2, 3, 4};
//GRP 3 - active
const byte solution[] = {5, 4, 1, 3};
```

excerpt of the code with active group 3 solution

## Possible future development

The Body station can currently be played fully and as intended but has room for improvement.

One of the major qualitative of life improvements would be the improvement of the switching between the groups. In concept it was planned to add an NFC card system for the players to log into the stations. This would benefit every additional coded puzzle.

Possible alternatives could be to add an extra switch/button for the instructor to use. The already installed LEDs could be used to show the active group.

Another alternative - without changing the hardware - could be to add a specific button press pattern (for example - press 3 specific buttons for 10 seconds) to change into a different mode. In this mode the group could be changed by using the already existing buttons and the LEDs can be used to support the navigation.

The box of the snail-body could be improved. Currently it has a tapped on cardboard cover. Although it is surprisingly stable - it would be best to change this to a full woodbox with the ability to open the electronics.

The electronics are currently plugged in breadboards (which are tapped inside the box) - to ensure stability the electronics should be soldered.

A less important improvement are the buttons. Currently they are glued on the snail. The plan was for them to be sitting inside the hole - unfortunately the holes were a little bit too small. This problem was deliberately ignored because of a style choice - but to ensure stability a reprint of the snail could be beneficial.

The addition of groups - as planned in the concept - can be easily done. With the remaining 2 (out of 5) patients on the scatter plot diagram two more group variations can be designed.

Tasks like "I have to identify the organ that was most commonly infected during the first 15 days across all five patients." have to be designed carefully or be repeated.

When changing the location of the organs on the diagram all the existing group variation needs to be factored in.

When changing the size of the organ only the group using this specific patient needs to be considered.

## Changing documents and diagrams used

The instruction sheets and most of the charts can directly be changed on the website "canva". The links are provided on the website.

On the canva website there is also the previous english version. The most current version is the one in german - to play the puzzles in english this version should be translated rather using the old english version.

Style Sheet:

[https://www.canva.com/design/DAG-NPpanSY/FaDeXz8ZYx0i-sZ8n90sBQ/edit?utm\\_content=DAG-NPpanSY&utm\\_campaign=designshare&utm\\_medium=link2&utm\\_source=sharebutton](https://www.canva.com/design/DAG-NPpanSY/FaDeXz8ZYx0i-sZ8n90sBQ/edit?utm_content=DAG-NPpanSY&utm_campaign=designshare&utm_medium=link2&utm_source=sharebutton)

Introduction Sheet:

[https://www.canva.com/design/DAG-f5g7ud4/ot28Y-I-Q58BuZbdIAQk8w/edit?utm\\_content=DAG-f5g7ud4&utm\\_campaign=designshare&utm\\_medium=link2&utm\\_source=sharebutton](https://www.canva.com/design/DAG-f5g7ud4/ot28Y-I-Q58BuZbdIAQk8w/edit?utm_content=DAG-f5g7ud4&utm_campaign=designshare&utm_medium=link2&utm_source=sharebutton)

Body-Chart Sheet:

[https://www.canva.com/design/DAG-NTJnVgs/rixBYRWx6cAzouBhqLY2uQ/edit?utm\\_content=DAG-NTJnVgs&utm\\_campaign=designshare&utm\\_medium=link2&utm\\_source=sharebutton](https://www.canva.com/design/DAG-NTJnVgs/rixBYRWx6cAzouBhqLY2uQ/edit?utm_content=DAG-NTJnVgs&utm_campaign=designshare&utm_medium=link2&utm_source=sharebutton)

# Results playtesting

## Playtesting in St.Pölten

The playtesting in St. Pölten was conducted with four players that formed one group and tested all three puzzles. It was the first time someone outside the team tested the puzzles.

There was a lot of helpful feedback provided throughout the playtesting. Also at the end a survey and question round was conducted (see chapter [Playtesting 1 St.Pölten survey](#)). This resulted in a lot of small changes for the puzzles and structure as well as major reworking of some aspects.

Some of the most common feedback was:

- **Unclear instructions**

Most of the struggle and frustration throughout all the puzzles was due to unclear formulation and vague instruction. This problem was the most timewasting factor for the participants trying to solve the puzzles.

- **Usability of the interactive puzzle elements**

Some elements were difficult to use. The optical magnification on the microscope was too difficult to use for the purpose intended - there was too much zoom. Also the cubes on the shadow puppet puzzle had too much friction.

- **To difficult, especially for teenager**

The first playtesting was conducted in around an hour and was done by adults educated in visualization techniques. The goal is around 40min for students with less knowledge about the topic.

- **Confusion on what's important for which task**

There was confusion on which instruction belongs to which puzzle and also the players struggle to connect which diagram is important.

The biggest changes in response to the feedback were:

- **Reworking the microscope puzzle**

The biggest change was with the microscope puzzle. The instruction, solution and the instruments to use were changed.

- **Changing the instructions on every puzzle**  
The instructions on every puzzle were reworked. The important parts were clearly formulated and separated from the story elements.
- **Labeling everything**  
Every puzzle received icons. Important elements were placed thoughtfully to indicate the relationship to the puzzle it belongs

## Project Fair

The project fair was the second time the escape room was tested. There was no strict constellation of teams and no time limit. Most commonly teams of two or solo players tested the puzzles.

There was an optional survey the participants could do (see chapter [Project fair survey](#)) and direct feedback was given. The general feedback was mostly positive, especially that the escape room is fun and well designed.

One of the major observations was that almost no group could do the puzzles without at least one hint. That led to a second rework of the instruction sheets and fine tuning of the difficulty of the puzzles.

The puzzles were made easier and the highlight elements were added in the instruction.

## Linz

For the playtesting in Linz a class of 19 students was split in two. Each half took turns with the escape room. The class was further split into groups 3-4 students, 3 groups per escape room run. Each team got their clipboard with their individual tasks for each puzzle. The students had to start at a predetermined puzzle, once finished with the first puzzle they were free to rotate to any of the next free puzzle. A limited time of 45min was set for each round of the escape room.

The students were given a survey to check their knowledge of data visualization as well as for them to give feedback on the escape room itself. (see chapter [Playtesting 2 Linz survey](#))

The playtesting went almost perfectly. The timeframe of a 45min per turn of the escape room was met with a margin of +-5min on both groups. The body and shadow puppet puzzle both had approximately similar time frames on average (around 11-13 minutes). For the microscope puzzle the students needed slightly more time on average (around 15 minutes).

# Iterations or challenges encountered.

From the early stages where the puzzles were merely concepts to the final prototypes, the project went through several iterations. After the first playtesting, several issues were addressed. While participants found the concept engaging, they reported that some instructions were unclear and that certain visuals were difficult to understand and interpret. Based on that feedback a refined version of the visuals was introduced and the instructions were improved in regards to understandability. They got a coherent design with log-book styled instructions and more explicit puzzle introductions. Visualizations were simplified, labels were added to differentiate which instructions belong to which puzzle and unnecessary decorative elements were reduced in order to improve readability.

The time between the first playtesting and the final playtesting in Linz was also spent reworking, redesigning and refining the puzzles. All of them got new versions and tasks to make it playable for three different teams.

The main issue with the shadow puppet puzzle in the first version was that it did not matter how the bars were stacked, they always gave the same result. Therefore, the tasks were altered and a sheet with possible solutions was introduced. The concept and general look stayed the same. According to the survey from the Linz plateesting, this puzzle was the one, the teenagers enjoyed the most out of the three.

For the Body puzzle the main problem was that the participants at the first playtesting were able to solve the puzzle by accident, and without using all the materials that were given to them. As a result, the instructions were made more clear and the chart was redesigned and labeled. Furthermore, the snail got a new body (which looks amazing!) and the electronics were hidden to make sure the players could not accidentally unplug cables.

The microscope puzzle needed the most refinement. The first playtesting indicated that the instructions were rather confusing and the charts way too small to see them clearly. Some notes were misleading and participants didn't know which sheets belonged to the puzzle. In general it seemed too difficult for teenagers and needed to be toned down. For the project fair and the plateesting in Linz the puzzles' difficulty was decreased by a considerable degree, new charts and tasks were introduced and the microscope was replaced by a magnifying glass. Although the puzzle was simplified, it still remained the one that took the most time to play.

## Documentation for website

### General information

Project name: Steampunk Escape Room

Location: GitHub repository — [InfoVisEscapeRoom/steampunk-escape-room](#)

Type: Static website

Languages: HTML, CSS, JavaScript.

## Purpose of the website

The website is designed to showcase a steampunk-style escape room project and provide all the necessary information about it. It presents the concept of the quest, its atmosphere, structure, tasks, and answer verification logic, as well as familiarizes the user with the idea, scenario, and possibilities of the escape room.

## Technologies used

The project was implemented using:

HTML – page structure

CSS – styles, design

JavaScript – interaction logic

Assets – graphics and multimedia

GitHub Pages – for online deployment

## Site structure

### Folders

1. assets/ – project resources:

CSS files for page styling

JavaScript files for site logic

Other auxiliary files (fonts, icons, styles)

2. images/ – graphic files:

Images for backgrounds, buttons, quest room illustrations

### HTML files

1. index.html – main page of the site:

Welcome page of the project

Contains navigation to other pages

Demonstration of stylized content

Demonstrations of the quest room and information about it

4. puzzle-check\_team1.html – checking the correctness of solved puzzles for the first team  
(exclusively for use during the game in the quest room)

5. puzzle-check\_team2.html – checking the correctness of solved puzzles for the second team  
(exclusively for use during the game in the quest room)

6. puzzle-check\_team3.html – checking the correctness of solved puzzles for the third team  
(exclusively for use during the game in the quest room)

### Other files

1. README.txt – text description of the project.

2. documentation.docx – detailed documentation of the project.

## Functionality

The Steampunk Escape Room project is implemented as a static website, but it has several important functional features:

Static website without a server component

All content is stored in HTML, CSS, and JavaScript files.

No database or server is required for the site to work — it can be run locally or via GitHub Pages.

Interactive pages for checking solutions

The pages puzzle-check\_team1.html, puzzle-check\_team2.html, and puzzle-check\_team3.html allow users to check the correctness of their solutions or quest room tasks.

The logic is implemented via JavaScript: after entering the answer, the user receives confirmation of correctness or a hint.

Thematic navigation between pages

The menu and buttons on the site allow you to quickly switch between the main page, templates, and verification pages.

The navigation matches the steampunk style and supports the atmosphere of the quest.

Graphics and styles to create atmosphere

Special fonts, buttons, and decorative elements in the steampunk style are used.

Images and backgrounds emphasize the atmosphere of the quest room and make the site visually appealing.

Adaptability

The site displays correctly on desktops, tablets, and mobile devices.

## User guide

Clone the repository:

```
git clone https://github.com/InfoVisEscapeRoom/steampunk-escape-room.git
```

Open index.html in your browser.

or

Open it via GitHub Pages as:

<https://infovisescaperoom.github.io/steampunk-escape-room/>

Use the menu to navigate between sections of the page. At the bottom of the site, you will find all the necessary files for developing puzzles, as well as links to other pages related to the game.

## Team reflections

What happens when six people that have never seen each other before , coming from all different kinds of places, get thrown into a room together, not to escape it, but to create it? With two girls from Ukraine, one from Pakistan, another one from Slovakia and two people from Austria, the group couldn't be more different. However, that doesn't need to be a negative aspect. It might have taken a while to warm up to each other but eventually they figured out how to work together as a team. They did some research on escape rooms by playing two escape rooms as a team which strengthened their cooperative skills.

Magdalena took over the role as group leader primarily due to logical reasons. She already studied at university of applied sciences and knew the lecturers.

Iryna was the scrum master of the team, calling in meetings and making sure that reflection sessions took place.

Throughout the project the team worked in a more flexible manner. Instead of assigning more strict roles than they had to, they divided tasks based on individual strengths and interests. There were a lot of aspects they did all together or in smaller groups of two to three people, such as concept development and puzzle design. Zuzanna was the main visual designer, in charge of creating the 3d-models, Valentyna was in charge of creating the website for the documentation and puzzle-solution-input. Fiza did a lot of research prior to the puzzle creation. Julius took a huge part in fine tuning the story and creating the puzzles. Communication mainly took place through regular in-person meetings, online teams meeting and per whatsapp chat. Other platforms were used like google docs for creating collaborative documents, google forms and mentimeter for creating surveys and gathering feedback, canva for designing presentations and instruction sheets, [rawgraphs.io](https://rawgraphs.io), tableau and Adobe Illustrator for creating charts and Blender for 3d modeling.

One of the main advantages of the group was that everyone came from a different study background, therefore, everyone had different strengths and prior knowledge regarding data visualization, coding, designing etc. They were also willing to share their insights on specific topics and helped out wherever they could.

There was a lot of positive team building going on within the group but there were also some challenges. The main being time management. Creating an escape room within only a couple of months is a challenge that requires a lot of planning. And thank god it was carefully done because time was running out the closer the next event was coming. This led to a lot of late night sessions. However, it worked out.

Another challenge was identifying if the puzzles were too simple or too difficult. The playtests really helped estimating that. Finding the right difficulty level for the target group required several iterations and adjustments. Working with physical materials also introduced practical difficulties, such as limited space, technical constraints, and the need to reset the setup between playtests.

As a team they learned working together, the importance of time management and having an open mind towards new ideas. They also learned that communication is an important part of working together and that trusting in each other's skills and in the process is also vital.

If the group was to continue the project, they would create more optional puzzles in between the stations and lay some easter eggs spread across the puzzles and the story, just for fun. Furthermore, they would introduce a keycard for the groups to easily access the puzzles. Lastly, they would create a final puzzle and a story finale.

# Attachment

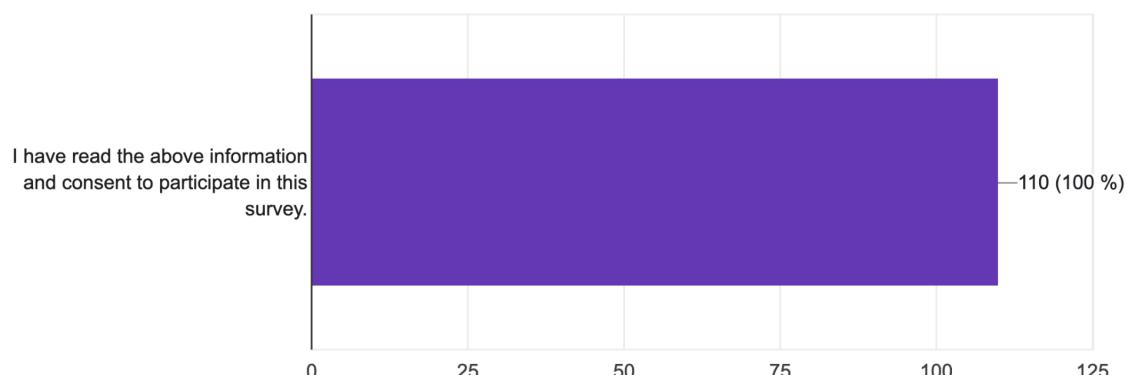
## Survey result:

first survey:

<https://docs.google.com/forms/d/e/1FAIpQLScswOY2hOYZHrk0luDQxk9aOwBHxTn2w5ko5MvvbeVHSuZUjQ/viewform?usp=header>

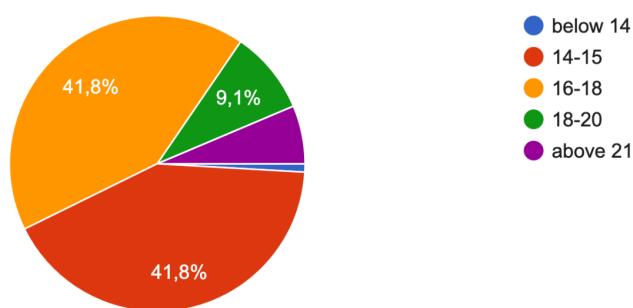
This survey collects insights on students' experiences with escape rooms, data visualization, and interactive learning. Participation is voluntary, res...purposes. By continuing, you consent to participate.

110 Antworten



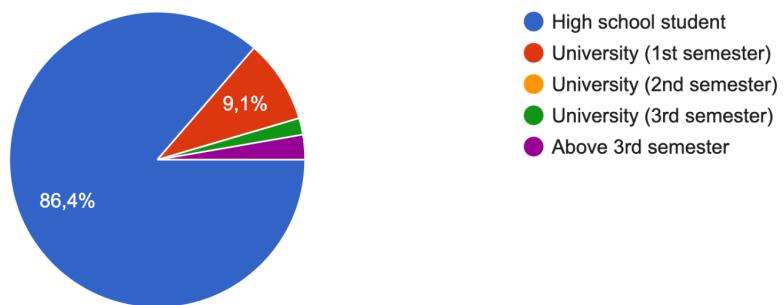
1. What is your age?

110 Antworten



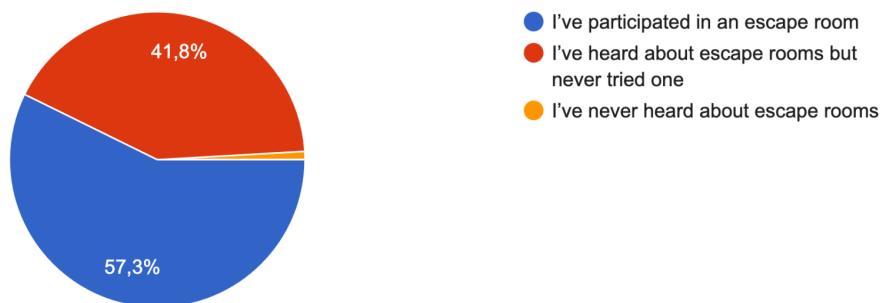
## 2. What is your current level of education?

110 Antworten



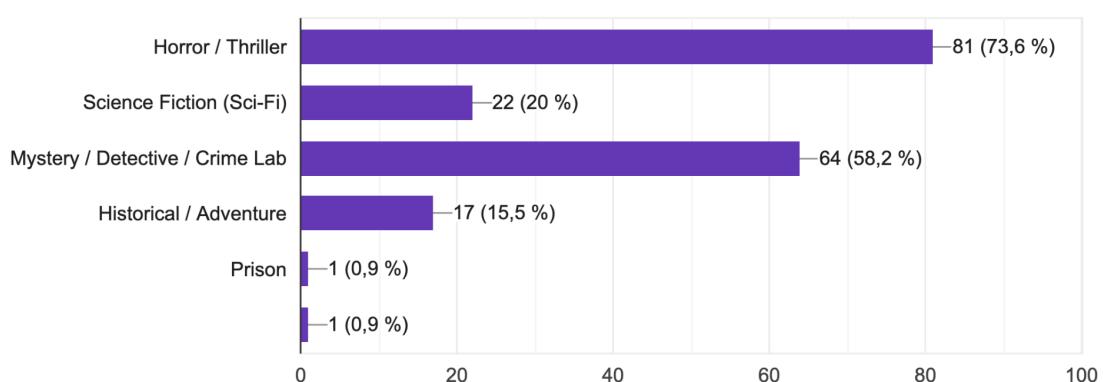
## 4. Which of the following best describes your familiarity with escape rooms?

110 Antworten



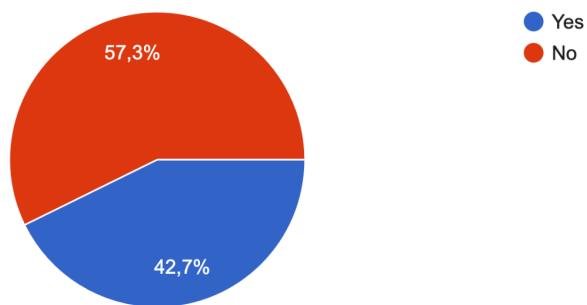
## 8. Which type of escape room would you enjoy the most?

110 Antworten



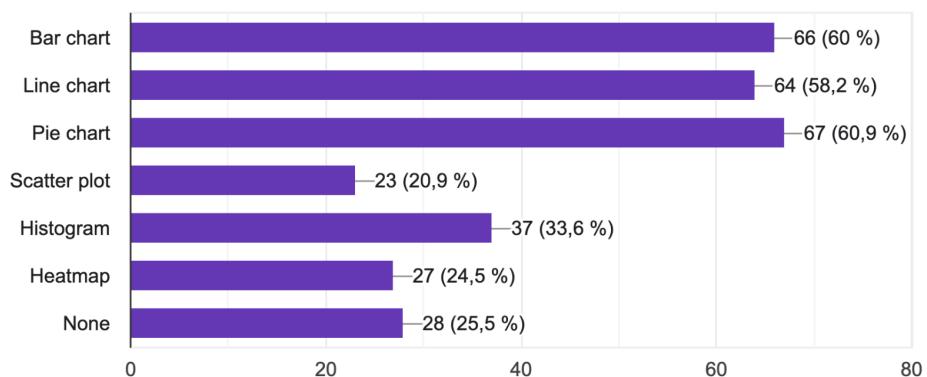
**9. Have you heard about "data visualization"?**

110 Antworten



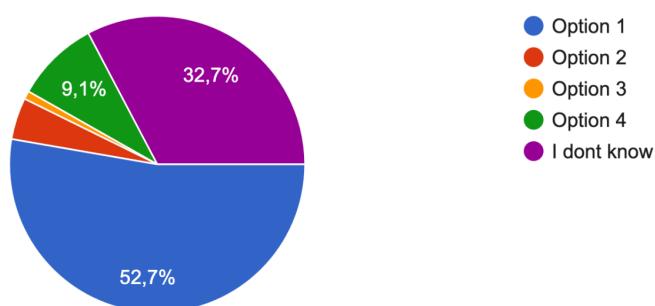
**10. Which of the following data visualizations are you familiar with? (Select all that apply)**

110 Antworten



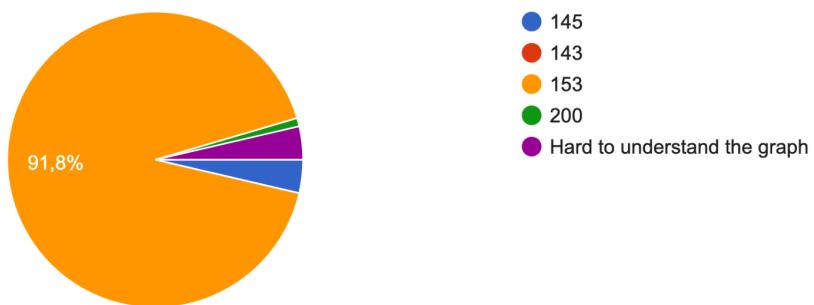
**11. Which one is Histogram**

110 Antworten



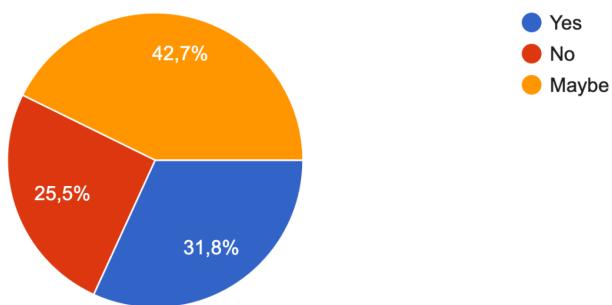
12. How many people have rated the taxi between 4.0 and 4.2?

110 Antworten



13. Would you be interested in an escape room that helps you learn data visualization through physical puzzles and visuals?

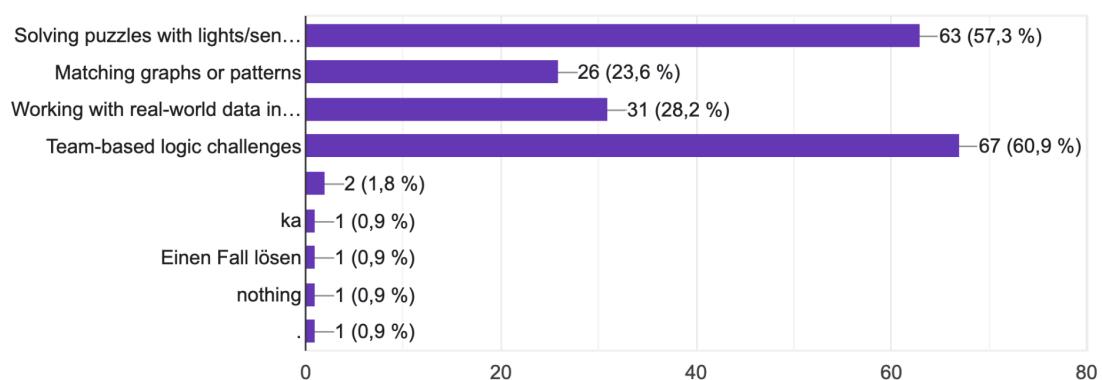
110 Antworten



pl

14. Which type of activity sounds most engaging to you?

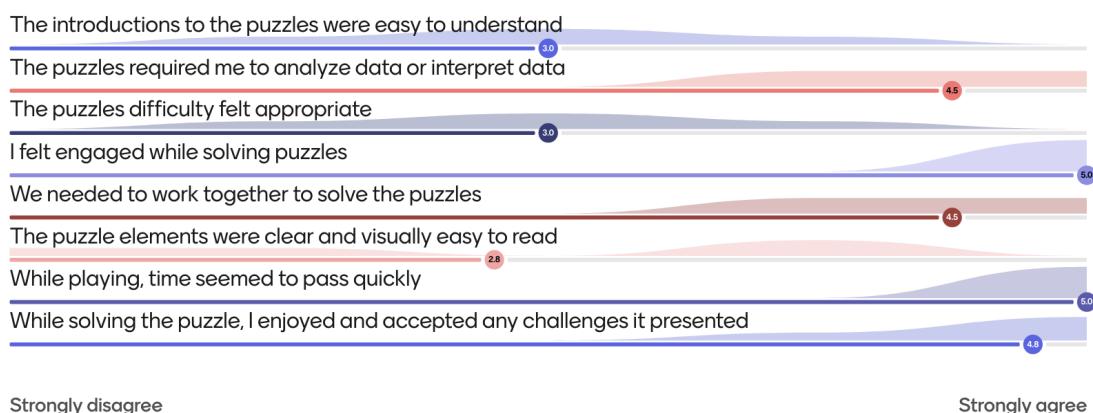
110 Antworten



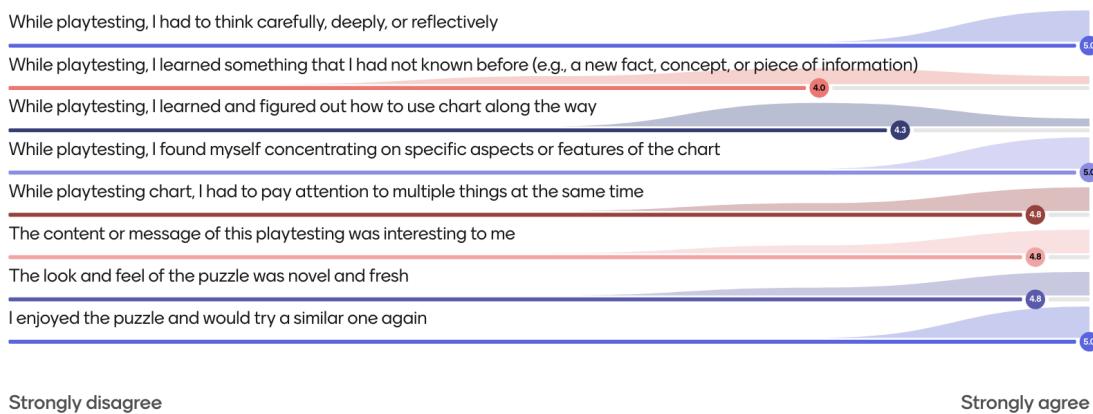
Playtesting St. Pölten:



## Likert Scale



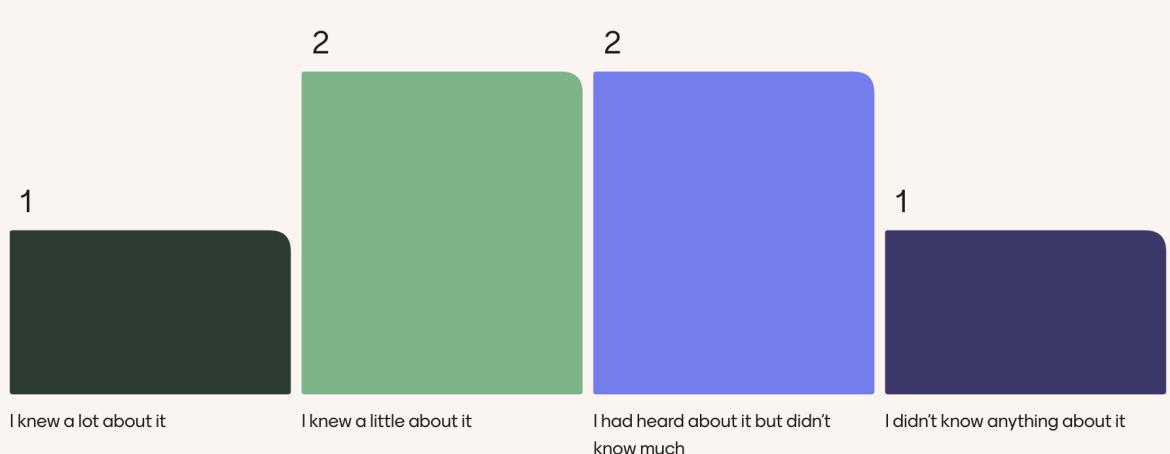
## Likert Scale



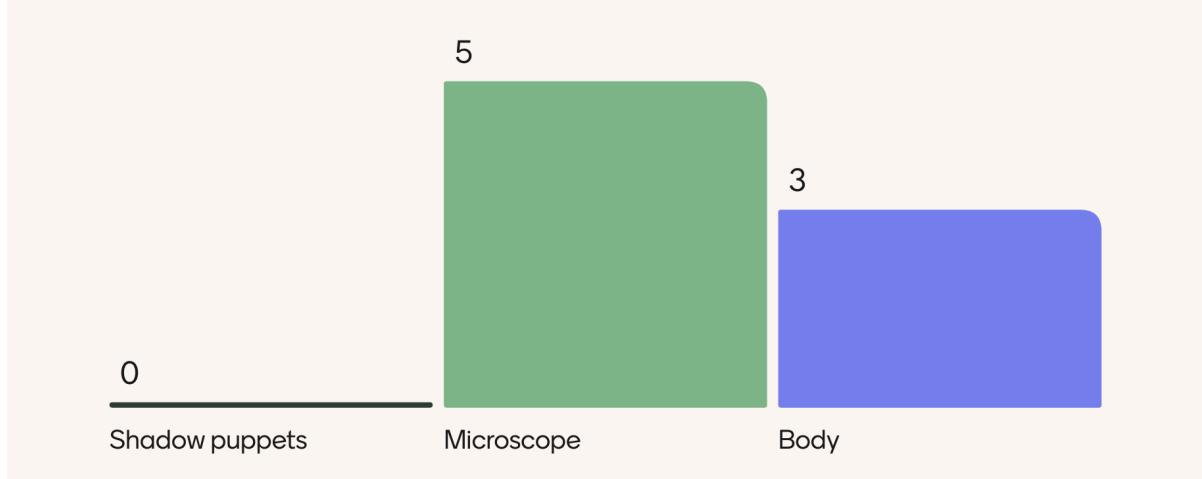
## Project Fair:



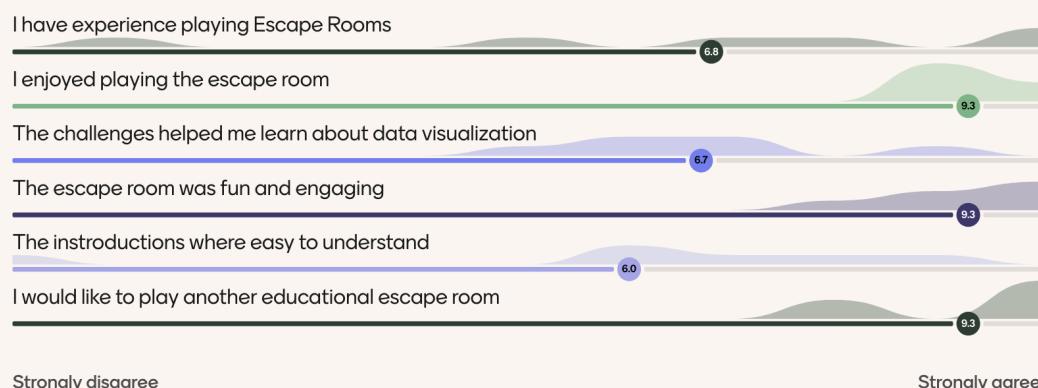
Before playing the escape room, how would you rate your knowledge of data visualization?



Which puzzle did you play



Please rate how much you agree with these statements about the escape room experience:



## What was your favorite part of the escape room?

The LOVELY snails!! 🐌 I also loved the ongoing storyline connecting the games and made the gameplay more enjoyable

Diese große Schnecke mit den Knöpfen zum drücken und den Lichern als Auflösung, ob man es richtig gemacht. Aber auch, dass man eine Story dazu hat mit dem "Tagebucheintrag".

## Do you have any ideas to make the escape room better?

Maybe one clean sheet explaining the whole storyline? And another one for every individual game. Also differentiate what is Storyline and what is important for gameplay

Playtesting Linz:

## ZUR UMFRAGE:



<https://www.menti.com/alhxce3oytun>

Vorwissen

Ich kenne mich mit Diagrammen aus:

- Stimme voll und ganz zu
- ja schon ein bisschen
- Neutral
- eher weniger
- Stimme gar nicht zu

Ich habe in der Schule schon viel mit Diagrammen gearbeitet

- Stimme voll und ganz zu

- ja schon ein bisschen
- Neutral
- eher weniger
- Stimme gar nicht zu

Ich habe schon selbst einige Diagramme erstellt

- Stimme voll und ganz zu
- ja schon ein bisschen
- Neutral
- eher weniger
- Stimme gar nicht zu

Ich habe schon viele Escape Rooms gespielt

- Stimme voll und ganz zu
- ja schon ein bisschen
- Neutral
- eher weniger
- Stimme gar nicht zu

Dieses Puzzle hat mir am meisten Spaß gemacht:

- Schattenspiele
- Mikroskop
- Schneckenkörper

## Retrospektive

An den Puzzles zu tüfteln hat mir gefallen.

- Stimme voll und ganz zu
- ja schon ein bisschen
- Neutral
- eher weniger
- Stimme gar nicht zu

Die Anweisungen waren klar und verständlich.

- Stimme voll und ganz zu
- ja schon ein bisschen
- Neutral.
- eher weniger
- Stimme gar nicht zu

Teamarbeit war ein wichtiger Bestandteil im Spiel.

- Stimme voll und ganz zu
- ja schon ein bisschen
- Neutral
- eher weniger
- Stimme gar nicht zu

Ich habe beim Spielen etwas Neues über Diagramme gelernt.

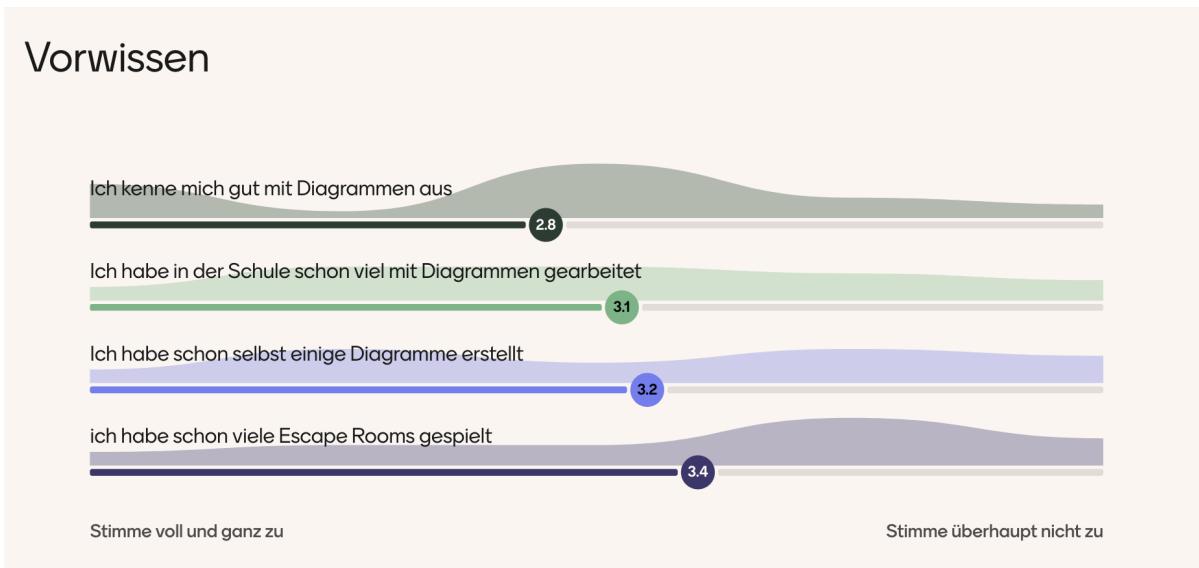
- Stimme voll und ganz zu
- ja schon ein bisschen
- Neutral
- eher weniger
- Stimme gar nicht zu

Ich würde gerne weitere Lern-Escape-Rooms spielen.

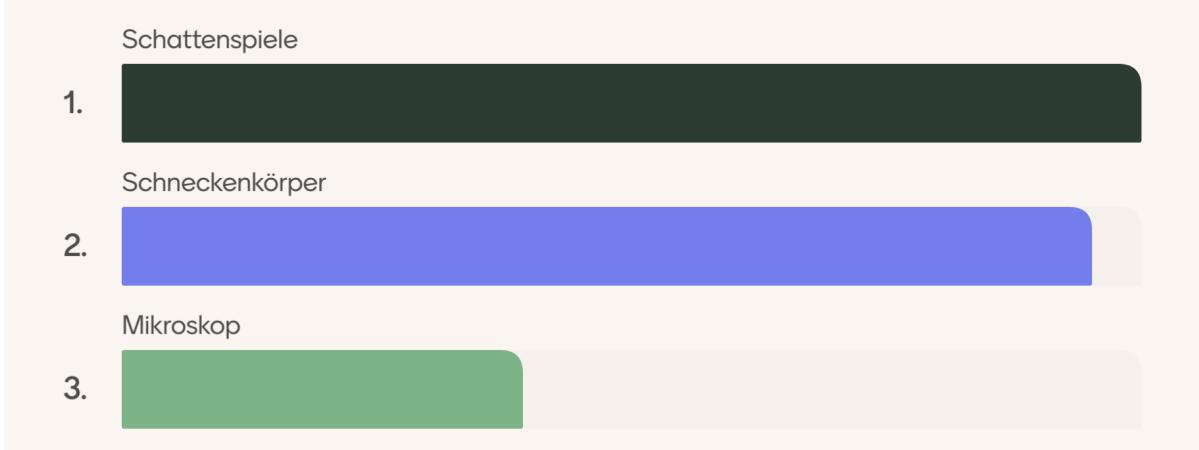
- Stimme voll und ganz zu
- ja schon ein bisschen
- Neutral
- eher weniger
- Stimme gar nicht zu

Was hat dir am Spiel am meisten gefallen?

Was würdest du verbessern und wie?



Dieses Puzzle hat mir am meisten Spaß gemacht



## Retrospektive



## Was hat dir am Spiel am meisten gefallen?

tschenlampen spiel  
spiel  
leider nichts diagrammspiel praxis  
die aufgaben das rätseln gar nix ich war nicht beg  
teamarbeit  
die teile allgemein teamwork escape room  
die einzelnen stationen dasd das mut lichr die herausforderung  
das thema schnecken der konzept gute rätsel  
die aufgaben waren vielfä kein unterricht spaß  
abwechslung zum normalen

## Was würdest du verbessern und wie?

- |   |   |
|---|---|
| nichts  | Ich fand es ziemlich cool, da es sehr verständlich waren und wir hatten nicht wirklich probleme |
| Die Teamenteilung   | Dass wir uns die Teams selber aussuchen können.   |
| Bisschen anderes Thema für die Teenager denn glaube nicht dass das Thema Schnecken richtig interessant war für alle 😊 | Wir sollten uns die Teams selber aussuchen dürfen   |
| Nichts  | Nichts  |

es war schon gut dass wir uns aufgeteilt  
haben also eigentlich nichts wichtiges

Eigentlich fällt mir nicht wirklich was rein

Mehr Aufgaben beim Escape Room

nichts

Nichts

Alles. Es war so Volksschule mäßig.

Das Diagrammspiel schwieriger  
machen

Nichts

## DR. SERIN's NOTIZEN

30.9.1899

Ich untersuche aktuell 5 Patient\*innen, die sich ungefähr zur gleichen Zeit infiziert hatten.

Seit ihrer Aufnahme überwache sie kontinuierlich und führe alle zwei Tage eine vollständige Diagnostik durch, um mögliche Veränderungen an Organen und am Körper festzuhalten.

Hier eine kurze Zusammenfassung meiner ersten Ergebnisse:

28. September – Keine Veränderungen

30. September – Keine Veränderungen

2. Oktober – Bei zwei Patient\*innen zeigten sich erstmals Anzeichen von Mutationen in Leber und Gehirn.

4. Oktober – Bei zwei weiteren Patient\*innen traten Leberschäden auf  
scheint so zu se

6. Oktober –

8. Okto

ber –

10. Okto

ber –

12. Okto

ber –

14. Okto

ber –

16. Okto

ber –

18. Okto

ber –

20. Okto

ber –

22. Okto

ber –

24. Okto

ber –

26. Okto

ber –

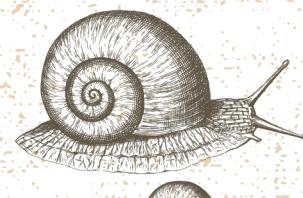
28. Okto

ber –

30. Okto

ber –

...Gibt es den für niemanden eine Rettung?...



# BEHANDLUNGSPLAN FÜR PATIENT 1

Auf Grundlage der Forschungen von Dr. Serin habe ich einen Plan ausgearbeitet, wie ich die verwandelten Patient\*innen behandeln will – mir bleibt nicht viel Zeit. Denn wie sie verwandelt auch ich mich gerade in eine Schnecke.

1. Ich muss das am STÄRKSTEN GESCHÄDIGTE ORGAN von PATIENTEN I finden. Das muss unbedingt als Erstes behandelt werden!
2. Als Nächstes muss ich unter den übrigen Organen dasjenige finden, das NACH TAG 22 BEI ALLEN FÜNF PATIENT\*INNEN AM HÄUFIGSTEN betroffen war.
3. Danach richte ich den Blick auf die INTENSITÄT DER INFektION: Ich muss das Organ behandeln, welches in den Aufzeichnungen am häufigsten einen INFektionsgrad von über 50% zeigt. Dort scheint sich das Virus am besten zu vermehren.
4. Das Organ mit den GERINGSTEN SCHÄDEN, muss UNANGETASTET bleiben – PATIENT I verkraftet keine unnötigen Eingriffe. Ich sollte mich auf EINES DER ÜBRIGEN ORGANE fokussieren.

1. —

3. —

2. —

4. —

Gebt die Anfangsbuchstaben der vier ausgewählten Organe in der richtigen Reihenfolge auf der Webseite ein, um den Schlüssel zu erhalten (ohne Leerzeichen oder Sonderzeichen)



## BEHANDLUNGSPLAN FÜR PATIENT 2

Auf Grundlage der Forschungen von Dr. Serin habe ich einen Plan ausgearbeitet, wie ich die verwandelten Patient\*innen behandeln will – mir bleibt nicht viel Zeit. Denn wie sie verwandelt auch ich mich gerade in eine Schnecke.

1. Ich muss das Organ finden welches bei PATIENTEN 2 als ERSTES INFIZIERT wurde. Das muss ich unbedingt auch als Erstes behandelt!
2. Als Nächstes muss ich unter den übrigen Organen dasjenige finden, das NACH TAG 10 BEI ALLEN FÜNF PATIENT\*INNEN AM HÄUFIGSTEN betroffen war.
3. Danach richte ich den Blick auf den SCHADEN AN DEN ORGANEN: Ich muss das Organ behandeln, welches bei PATIENT 2 am STÄRKSTEN BESCHÄDIGT ist.
4. Das Organ mit den GERINGSTEN SCHÄDEN, muss UNANGETASTET bleiben – PATIENT 2 verkraftet keine unnötigen Eingriffe. Ich sollte mich auf EINES DER ÜBRIGEN ORGANE fokussieren.

1. —

3. —

2. —

4. —

Gebt die Anfangsbuchstaben der vier ausgewählten Organe in der richtigen Reihenfolge auf der Webseite ein, um den Schlüssel zu erhalten (ohne Leerzeichen oder Sonderzeichen)



## BEHANDLUNGSPLAN FÜR PATIENT 3

Auf Grundlage der Forschungen von Dr. Serin habe ich einen Plan ausgearbeitet, wie ich die verwandelten Patient\*innen behandeln will – mir bleibt nicht viel Zeit. Denn wie sie verwandelt auch ich mich gerade in eine Schnecke.

1. Als Erstes muss ich das Organ behandeln, das in den ERSTEN 12 TAGEN BEI ALLEN FÜNF PATIENT\*INNEN AM HÄUFIGSTEN betroffen war.
2. Danach richte ich den Blick auf die INTENSITÄT DER INFektION: Ich muss das Organ behandeln, welches in den Aufzeichnungen am häufigsten einen INFektionsgrad von unter 45% zeigt.
3. Jetzt wo es den Patienten hoffentlich schon etwas besser geht muss ich nun das Organ behandeln, welches bei PATIENT 3 am STÄRKSTEN BESCHÄDIGT ist.
4. Das Organ mit den GERINGSTEN SCHÄDEN, muss UNANGETASTET bleiben – PATIENT 3 verkraftet keine unnötigen Eingriffe. Ich sollte mich auf EINES DER ÜBRIGEN ORGANE fokussieren.

1. —

3. —

2. —

4. —

Gebt die Anfangsbuchstaben der vier ausgewählten Organe in der richtigen Reihenfolge auf der Webseite ein, um den Schlüssel zu erhalten (ohne Leerzeichen oder Sonderzeichen)

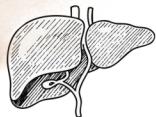


# LEGENDE

CHART 0.12.520



## ORGAN:



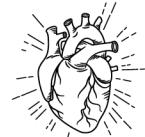
LEBER



GEHIRN



NIEREN



HERZ



LUNGE

## PATIENT:



PATIENT 1



PATIENT 2



PATIENT 3



PATIENT 4



PATIENT 5

# AUFTREten DER ERSTEN SCHÄDEN UND AKTUELLES INTENSITÄTSSTADIUM

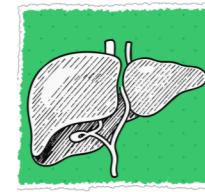
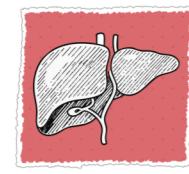
CHART 0.12.520



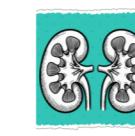
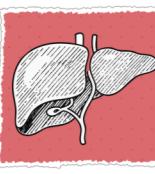
Intensität der Infektion [%]



90



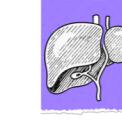
80



70



60



50



40



30



20



10



0

2.10

4.10

6.10

8.10

10.10

12.10

14.10

16.10

18.10

20.10

22.10

24.10

26.10

28.10

30.10

Datum der Erstinfektion [TT.MM.]



# MIKROSKOP

## AUS DR. SERINS LOGBUCH

Als die ersten Anzeichen der Verwandlung auftauchten, wusste ich, dass keine Zeit mehr zu verlieren war. Ich habe gesehen, wie meine engsten Freunde und Kolleginnen langsam zu Schnecken wurden und mit ihnen verschwand jede Hoffnung auf Normalität. Zu verstehen, wie sich dieses Virus ausbreitet, wurde zur einzigen Priorität. Vor allem in den frühen Stadien, als ein Eingreifen noch möglich schien.

Ich sammelte jede Datenspur, die ich finden konnte. Jede Messung, jede Notiz, jede Tabelle. Ich begann, alles auszuwerten, was mir zur Verfügung stand. Diagramm um Diagramm, Ausbruch um Ausbruch. Ich suchte nach Mustern in einem Meer aus Zahlen, nach einer Ordnung im Chaos.

Irgendwann verlor ich selbst den Überblick darüber, wie viele Visualisierungen ich erstellt hatte. Vielleicht mehr, als nötig gewesen wären. Doch nun, da mein Körper sich langsam verändert und meine Hände schwerer werden, bleibt mir nur die Hoffnung, dass diese Daten euch helfen werden, dort weiterzumachen, wo ich gescheitert bin.

Die Wahrheit liegt in den Tabellen.

Und meine Zeit läuft ab.

### LOGBUCH - EINTRAG

Meine Schleimspuren auf dem Boden werden länger. Ich habe kaum noch Kraft, aber die Daten... die Daten lügen nicht.

- Ich habe alle Infektionsverläufe im System kartiert. EINE PERSON STICHT HERAUS. Immer wieder taucht ihr Name auf, immer wieder führt eine Linie von ihr zu anderen. Wenn ich herausfinden will, wie dieser Albtraum begann, muss ich verstehen, wer die MEISTEN Menschen angesteckt hat.
- Doch es reicht nicht, diesen einen Namen zu finden. Ich muss auch wissen, WEN genau diese Person infiziert hat und WARUM. Gibt es ein Muster unter ihnen? Ein GEMEINSAMEN MERKMALE? Ein Ort, ein Organ, eine Rolle?

Vielleicht liegt genau darin der Schlüssel zur Ausbreitung des Virus. Findet die Quelle. Findet ihr Netzwerk. Und sagt mir, was sie alle verbindet.

### GEMEINSAMKEIT:

(Um zu sehen, ob ihr richtig seid, gebt die Lösung auf der Webseite ein)



# MIKROSKOP

## AUS DR. SERINS LOGBUCH

Als die ersten Anzeichen der Verwandlung auftauchten, wusste ich, dass keine Zeit mehr zu verlieren war. Ich habe gesehen, wie meine engsten Freunde und Kolleginnen langsam zu Schnecken wurden und mit ihnen verschwand jede Hoffnung auf Normalität. Zu verstehen, wie sich dieses Virus ausbreitet, wurde zur einzigen Priorität. Vor allem in den frühen Stadien, als ein Eingreifen noch möglich schien.

Ich sammelte jede Datenspur, die ich finden konnte. Jede Messung, jede Notiz, jede Tabelle. Ich begann, alles auszuwerten, was mir zur Verfügung stand. Diagramm um Diagramm, Ausbruch um Ausbruch. Ich suchte nach Mustern in einem Meer aus Zahlen, nach einer Ordnung im Chaos.

Irgendwann verlor ich selbst den Überblick darüber, wie viele Visualisierungen ich erstellt hatte. Vielleicht mehr, als nötig gewesen wären. Doch nun, da mein Körper sich langsam verändert und meine Hände schwerer werden, bleibt mir nur die Hoffnung, dass diese Daten euch helfen werden, dort weiterzumachen, wo ich gescheitert bin.

Die Wahrheit liegt in den Tabellen.

Und meine Zeit läuft ab.

### LOGBUCH – EINTRAG B

Meine Hände zittern. Nicht nur vor Angst, die vielen Zahlen und Tabellen steigen mir zu Kopf.

Ich habe begonnen, die Infektionen nach Rollen im Labor zu ordnen. Wissenschaftler. Techniker. Studenten. Mechaniker. Jeder hatte seine Aufgabe, doch nicht jeder war dem Virus gleich stark ausgesetzt.

- Irgendwo in diesen Daten liegt die Wahrheit darüber, welcher JOB im DURCHSCHNITT die höchste Viruslast trägt. Diese Gruppe ist am stärksten gefährdet. Nicht weil sie etwas falsch gemacht hat, sondern weil sie dem Virus besonders nahe war.
- Aber selbst in dieser Gruppe gibt es eine Abweichung. Eine Person, deren Werte den Durchschnitt nach unten ziehen. Die deren Infektionsrate niedriger als bei allen anderen ist. Findet die am stärksten gefährdete Rolle. Und findet die Person, die zeigt, dass selbst dort Hoffnung existiert.

#### NAME DER PERSON:

(Um zu sehen, ob ihr richtig seid, gebt die Lösung auf der Webseite ein)



# MIKROSKOP

## AUS DR. SERINS LOGBUCH

Als die ersten Anzeichen der Verwandlung auftauchten, wusste ich, dass keine Zeit mehr zu verlieren war. Ich habe gesehen, wie meine engsten Freunde und Kolleginnen langsam zu Schnecken wurden und mit ihnen verschwand jede Hoffnung auf Normalität. Zu verstehen, wie sich dieses Virus ausbreitete, wurde zur einzigen Priorität. Vor allem in den frühen Stadien, als ein Eingreifen noch möglich schien.

Ich sammelte jede Datenspur, die ich finden konnte. Jede Messung, jede Notiz, jede Tabelle. Ich begann, alles auszuwerten, was mir zur Verfügung stand. Diagramm um Diagramm, Ausbruch um Ausbruch. Ich suchte nach Mustern in einem Meer aus Zahlen, nach einer Ordnung im Chaos.

Irgendwann verlor ich selbst den Überblick darüber, wie viele Visualisierungen ich erstellt hatte. Vielleicht mehr, als nötig gewesen wären. Doch nun, da mein Körper sich langsam verändert und meine Hände schwerer werden, bleibt mir nur die Hoffnung, dass diese Daten euch helfen werden, dort weiterzumachen, wo ich gescheitert bin.

Die Wahrheit liegt in den Tabellen.

Und meine Zeit läuft ab.

### Logbuch - Eintrag C

Ich erinnere mich an einen Moment, als alles kippte. Als aus einzelnen Fällen ein Ausbruch wurde.

Die Zeitreihen verraten es mir. Ein Punkt, an dem plötzlich mehr Menschen infiziert wurden als je zuvor. Der Moment, an dem der Virus außer Kontrolle geriet.

- Ich muss wissen, WANN das geschah. WER in diesem Moment betroffen war. Und vor allem: was VIELE dieser Menschen verbindet.
- Waren sie am selben Ort? Hatten sie dasselbe Organ zuerst befallen? Hatten sie denselben Job?

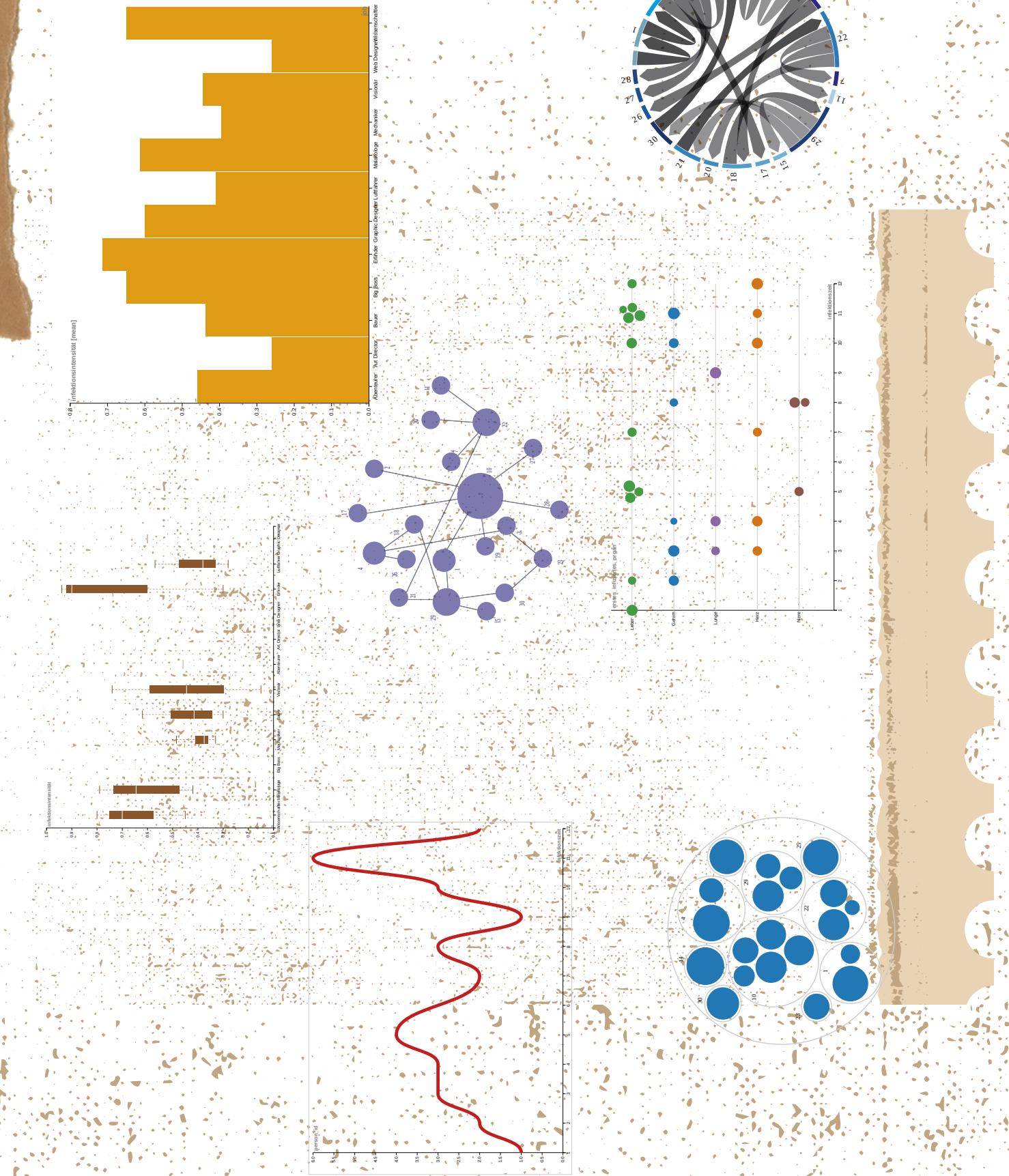
Findet diese Gemeinsamkeit. Denn wenn wir verstehen, was sie verbindet, verstehen wir vielleicht, wie wir den Virus stoppen können.

### GEMEINSAMKEIT:

(Um zu sehen, ob ihr richtig seid, gebt die Lösung auf der Webseite ein)



person_id	person_name	infected_by	infected_time	first_damaged_organ	organ_damage	intensity_of_infection	Wissenschaftler
1	Wolfgang		0	1 Leber	16	0,80	Malakologe
2	Mary		10	2 Gehirn	12	0,60	Big Boss
3	Momo		23	11 Leber	9	0,60	Luftfahrer
4	Betty		14	11 Gehirn	19	0,70	Bauer
5	Bernhard		8	8 Gehirn	5	0,50	Mechaniker
6	Barabara		28	4 Gehirn	2	0,33	Bauer
7	William		22	10 Leber	13	0,57	Wissenschaftler
8	Zuzana		17	7 Herz	7	0,26	Mechaniker
9	Julia		29	5 Leber	12	0,74	Visionär
10	Richard		1	2 Leber	5	0,42	Malakologe
11	Charles		22	10 Gehirn	10	0,47	Luftfahrer
12	Dorothy		18	11 Leber	3	0,38	Luftfahrer
13	Tizian		20	11 Leber	15	0,30	Graphic Designer
14	Joan		11	11 Herz	8	0,62	Erfinder
15	Valentyna		29	8 Niere	13	0,26	Erfinder
16	Margaret		6	5 Leber	18	0,15	Abenteurer
17	Magdalena		10	3 Herz	9	0,43	Malakologe
18	Paul		4	12 Leber	8	0,36	Erfinder
19	Julius		10	4 Herz	13	0,79	Mechaniker
20	Fiza		22	10 Herz	15	0,45	Bauer
21	Frank		29	5 Leber	7	0,37	Visionär
22	Carol		25	9 Lunge	17	0,90	Bauer
23	Jack		30	11 Leber	14	0,28	Wissenschaftler
24	Joyce		21	7 Leber	8	0,46	Art Director
25	Billy		24	8 Niere	6	0,38	Web Designer
26	Iryna		4	12 Herz	18	0,94	Inventor
27	Doris		10	4 Lunge	12	0,75	Malakologe
28	Jerry		10	3 Lunge	6	0,69	Malakologe
29	Christina		1	3 Gehirn	17	0,65	Malakologe
30	Eugene		29	5 Niere	8	0,30	Mechaniker



# Bericht: Ausbreitung der Infektion

13.05.1899



Ein Virus breitet sich in unserer Stadt von insgesamt 112.000 Einwohner\*innen aus.

Aus Not und mit viel Mühe haben wir eine Umfrage und Testungen bei der gesamten Bevölkerung erhoben! Fast alle zeigen Symptome, manche sind schon fast Ganz zur Schnecke geworden. Wir müssen die Daten unbedingt an unsere Kolleg\*innen weitergeben, aber alle Wege sind voll mit Schneckenschleim.

Wer auch immer unsere Aufzeichnungen findet:

Analysiere und rekonstruiere die Verteilung in der Bevölkerung!

- Stapele die bereitgestellten Boxen so, dass ein physisches Balkendiagramm entsteht.
- Vergleiche diesen Schatten mit den Balkendiagrammen auf dem Anleitungsblatt.

## NOTIZEN DER UMFRAGE



### Starke Müdigkeit

Müdigkeit ist das wohl am **HÄUFIGSTEN BEOBACHTETE SYMPTOM**.

Über **7 TAGE** hinweg wurden **TÄGLICH 14.000 PATIENT\*INNEN** getestet und bei **JEDER INDIVIDUELLEN DAVON** zeigte Anzeichen einer besonders starken Müdigkeit.

### Unterkühlte Körpertemperatur

Das Virus verursacht mehrere starke Abfälle der Körpertemperatur bei Betroffenen. Dieses Symptom trat bei **70.000 Patient\*innen** in der infizierten Bevölkerung auf.

### Liebe zu Feuchtigkeit

Viele Patient\*innen zeigen eine ausgeprägte Vorliebe für Feuchtigkeit: **ETWA DIE HÄLFTE DER GESAMTEN BEVÖLKERUNG** hat dieses Symptom.

### Schneckenschleim schwitzen

Dies ist das am seltensten dokumentierte Symptom. Nur ein **EINZIGES PROBEGLAS** ist gefüllt.

### Sonnenallergie

Fast **DIE HÄLFTE** der Patient\*innen, die eine **VORLIEBE ZU FEUCHTIGKEIT** entwickelt haben, zeigten inzwischen **AUCH EINE EMPFINDLICHKEIT GEGENÜBER SONNENLICHT**.



# Bericht: Ausbreitung der Infektion

2

13.05.1899

Ein Virus breitet sich in unserer Stadt von insgesamt 112.000 Einwohner\*innen aus.

Aus Not und mit viel Mühe haben wir eine Umfrage und Testungen bei der gesamten Bevölkerung erhoben! Fast alle zeigen Symptome, manche sind schon fast Ganz zur Schnecke geworden. Wir müssen die Daten unbedingt an unsere Kolleg\*innen weitergeben, aber alle Wege sind voll mit Schneckenschleim.

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## NOTIZEN DER UMFRAGE

### Starke Müdigkeit

Eine Ganze Woche haben wir getestet – die ERSTEN 3 TAGE waren es insgesamt 28.000 Einwohner\*innen. Danach waren es über 4 TAGE hinweg TÄGLICH 14.000 PATIENT\*INNEN, sie alle zeigten Anzeichen einer besonders starken Müdigkeit.



### Unterkühlte Körpertemperatur

Unterkühlung ist das wohl am HÄUFIGSTEN BEOBACHTETE SYMPTOM.

Das Virus verursacht mehrere starke Abfälle der Körpertemperatur bei Betroffenen. Nur 14.000 HABEN GEFEHLT dann hätte die GESAMTE BEVÖLKERUNG das Symptom gezeigt.

### Liebe zu Feuchtigkeit

ETWA DIE HÄLFTE DER PATIENTEN DIE STARKE MÜDIGKEIT zeigten, hatte auch eine Vorliebe zu Feuchtigkeit entwickelt.

### Schneckenschleim schwitzen

ETWA DIE HÄLFTE DER BEVÖLKERUNG hat dieses Symptom und war am ganzen Körper voller Schneckenschleim.

### Sonnenallergie

Dies ist das am seltensten dokumentierte Symptom. Nur etwa 14.000 Personen waren davon betroffen..



# Bericht: Ausbreitung der Infektion



13.05.1899

Ein Virus breitet sich in unserer Stadt von insgesamt 112.000 Einwohner\*innen aus.

Aus Not und mit viel Mühe haben wir eine Umfrage und Testungen bei der gesamten Bevölkerung erhoben! Fast alle zeigen Symptome, manche sind schon fast Ganz zur Schnecke geworden. Wir müssen die Daten unbedingt an unsere Kolleg\*innen weitergeben, aber alle Wege sind voll mit Schneckenschleim.

Wer auch immer unsere Aufzeichnungen findet:

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## NOTIZEN DER UMFRAGE



### Starke Müdigkeit

Eine Ganze Woche haben wir getestet - die ERSTEN 3 TAGE waren es TÄGLICH 28.000 Einwohner\*innen. Danach waren es über 4 TAGE hinweg TÄGLICH 14.000 PATIENT\*INNEN, sie alle zeigten Anzeichen einer besonders starken Müdigkeit.

### Unterkühlte Körpertemperatur

Das Virus verursacht mehrere starke Abfälle der Körpertemperatur bei Betroffenen. Dieses Symptom trat bei 84.000 Patient:innen in der infizierten Bevölkerung auf.

### Liebe zu Feuchtigkeit

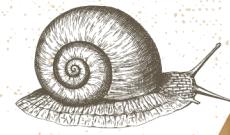
Viele Patient\*innen zeigen eine ausgeprägte Vorliebe für Feuchtigkeit; ETWA DIE HÄLFTE DER GESAMZEN BEVÖLKERUNG hat dieses Symptom.

### Schneckenschleim schwitzen

Dies ist das am seltensten dokumentierte Symptom. Nur ZWEI PROBEGLÄSER waren gefüllt.

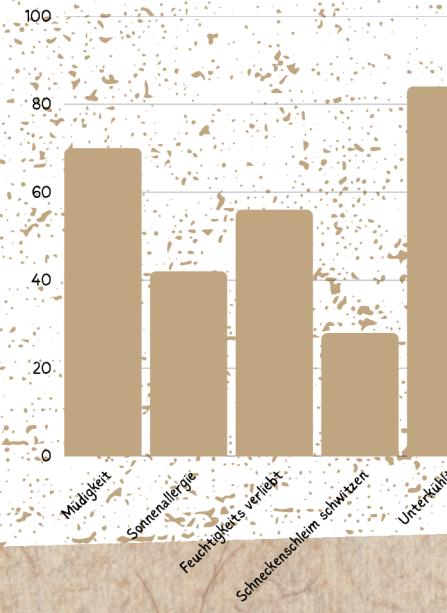
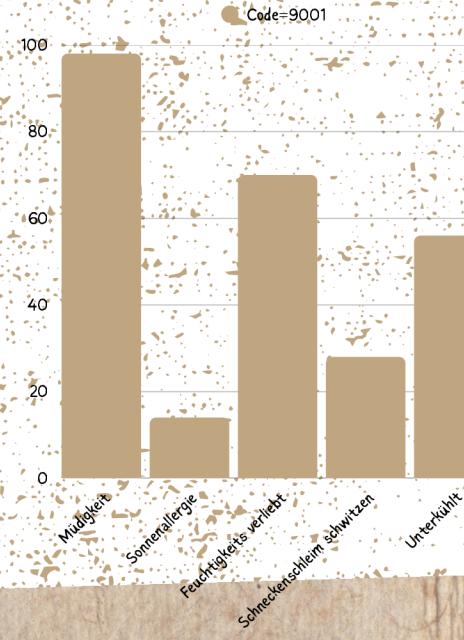
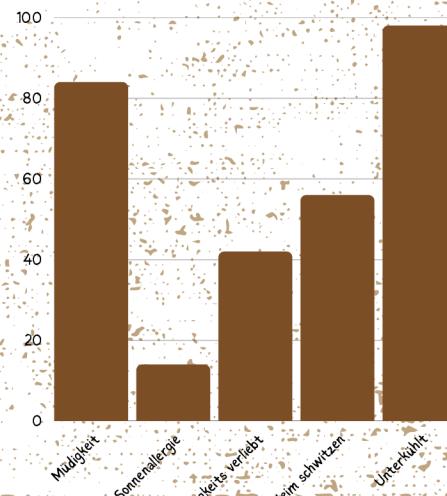
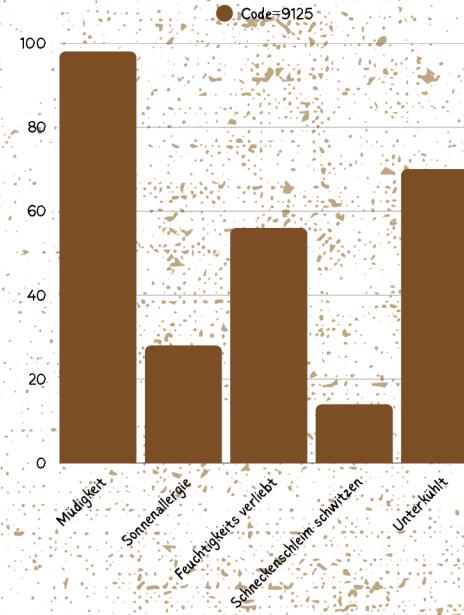
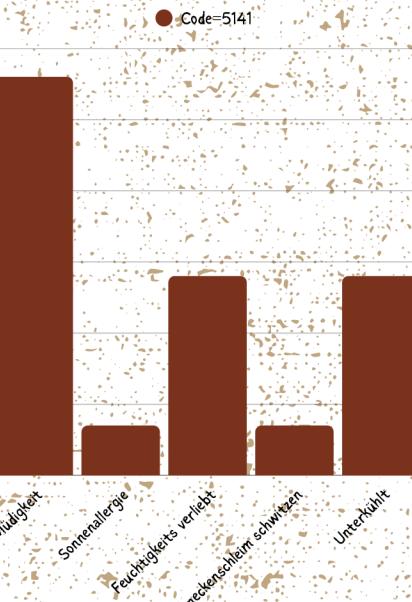
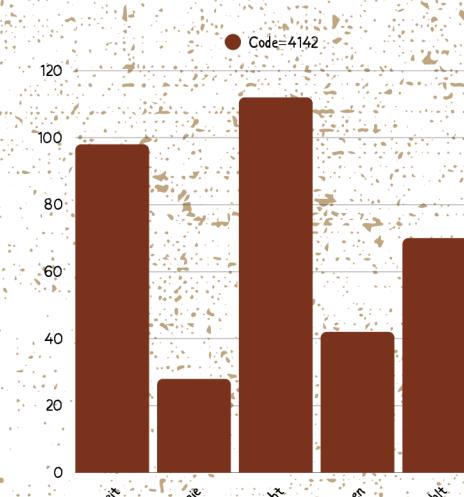
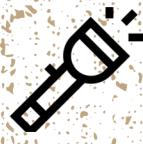
### Sonnenallergie

Fast DIE HÄLFTE der Patient\*innen, die eine UNTERKÜHLTE KÖRPERTEMPERATUR entwickelt haben, zeigten inzwischen AUCH EINE EMPFINDLICHKEIT GEGENÜBER SONNENLICHT.



# Population Symptom Charts

Vergleicht euer Ergebniss und gebt den Code in der Webseite ein!



# Font - Sigher - FOR HEADLINES USE CAPS-LOCK

Sigher - date/subtest

Also Sigher - Text

