

Processbook

Constraints

- Players wake up in the middle of the night because of temperature.
- Edible
- Playable in the dark

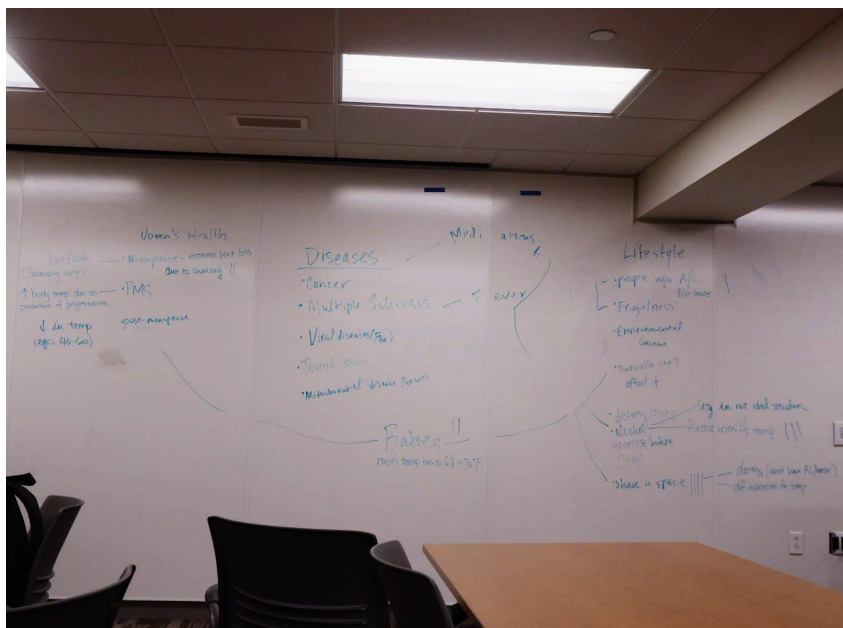
Our constraints provided us with some general direction guiding our game design process. We picked playable in the dark would suit the needs of players waking up in the night. Edibility is one thing that we struggled on when trying to define and incorporate it into our game, as you would see in the rest of this process book.

Problem Scope Brainstorm

Our first brainstorming session involved exploration of different temperature-related sleep problems. We grouped topics based on their commonalities related to temperature and relevant context. The topics that got most traction were:

- Menopause induced chest heat
- Temperature preference of other people
- Alcohol related body temperature change

We decided to focus on people who were living with others that have different temperature preferences, because we would be able to get more playtesters, in a college setting, who more closely relate with the problem by either having a roommate or have had a roommate in the past.



Personas

After defining our problem, we arrived relatively quickly on the type of people our game would target. We all had experience with living with other people before and agreed that college dorms would be a place where this type of problem commonly occur. This consensus leads us to our personas.

We created Alex and Phoebe (Appendix A) based on the problem statement that was selected and designated them to be college students living in the same room with different preferences of temperatures.

After class discussion on different aspects of a persona. We decided to add an emotional aspect to Alex's wants. Alex, who is our main subject, wants to maintain a good relationship with Phoebe in addition to getting a good night's sleep. We believe that this added dimension would help us design a game that more accurately satisfy players' living context; thus creating a game in which players would be more willing to play.

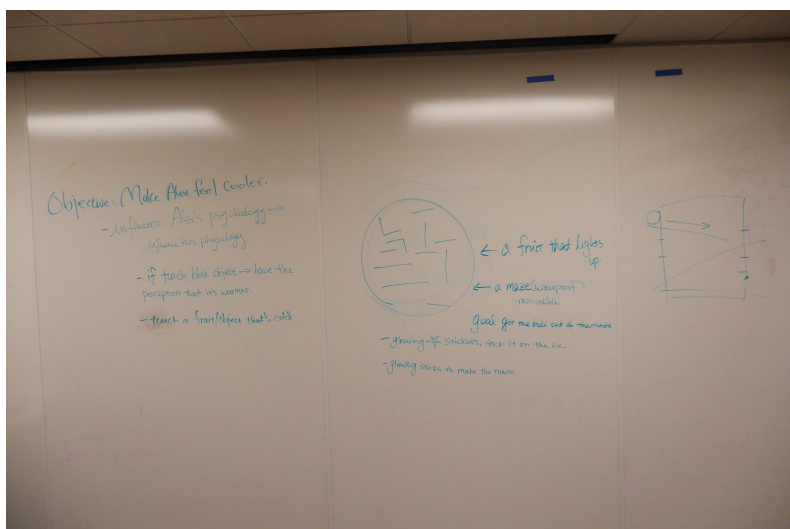
First Prototype Brainstorm

Our first decision about our game was the player count. We discussed the possibility of including our roommate character into the game as a player, then dropped the idea in favor of a single-player experience in dealing with waking up in the middle of the night.

We then wanted to influence the players' psychology in order for them to feel more comfortable to sleep. We focused our attention to literature that offers evidence that the perception of color would change a person's perception of temperature. Examples of such literature could be "Colour-temperature correspondences: when reactions to thermal stimuli are influenced by colour" by Ho et al. and be found in our theory paper.

We settled on some key game elements and features with this brainstorm session, namely:

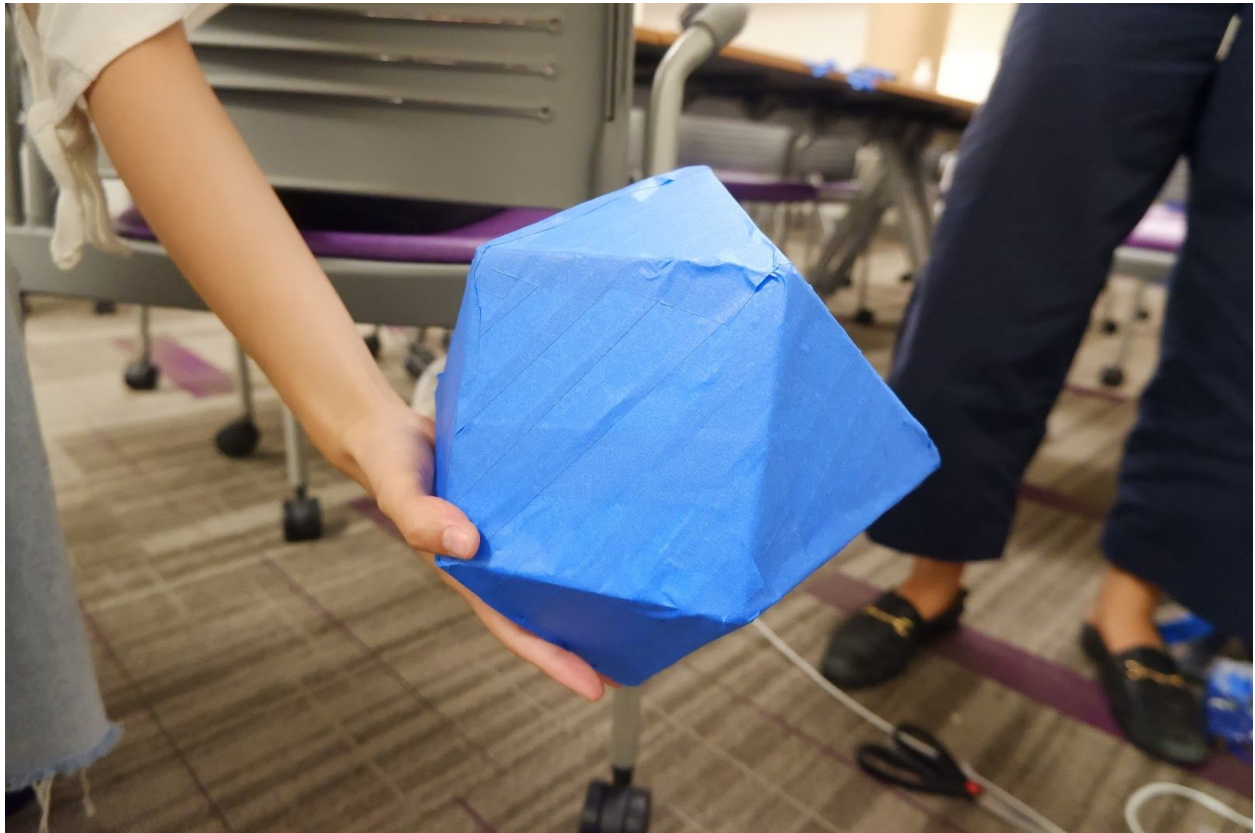
- A sphere maze
- Players play when they wake up in the middle of the night
- The game will be in blue to help with color perception
- The maze would be made with fruit



We decided on a sphere maze that players would play while lying on their beds.

First Prototype

Because of the rapid scheduling of first playtesting class, we decided to build a simple prototype with cardboard cutouts instead of real fruits. We maintained the color theme of blue and scavenged materials around us. The result was a playable maze ball with tracks on it.



Second Prototype

We didn't get a chance to playtest our game during the first playtest event. Fortunately, that also gave us another shot at creating another prototype. With more time in our hands, we carved a pumpkin into and wrapped it in blue tape to make the game object (Appendix B).



First Playtest

We brought both prototypes to our first playtest session. Nabeeha and John playtested and we observed that people would play with different positions while lying down. Some key observations and findings from this playtest include:

- Pumpkin smells after a day
- Awkward positioning when lying down
- Limited replayability
- Narrow ridges hinder play

Fellow game designers like Matt and Paul have all contributed to giving feedback.

Playtest Debrief

We re-examined the roles of edibles in the game. While using a pumpkin as a maze foundation provided a cold touch sensation for the players, which was what we were aiming for, the pumpkin still felt like a shoe in for a normal prototype material. Compounded with the fact that we wanted more long lasting game components, we decided to scratch the fruit maze idea in favor for a game that's less ephemeral and still uses the same psychological principles to help people sleep.

Third Prototype Brainstorm

Going into a new direction, we struggled a little bit here when thinking about the new game. We spent a considerable amount of time thinking about utilizing constraints, materials and gameplay. When thinking material-first, we thought about using modular magnets that felt fun but also have a chilling touch sense. Constraint-wise, we thought deeply on Jessica Hammer's suggestion on considering ice as a key part of the game, but the constraint-first approach felt limiting when considering gameplay elements that surrounds the constraints. We thought about designing a roleplaying board game, adding a spin wheel, and magnet toy game; we stacked these ideas, reiterating rapidly during this session, then decided on a card based game that challenges players on "manipulating temperature around them" and the player will be able to see the cards in the dark through glowing ink.



Third Prototype

We created our third prototype with individuals all having different game components to make. While making the game, we realized the glow-in-the-dark pen is not bright enough to allow the players to see the game directions in the dark. We substituted that component with decorative light bulbs connected to individual cards to allow the player to see text on the cards.



The game we created had the following rules and components

Setup

CoolKit: 1 Magic Bag, 1 Thermometer, 1 The Box, 16 cards (13 cold and 3 hot)

1. Keep Magic Bag in freezer
2. Place all cards, face-down, in The Box, shuffle them
3. Place CoolKit near bed

Gameplay

1. **SET** the Thermometer to your perceived temperature. (*Hard mode: +10 degrees*)
2. Randomly **PICK** a card from The Box.
3. **READ** the instruction on the card and **DO** the following:
 - a. Manipulate the temperature only after the **completion** of instruction;
 - b. **Increase** the temperature if the card is **red**; decrease the temperature if the card is **blue**;
 - c. Manipulate the temperature by the degree of the specified **number** on the card;
4. Put the card back **BACK** into The Box and **SHUFFLE** them. (*Hard mode: Put the card into the discard pile*)
5. Repeat the above steps.
 - a. You **WIN** if you have decreased the temperature to **68** degrees.
 - b. You **LOSE** if you run out of cards and haven't reached **68** degrees.

Second Playtest

We had the help of Kyle, one of our classmates, to test our revamped game. He played the game in a dark room on a desk. He was having fun on discovering what is installed in the Magic Box by drawing cards. He provided feedback on the build of the game, which is flimsy and have to be carefully handled. We also observed that he had to do mental math when moving the scale on the thermometer.





Latest Iteration

One of the first adjustments made after the playtest was to improve the readability of the thermometer scale to reduce the mental load of players when they are adjusting it according to their score. We also added The Box, which holds all the cards to ensure the integrity of the build.

Future Improvement

Build quality is one of the running improvements that we are pursuing. The constraints of being able to play in the dark is definitely one that could be explored more by using different tools to help players play and also not affect their will to sleep is a big opportunity.

Appendix

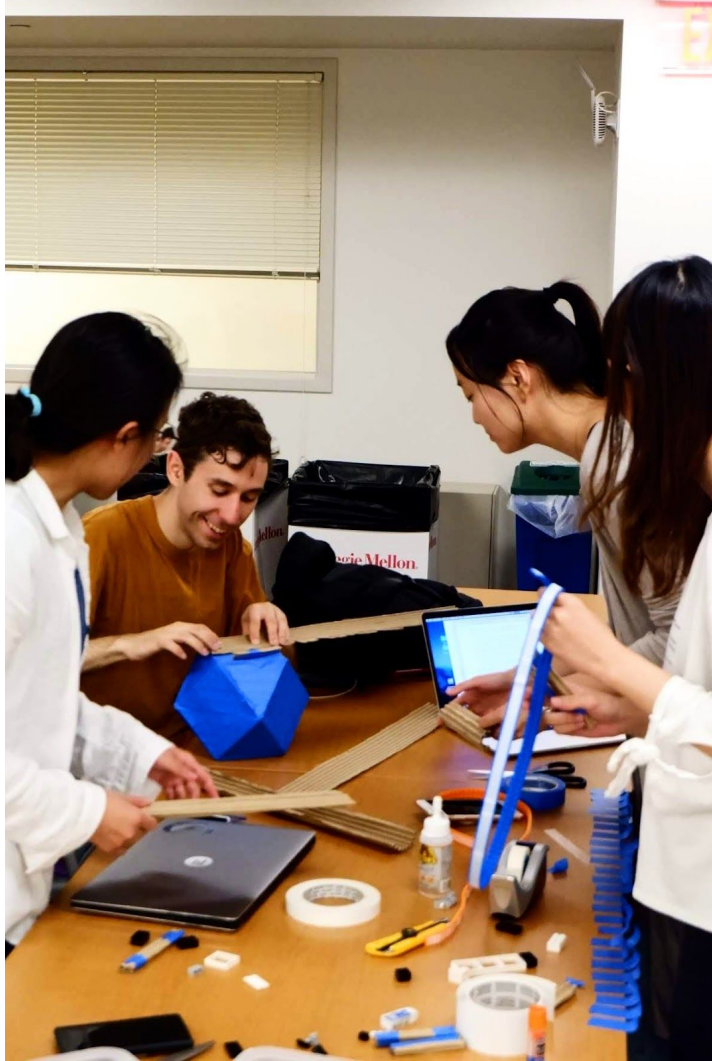
A - Persona

Alex, a college student living in a dormitory room with one other student. Her roommate, Phoebe, likes to sleep in warm conditions; whereas Alex likes the opposite. As a result, whenever Phoebe goes to sleep, she turns up the temperature. Alex often wakes up in the middle of the night because it became too hot. She would love the room to be colder when she sleeps but Phoebe is very stubborn about the room temperature. She comes across this kind of problem for the first time, but she values the friendship with Phoebe a lot despite this little annoying stuff. So she doesn't want to put Phoebe into a difficult situation by asking her to turn down the temperature while she wants to get a good sleep.



B - Prototype Making

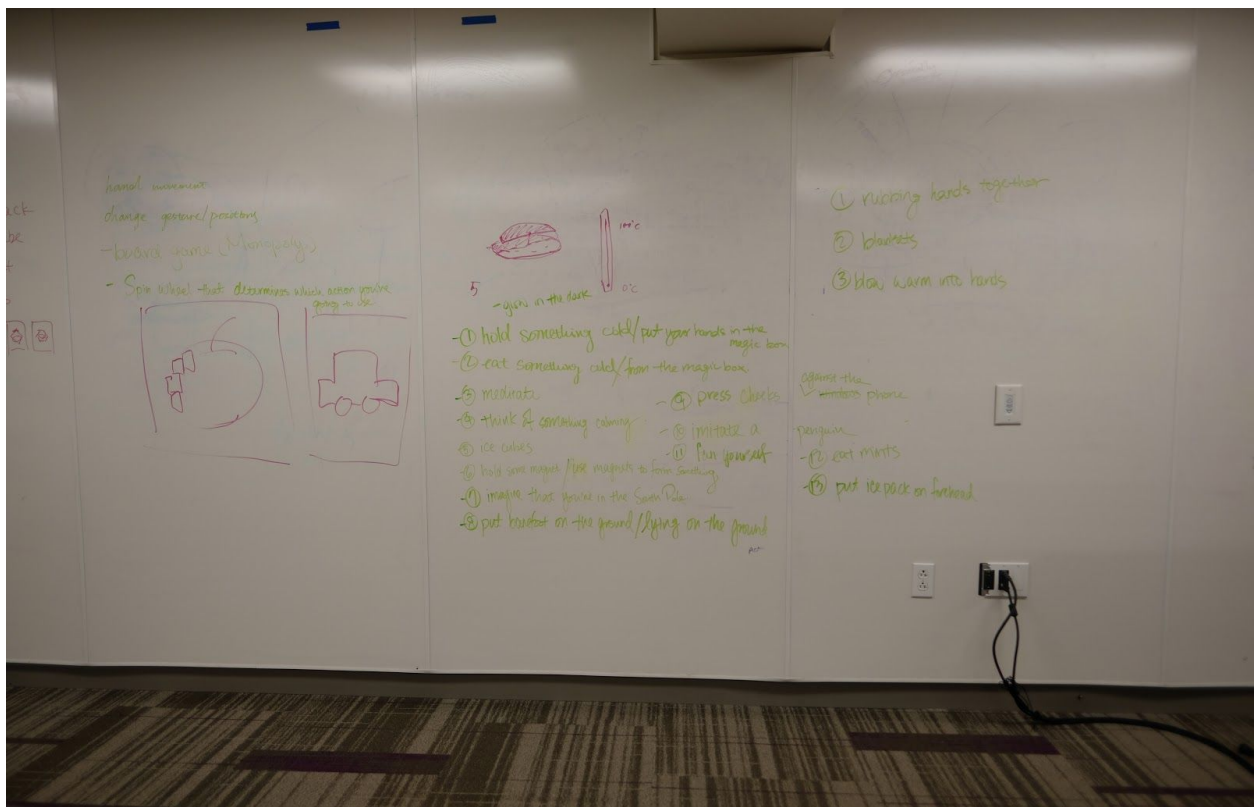




C - Playtests



D - Ideation



E - Card Design

Chill Letter 1

3 Put your hand in the magic box	4 Eat something cold from the magic box	5 Touch ice cubes
3 Meditate	4 Think of something calming	5 Imitate a penguin
3 Touch magnet	4 Imagine yourself in the South Pole	5 Imitate a penguin

Chill Letter 2

3 Press cheek against your phone	4 Touch a cold surface	5 Touch ice cube
3 Fan yourself	4 Eat mints	5 Put icepack on your forehead
3 Blow warm air	4 Rubbing hands together	5 Put a blanket on

Cardback

612 x 792