

Presentation by Nachiketa Patel, Mahya Tazike

ChromaSonic Focus Cubes

Meet our team



Nachiketa Patel



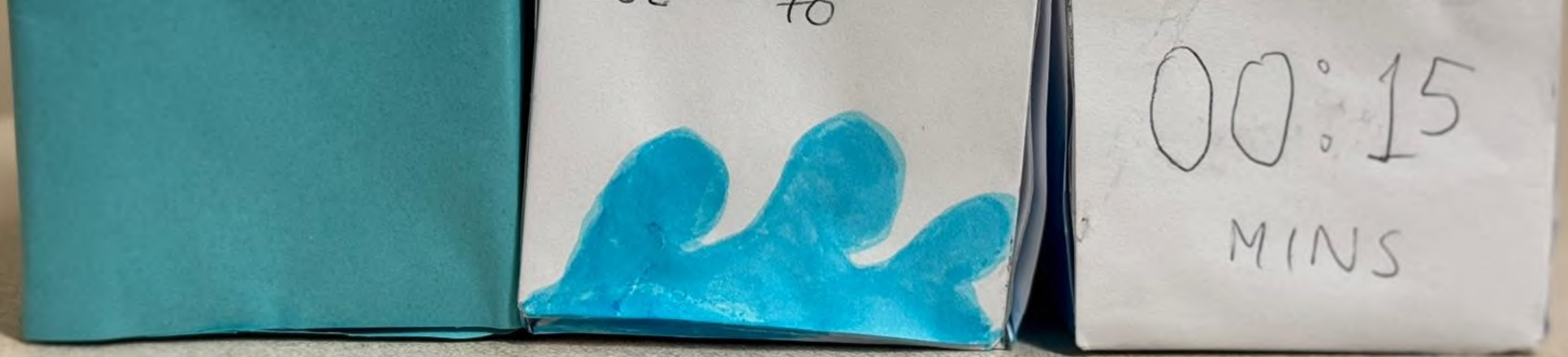
Mahya Tazike

Agenda

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Unlock Your Ultimate Focus Zone with ChromaSonic:
Where Color Meets Music for Peak Productivity!



Introduction —

ChromaSonic Focus Cubes
are an innovative concept for
enhancing focus and
concentration using the
power of color and music.

Why ChromaSonic Focus cubes?

Comprehensive design solutions

Innovative Intergration of colors and music

Specific colors affect mood, attention, and productivity, while music types modulate arousal levels and improve focus. These cubes merge color and music, providing a comprehensive solution for enhanced cognitive performance.

Personalized Environment

Users can select from diverse colors and music genres to optimize their workspace. Whether calming blues for relaxation or upbeat tunes for motivation. These cubes empower users to craft their ideal concentration zone.

Tangible Interaction

ChromaSonic Focus Cubes provide a hands-on experience, allowing users to select colors, adjust music, and set focus durations. This interactive design promotes engagement, customization, and concentration, making it intuitive for users of all abilities.

Voice AI Integration for Enhanced Usability

With Voice AI, users can effortlessly select colors and adjust volume levels by controlling the cubes via simple voice commands, facilitating hands-free operation ideal for focused work sessions or multitasking.

Whom it may help?

Individuals with ADHD

Tailored to enhance focus, reduce distractions, and support emotional regulation through customizable sensory environments.

Key Benefits for ADHD:

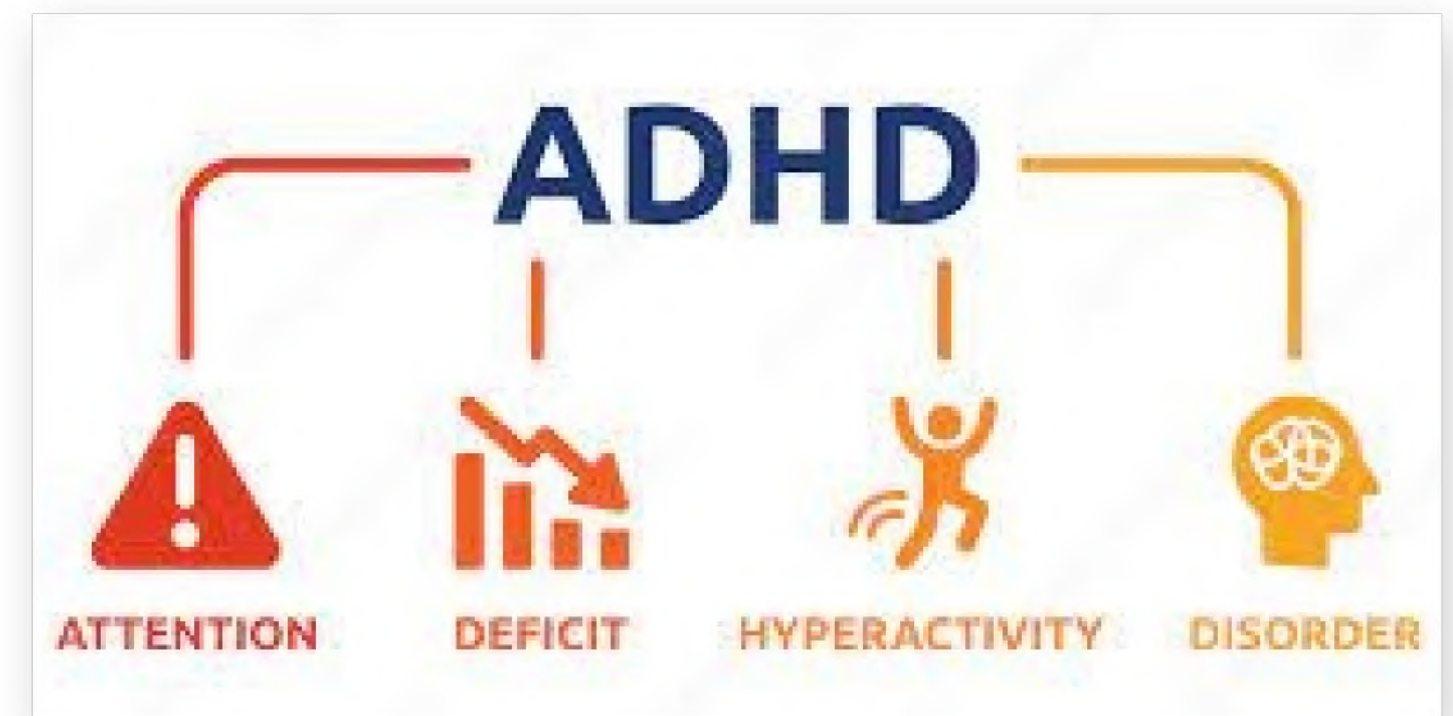
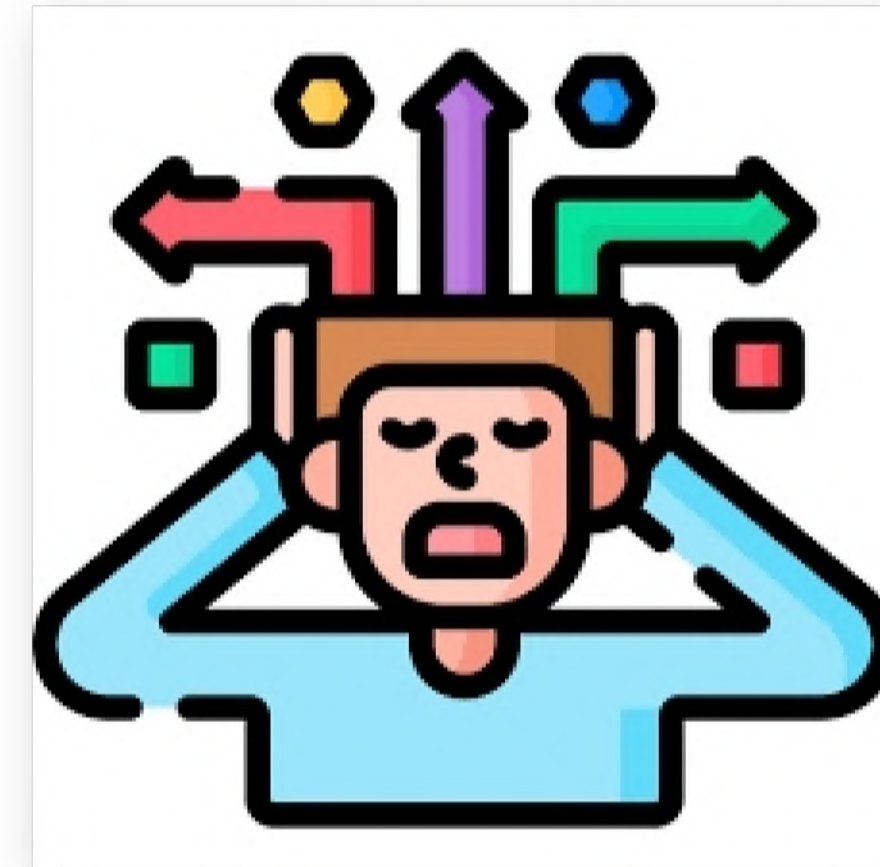
Concentration: Custom colors and music improve focus.

Emotional Regulation: Personalized settings aid in managing emotions.

Engagement: Interactive challenges increase engagement and creativity.

Broadly Beneficial:

While designed for ADHD, it is useful for anyone seeking a focused and creative workspace.



Research Findings

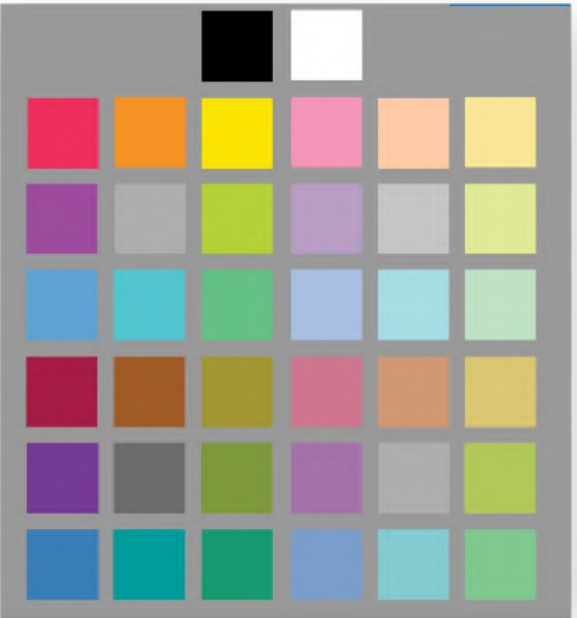
Location

USA and Mexico

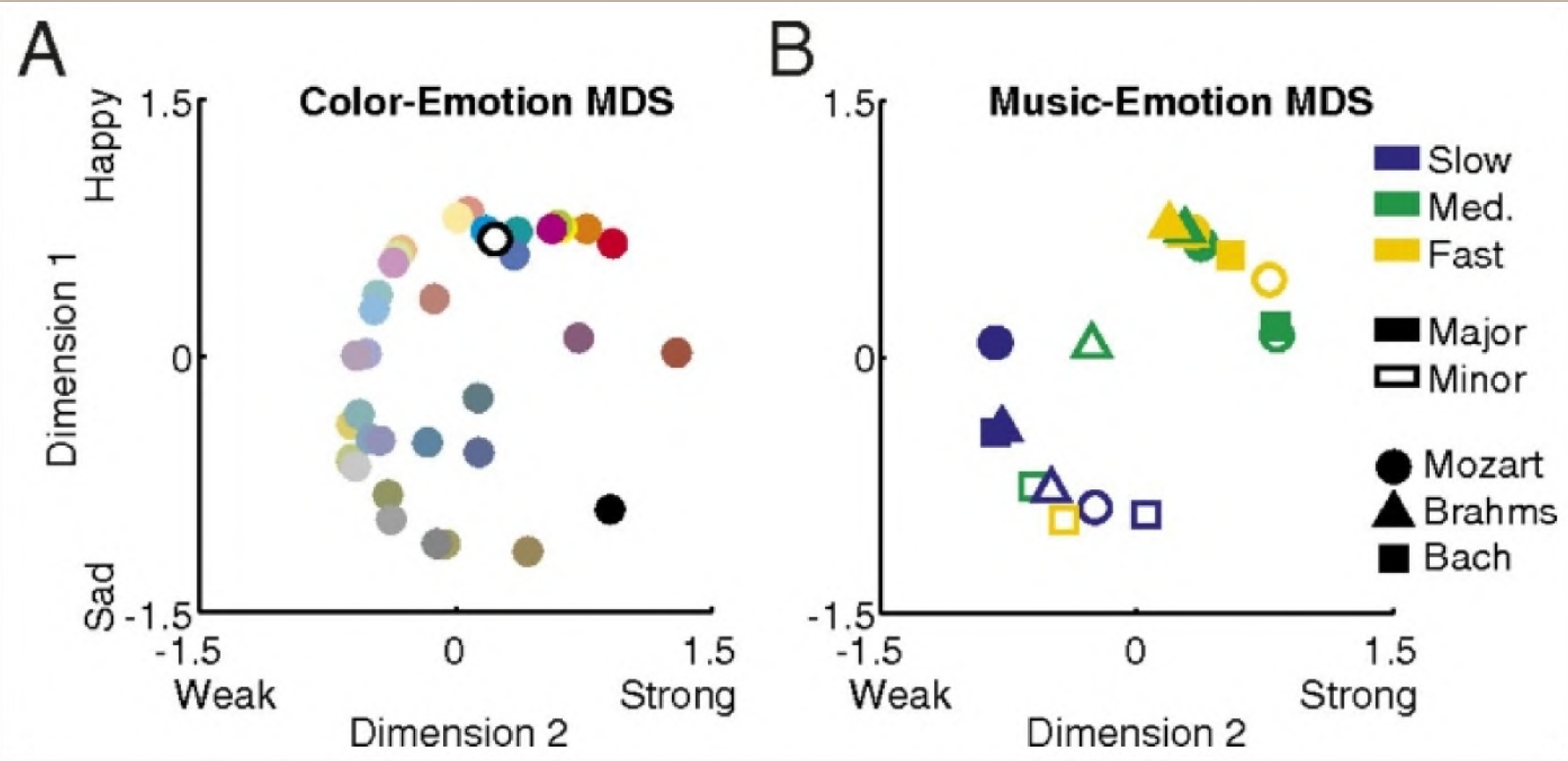
Experimental Setup

Participants listened to 18 classical orchestral music selections while viewing the 37 colors on a computer monitor. The background was kept neutral gray to minimize any potential color biases.

Reference: Music-color associations are mediated by emotion



37 Colors presented during experiment

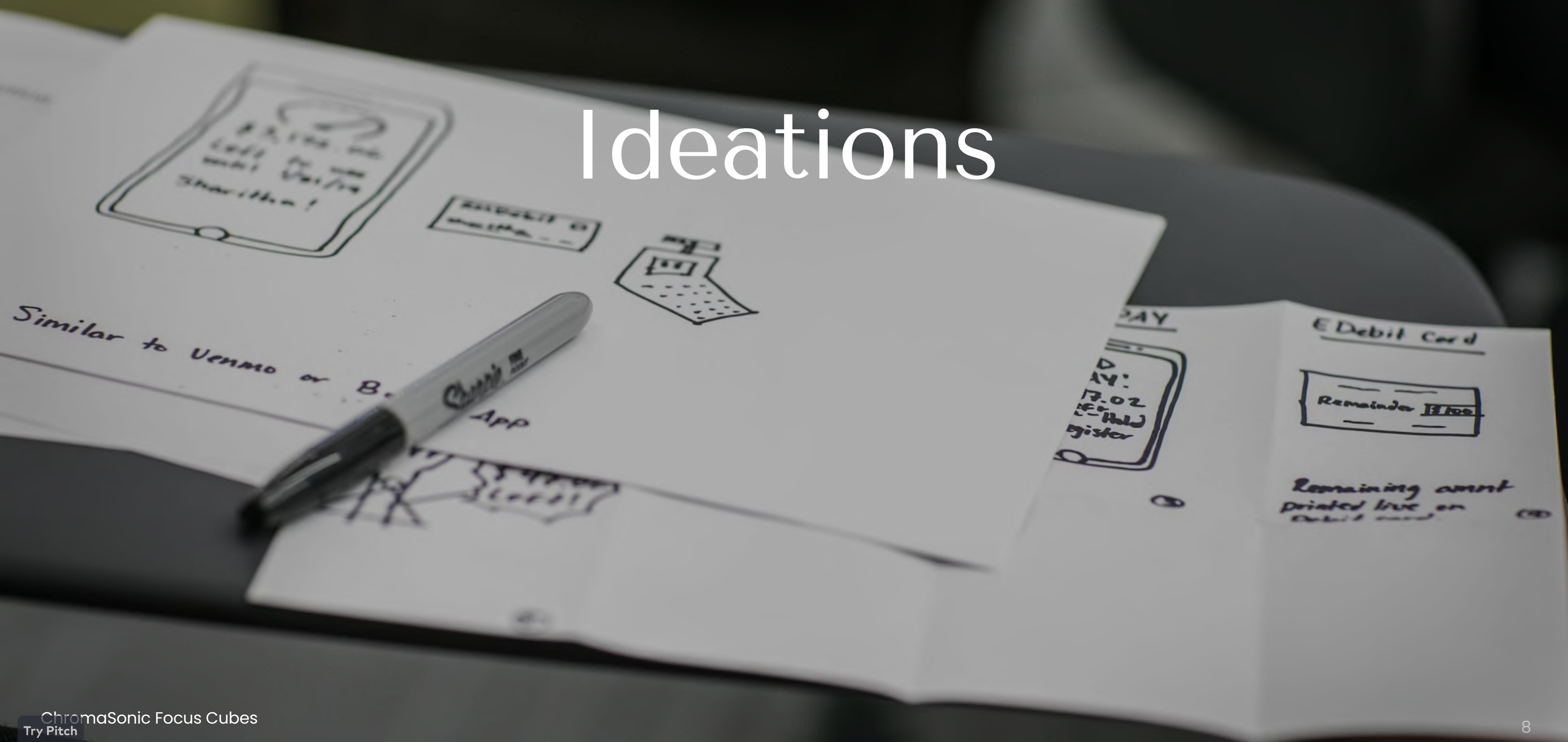


Findings

1. Tempo and Mode Associations:
 - a. Faster music in major mode correlated with more saturated, lighter, and yellower colors.
 - b. Slower music in minor mode linked to desaturated, darker, and bluer colors.
2. Emotional Associations:
 - a. Emotional dimensions such as happy/sad, lively/dreary, strong/weak, and angry/calm highly correlated in mediating music-color associations.
3. Cultural Invariance:
 - a. Associations between music and colors found to be universal.
 - b. Implies that music-to-color associations mediated by emotions transcend cultural boundaries.

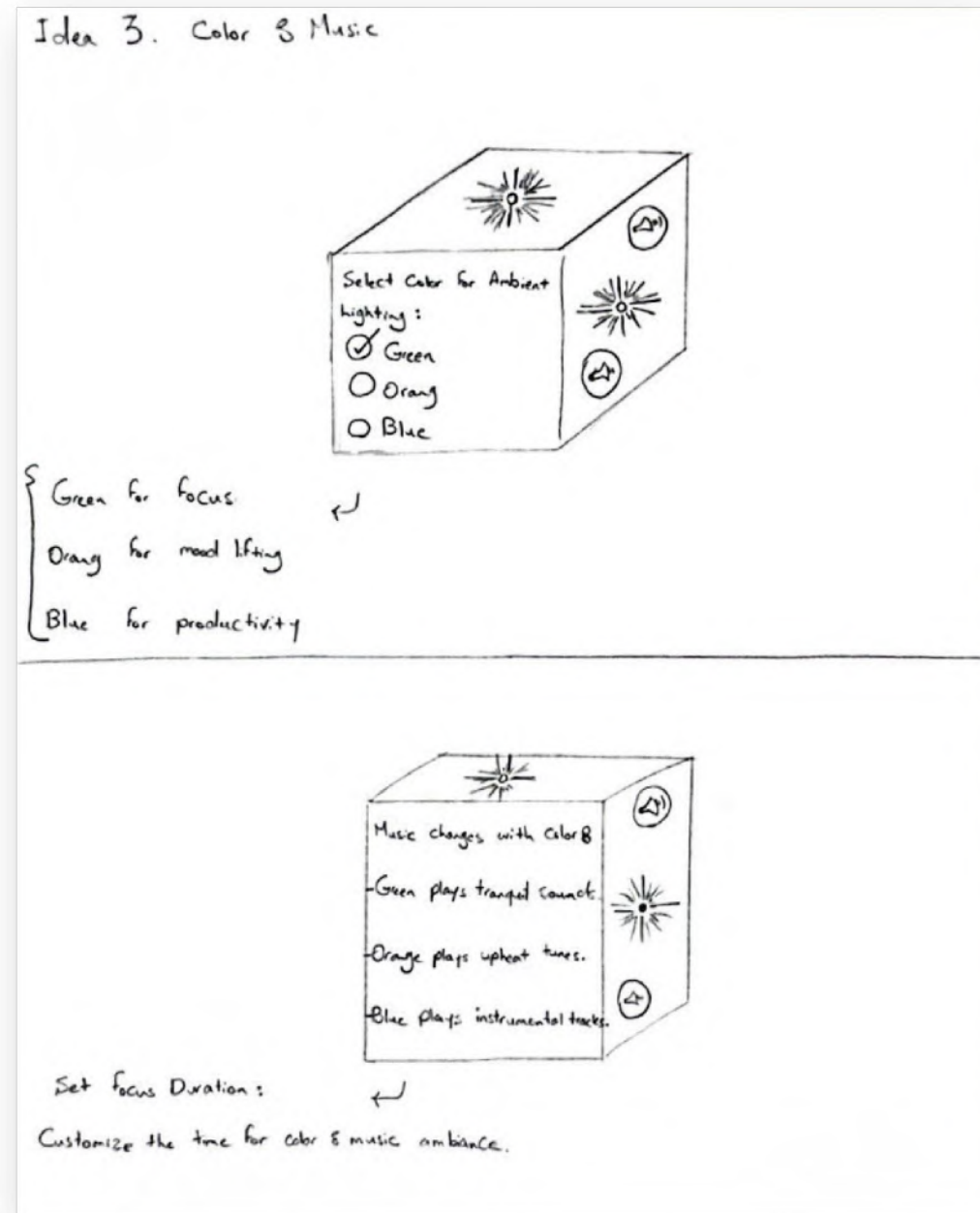
Comprehensive design solutions

Ideations

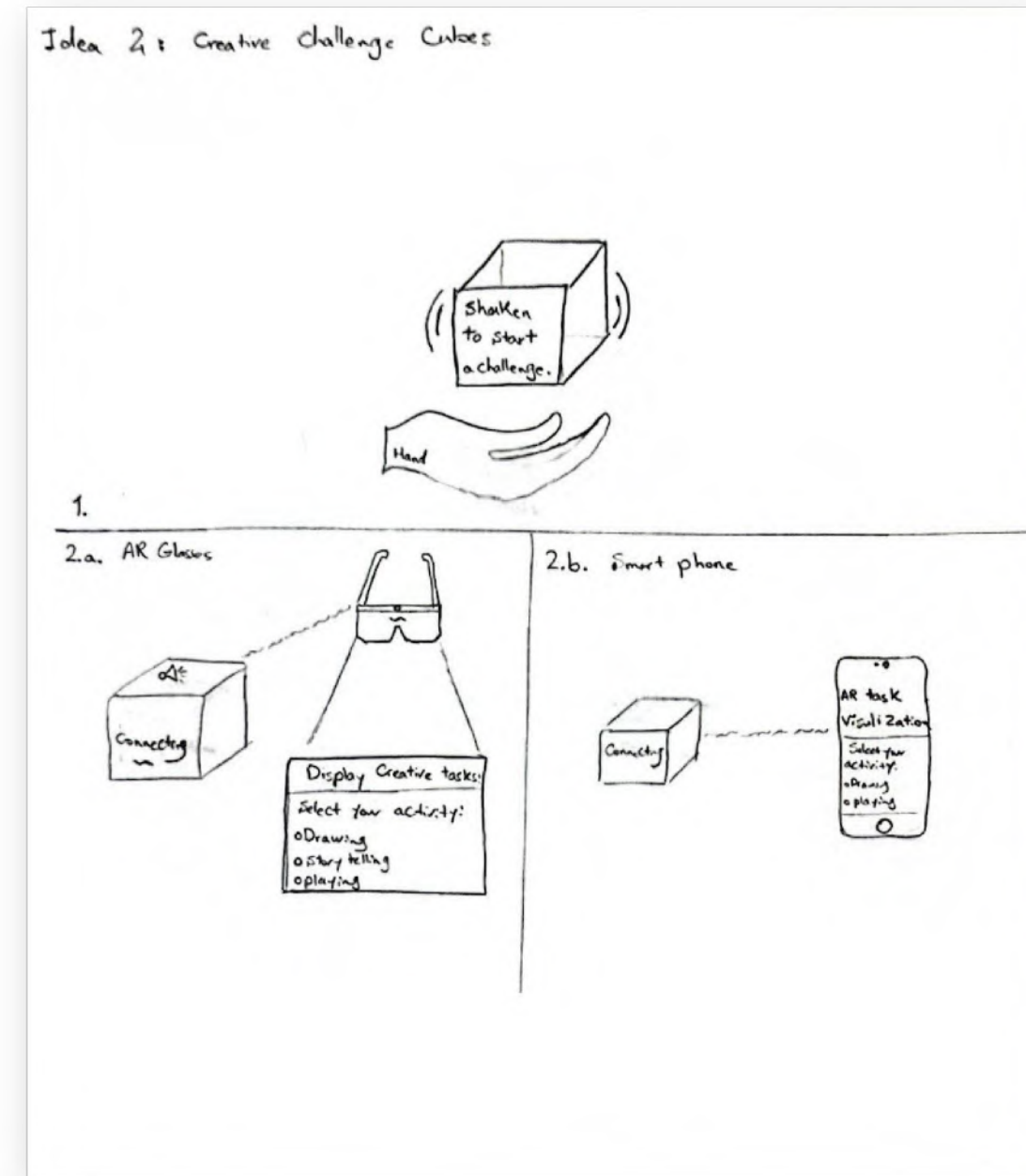


Ideation

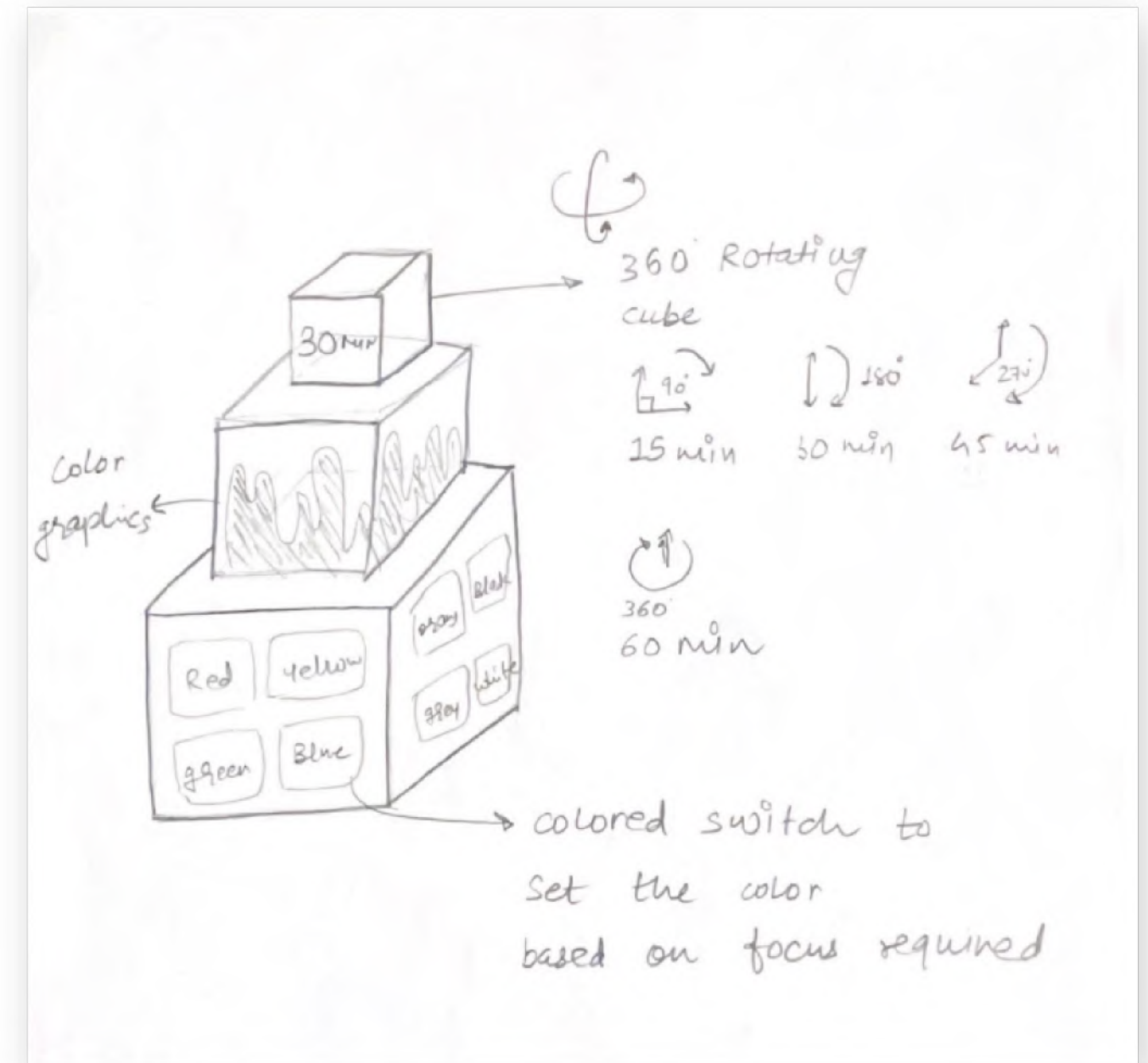
Ideation 1 —



Ideation 2 —

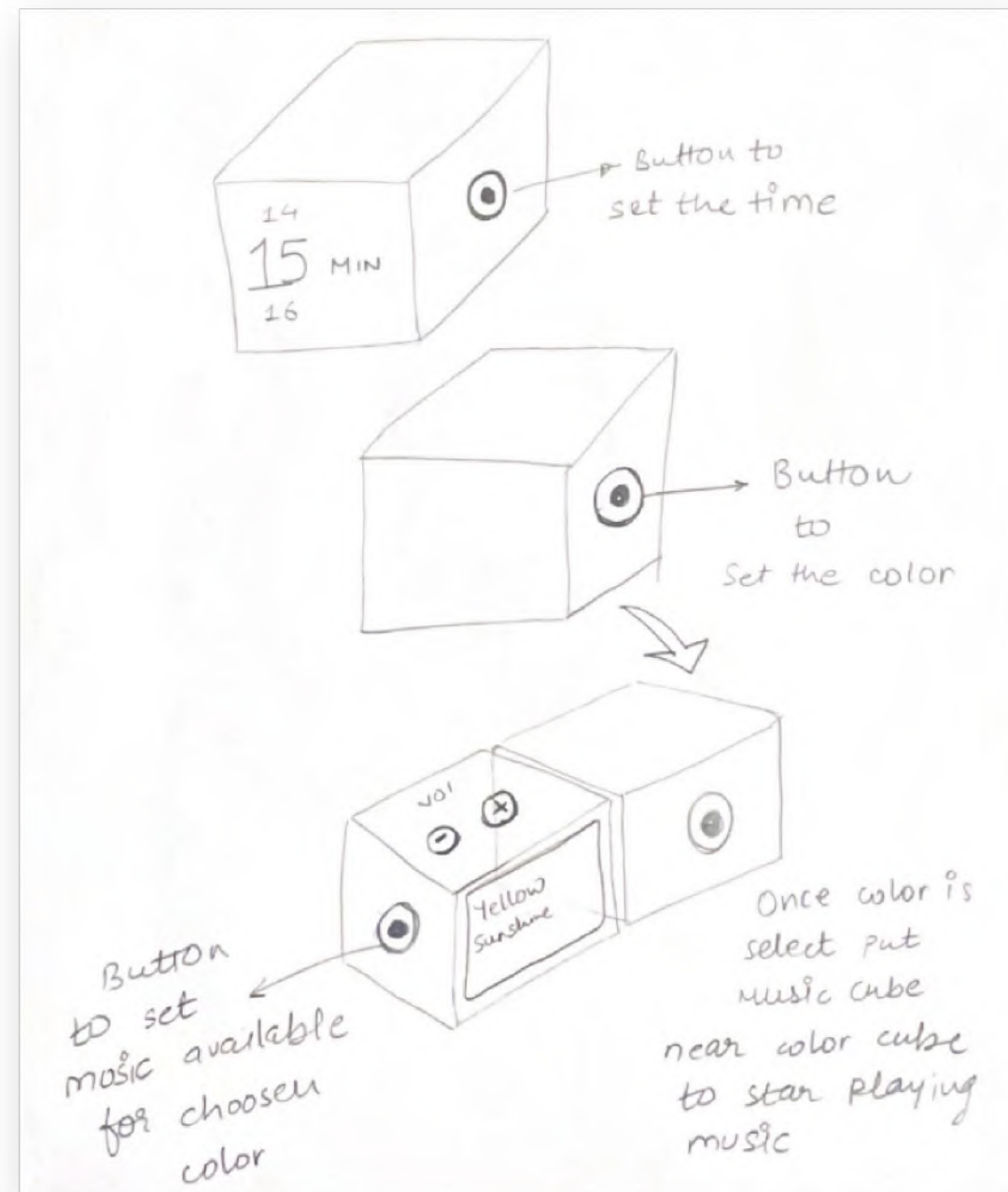


Ideation 3 —

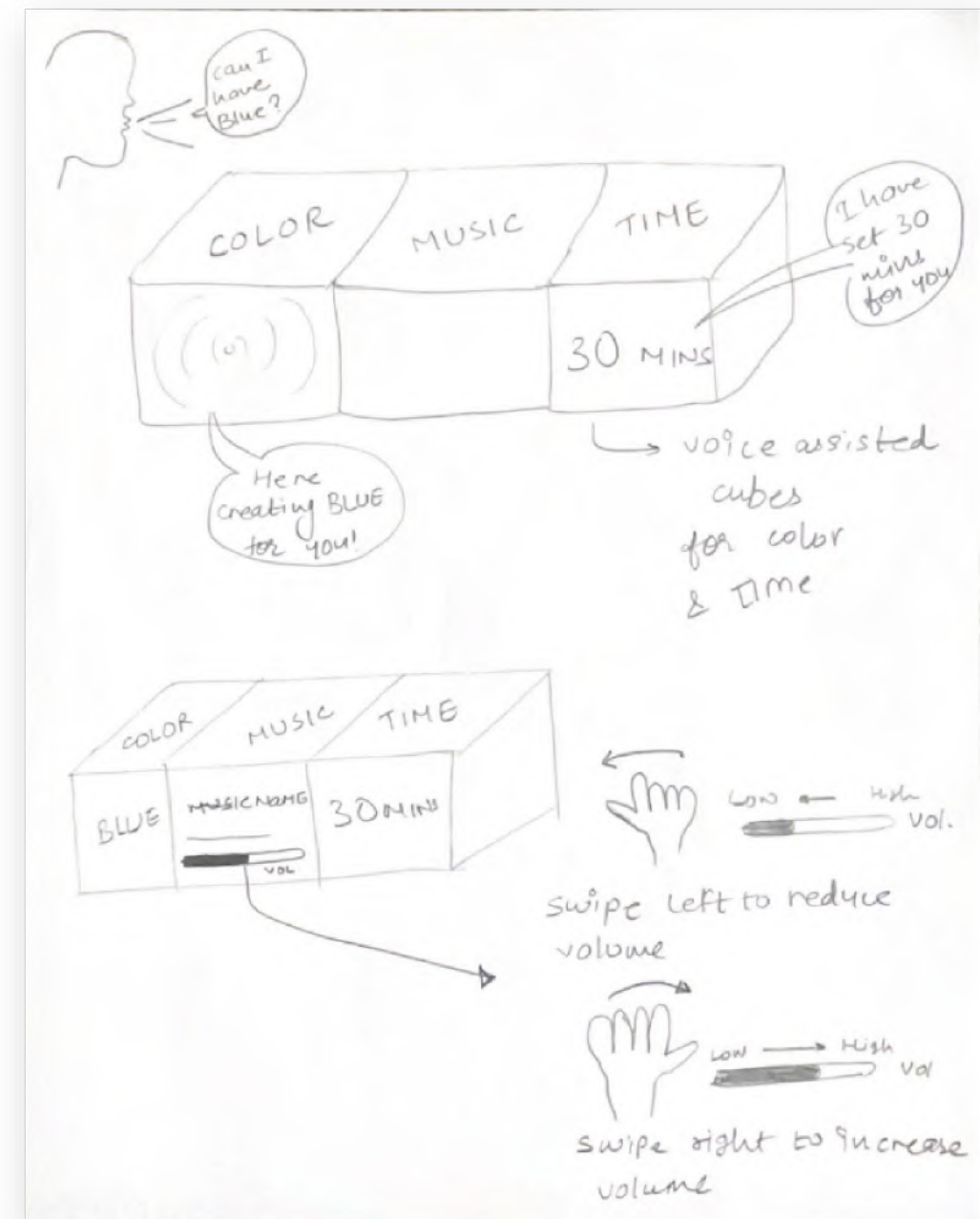


Ideation

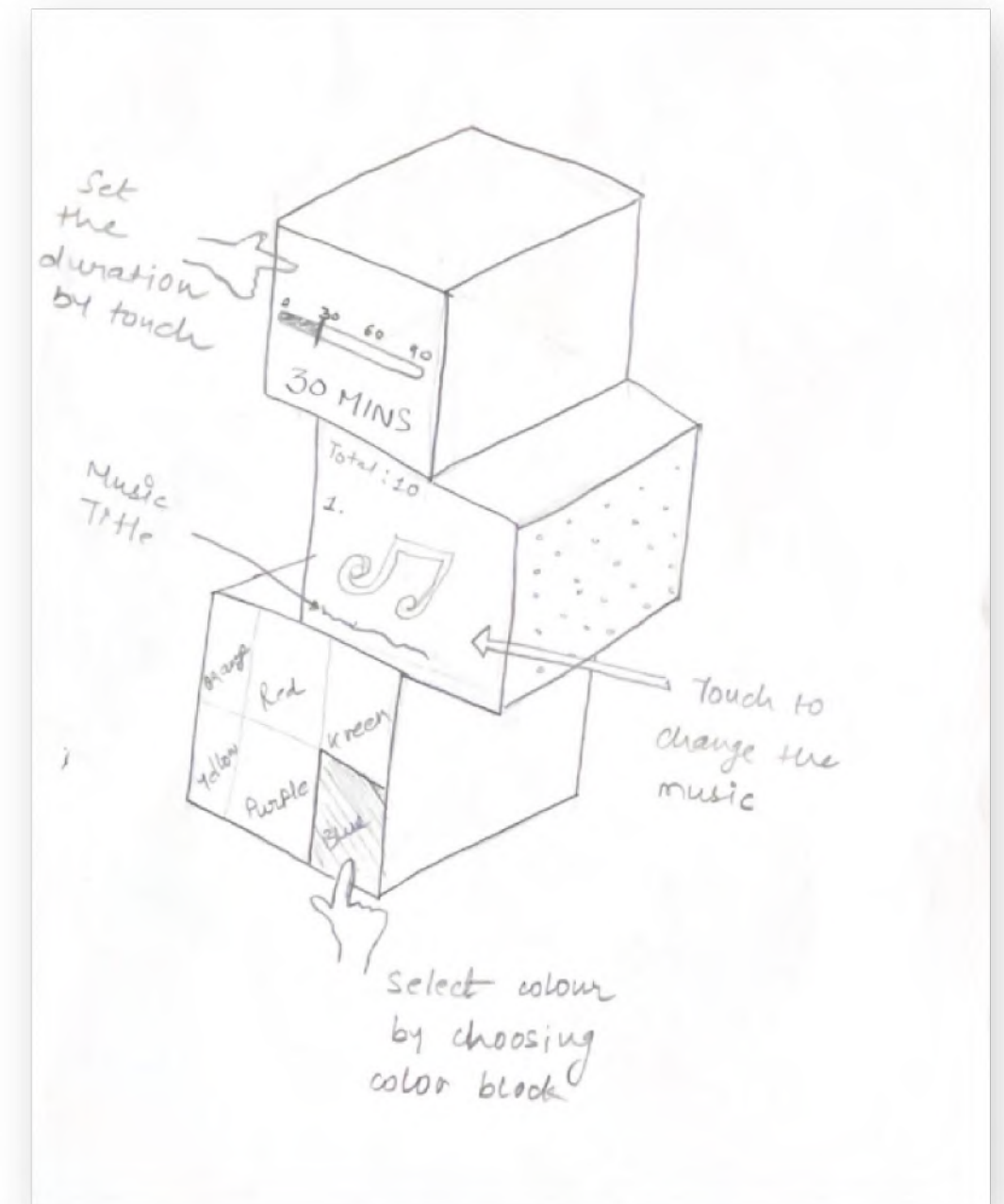
Ideation 4 —



Ideation 5 —

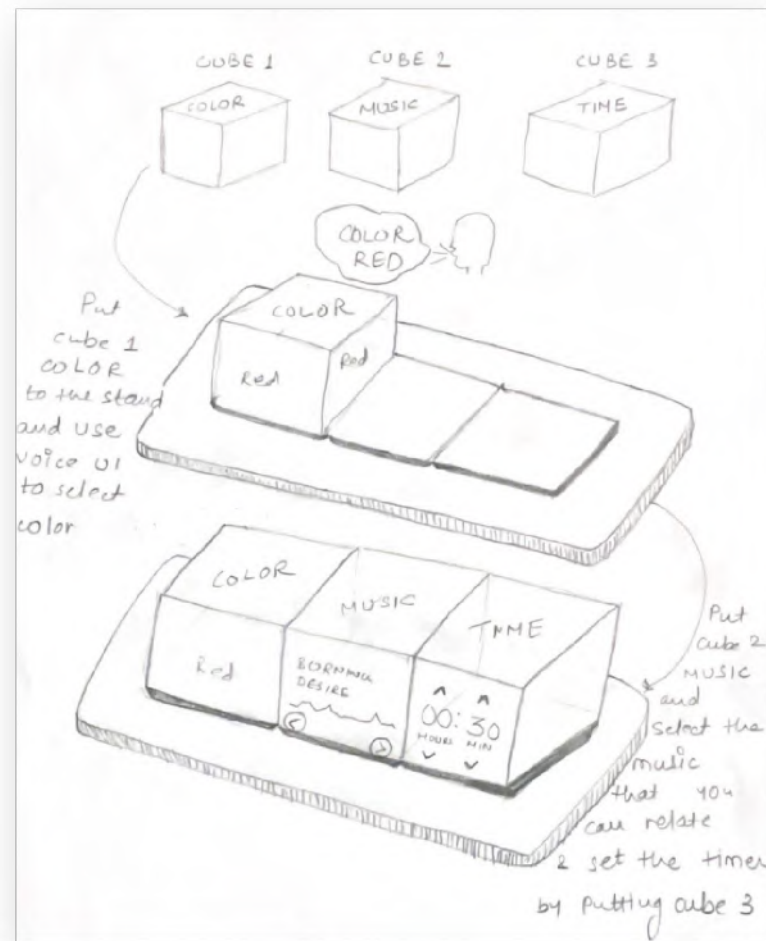


Ideation 6 —

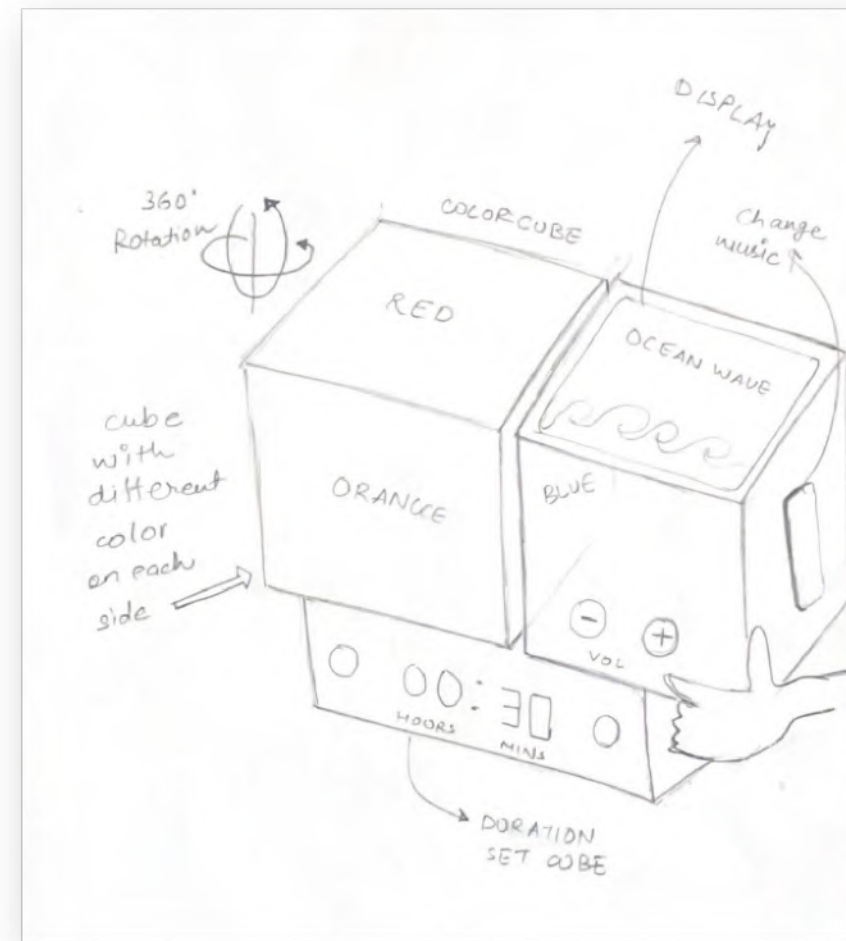


Ideation

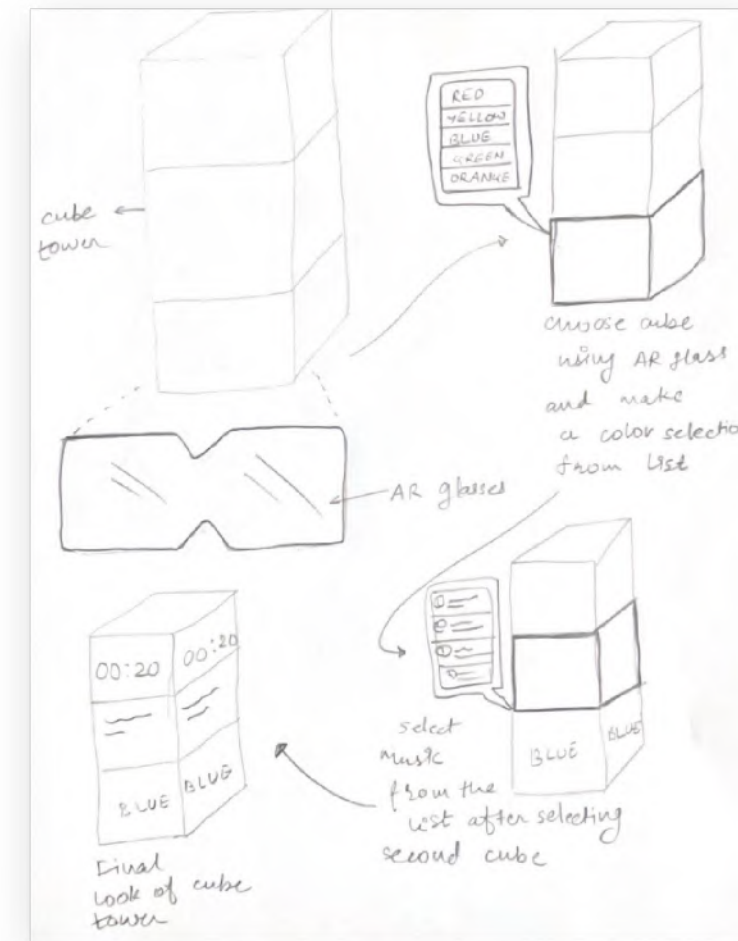
Ideation 7 —



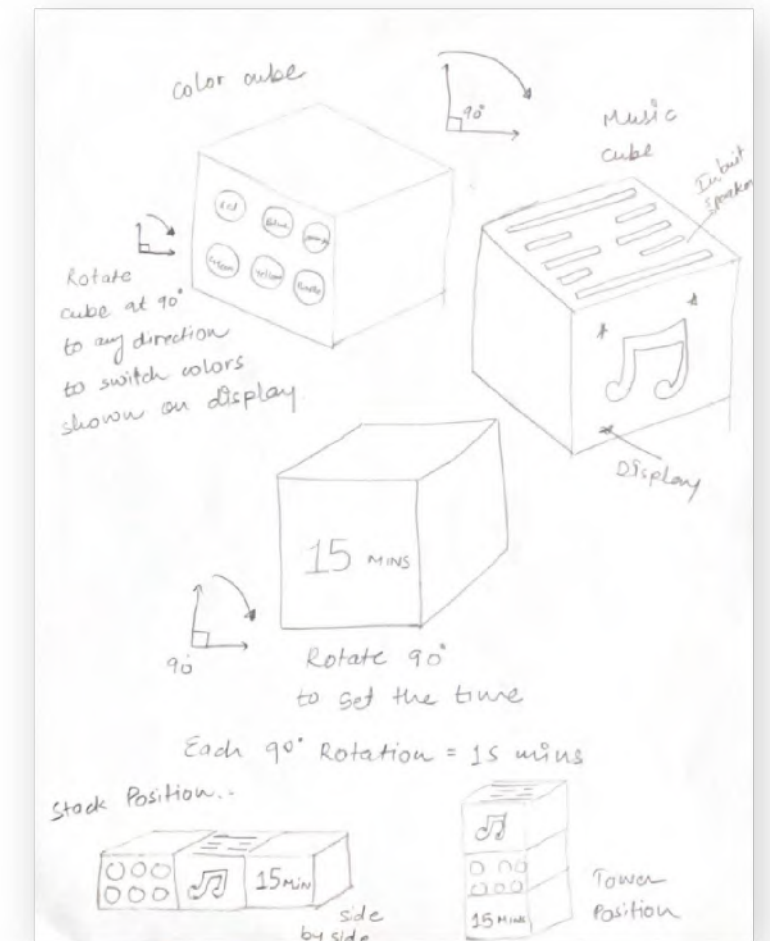
Ideation 8 —



Ideation 9 —



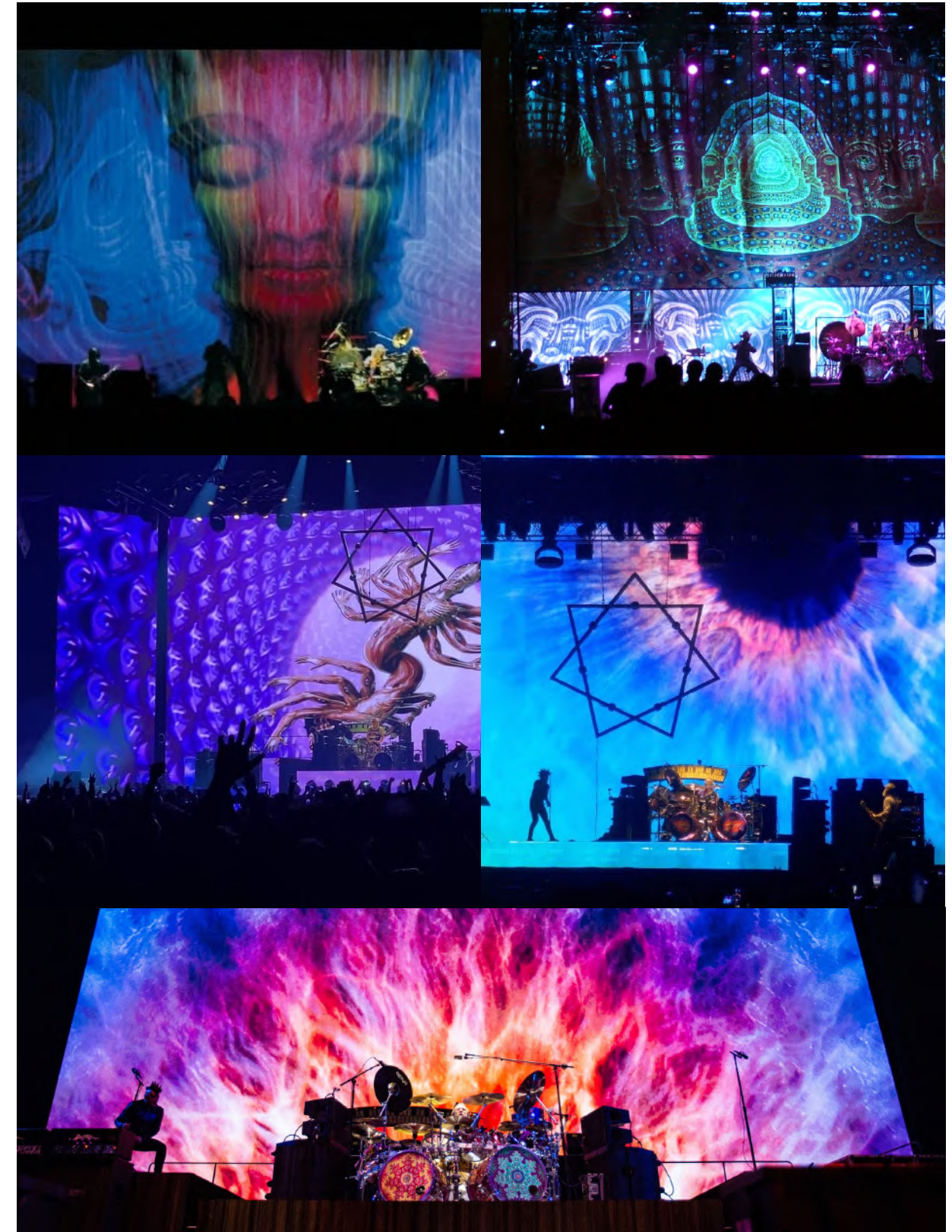
Ideation 10 —



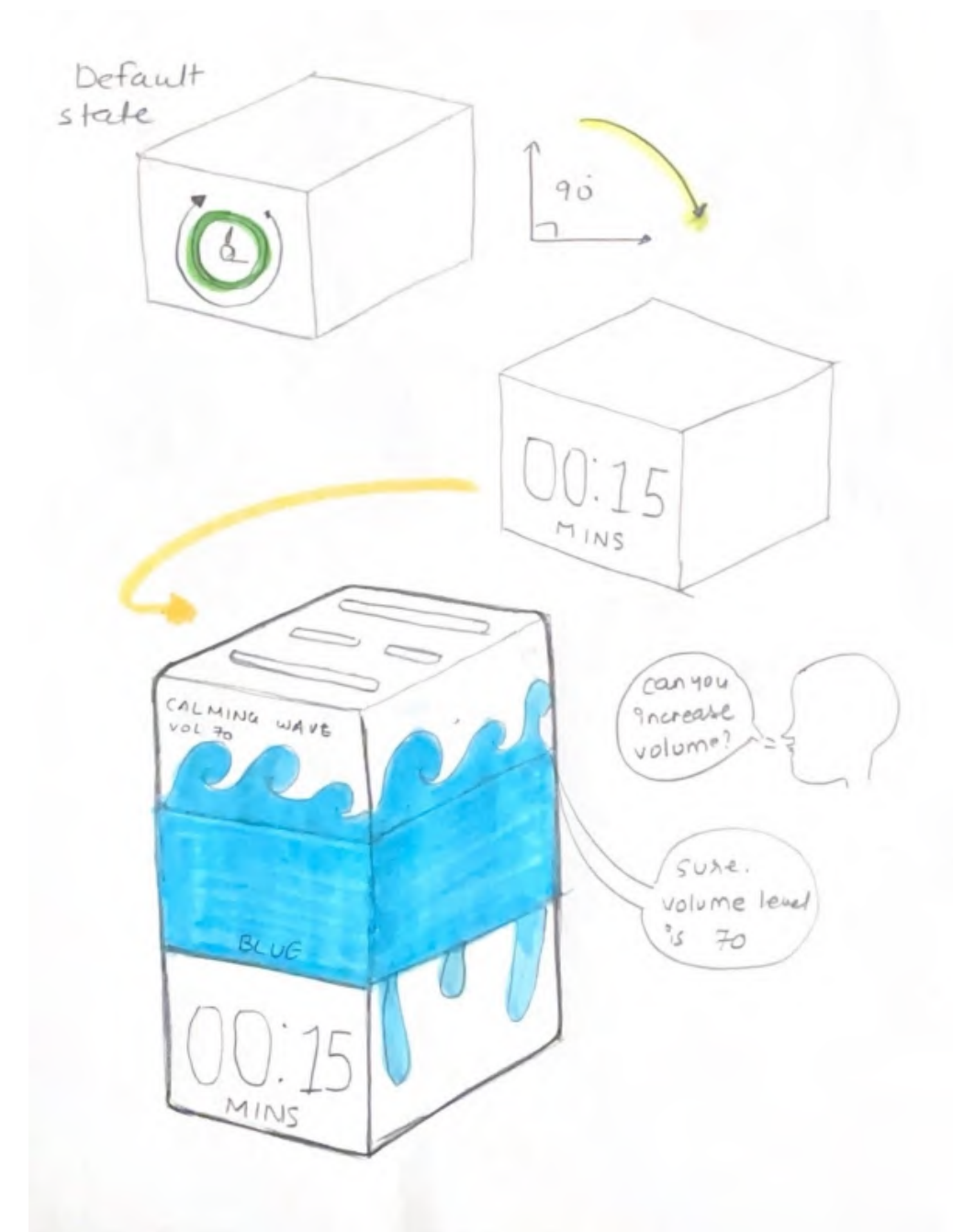
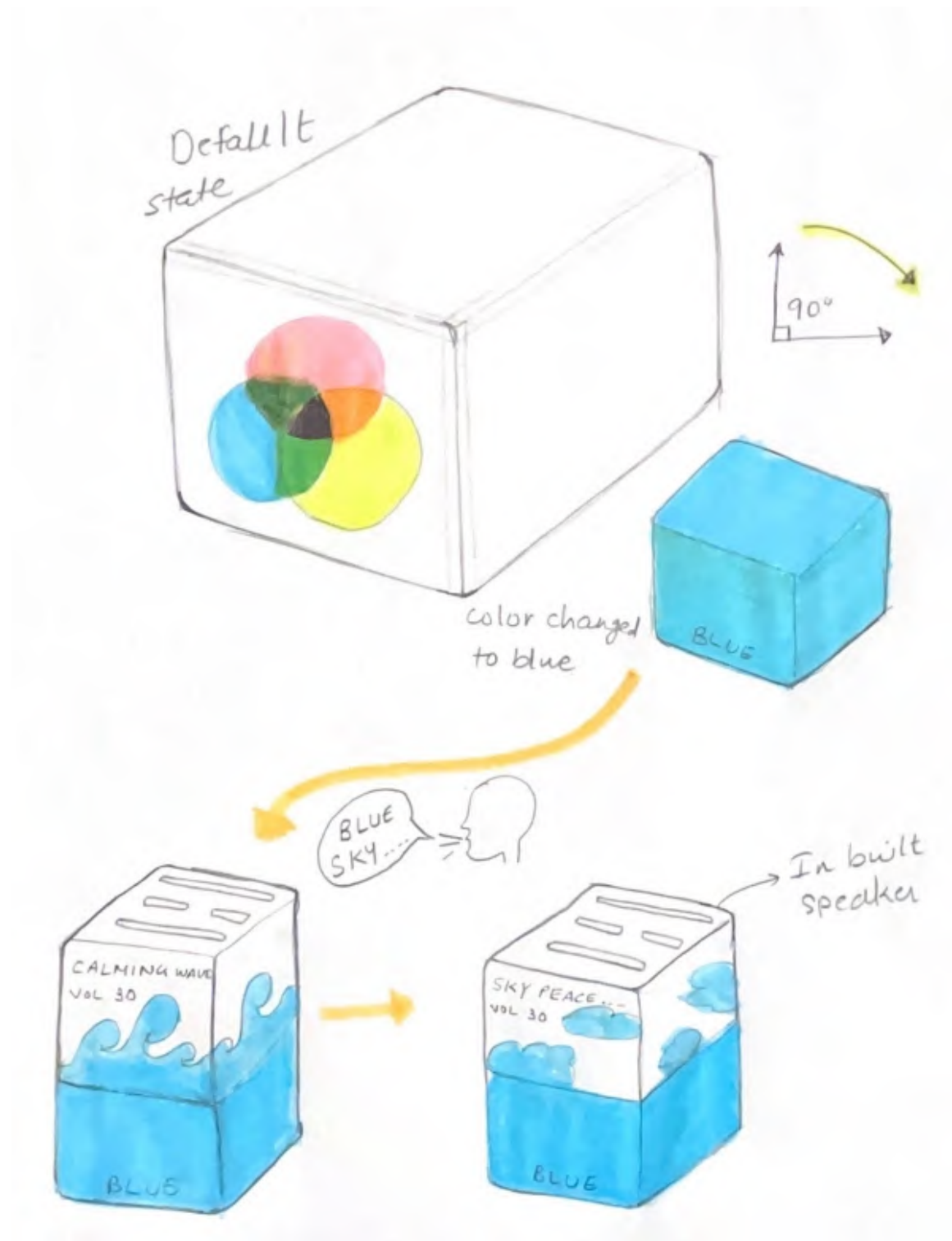
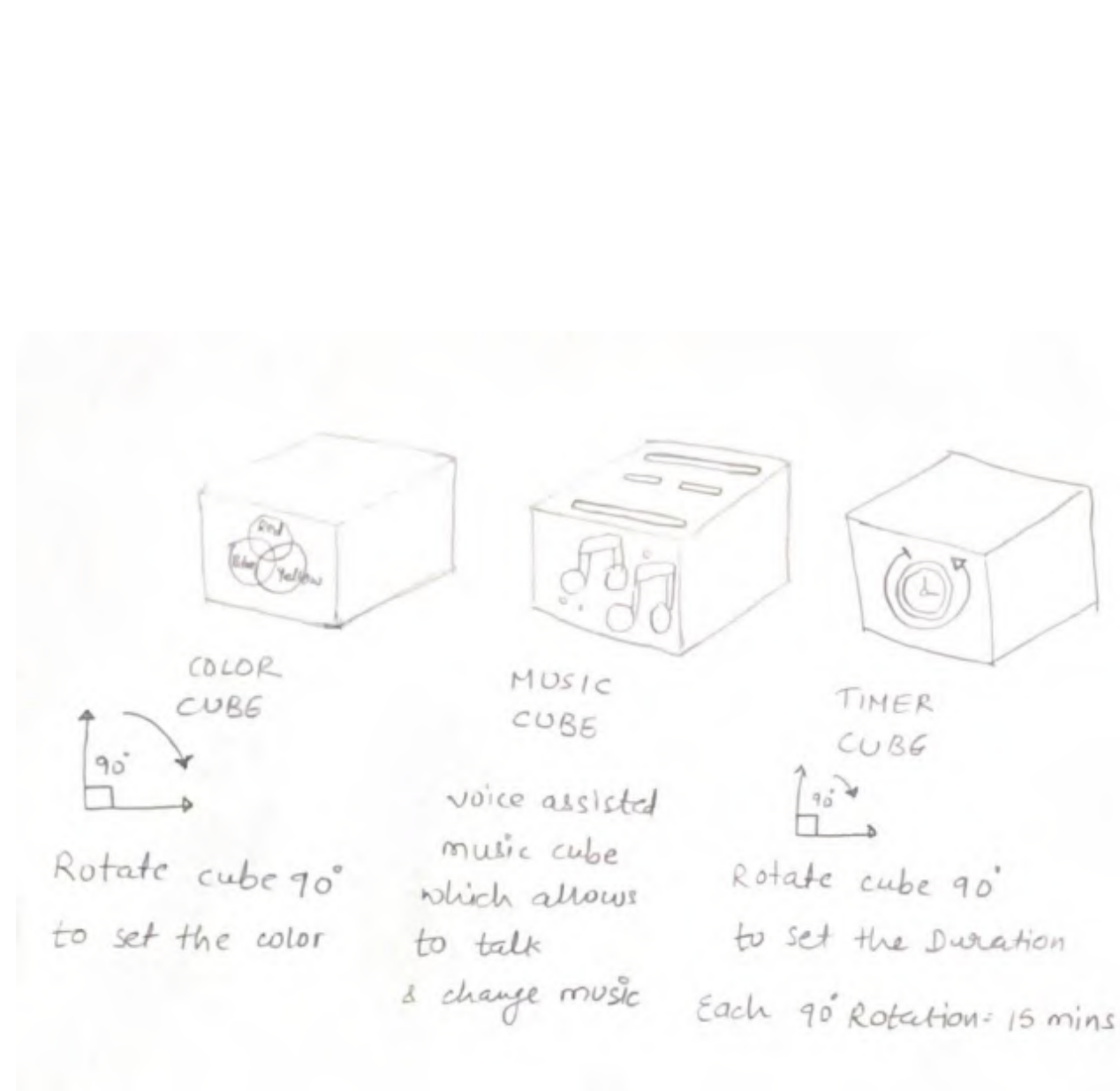
Inspiration

Tool Band

The captivating impressionism of Tool's material comes not just from the music itself, but from the artwork, the words, the mysteries, and the subversion of their artistry.



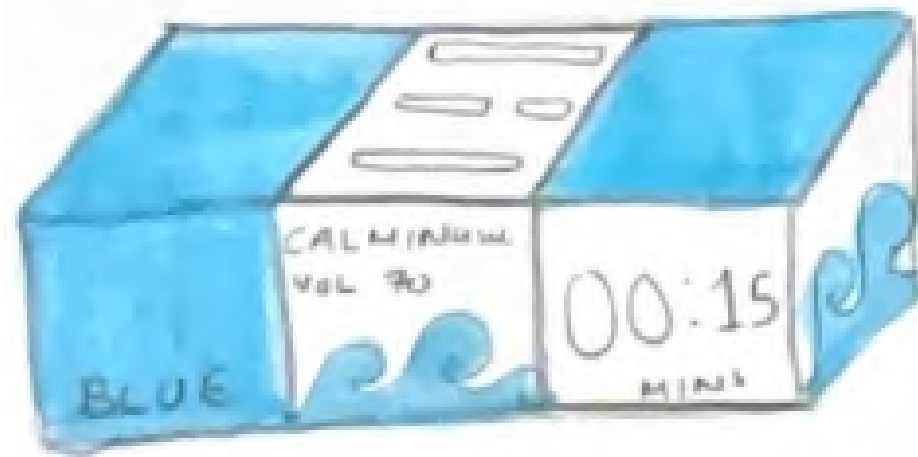
Final Concept



Final Concept

Arrangement Patterns:

side by side



Tower

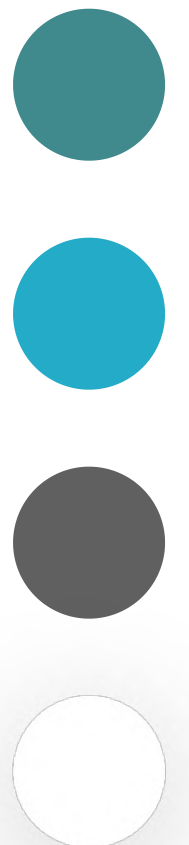
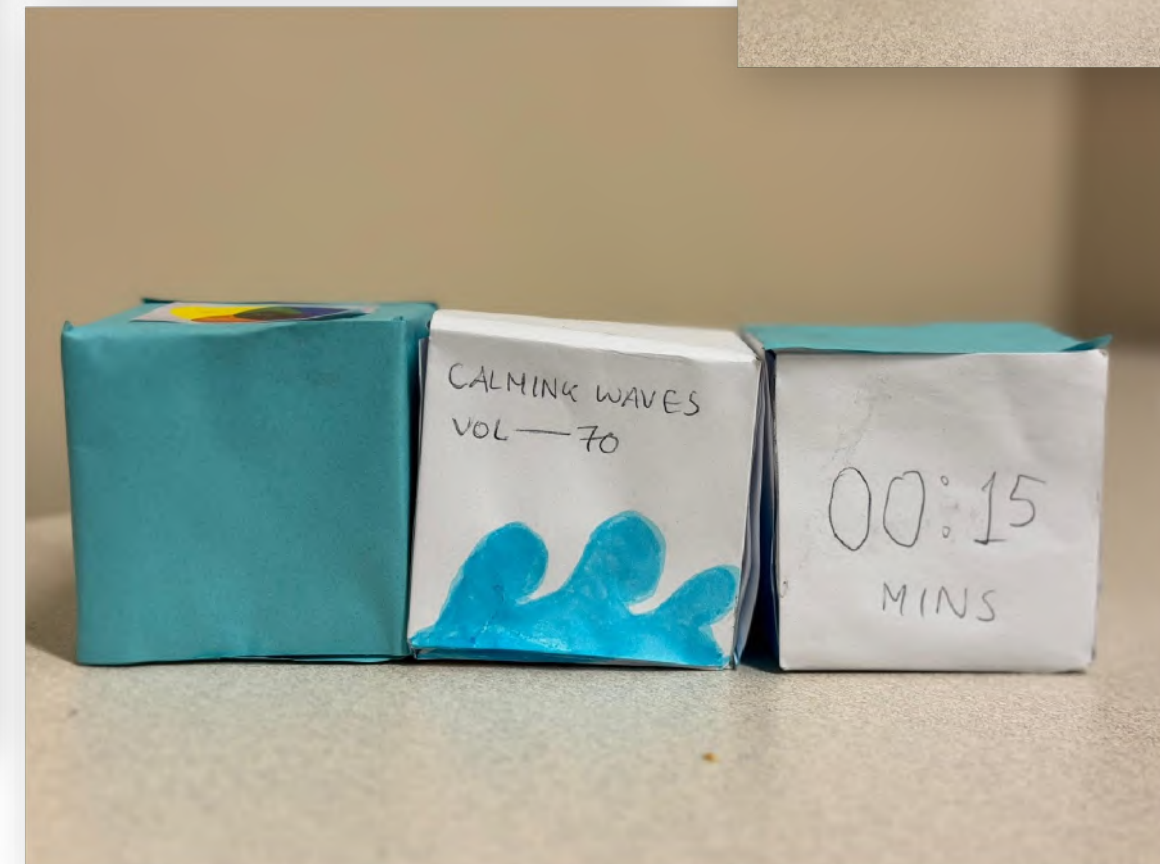


Mountain



Paper prototype

This project's paper prototype focuses solely on the color blue and its associated music for demonstration purposes.



How does it work?

ChromaSonic Cubes revolutionize focus and productivity with their innovative design and intuitive functionality. Here's how it works:

Color Cube

- Rotate the Color Cube at a 90-degree angle in any direction to set your desired color.
- Once the color is set, attach the Music Cube to the Color Cube.

Music Cube

- The Music Cube is voice-assisted, allowing users to command song changes effortlessly.
- Experience seamless music playback with voice commands, eliminating the need for manual song selection.

Timer Cube

- Similar to the Color Cube, rotate the Time Cube at a 90-degree angle to set the desired time.
- Each 90-degree rotation corresponds to a 15-minute interval, providing flexible time management options, including graphics to the chosen music, enhancing visual engagement.



[ChromaSonic Cube Prototyping Video.mp4](#)

User Testing Reflection

Location
Indianapolis, IN, USA

Participants

3

Students- 2
Full time Employee -1

Customer Anecdotes

- " These cubes are very handy."
- " I love how music starts playing when I attach the music cube to color cube."
- " Can I have more music choices apart from the music associated with colors?"
- " Can I select the music first before selecting the color?"
- " I like the idea how it will help me keep away from my mobile phone."
- " I would like to have bluetooth connection"



Findings

- Users are finding the size of the cube should be smaller to make it pocket friendly.
- Users appreciated the ability to customize their focus environment by selecting their preferred color and accompanying music.
- Customers found ChromaSonic Cubes intuitive and user-friendly.
- The three arrangement options offered by ChromaSonic Cubes—side by side, tower style, and mountain style—provided users with flexibility in optimizing their workspace layout to suit their preferences and needs.
- Users want to use the cubes separately as well based on their emotional state, music is not required all the time.
- Users want the cubes to be used in a larger area rather than a smaller space like their work desk or bedside table.



Future scope

- All these cubes can be one unit and each can rotate on X axis to set the tailored experience.
- Adding the feature of Bluetooth connectivity so that users can listen to music keeping the privacy of others in mind.
- Develop functionalities that allow users to use each cube separately based on their emotional state or specific needs, providing a more tailored and adaptable user experience.

Lessons Learned from Our Journey

User-Centered Design is Key

Targeting individuals with ADHD early in the design process revealed crucial insights into their unique needs and preferences, underscoring the importance of user-centered design.

Sensory Integration's Impact

Testing confirmed the strong influence of color and music on concentration and mood, validating our approach to creating a multi-sensory focus environment.

Adaptation and Learning

The process taught us the importance of adaptability—both in our technology, allowing the system to learn and evolve with the user, and in our approach, responding to feedback and unexpected challenges.

A person is sitting on a brown leather sofa in a modern living room, using a laptop. The room features a white marble coffee table with a stack of papers, a wooden side table with a stack of books and a wicker basket, and a large window with white curtains. A framed abstract painting hangs on the wall.

Thank you

ChromaSonic Focus Cubes



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