



MindCompass

Your wellbeing companion

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TABLE OF CONTENTS

01

Problem + Solution

02

Encoding Values

03

Task Evolution

04

Usability Goals +
Measurements

05

Interface Revisions

06

Med-Fi Task Flows

07

Prototype
Implementation

08

Appendix

**Problem +
Solution**



Problem

Parents express their anxiety,
sleeplessness, and
uncertainty



Parenting is a stressful task

Kids have restless energy and
unbounded imagination,
struggle with emotional
regulation



**Exhausted parents who struggle to
keep up + over-energetic kids**

How can we meet the needs of parents and kids by **helping kids regulate their emotions in a way that is appealing to their childish imagination and sense of wonder?**

Our Solution Evolution

Help parents gamify
child care tasks!



Making **childcare tasks**
accessible and engaging!



Make **emotional care
and regulation** at home
more fun and engaging!

Parents don't want more
layers to work with, a
clear purpose is more
attractive

Of the tasks we
suggested, meditation
and hygiene were the
most wanted

Meditation offers a wider
range of possibilities for
tailored experiences

Final Solution

Using **gamification** in **Mixed Reality** to make emotional care and regulation at home more **fun and engaging** for children and impactful to care taker's **peace of mind**



Highly-customizable, guided audio-visual meditation experiences in **Mixed Reality**

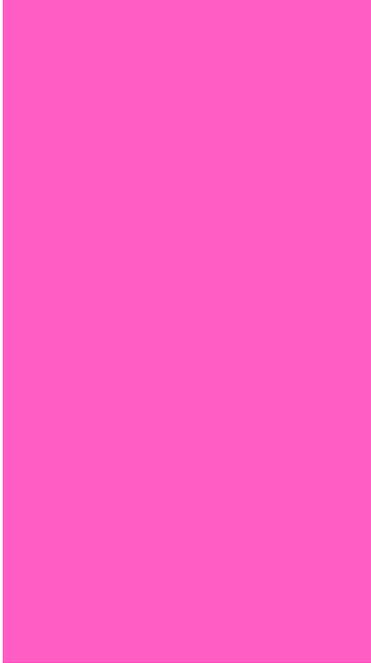
User Focus

Collaborative care
experiences between
parents and kids (5-10 yo)



Providing immersive and
independent meditative
experiences for **kids** (5-10 yo)

Encoding Values



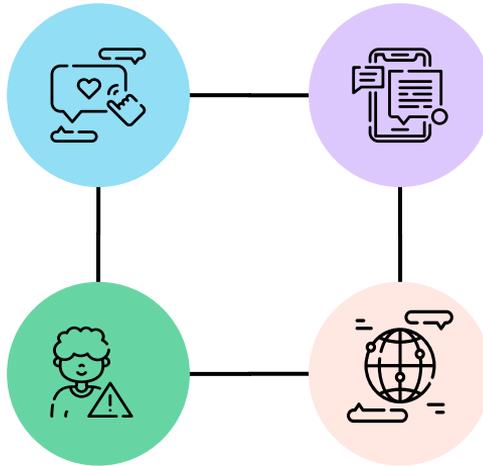
Value / Feature Alignment

Fun

- Game ideas are **engaging and entertaining**
- Rewards **encourage** interactive continued use
- Experience is **customizable/personalized**

Safe

- Parental controls
- Scenarios restricted for **focused use cases**
- Designed to **not be used for more than 30 min a day** (limited screen time)



User-Friendly

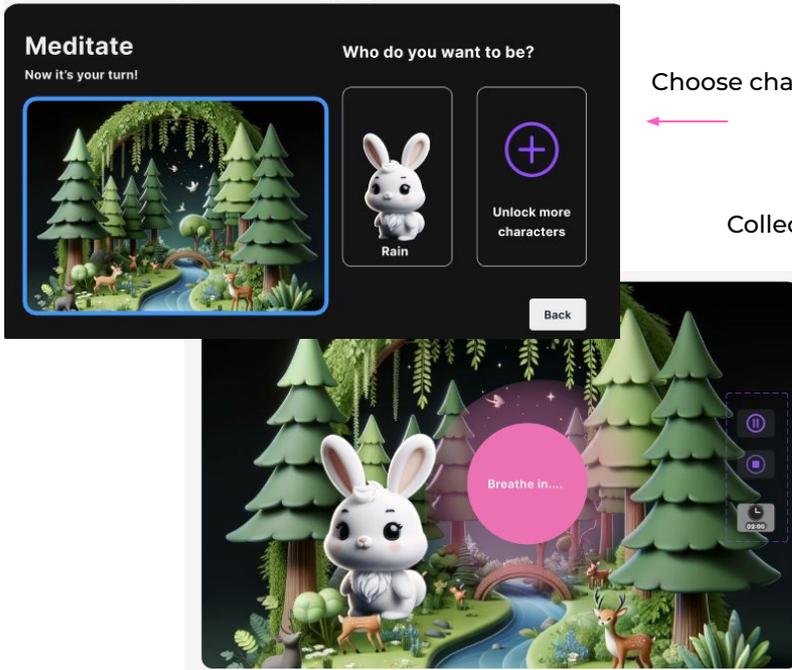
- **Simple** UI/UX with large imagery
- **Reactive** UI/UX with animated response
- **Tutorial** for first time users

Inclusive

- Gamification stories **not offensive** to one culture
- Activities are **accessible** (audio and visual aids)
- **Multilingual** text, subtitles, and audio

Value-backed Design Features - Fun

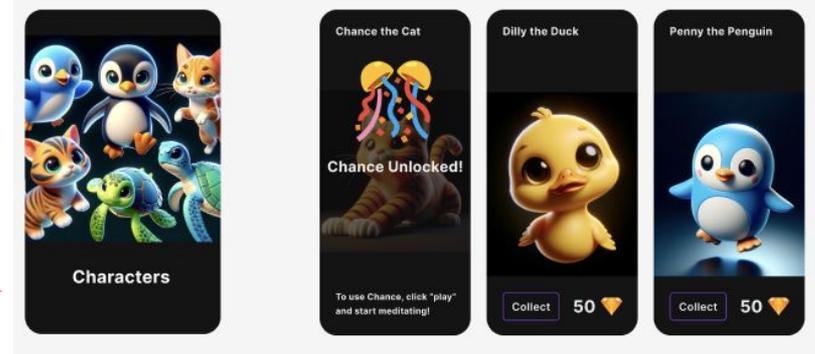
Customize meditation experience with **characters** and **environments**



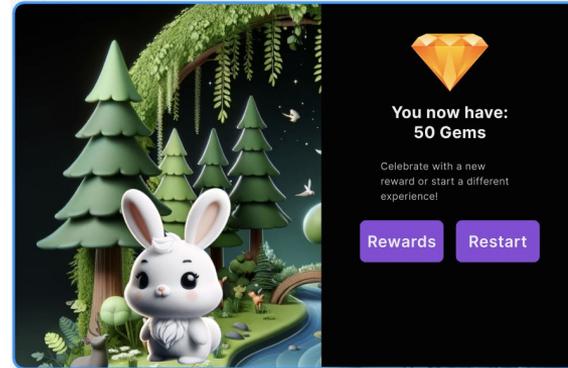
Choose character guide

Collect new rewards

Unlock gems and redeem for **rewards**



Earn gems for exercise completion



Value-backed Design Features - User Friendly

Step-by-step **tutorial walkthrough** of key features

Profile ✕

This is your profile where you can track your moods and weekly progress!

Next

Rewards ✕

Track the gems you've earned and redeem them for new virtual environments, characters, and accessories!

Back **Done**

Play

Practice guided med characters, music, and backgrounds! Earn gems each time you play!

Back **Next**

Exit at any time

Consistent color scheme

Purple for actions

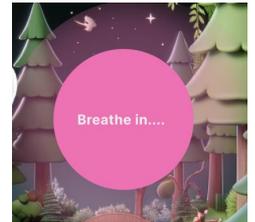


Collect

Pink for emphasis + guidance



Escape from any page using menu bar



Home

Play

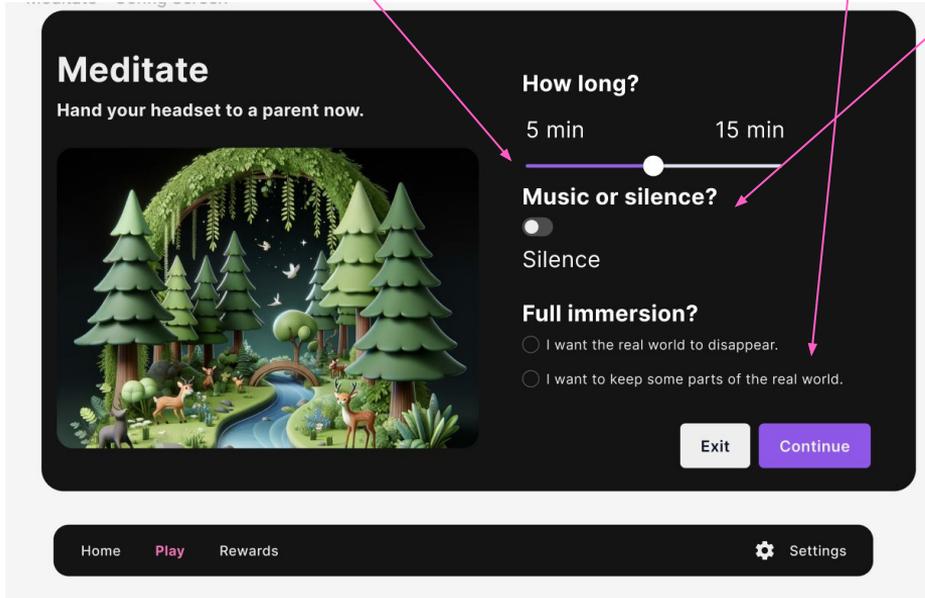
Rewards

Value-backed Design Features - Safe + Accessible

Meditation experiences limited to 5-15 minutes only.

Option for silence (for deaf/HoH), full immersion vs not (prevent overstimulation, isolation)

Activities are **accessible** (audio and visual narration)



Value-backed Design Features - Safe + Accessible

Why dark mode?

For VR UI, pure white is discomfoting (affects global illumination on eyes)

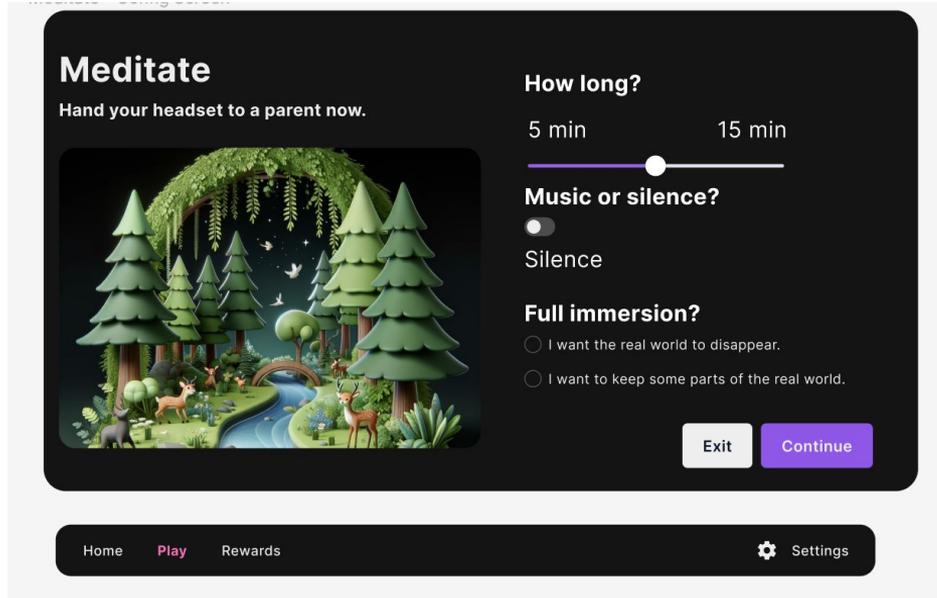
Placing pure white is like getting exposed to the light when your eyes are still in night mode.

Why our bright color scheme?

VR headsets still don't have the resolution of a phone or retina (definition and contrast are not as accurate)

Safe range of motion - Menu bar at bottom of screen

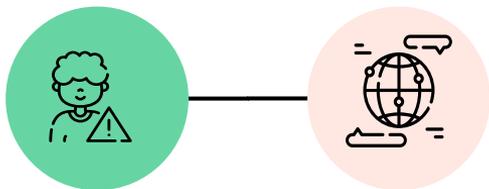
XR UIs need to be at least 10 degrees below straight forward line of sight to ensure head/neck comfort



Design Tensions

Fun & Safe

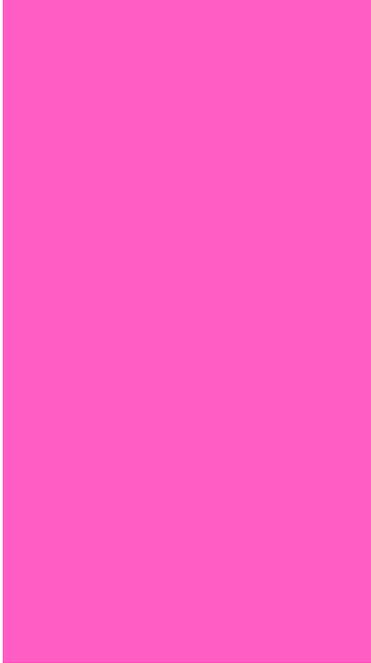
- Reward loops and gamification by design have an **addictive** nature to them
- Relying solely on new in-game rewards for user **retention/engagement** requires constant design/development of new experiences



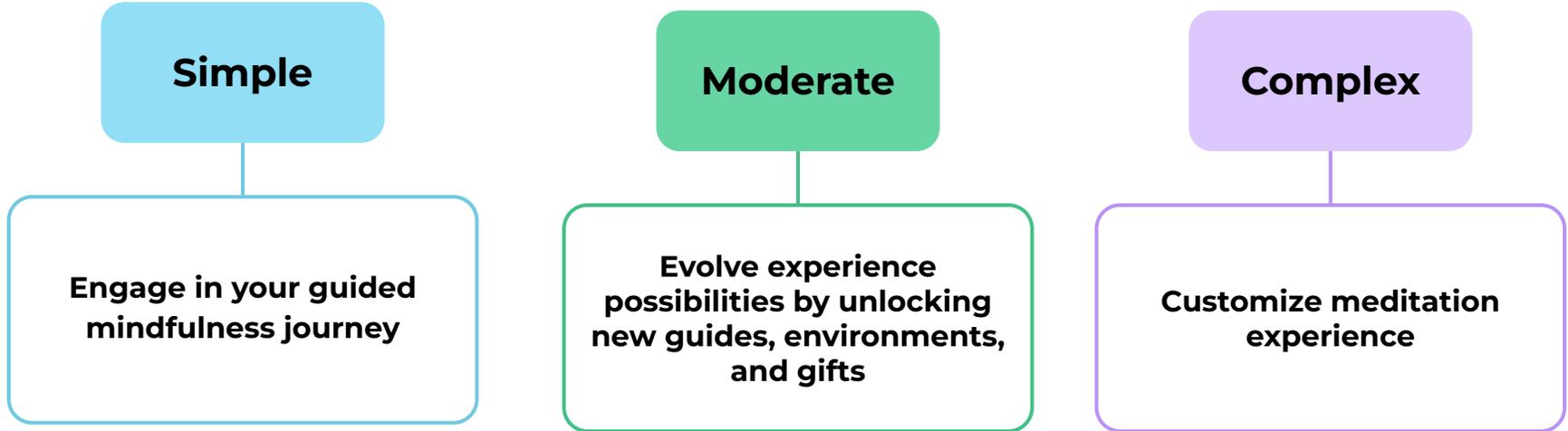
User-Friendly & Inclusive

- **Simplicity** of user interface and interactions can conflict with **need for access** to inclusive features
- Creating **high-quality language translations** for story narratives may be a barrier to inclusivity

Task Evolution

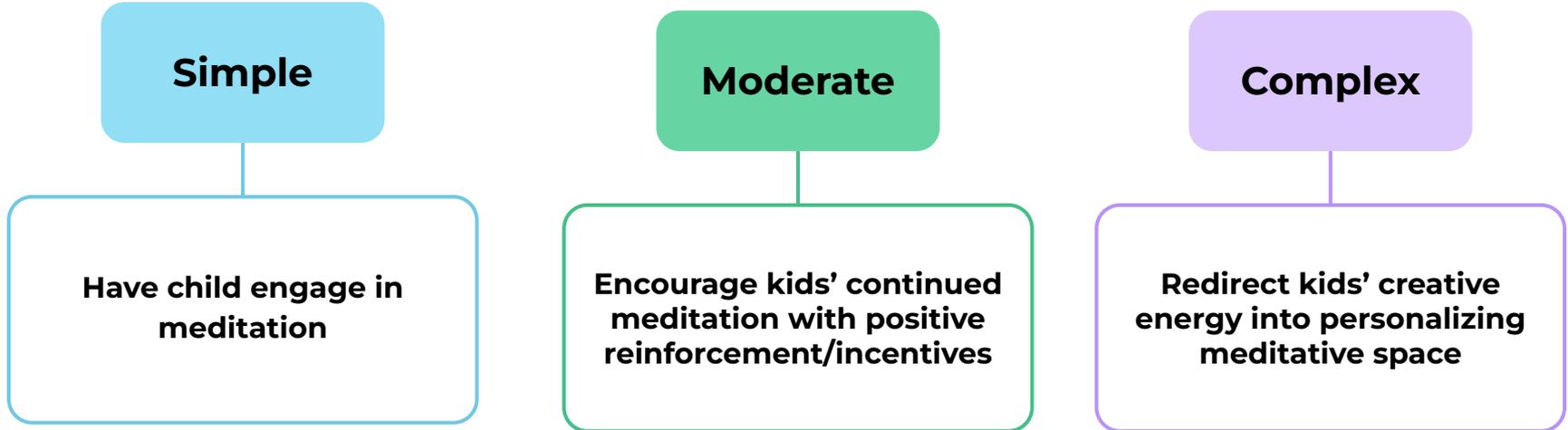


Tasks Overview - Before



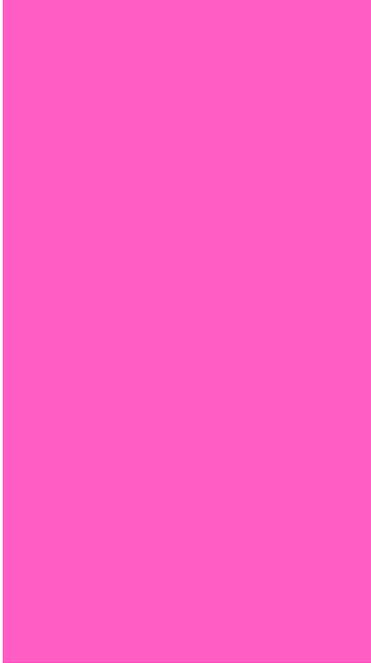
Before: tasks were specific to in-app game play...

Tasks Overview - Now



Changed task descriptions to be less app-focused and more user-focused

Usability Goals + Key Measurements



Usability Goals

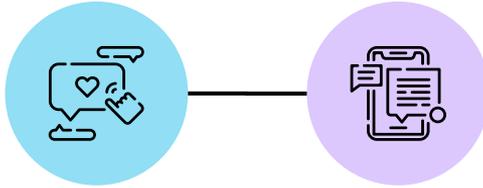
Intuitiveness

Rationale

Users should face little friction engaging a mindfulness experience, a first read should allow for seamless decision making

Key Measurement

How many instances of user inquiry take place per screen (target: ≤ 2)



Efficiency

Rationale

The purpose of the application is to engage the child in mindfulness practice, the less total time users spend on our input screens and instead in the experience the more successfully our product is achieving its purpose

Key Measurement

Time spent on UI (target: ≤ 3 mins)

Additional Mixed Reality Goals

Don't use large areas of pure white nor pure black.

This screen is on your face.
Pure white is like getting exposed to the light when your eyes are still in night mode.

Use fonts with large white spaces, avoid narrow fonts.

Almost any typography used in UI will work in MR, but due to lower resolutions compared with a phone, the spaces are not as defined as they are in a high resolution phone

Colors tend to be brighter in MR

MR headsets still don't have the resolution that you would expect in a phone or in a retina screen, so definition and contrast are not as accurate as they are in traditional devices.

Progress Toward Usability Goals

Intuitiveness

- Buttons have **clear color tone distinction** for immediate decision making
- Non-interactable buttons have a **distinct color shift** for avoiding misclicks
- Settings leverage **toggles and sliders** for well known features
- Character text/audio guidance for meditation instructions

Efficiency

- Provide **clear exit/back buttons** to return users to main menu
- Cut down on **excessive information** per screen
- Streamlined task flows for achieving core tasks **within less clicks**

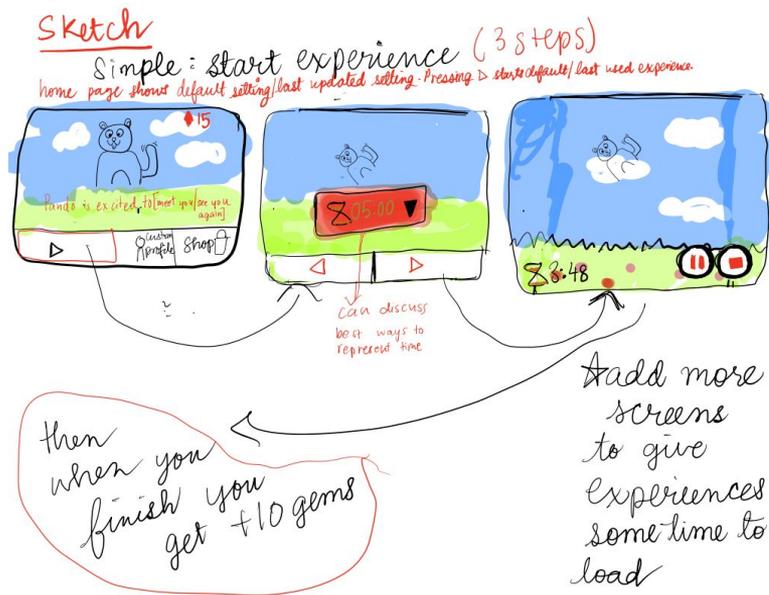
Mixed Reality

- User Interface uses **grey color tones** with softer yet clearly clickable purples for buttons
- All **visuals are large enough** to compensate for decreased resolution
- Bright purple/pink color scheme are **high contrast**

Revised Sketches



Major Change 1 - Reduce Care Task Scope



After

- Now, we only offer users a meditation task
- (in line with our name change and problem focus too)
- Less steps required to start meditation experience (reduced decision making and complexity of choice)

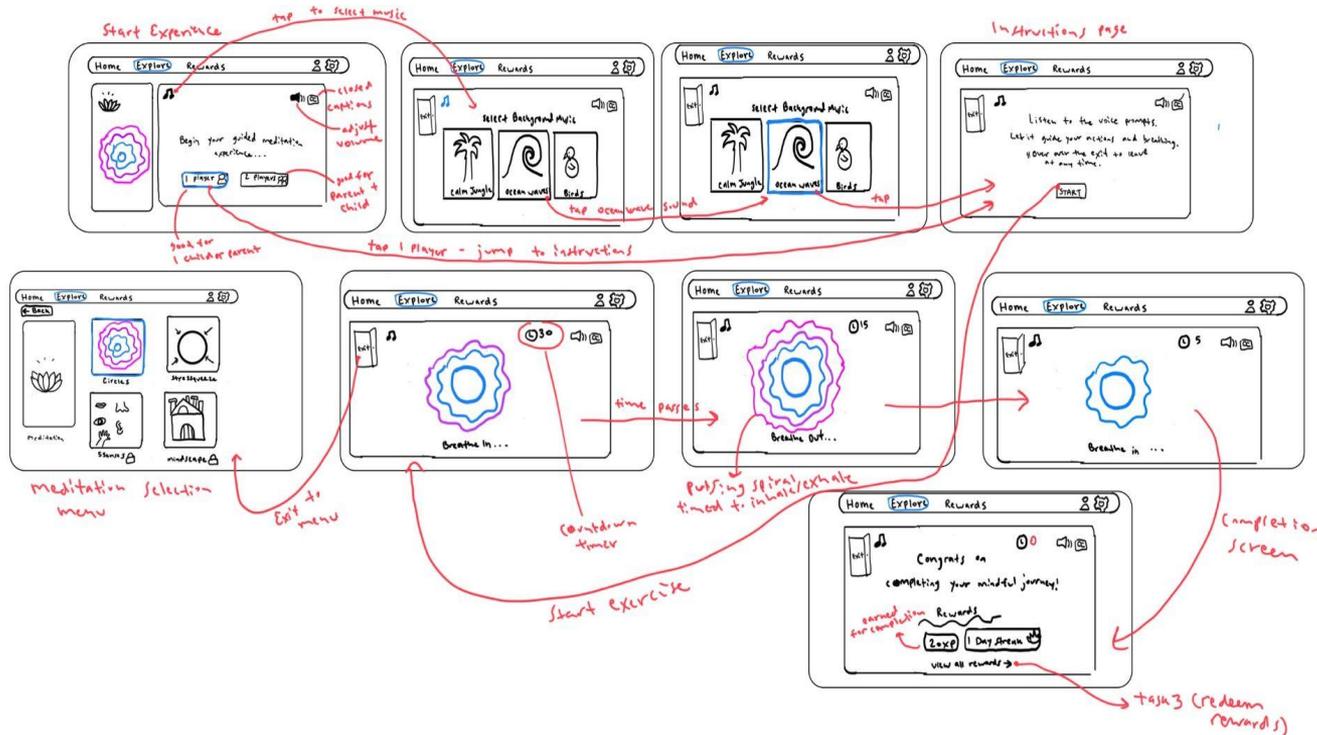
How Changes Addresses Usability Goals

Intuitiveness + Efficiency: only one care task available and less set up required, easier to go back in user flow, harder to get lost or bored in flow

Major Change 2 - Character Guided Meditation

Before

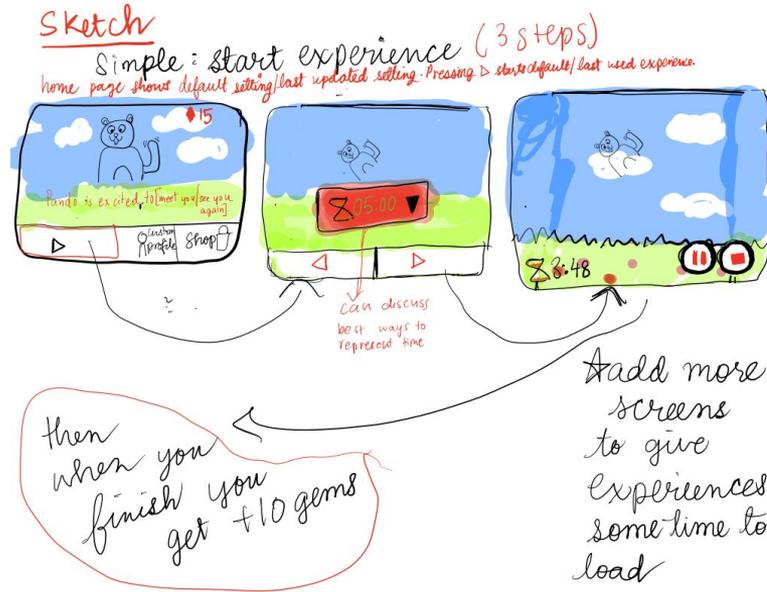
Previously, our meditation experience was more abstract without many child-friendly visuals or thorough instruction



User feedback:

- No way to pause/play experience
- No way to change duration
- Would be helpful for child to have more guidance through the meditation

Major Change 2 - Character Guided Meditation



After

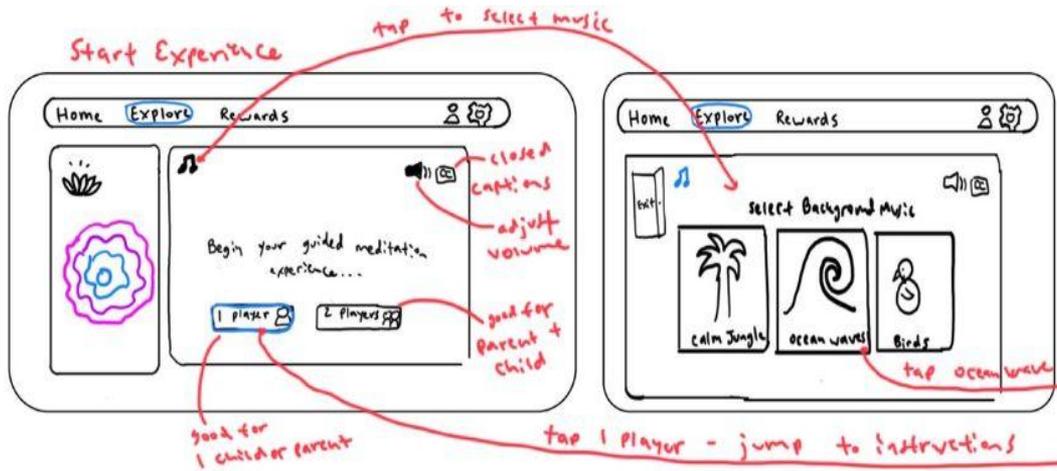
- Now, we offer an in-game animated character that guides the child through a meditation narrative
- Pause/play functionality
- User can change duration of experience with drop down

How Changes Addresses Usability Goals

Intuitiveness + Efficiency: more obvious start button, large navigation icons, easy to pause/stop experience, character narrating task flow to avoid confusion + more fun for kids

Major Change 3 - More Customizable Meditative Space

Before



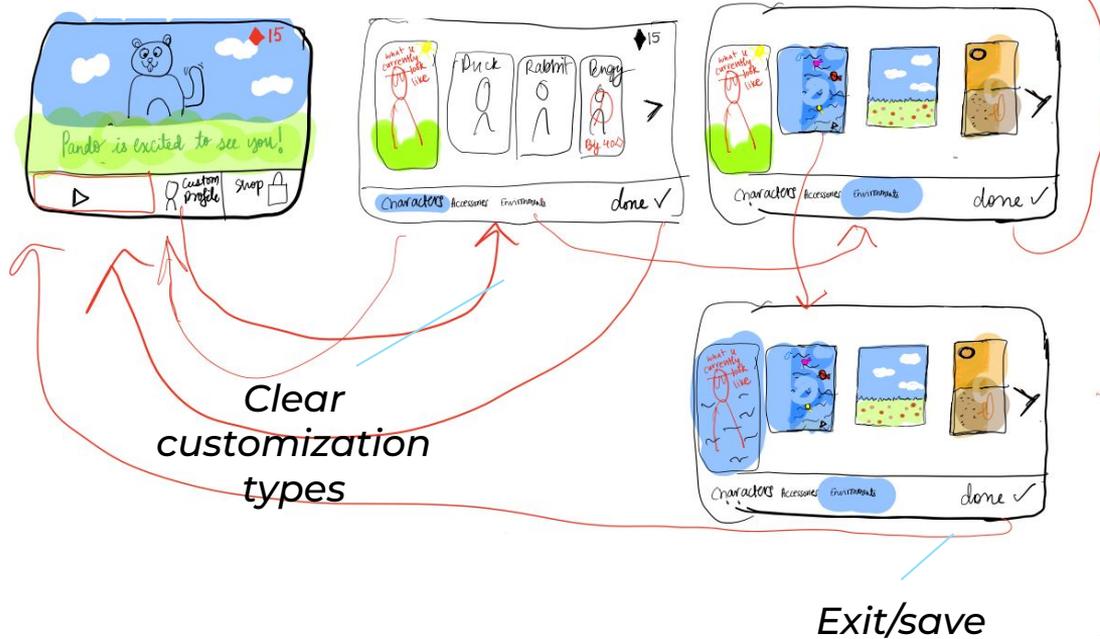
Previously, our meditation experience only had 2 customization options: changing number of players and music → **changing user number is now irrelevant because the child is the targeted user**

User feedback:

- Kids love characters and cartoons
- No way to customize experience beyond music → may not be as exciting for kids
- No “back” button to change music without exiting whole thing

Major Change 3 - More Customizable Meditative Space

After



Now, we offer the choice to customize the character guide and the environment, both more visually stimulating for the user

Users can more easily change and confirm their selection and exit at any time

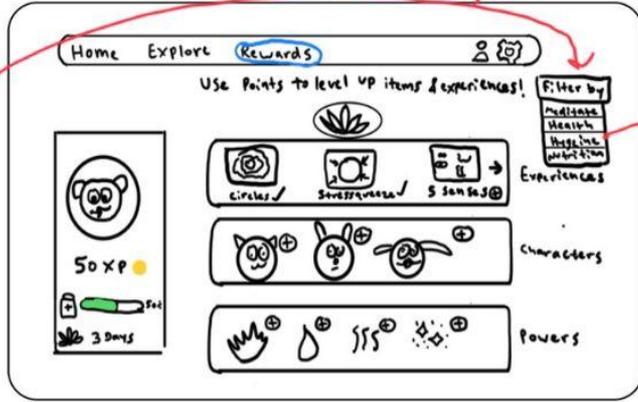
Three simple visual options at a time

How Changes Addresses Usability Goals

Intuitiveness + Efficiency: one category at a time reduces visual confusion, easy to change option with navigation bar + carousel format, done button for confirmation

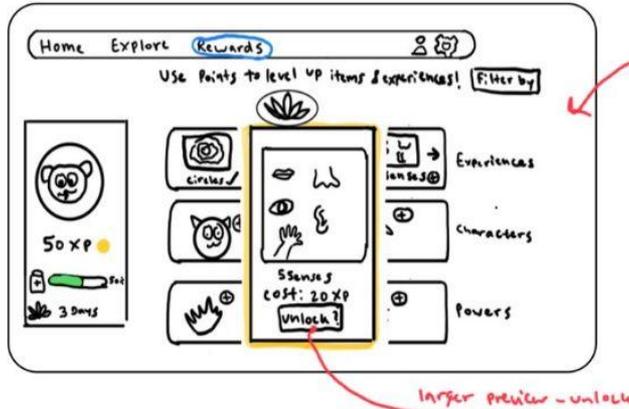
Major Change 4 - Simpler Redeem Rewards

Tap Change Category



Before

Previously, our rewards section showed all possible reward categories at once (very overwhelming) + only offered filter for care tasks (no longer relevant - only meditation now)



larger preview - unlock

User feedback:

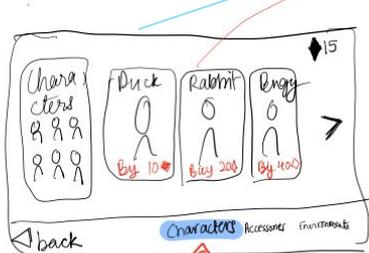
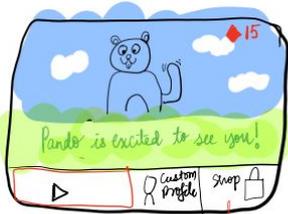
- Kids may be unfamiliar with gaming jargon (XP)
- Kids prefer much larger icons and text → only show a few options at a time
- No cost visible for each item until selected
- Powers section was confusing → how would they be used in the experience?

Major Change 4 - Simpler Redeem Rewards

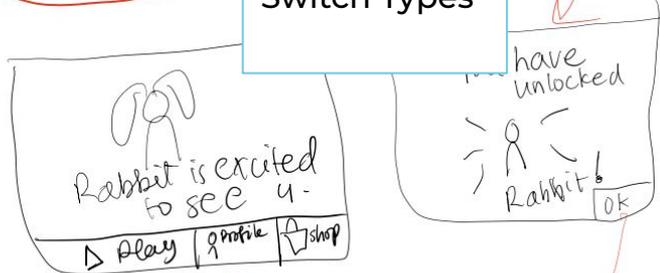
complex : Redeem Reward

Three simple visual options at a time

After



Switch Types



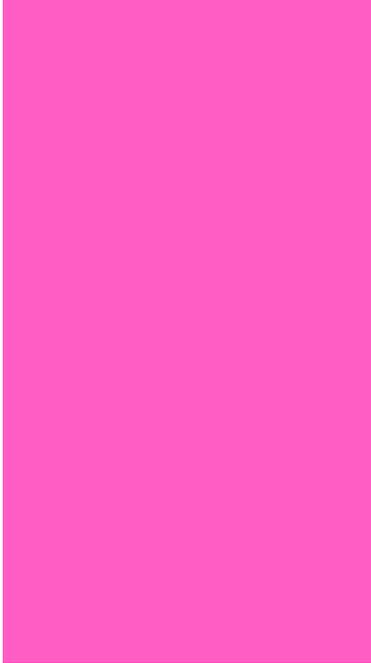
Clear customization types

- Now, we have defined and visually larger reward categories (e.g. characters)
- Total gems count is visible in the top right
- No power options
- Carousel of options with left-right navigation instead of displaying all items

How Changes Addresses Usability Goals

Intuitiveness + Efficiency: no longer displaying multiple options at a time, large icons/buttons, back button and "ok" confirmation for escaping

Med-Fi Task Flows



Simple Task: Engage in meditation

Narrated meditation instructions



Forest environment visible in the background

Pause
Stop
Countdown timer

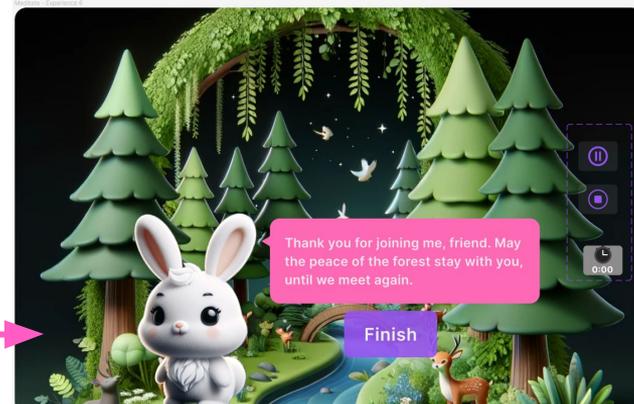
Pulsating animation with breathing cues

Cycle between screens

"Rain the Rabbit" acts as a narrator through the experience



Rain also bounces up and down in time with pulse



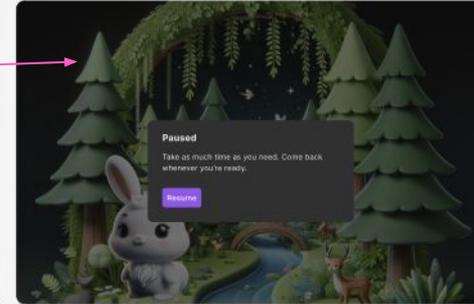
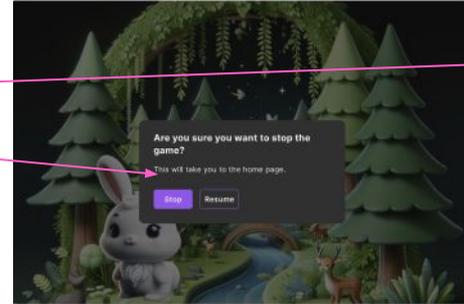
End of meditation

Simple Task: Engage in meditation (cont.)



Pause
Stop

Confirmation about pausing/stopping

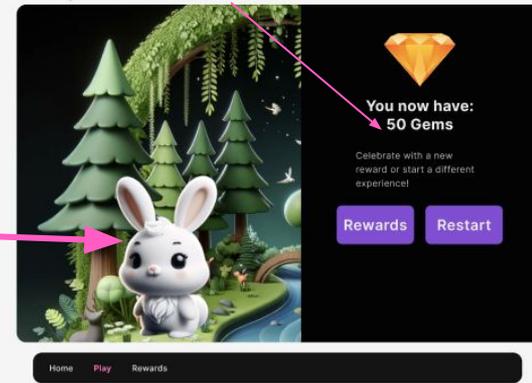
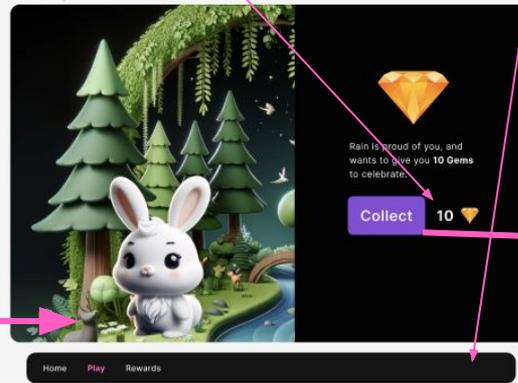


Ending narration

Earn 10 gems for completion

Reveal menu bar only after completion (less distractions mid-experience)

Total gem count



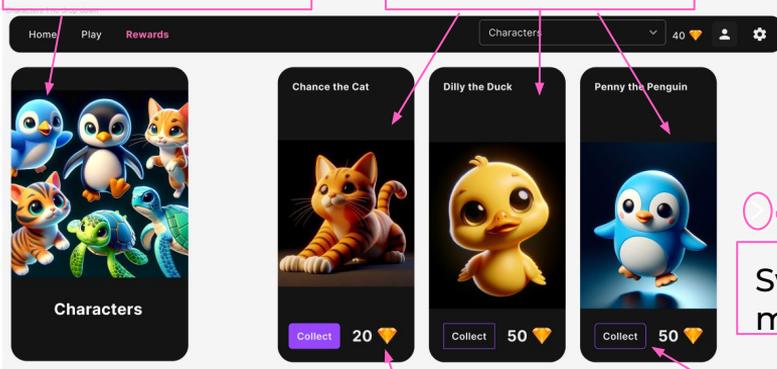
Moderate Task: Build Meditative Space

Reward Category

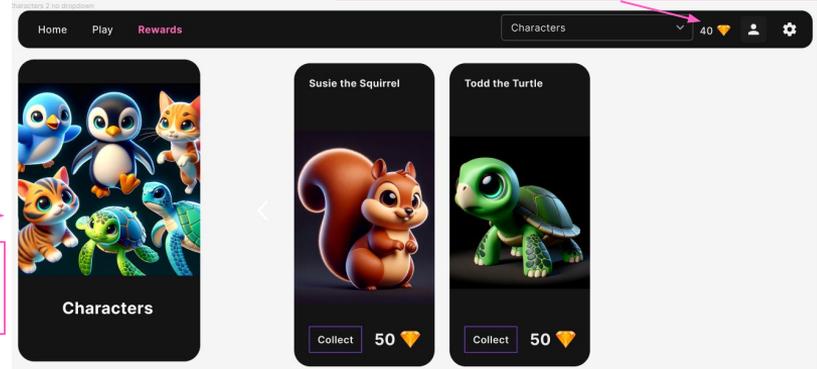
Character options

(Characters)

Gem count in menu



Swipe to see more options

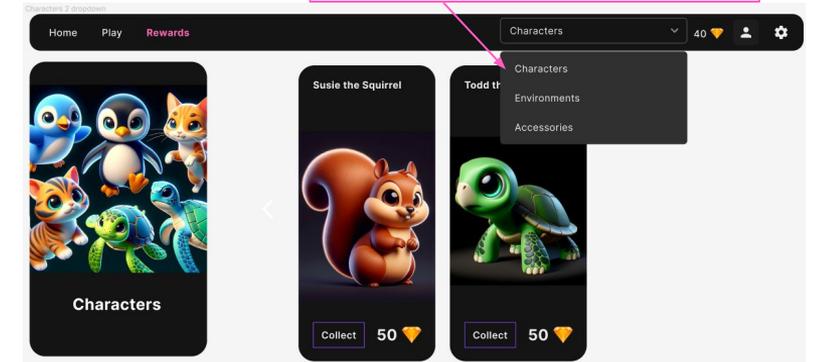
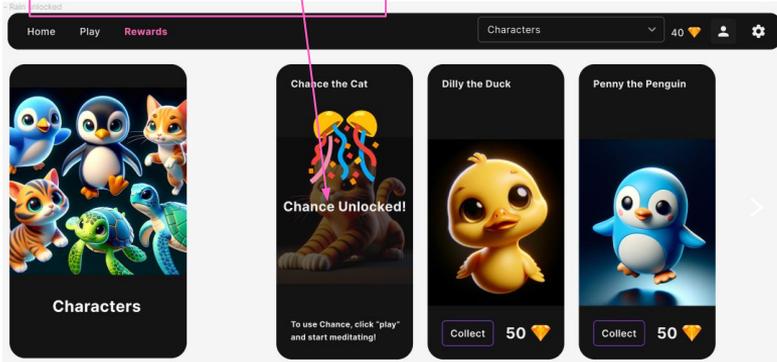


Character unlocked

Spend 20 gems to unlock character

Button not solid to indicate not enough gems

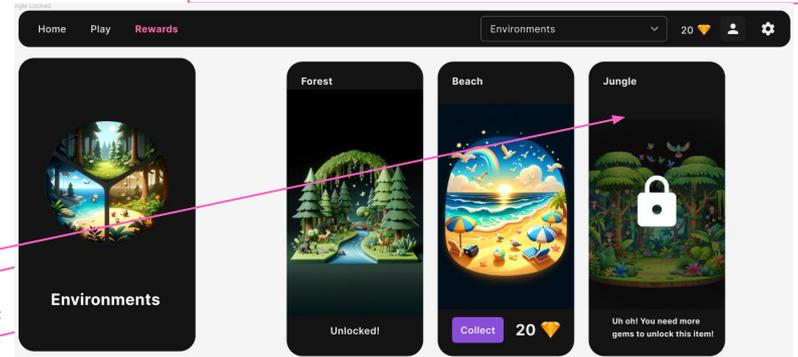
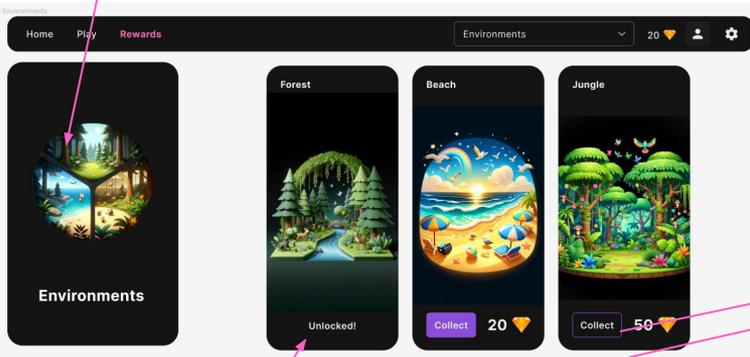
Click drop down for reward types



Moderate Task: Build Meditative Space (Environments)

Reward Category

3 options: Forest, Beach, Jungle

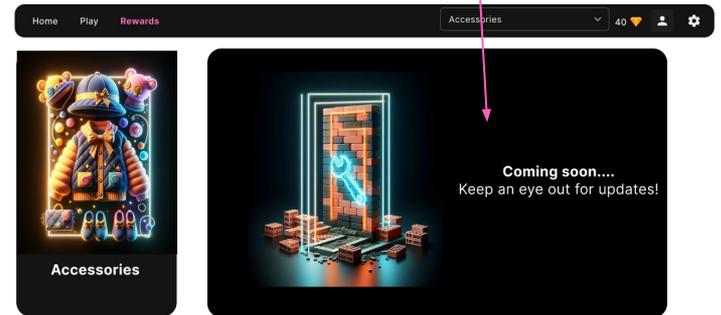
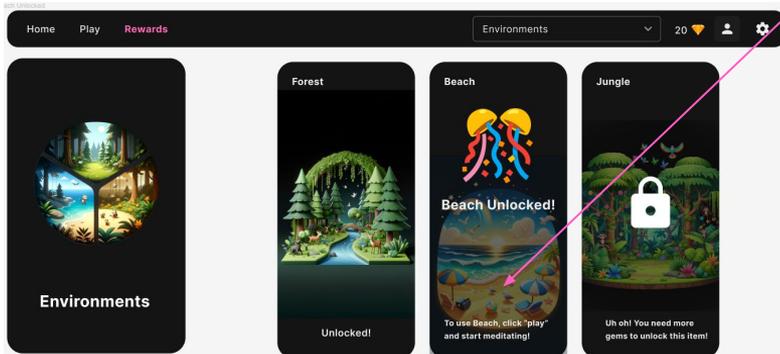


Jungle not unlockable

Forest already unlocked

Beach unlocked

Construction for "Accessories"

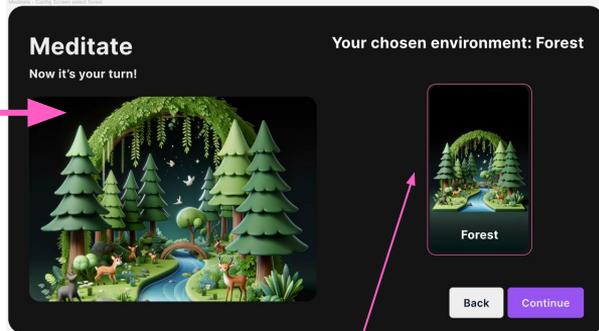
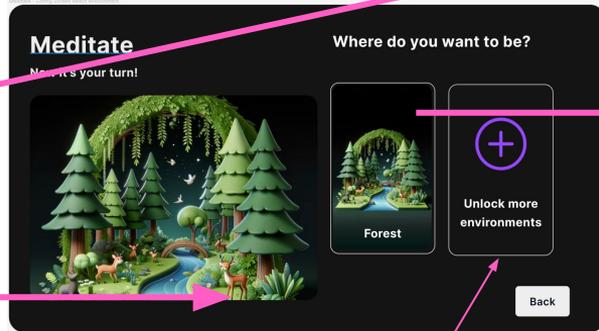
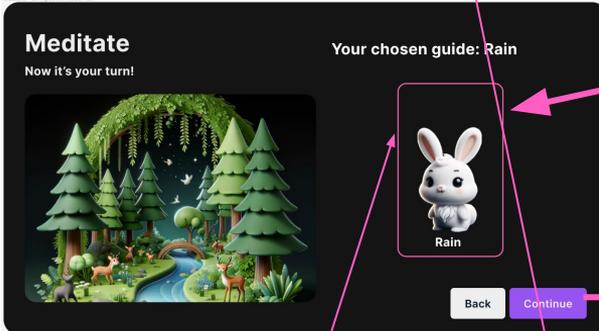
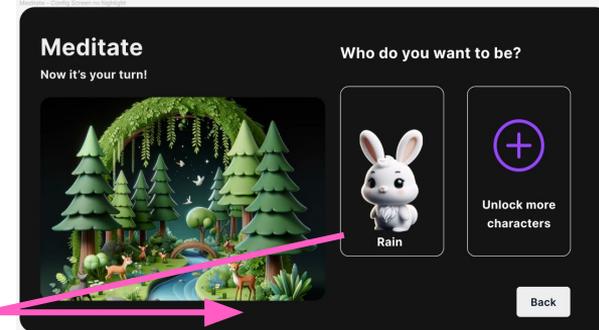
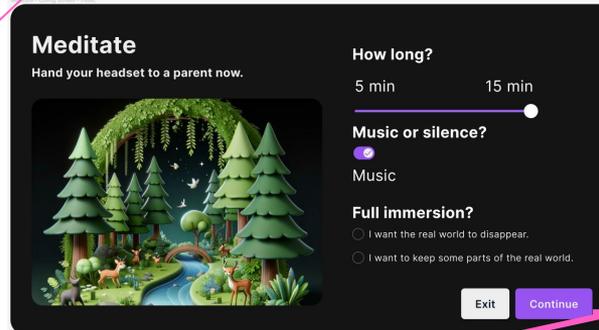
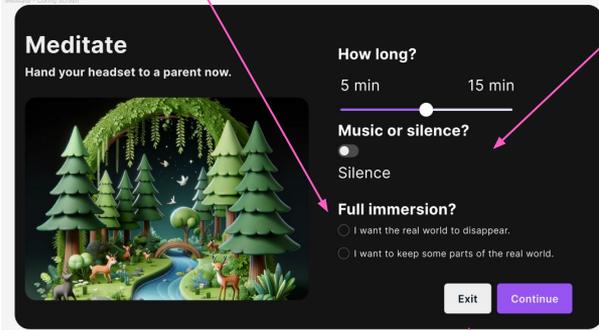


Complex Task: Personalize Meditation

Full VR vs MR

Slider to adjust experience duration + option for no music

Character selection



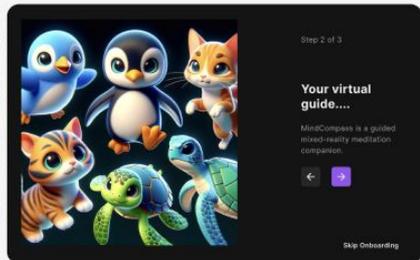
Character selected (highlight in pink)

Exit to home

Go to rewards to unlock more

Environment selected

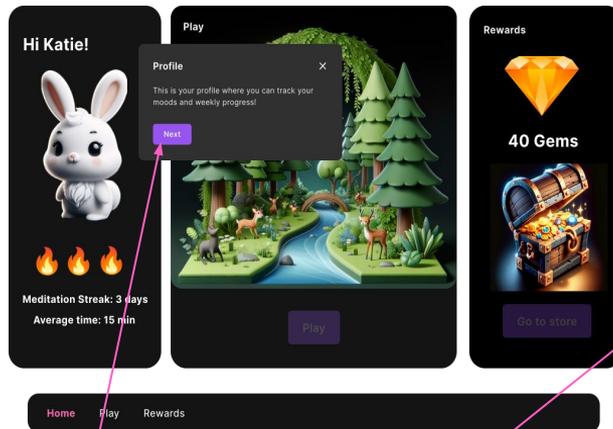
Landing screen + app intro



Extra Task: Onboarding

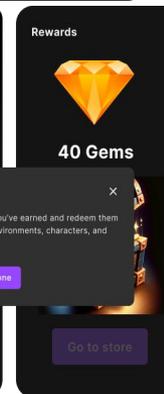
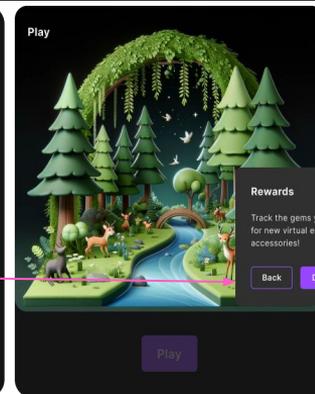
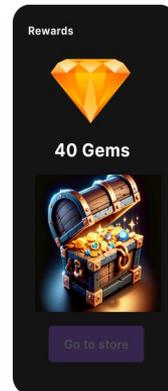
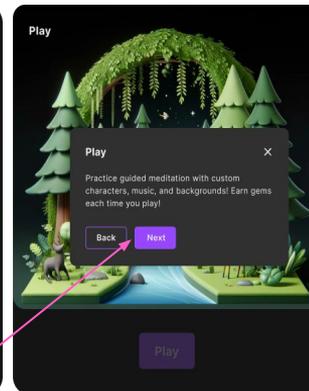
Profile with last-used character and usage stats

Home screen with Profile, Play, and Rewards sections

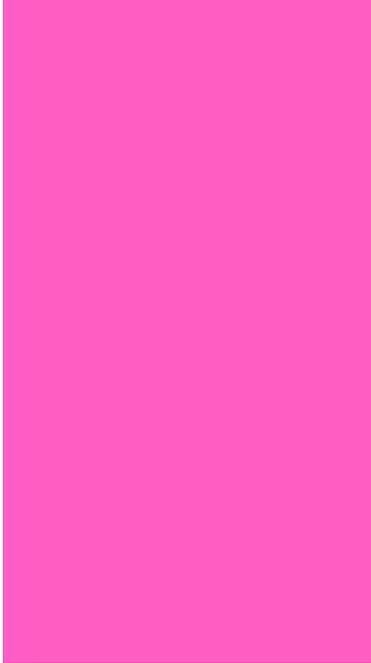


Walkthrough pop ups for Profile, Play (meditation), and Rewards sections

Menu bar for category shortcuts



Prototype Implementation



Design and Prototyping Tools (Notability)

For task flow sketching and early ideation

Pros

Simple, Intuitive, and commonly used application for sketching

Incredibly flexible, allows for quantity over quality approach for better ideas to flourish

Cons

Requires significant step by step designing and wireframing

Difficult to visualize final product vision without higher fidelity tools



Design and Prototyping Tools (Figma)

For prototyping and building out screens

Pros

Powerful prototyping tool that leverages online access to templates and plugins for novel features and utility

High fidelity visualization of user interfaces and interactions

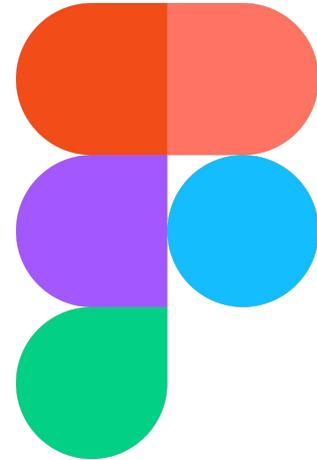
High quality XR interface templates and components available

Cons

Plugins while powerful may not be perfect for specific use cases and can result in wasted efforts

Time consuming to debug prototyping flows

Not easy to embed audio into prototype or mimic XR controller gestures



Design and Prototyping Tools (DALL-E 3)

Used for character and environment generation

Pros

Incredibly quick high definition realization of imagery needed for user interfaces

Can recreate image styles by referring to earlier image generations

Can specify unique style with prompt engineering

Cons

May take time to determine the right wording necessary for specific image desired

Blocked by paywall, not accessible unless you pay for ChatGPT Plus Subscription



Design and Prototyping Tools (ElevenLabs)

Used for text-to-audio narration generation

Pros

Generates incredibly convincing voice clips of given text

Plethora of pre-existing voice settings to choose from for first time users

Cons

Voice generations can have a variety of results and require fine tuning and regenerations at times

Forced to fine tune voice settings if a pre-existing voice template does not meet needs

No way to download audio transcript - had to screen record

**Eleven
Labs**

Limitations and Trade Offs

What did we have to leave out?

Reward system doesn't store total number of gems earned spent (Figma Limitation)

Cannot add audio to prototype, which restricts it to visual only (Figma Limitation)

Meditation experience not reactive to time customization (Figma Limitation)

Experience has only been built for Rain the Rabbit and Forest Scene (Time Limitation)

Unlocking rewards does not allow for customization yet (Time Limitation)

No accessories in the rewards tab (Time Limitation)

Wizard of Oz Features

What did we have to simulate?

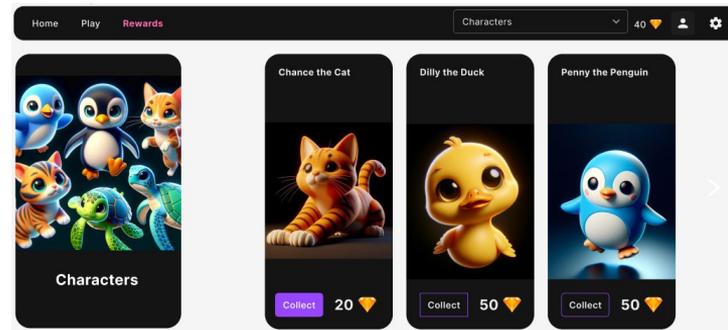
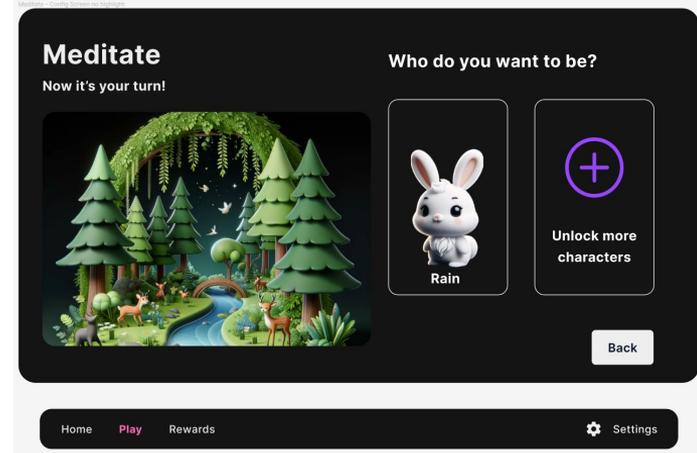
- “Streak of 3” text on homepage simulates what the page looks like after a user has meditated 3 days in a row
- Environment in UI simulates the environment a child would see in Mixed Reality, with nature appearing on different parts of the real world
- “Breathe in, Breathe Out” meditation flow pulses are hard coded onto UI when they should instead be layered onto the real world via Mixed Reality



Hard Coded Items

What features were pre-set?

- Sliding timer is functional but selected time is still set to 5 min for experience
- Hard-coded customization preferences as a default rabbit in a forest for showcasing experience
- Number of gems in rewards page is hard-coded to be 40 to demo purchasing of affordable rewards and to showcase non-purchasable interaction

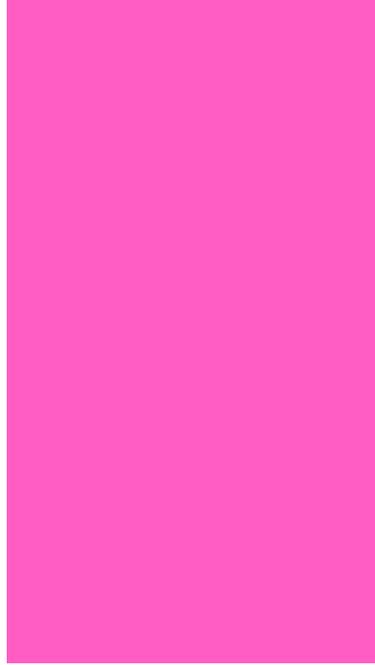


Future Plans

What are some incoming changes?

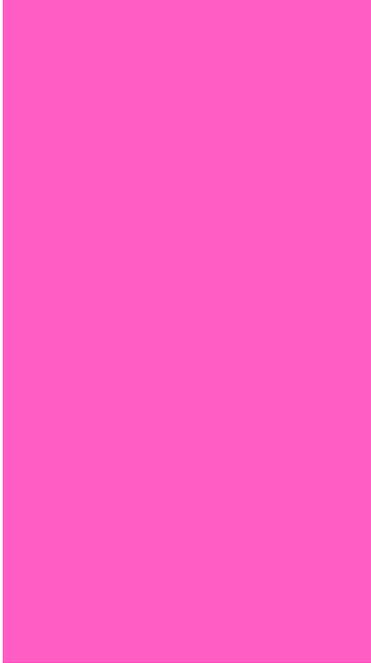
- Updating market place to better align with application **theme of mindfulness and meditation**
 - Currency change from Gems to Zen
- Recreating meditation experience in **Mixed Reality for full immersive realization** of mindfulness practice
 - Align with Mixed Reality UI/UX guidelines
 - Vibration in controller for haptic feedback + breathing cues
- Gauge **emotional development** through survey at end of meditation
- Implementing narration and text for **additional languages for increased accessibility**
 - Intentional research on meditation practice variations in different cultural contexts

Med-fi Prototype Link



<https://www.figma.com/proto/KpWBUwZBQ54ysAo6pPKiqA/MindCompass-Med-fi-Prototype?type=design&node-id=102-9885&t=Jgl4SeAPzJmJYQNC-1&scaling=min-zoom&page-id=0%3A1&starting-point-node-id=102%3A9885&show-prot-sidebar=1&mode=design>

Appendix



Entire Figma Mid-fi Flow (Meditation)

Meditate - Experience 1



Meditate - Experience 2



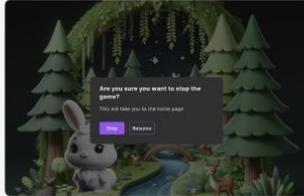
Meditate - Experience 3



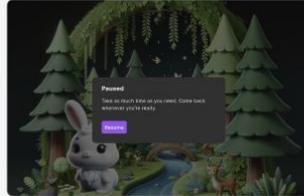
Meditate - Experience 4



Meditate - Experience 7



Meditate - Experience 8



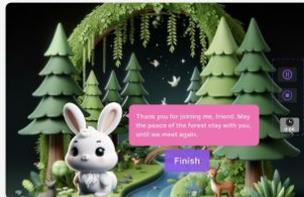
Meditate - Experience 9



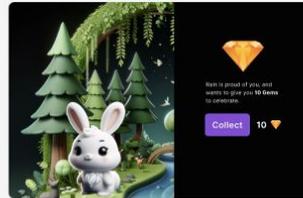
Meditate - Experience 5



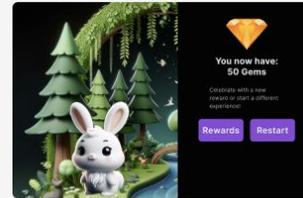
Meditate - Experience 6



completion screen

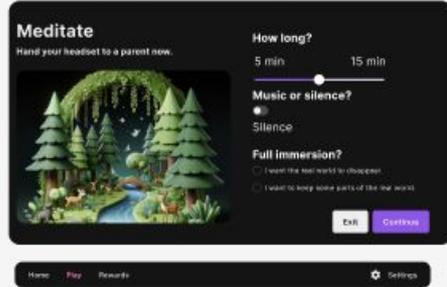


completion screen 2

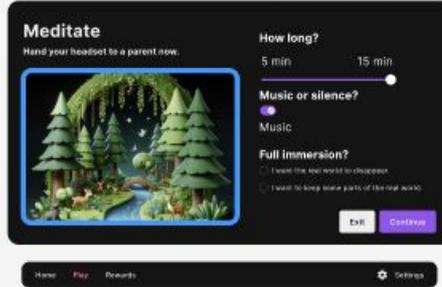


Entire Figma Mid-fi Flow (Customize)

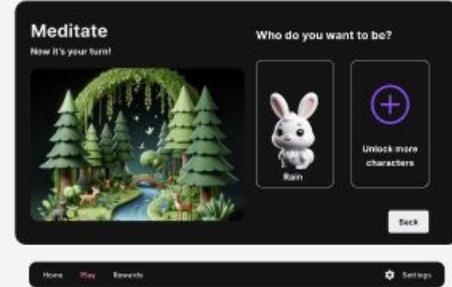
Meditate - Config Screen



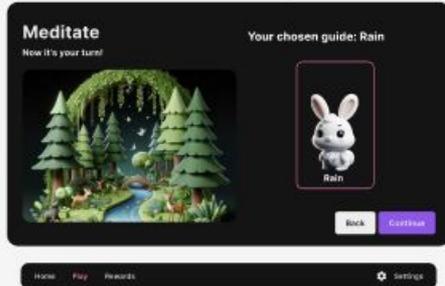
Meditate - Config Scre...



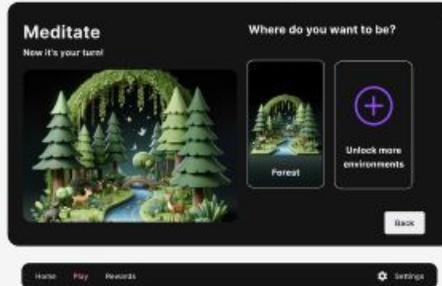
Meditate - Config Scre...



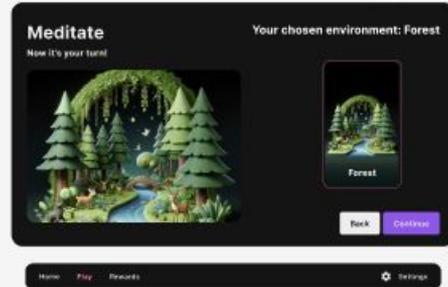
Meditate - Config Scre...



Meditate - Config Scre...



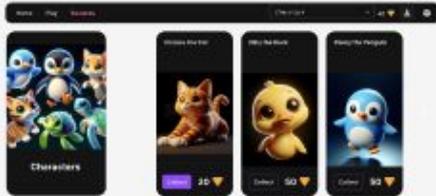
Meditate - Config Scre...



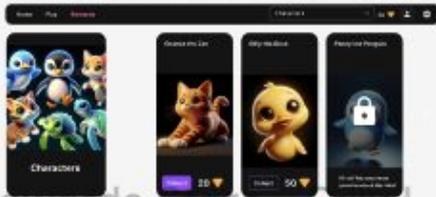
Entire Figma Mid-fi Flow (Rewards)

*not chronological because always depends on user clicks

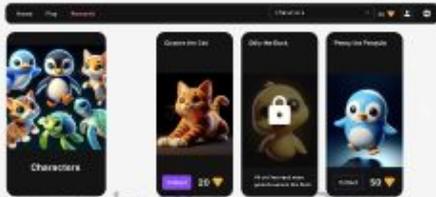
Rewards Store - Char...



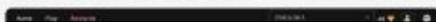
Rewards Store - Penn...



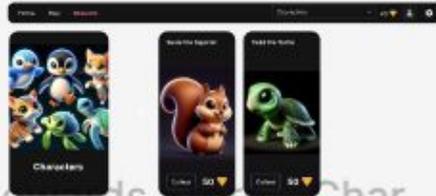
Rewards Store - Diny I...



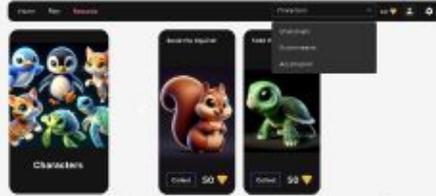
Rewards Store - Rain ...



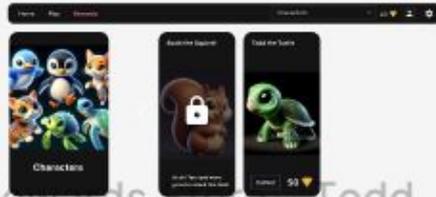
Rewards Store - Char...



Rewards Store - Char...



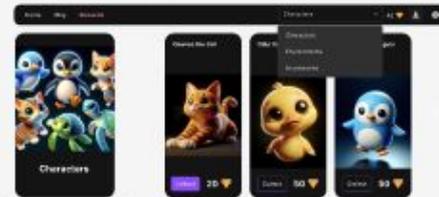
Rewards Store - Susie...



Rewards Store - Todd...



Rewards Store - Char...



Rewards Store - Acce...

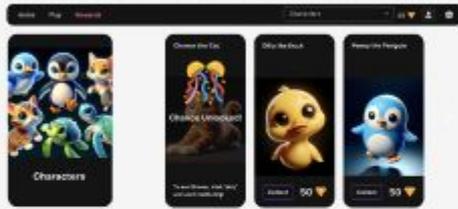


Rewards Store - Acce...

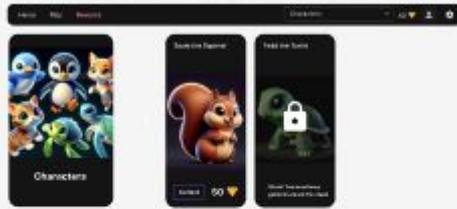


Entire Figma Mid-fi Flow (Rewards) Contd.

Rewards Store - Rain ...



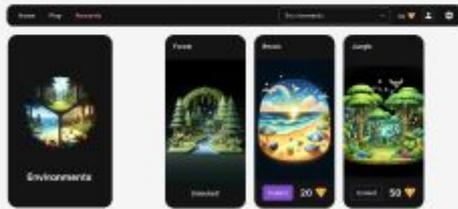
Rewards Store - Todd...



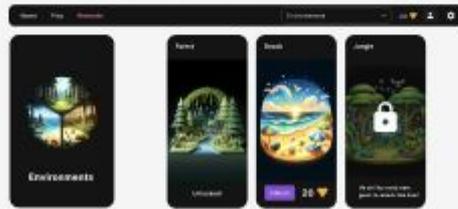
Rewards Store - Beac...



Rewards Store - Envir...



Rewards Store - Jungl...



Rewards Store - Envir...



General Suggestions from Interviews

- Bigger icons (that represent task), less words
- Customise UI for child (Bigger more obvious buttons)
- Hover highlights/ haptic feedback
- Not clear what things are clickable
- Don't put boxes around things that aren't clickable
- Action item - blue/red/ strong color
- Tutorial (Try every environment and sound once to unlock them all)
- Just have 1 wellbeing category
- Survey kid's emotions before/after experience

UI Guidelines (Part 1)

Don't use pure white.

This is applied in any kind of UI design but in VR this discomfort is truly bothering, it really affects the global illumination so placing pure white is like getting exposed to the light when your eyes are still in night mode.

Use fonts with large white spaces, avoid narrow fonts.

Almost any typography used in UI will work in VR, but due to lower resolutions compared with a phone, the spaces are not as defined as they are in a high resolution phone, so try to give space to the pixels.

Colors tend to be brighter in VR

The contrast between colors increase in VR, especially when using stand alone apps. VR headsets still don't have the resolution that you would expect in a phone or in a retina screen, so definition and contrast are not as accurate as they are in traditional devices.

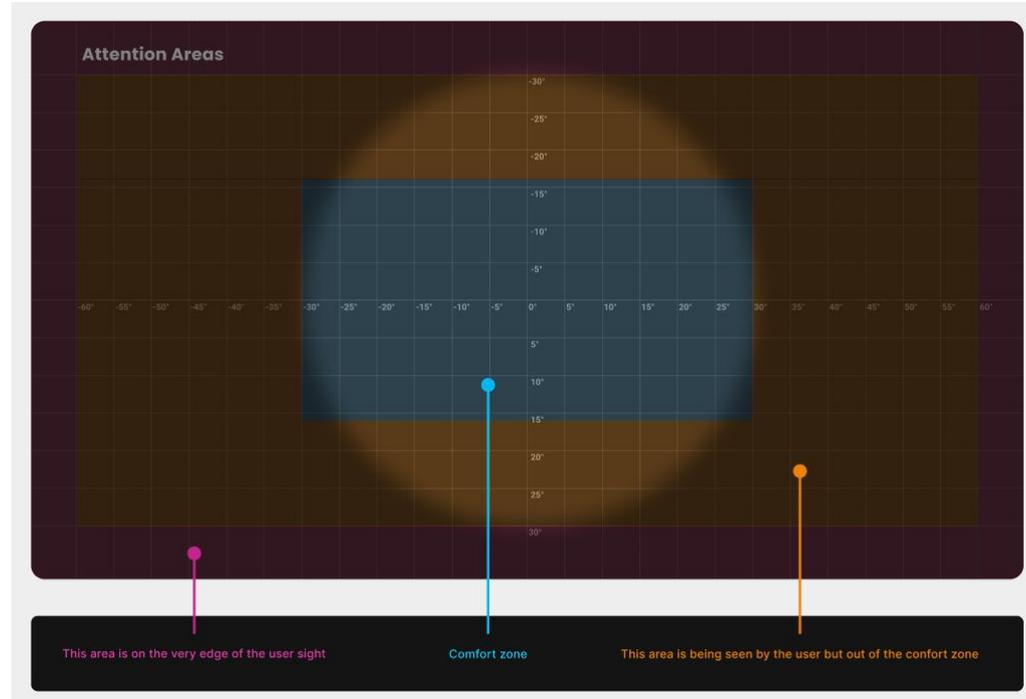
<https://developer.oculus.com/resources/2d-pwadesign-foundations/>

UI Guidelines (Part 2)

Understand distances, heights and comfort areas
This is the key if you want the final development aligned with your design. 2 meters distances feels very different than 1 meter. Even the scale is the same, 1 meter feels close, feels important, while 2 or 3 meters feels distance, feels calm.

You can play with the comfort area, maybe we have a very short menu so you don't mind it being on the very edge so the user has to turn a bit. Other times you want all the content there maybe because your navigation is a bit more complex, in that case, don't force it, use a narrower layout.

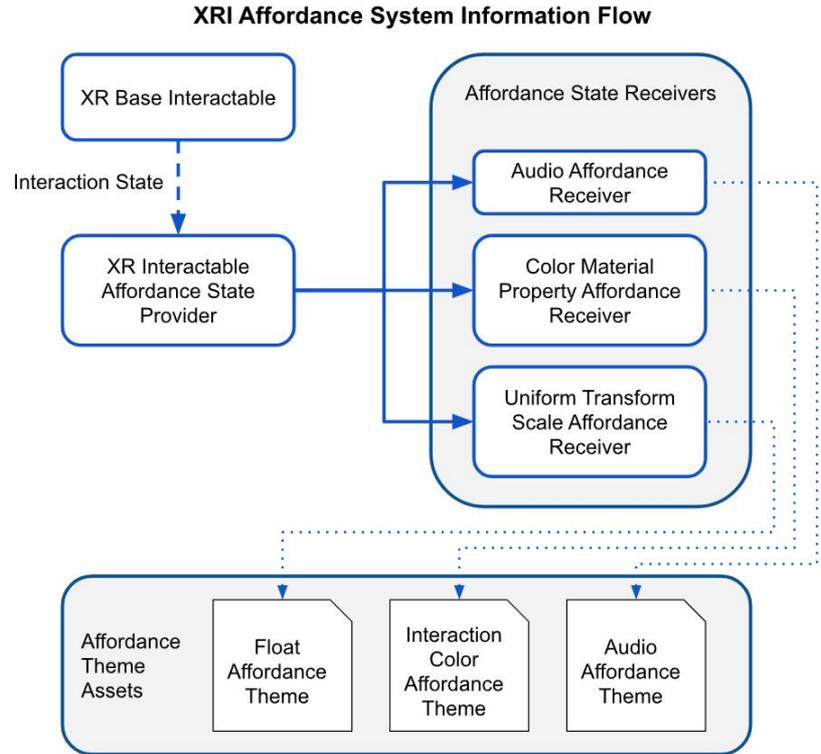
<https://developer.oculus.com/resources/2d-pwade-sign-foundations/>



XR Interactive Flows

The Unity XR Interaction Toolkit allows for engaging interactive user actions. Interactables like User Interfaces can be customized to have more accessible child friendly user interface interactions

This allows for effects like on hover fading in of a button, highlighting, audio response to hovering over a prompt, etc. It brings a user interface to life



Figma Tutorials/Templates Used

XR ToolKit:

<https://www.figma.com/community/file/1107717007888322582/view-floatgrids-in-webvr-with-draftxr>

Slider Animation:

[https://www.figma.com/file/ErtfGGvdfresCtotJibjkc/Slider-Component-\(Community\)?type=design&node-id=113-90&mode=design&t=DL0a0eUHdoS5G5HG-0](https://www.figma.com/file/ErtfGGvdfresCtotJibjkc/Slider-Component-(Community)?type=design&node-id=113-90&mode=design&t=DL0a0eUHdoS5G5HG-0)

Pulse Animation:

[https://www.figma.com/file/RvbmN8HpZ81CAu4gvxU0h/Pulse-Interaction-Components-\(Community\)?type=design&node-id=28-22&mode=design&t=92rwVxQAEEsDox39-0](https://www.figma.com/file/RvbmN8HpZ81CAu4gvxU0h/Pulse-Interaction-Components-(Community)?type=design&node-id=28-22&mode=design&t=92rwVxQAEEsDox39-0)