

# ECORISE STUDIO

*Final Report from the Capstone in  
Integrated Design*

# TABLE OF CONTENTS

## 3

### ABOUT CENTER FOR INTEGRATED DESIGN AND CAPSTONE

What is Design Thinking?  
Bridging Disciplines Program  
What is a Capstone Class?  
Project Partner: EcoRise  
Project Insights & Reflections

## 14

### MENT

Project Overview  
Our Team  
Understanding Ecorise  
Empathy Research  
The Stories of Pat and Teju  
Secondary and Empathy Research  
Combining Ideas  
Testing Our Prototypes  
Mockups  
Implementation and Next Steps  
Acknowledgements

## 40

### EXPERIENTIAL LEARNING PLAYBOOK

Our Team  
Getting Started  
Research  
Insights  
Prototyping  
Testing  
Iterate  
The Playbook  
What's Next

## 70

### PEARED

Team Bios  
Executive Summary  
Stakeholder Research  
Insights  
Ideate  
Concept  
Prototypes  
Next Steps  
Acknowledgments

## 96

### RISE CLUB

Project Overview  
Meet our Team  
The Design Process  
Empathy  
Insights  
Research Recap  
Problem Statement  
Concept Development  
Next Steps  
Acknowledgments

## 134

### CONCLUSION

# WHAT IS THE CENTER FOR INTEGRATED DESIGN?

The Center for Integrated Design provides design-based learning experiences at the University of Texas at Austin for every student to integrate human-centered design skills into their own disciplines.

## INTRODUCTION

Established in 2017, the Center for Integrated Design (CID), housed in the School of Design and Creative Technologies at the University of Texas at Austin, brings Design Thinking into the core of the UT curricula on a comprehensive scale. In collaboration with the Design, Engineering, Information, Business, Computer Science and Architecture programs, CID has created a multidisciplinary curriculum that offers all UT students the opportunity to study design methodology and apply it in creative and entrepreneurial scenarios. The Center for Integrated Design was founded by design industry leader, Doreen Lorenzo—former president of the global design firms frog and Quirky and co-founder of the mobile video insights firm Vidlet. The program is currently led by Assistant Professor of Practice Gray Garmon.

In collaboration with the School of Undergraduate Studies, CID launched an innovative Bridging Disciplines Program (BDP) in Design Strategies developed for undergraduate students across various disciplines. The certificate culminates with a

capstone design course, allowing students to function as design consultants for Austin-area organizations, programs, and companies. The Center for Integrated Design offers interdisciplinary courses for all students at the University of Texas at Austin. Whether a student is majoring in engineering or philosophy, business or Physics, Latin or Art History, our courses amplify the educational experiences of all students at UT Austin by teaching them to integrate human-centered design skills into their own disciplines, and their own lives. By using core design faculty and design-professional adjuncts we have the capacity to teach experimental and adaptable courses that meet the emerging demands of the world around us.

The Center focuses on mindsets, attitudes, and foundational design skills to train students to be creative in their approach to solving problems and generating ideas. We teach them to become more designerly versions of their chosen disciplines. A more human-centered civil engineer, a more creative historian, a more empathetic marketer.

# WHAT IS DESIGN THINKING?

Design Thinking, a recognized approach for creating thoughtful experiences and systems, is a core practice of some of the most innovative companies and institutions in the world. Design Thinking has been utilized to create consumer products, health-care systems, retail spaces, fundraising events, policies and procedures, curricula and more.

Design Thinking methodologies have gained increasing traction in human-centered contexts like the K-12 education and higher education systems, health care, and social services. From educators using the process as a pedagogical framework for real world, project-based learning to teams leveraging the process as a driver of innovation, progressive leaders have taken up Design Thinking as a mechanism for positive change. As we build awareness that many systems are complex human-centered environments that are actively designed, we continue to see the desire to equip leaders and teams with tools that are more frequently leveraged by professional designers in order to creatively solve problems and actively imagine new futures.

The foundation of Design Thinking is a first-hand understanding of the human needs and behaviors in the systems being designed, followed by decision-making that is based in that understanding. It relies heavily on collaboration from a team, participation from potential end users and stakeholders, a willingness to learn one's way to the right solution, and a bias toward action over planning.

Using the human-centered, iterative process of Design Thinking can also provide helpful frameworks for designing more equitable solutions for all stakeholder groups, creating a community-driven collaborative process that engages users in the process of co-creation and iterative feedback. Through thoughtful stakeholder and systems mapping, the Design Thinking process intersects with Systems Thinking to help address complex problems and opportunities to serve a diverse community.

# BRIDGING DISCIPLINES PROGRAM

Certificate in Design Strategies

## AN INTERDISCIPLINARY DESIGN CERTIFICATE

The Center for Integrated Design and the Bridging Disciplines Program are working together to offer students an opportunity to gain a deeper expertise in design, and learn from a diversity of sources across campus. Although the Center doesn't offer a degree, this is a chance for students to earn a certificate that acknowledges their academic experience and commitment while at The University of Texas.

Bridging Disciplines Programs (BDP) allows students to earn an interdisciplinary certificate that integrates courses from across the University of Texas at Austin. Creativity and problem-solving have become necessary skills in today's world as businesses, non-profits, and entrepreneurs have embraced human-centered design to solve product, systems, service, and social problems. The Design Strategies BDP provides a unique multidisciplinary framework for undergraduate students to master design thinking skills outside of traditional departmental programming to better prepare them to tackle real-world wicked problems. The curriculum engages students in a design process that includes research and insights; creative problem solving; prototyping and testing; and implementation and presentation— all while learning to apply a critical lens to the social context within which design takes place. Through multidisciplinary foundational courses, students in the Design Strategies BDP develop a design thinking toolbox and learn about the social context of design. In strand courses, students enhance their

understanding of various disciplinary approaches to human-centered design. The BDP culminates in a capstone project in which teams of students from different majors work together to apply what they've learned and present their work. The Design Strategies BDP is offered in collaboration with the Center for Integrated Design

Students take 3-5 foundation classes through the Center for Integrated Design. These courses include Introduction to Design Thinking, Sketching for Thinking and Communication, Intro to Prototyping, and more. They also take 1-2 courses from other creative disciplines across campus, like Architecture or Advertising. They culminate their coursework with the Capstone in Integrated Design. The students work on a team for a full semester project where they integrate all their design coursework into the project work, demonstrating their skills and experiences in design.

The Bridging Disciplines Programs (BDPs) at The University of Texas at Austin allow undergraduates to develop a secondary area of specialization that complements their major. To earn a BDP certificate, students must complete 19 credit hours combining interdisciplinary coursework with hands-on research, internship, or creative experiences. As an undergraduate UT student, you can benefit from earning a BDP certificate in many ways: Become a more flexible, versatile thinker, and prepare for a professional world that values interdisciplinary perspectives, innovation, and collaboration.

*Each Spring semester students completing Center for Integrated Design's innovative Bridging Disciplines in Design Strategies program take a capstone course where they work directly with a real-world challenge and consult with an organization or company to imagine and create new products, services or processes as design solutions.*

## PROJECT PARTNER: ECORISE

EcoRise is an Austin-based non-profit that offers school-based programming for youth to tackle real-world challenges. Their curriculum includes teaching sustainability, design innovation, and social entrepreneurship.

This semester the Center for Integrated Design and EcoRise partnered on a project for the Capstone course. The student teams worked on a current EcoRise Project program that provided curriculum to high school students who are interested in college or careers in sustainability and green building.

We are starting with a board HMW that was developed in collaboration with the client: How might we support EcoRise students in their transition to college and careers in sustainability and green building?

**WHO EcoRise** <https://www.ecorise.org/>

*EcoRise inspires a new generation of leaders to design a sustainable future for all. Our school-based programs empower youth to tackle real-world challenges in their schools and communities by teaching sustainability, design innovation, and social entrepreneurship.*

*With over 17 years of experience working with education programs serving youth, Gina LaMotte founded EcoRise (formerly Uplift Austin) in 2008. EcoRise began in one public high school in Austin, Texas, with the mission of inspiring a new generation of leaders to design a more sustainable future for all.*

**WHAT Graduation/Transition**

What's next for the students that participate in the EcoRise training and curriculum? What's next for

the students that participate in the EcoRise training and curriculum?

We are starting this project looking at the graduation and/or transition moment from highschool to post-graduation opportunities. Are we able to improve on this by designing experiences to support the students?

**HOW Design Thinking and Design Strategies**

We will utilize all of our skills in Design (recall back to all of your coursework in the BDP) as well as your major. The integration of these two disciplines (design + your major) is what makes you an exceptional teammate and ready to work on this design challenge.

**WHY Supporting college and careers in sustainability**

EcoRise develops an amazing curriculum for teachers and students all over the country. Their new program in sustainability and green building gives young people valuable education and experience. We want to amplify that experience to support successful transition to college or careers.



# PROJECT INSIGHTS & REFLECTIONS

Any design challenge that is tackled by multiple teams will result in a portfolio of solutions -- some similar, some different. Because each team crafts their own unique design process and also brings together a unique mix of backgrounds, disciplines and perspectives, each solution will take a different direction.

In the case of this semester, our class portfolio of solutions saw two mentorship programs, each with their own distinct focus. The team who produced the mentoring program Ment focused on artifacts and scaffolds to support the building of trust between the mentor and the mentee. The team who produced Peared also focused on mentorship, but developed a strong point of view of the necessity to recruit mentors from different life stages and make intentional matches between mentors and mentees based on interest.

One team focused on experiential learning as a vital tool for engaging students in their own “green

awakening” -- that moment when a young person realizes their impact on the planet and commits to working to make changes toward a healthier environment, whether in their personal lives or professionally.

Lastly, the team who produced the concept Rise Club explored opportunities to bring students together in an informal setting during high school to empower them to lead their community to better environmental outcomes. Rise Club, as a broader concept in our portfolio, has the potential to serve as a vessel for both the mentoring programs and the experiential learning concept.

Each design team’s unique perspectives and design directions influenced the development of their proposed solutions. When we take a step back and look at them together as a portfolio, new opportunities to leverage the strongest components of each solution emerge as compliments to each other.

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# FACULTY PROFILES



**GRAY GARMON**

Gray Garmon is an Assistant Professor and Director of the Center for Integrated Design in the School of Design and Creative Technologies at the University of Texas in Austin. Before UT, Garmon was a faculty member at Southern Methodist University and co-founder of the Master of Arts in Design and Innovation program. He practices human-centered design (HCD): a problem-solving approach widely used in industry, governments, schools and NGOs. HCD focuses on people first. Through specific qualitative research methods, he comes to understand the context in which people are functioning and how understanding behaviors, emotions and motivations can lead to better design solutions.

Garmon holds a Master of Architecture from the University of Pennsylvania and a Bachelor of Science of Architectural Studies from the University of Texas in Austin. Garmon served in Peace Corps Ghana from 2007-2009, is a recipient of the American Institute of Architects Henry Adams Medal, and a University of Pennsylvania Social Impact Fellow. His recent design work includes a partnership with a health clinic and school in the western region of Ghana, an urban plaza prototype called Reimagine Crowdus St., and an NEA funded interactive art project called the WonderPhone.



**KATIE KRUMMECK**

Katie Krummeck is an educational designer and an international thought leader in leveraging the power of design to drive change in the K-12 system. She is also an expert in using the design process and maker-based instruction to create student-centered learning experiences that develop students’ creative confidence, optimism, and problem-solving skills. Katie has led design teams to tackle diverse projects such as reimagining a PreK-12 school schedule, redesigning the substitute teacher program for a district and helping a theater company diversify their patronage. She has coached school leaders, educators, non-profit leaders and corporate executives to develop their design mindsets and the capacity to leverage design to drive innovation.

Katie began her career as a secondary teacher and co-founder of an independent school where students collaborated across age groups to engage in project-based, interdisciplinary learning. She has since worked on the national team of an education non-profit start-up, helped develop the K12 Lab at the Hasso Plattner Institute for Design at Stanford University, and directed a collegiate makerspace. Katie also founded the Maker Education Project at Southern Methodist University, an initiative dedicated to catalyzing transformational maker-based learning experiences for students in K-12 schools.

She is currently working as an independent consultant based in Portland, Oregon and has recently joined the Aga Khan Foundation, an international development agency, to serve as their Global Design Advisor.

# PROJECT PROPOSALS

The following pages include the design process and concepts developed by four design teams in the Capstone in Integrated Design.



**ment**

*The mentorship experience meant to bring people together for futures in sustainability.*



# *Project Overview*

*Our mission was to assist EcoRise with their goal of supporting BIPOC high school students transition into sustainability careers.*

We identified systemic issues that complicate this transformation period for BIPOC students, such as environmental injustice, lack of representation, and financial disparities.

Through secondary and empathy research, we found that BIPOC students face a feedback loop of intersectional challenges and that mentorship was the key to break this cyclical problem. This discovery led to our main concept of personalized guidance to gain crucial life skills and sustainability knowledge to foster an environmental justice mindset in their communities, as well as thrive in their post-high school journeys. We were motivated to create a memorable experience with a support system, as well as an interactive kit to facilitate valuable discussions and reciprocal learning.

We designed a prototype of journal pages, meeting instructions, and digital topic discussions cards that integrated three core concepts (financial literacy, self-advocacy, future planning). We assumed that mentorship facilitation would help to avoid awkward introductions and promote action-oriented goals; that these topics were areas students want and need to work on; and that the experience format would prompt meaningful and valuable interactions. Since pairing was not our emphasis, mentees and mentors were matched based on perceived compatibility (e.g., current education/industry). Zoom, MURAL, and Quizlet were used to create our proto-

type experience for five separate sessions between mentorship pairs.

With multiple iterations, we realized that mentorship was very similar to the therapeutic alliance, because mentorship pairs were vulnerable, empathetic, as well as trusted and respected each other more as the meetings progressed. We made changes to emphasize that analogy even more, such as shared instructions, a building block method, and rewording to evoke a sense of transparency and depth. Mentorships pairs reported that this experience was incredibly beneficial and even easier than their typical transition programs.

We are proud to present Ment, a mentorship experience meant to bring people together for futures in sustainability. BIPOC students might feel lost and nervous about this transition. We have designed an interactive, unforgettable sustainability-focused kit with personalized guidance to springboard mentors and mentees into a therapeutic-like alliance from day one, so they can grow trust, empathy, and reciprocal learning throughout their journey together.

# Our Team

We are a group of passionate Design students from the University of Texas at Austin with a mission to help combat inequity in sustainable career paths



Sammy Feingold is a senior pursuing a degree in Merchandising and Consumer Sciences with a Bridging Disciplines Certificate in Design Strategies. Her experiences in college have given her the opportunity to pursue a career in fashion and develop the knowledge needed to channel her creativity and interactively learn about the world.



Diego Maldonado is a fifth-year studying Human Dimensions of Organizations major while also pursuing a minor in entrepreneurship, Chinese, and a certificate in Design Strategies. He has a passion for user-centered design and creating data-driven strategies.



Chase Broadfoot is a senior pursuing a degree in advertising with a minor in business and a certificate in Design Strategies. He looks to work at the intersection of advertising, design, and business after graduation.



Grace Young is a senior pursuing a Mechanical Engineering degree with a minor in Business and certificates in Design Strategies and Humanitarian Engineering with a focus on sustainability.



Anna Norman is a senior majoring in Computer Science with a minor in Mandarin Chinese and a Certificate in Design Strategies. She loves working in the intersection of design and sustainability, and her passion for environmentalism drives her closer to a zero waste lifestyle every year. She is also excited to combine a love of user-centered design and programming as a software engineer next fall.



Destiny Gonzales is a science-based Psychology major with a Design Strategies certificate. She is passionate about psychomusicology and music cognition, which are research fields that study how music affects the mind, body, brain, and society. Her career involves a cognitive science PhD program to conduct independent research in order to identify noninvasive solutions for self-regulation and psychopathologies in underprivileged communities.

*We needed to gain a deeper understanding of our problem space.*

*Where do we begin?*

## Understanding Ecorise WITH MIND MAPPING

At the beginning of our project, our team was unsure what direction to go in to begin to understand Ecorise at a deeper level. We were being overwhelmed with information left and right. A Mind Map provided a way to step back and organize all of this data based on how it was related.

### What is a Mind Mapping?

Mind Mapping involves the process of writing down concepts in connection to each other. Typically, a Mind Map is started with an idea or

concept that is drawn in the middle, and ideas related to this concept are drawn branching out from it. The ideas continue to branch down into smaller and smaller sets of ideas. The goal of a mind map is to aid in brainstorming. The concepts that are written down can help prompt the recall of other related information. Mindmaps can be created in multiple ways, for example, you can use a mind map to ideate new knowledge (the plot of a storyline, personal goals, etc.), or it can be used to recall knowledge (taking notes from class, mapping out existing processes, etc).

### How did we use Mind Maps?

A great way to create a mind map is on paper with colored pens or pencils. Using colors helps to better distinguish the ideas from getting mixed together on paper when concepts begin to fill up adjacent space. Unless there is plenty of whitespace, mind maps can be difficult to read if everything is written in the same color. Here is an example of the mind map we created to help organize information about Ecorise after our first class:

In this case, the mind map was used to better understand what parts of the Ecorise we did and

did not have a grasp on. We used a mind map to explore what we knew about a student's journey through Ecorise, and then wrote down questions about areas we would like to further understand. This map ended up being useful for our team, as we better understood the prompt we were given to work on, we organized the data, and wrote more questions which we could explore in interviews or secondary research. We have been able to ask these questions and get a better understanding of the area we are working in.

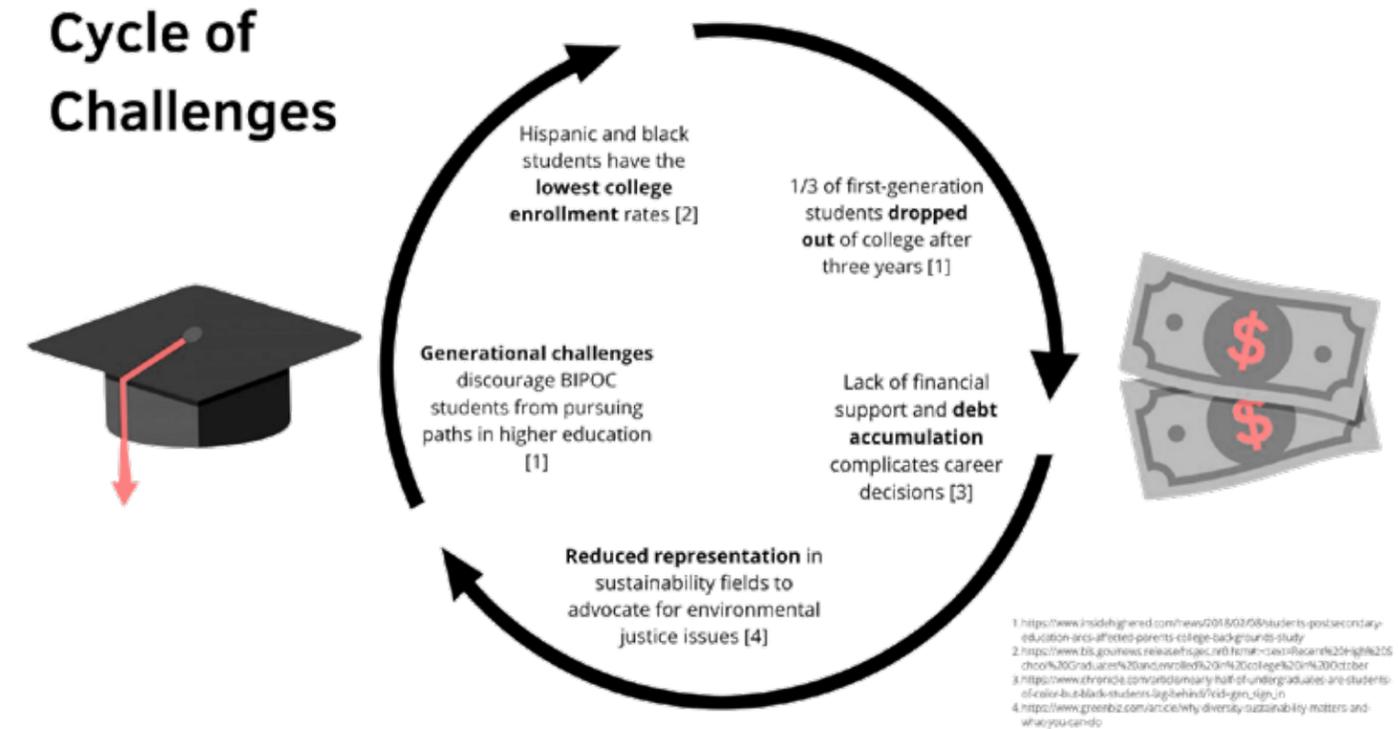


# Primary Research

## WHAT WE LEARNED

Empathy Research was the starting point of framing our question and final solution to our problem statement BIPOC students face systemic issues and need support as they learn life skills during the transition from high school to future paths in sustainability. After meeting as a team and doing separate research we found there to be a gap in mentorship. We landed on this issue because BIPOC students face intersectional challenges that discourage them from pursuing and completing higher education endeavors, especially in sustainability.

It begins with the generational challenges that discourage BIPOC students from pursuing paths in higher education. This then further affects the BIPOC community Hispanic and black students have the lowest college enrollment rates and 1/3 of first-generation students dropped out of college after three years. This is due to the lack of financial support and debt accumulation complicates career decisions. Thus resulting in Reduced representation in sustainability fields to advocate for environmental justice issues. We saw that there needed to be a way to break this cycle to allow for future and continued success.





## PATRICIA GONZALES

The story of a victim becoming a leader in environmental justice

A stakeholder that resonated with our design statement and research was Patricia (Pat) Gonzales. She is a sustainability nonprofit founder for Caring for Pasadena Communities. As a Hispanic woman who has lived in many underprivileged neighborhoods, Pat has faced countless barriers in her journey to combat local environmental injustice.

Growing up in Manchester and Pasadena, TX, Pat experienced the direct consequences of pollution from nearby cancer clusters, such as food contamination, frequent asthma attacks, and in the worst cases even death caused by refinery explosions. As a young adult, she was inspired by her friends in sustainability nonprofits who were working with government and science institutions to educate communities with door-to-door methods and implement devices to record toxic imbalances caused by chemical plants. With peer mentorship, Pat was **empowered to provide accessible sustainability education**

**to historically oppressed groups to advocate for themselves and fight against big petrochemical companies.**

Pat encountered a few roadblocks along the way. She noticed marginalized groups were being silenced by money-hungry officials and corporations, as well as **not financially supported to make their communities healthier and safer.** Funding was also an issue for Pat and her nonprofit members. Her resources are limited and inconsistent, which makes information dissemination much more difficult due to travel expenses, resource allocation, and legal representation.

Despite these systemic issues, Pat continued to voice her opposition to greedy corporations responsible for her community's health complications. Her mentors became her close friends

and motivated her to continuously engage people of all ages in environmental justice. She **credits her mentorship for the development of life skills and issue-specific knowledge, as well as the resilience to continue her mission in the face of adversity.** The power of mentorship is undeniable, and is much more memorable when both the mentee and mentor are working together towards shared goals. Pat strongly believes that the **mutual respect, care, and learning in her mentorship experiences were the support she needed** to encourage other environmental injustice victims to become change-makers in her community.

*“My big decision to start my nonprofit came from different mentors to learn the lingo and science. I didn’t mind starting from the bottom in order to build up.”*



## TEJU ADISA-FARRAR

The story of a change-maker in equity and sustainability

*“Most of the work that I do is informed by other teachings, but I’m able to work because I have these institutional degrees.”*

Our second stakeholder was Teju Adisa-farrar. Teju wears many hats in her professional life and considers herself a geographer, a poet, a writer, an equity consultant, and definitely an activist. She studied Urban Sociology and Political Theory in higher education and uses her expertise to advocate for environmental and cultural justice. She shared the story of how she got to where she is now.

Teju was born into a systematically disadvantaged neighborhood, and experienced environmental injustice first-hand when she was diagnosed with asthma because of the high rates of pollution in her neighborhood. She learned this years later when she was interning for an environmental company in her hometown.

As a young woman, she began to work in the sphere of sustainability with local companies.

She recalled those who had inspired her along the way, and pointed out a number of black women, like herself, that she had looked up to. She was able to see the fields that these women worked in, and then learned what path they had taken to get there, so she could pursue similar interests in college. This is when we learned that **having mentors who were representative of their mentees is crucial to inspiring mentees to pursue their dreams.**

In college, Teju noted that her interests varied far and wide, and she felt like she was not able to pin down a major that directly matched her interests. She studied a variety of different subjects and switched her major multiple times to try to find the right fit. When we asked her about how valuable her education was,

she notably said that what she learned within her university courses was not that valuable. She noted that her degree was most valuable in providing the necessary credentials needed to be respected in her field, but that **her most important education happened in other areas of her life while travelling, reading, talking to individuals, and learning about her ancestors’ way of life.**

After graduating with her Master’s, Teju is now able to pursue a career in a field that she loves. The overall impact of her education was not entirely positive though. She mentioned to us that years after graduation, she is *“still thousands of dollars in debt”*. There is a clear tradeoff between gaining credentials from education and sacrificing financial stability to do so. Teju mentioned that she wishes students had a better idea of what they were getting into, and we noted that **students are lacking education in key areas like finances.**



## Breaking the Cycle

- BIPOC graduates become leaders and foster a sustainability mindset in their communities.
- BIPOC students gain crucial life skills and sustainability knowledge.
- Personalized mentorship breaks systemic barriers and inspires change-makers.

### BIPOC Students...

lack the support, resources, and guidance to overcome intersectional issues.

### Life Skills...

are necessary for long-term success, yet they are not taught in K-12 education.

### Mentorship...

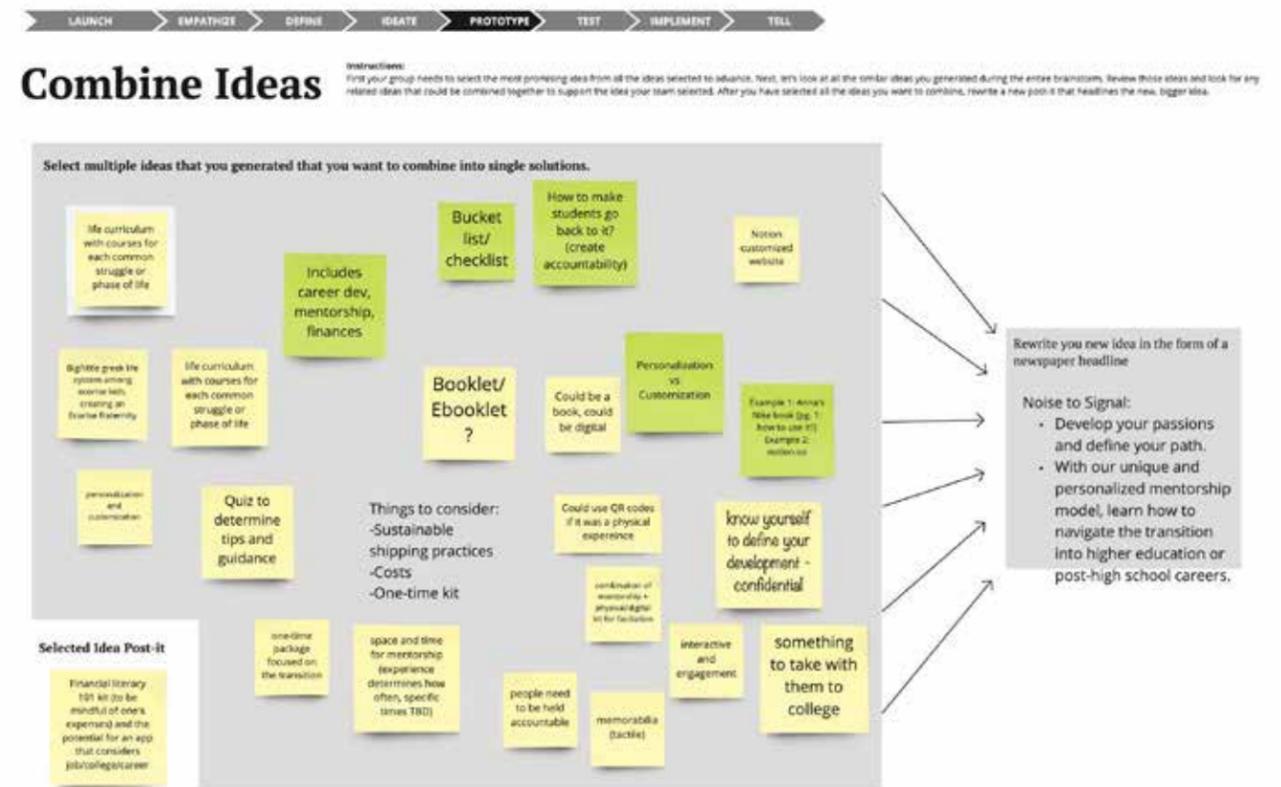
is a memorable growth-oriented experience that can benefit the mentor and mentee.

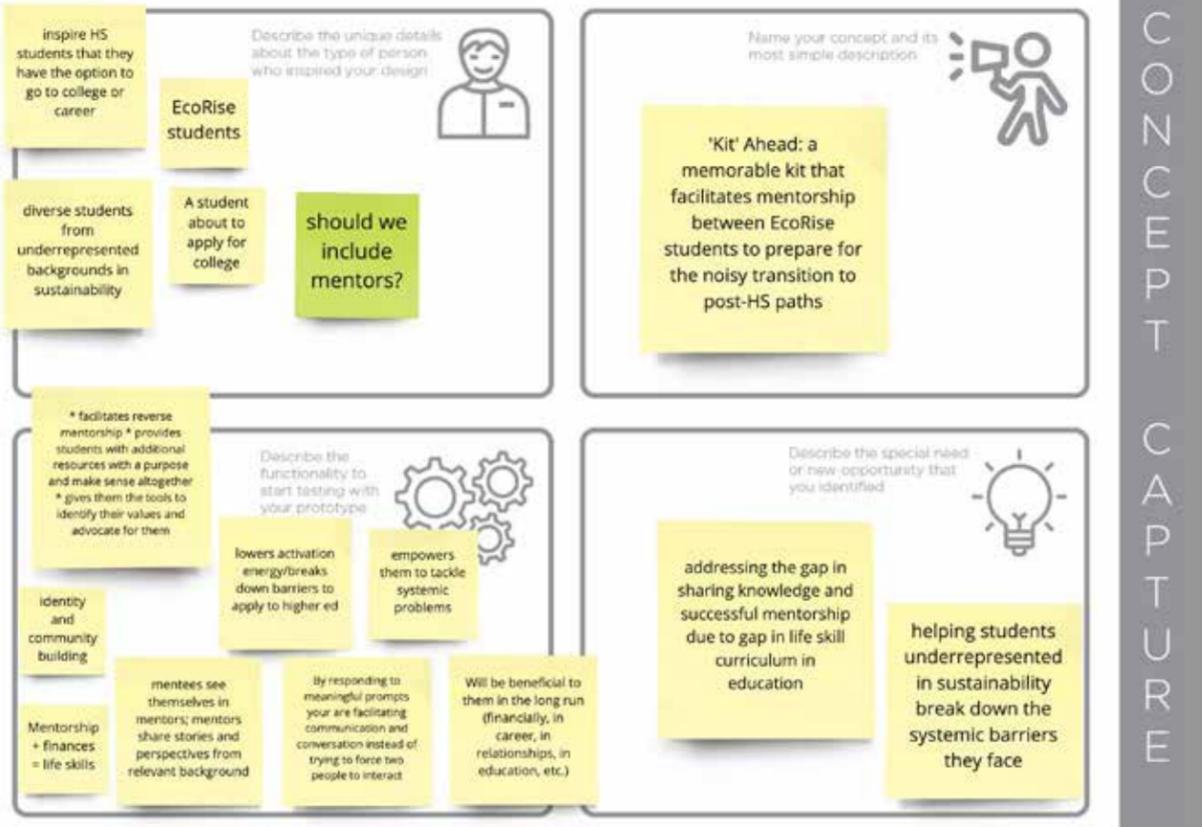
# Combining Ideas

## HOW TO ESTABLISH AN EFFECTIVE PROTOTYPE

Before you begin a Concept Capture you must either have researched, tested, or choose an idea to focus on. This step most commonly takes place within the prototyping phase. We decided before we could capture our idea at a high level we needed to sort through the ideas we had. We did this by using a Combine Ideas template shown below.

After successfully combining our ideas we chose to develop a “kit” even though we all had a mental image of what it would do and incorporate it and we struggled to put pen to paper. A member informed us that a Concept Capture would be a viable option to bridge the gap. This method works by breaking down your concept/solution into categories. It also helps to understand where a project is going and the necessary next steps.





# Testing Our Prototypes

To begin our process, the team created a spreadsheet of potential interviewees and their availability. We then matched each “mentor” with a “mentee” according to availability and their perceived compatibility. Our ideal testers were students in their 3rd or 4th year of high school and young professionals who were below 25. This last criteria was to minimize the separation between each participant’s understanding of where they are in their lives and minimize any perceived power dynamic while still allowing for an exchange of information that would benefit the mentee and, hopefully, the mentor as well.

To test the prototype, facilitators, along with the “mentor” and “mentee” pair were invited to a Zoom call. We gave the pairs a brief overview of the tasks and project at the beginning, helped them get started, and then turned off our cameras and audio in order to allow them to interact with each other and focus on each other.

We stayed on the call in order to provide technical support or clarification when requested, and then turned our cameras back on in order to debrief the pairs at the end of the call.

# Capturing Ideas

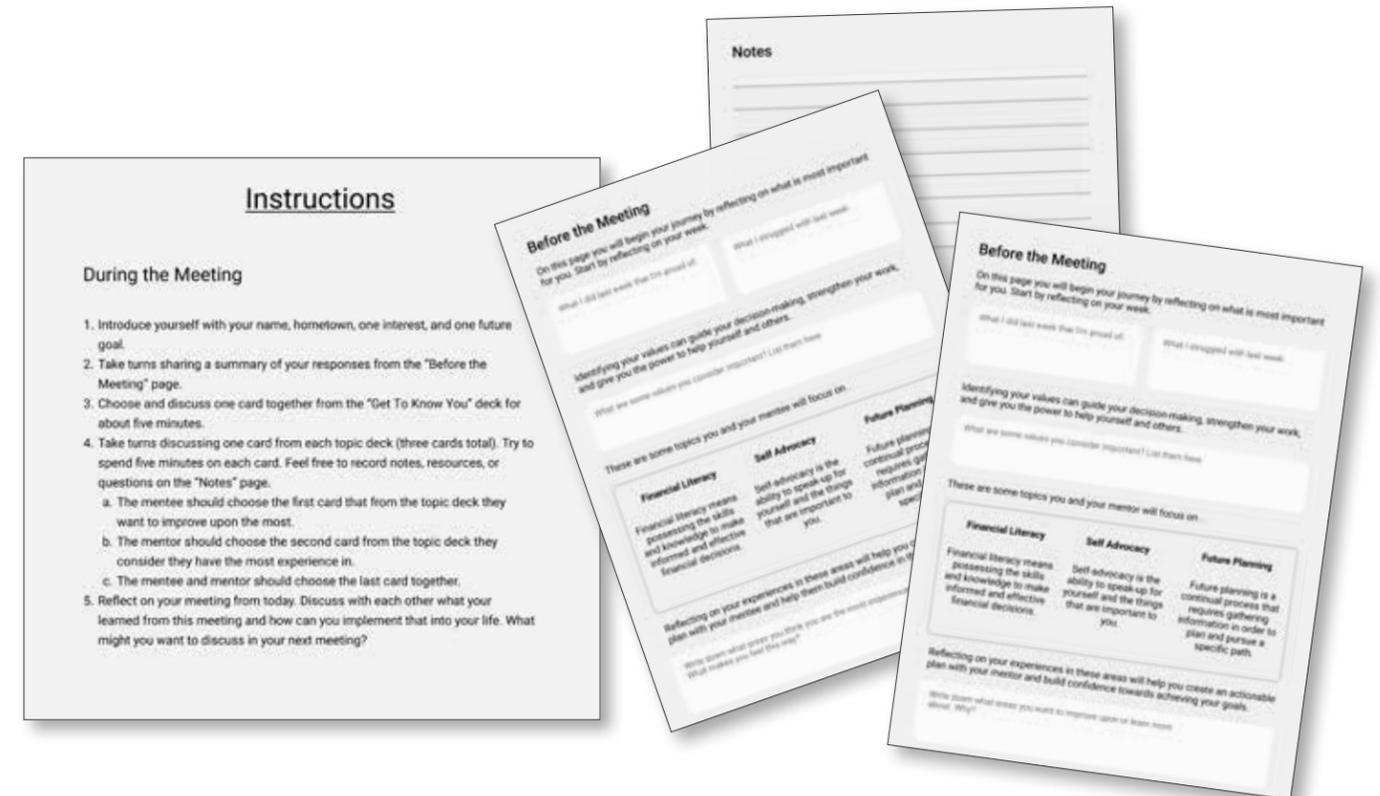
The Concept capture consists of describing what inspires the design (background research/interviews), the opportunities to identify, a simple description, and lastly exploring the functionality. There is no strict method to fill it out. One of the reasons I enjoy using this technique is you can hop around the quadrants to develop your point and work through the areas that are stumping you or your team. From previous experience, it is important to note that describing the functionality of a concept is more of a developed section and it could be helpful to touch on the other quadrants before proceeding to this one.

This is the perfect method to take advantage of during a prototyping process since in my opinion, the most difficult part of creating an effective prototype is understanding it. Not just knowing what you are making, but how it affects the audience you are creating it for. The Concept capture does just that by giving a formatted way to explore a

solution. It also is a telling moment if a designer is struggling to fill out the form then maybe the prototype path that you are going down is not an adequate solution to the problem at hand.

On the other hand, though, it is an earlier stage in the design process and a simple way to capture ideas. This means that even though this will help you progress in the design process it is not an in-depth analysis of a concept. We see it more as a way to work through and understand an idea and if it could become successful. If your goal is to thoroughly plan out and develop an idea or you are moving from a low-fidelity prototype to a high-fidelity prototype a different method would be more suitable.

Overall, a concept capture is a user-friendly model to start building a successful prototype and help to understand what is necessary for the user to get the most of your solution.

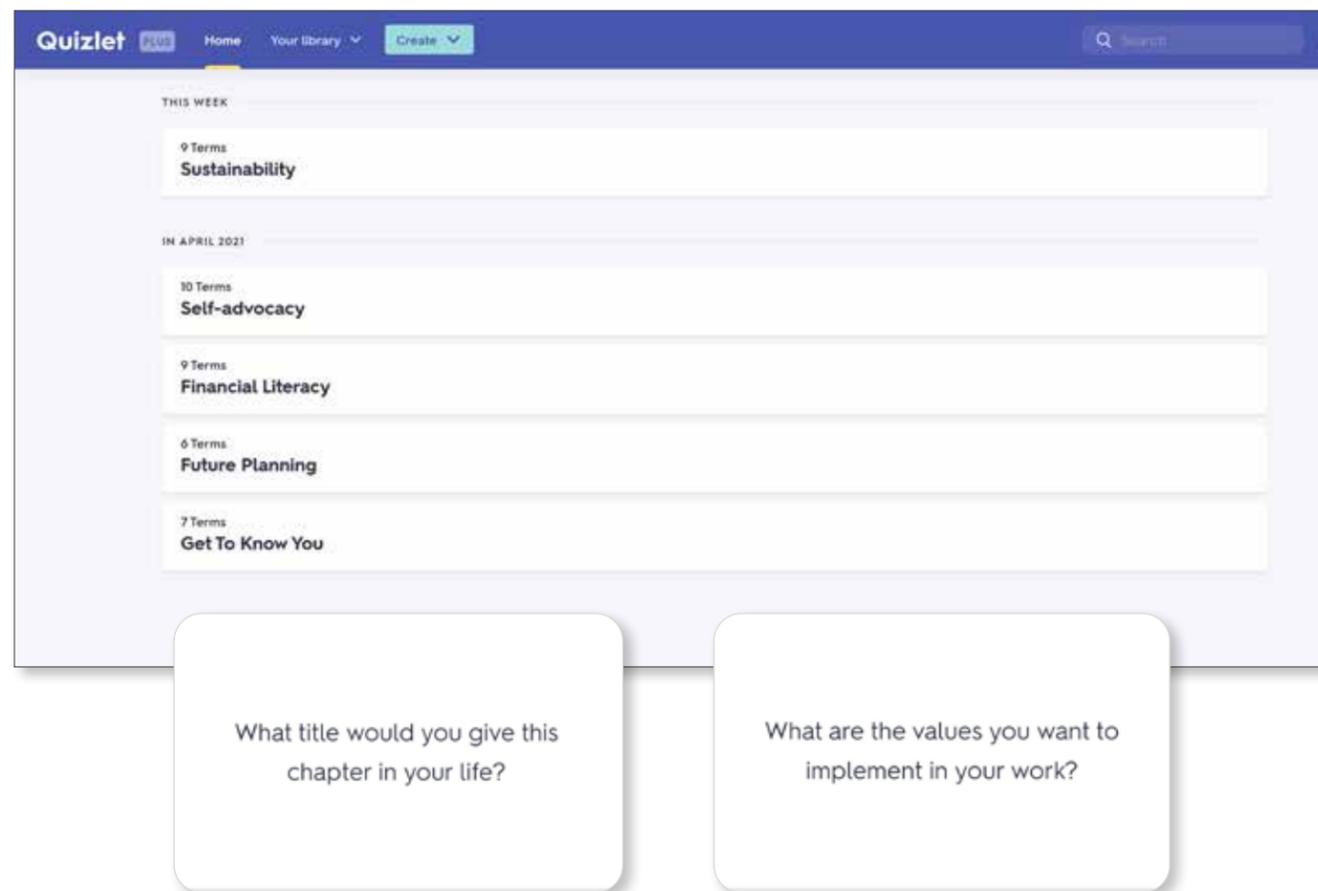


# Testing Our Prototypes

The two components of our prototype that were tested were our Mural board and our Quizlet. Our Mural board served as our interactive platform between the users and our prototype. It included our journal sheets for each “mentor” and “mentee,” consisting of a pre-meeting and during meeting section, and a set of instructions. Initially, we had two sets of instructions, but based on observing their confusion when navigating turn taking without knowing what the other person was looking at and tester feedback validating that assumption, we created a shared set of instructions and placed that between their individual workspaces.

Our Quizlet represented our card decks, which were meant to facilitate the interactions between mentors and mentees while still being open ended and nonintrusive enough to allow for natural conversation. These decks consisted of four categories: Get to Know You, Financial Literacy, Self Advocacy, and future planning.

After multiple rounds of feedback and adjusting our prototype, we invited one of our most successful pairs back and got their feedback on these improvements.



## Prototyping Insights

### THERAPEUTIC ALLIANCE

After each testing session, pairs reported feeling more connected than when they started out and noted that they were able to skip the awkwardness of meeting someone and get to deeper conversations. They also observed a reverse mentorship came naturally from taking turns sharing their personal experiences.

### INSTRUCTION RESTRUCTURE

In response to initial feedback from our users, we created a shared set of instructions to eliminate confusion and create an even playing field across roles and encourage feelings of transparency. The instructions were also reworded to clarify our intentions and encourage turn taking.

### SUCCESSFUL FACILITATION

The test users agreed that the cards effectively prompted conversation while still allowing for deviation and open conversation in order to tailor the experience to the mentee’s goals. Over time, the pairs were less reliant on the cards.

# Introducing ment

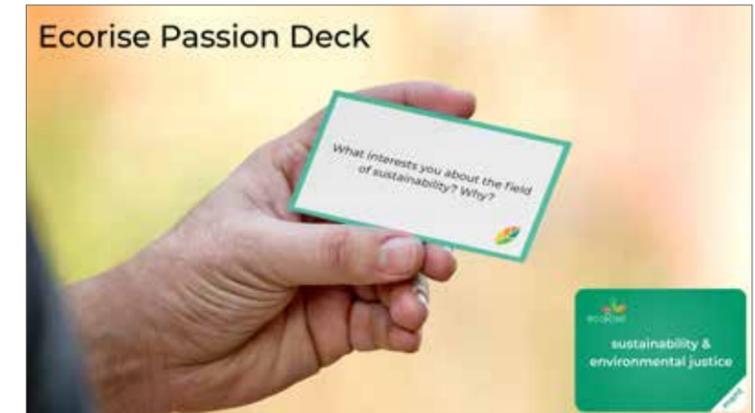
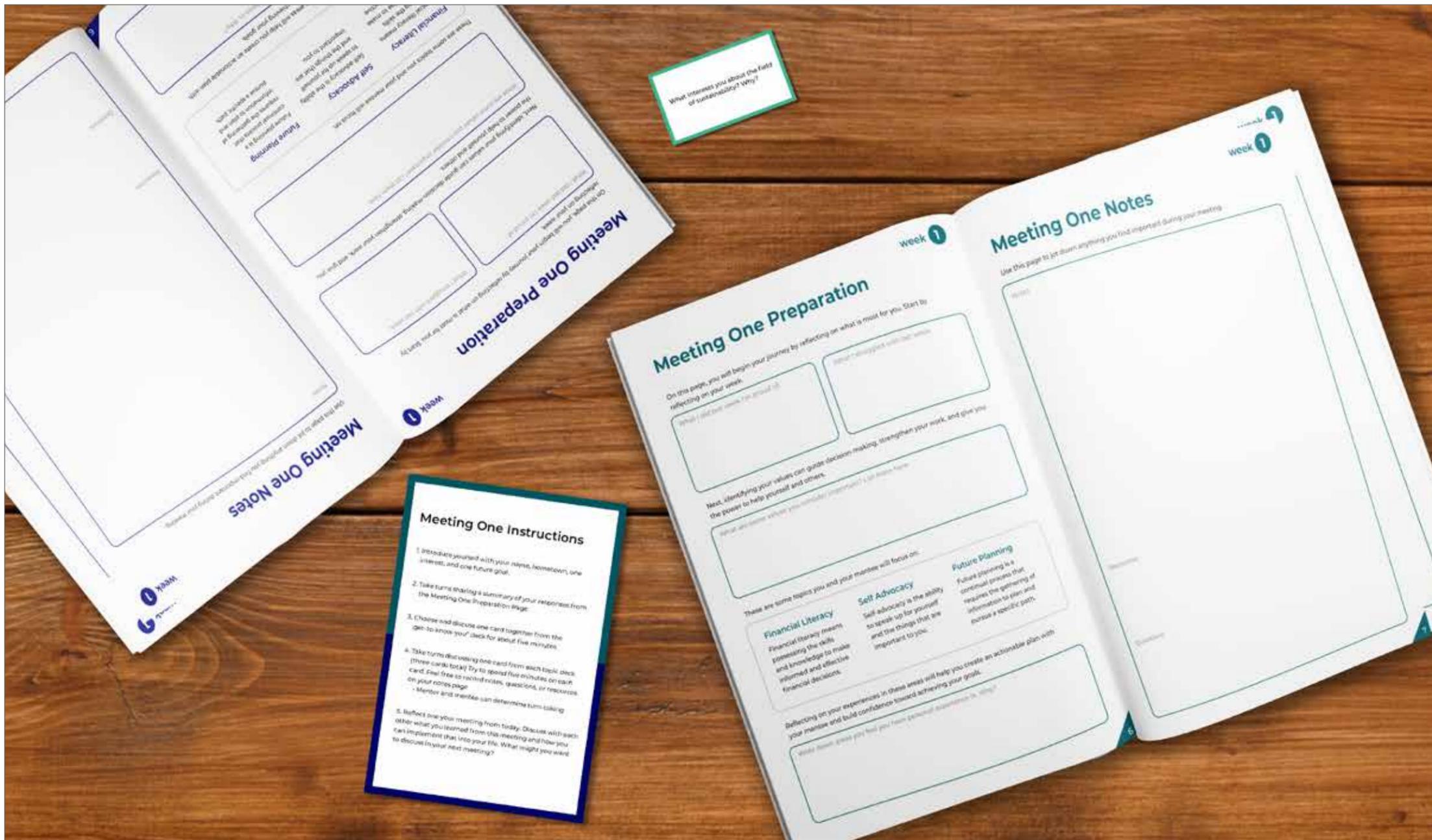
THE MENTORSHIP EXPERIENCE MEANT TO  
BRING PEOPLE TOGETHER FOR SUSTAINABLE  
FUTURES.

Ment is a solution to mentorship facilitation that fits into a one small box. Included within the box is everything that is needed to grow a meaningful relationship between a mentor and mentee. This includes a getting started booklet to introduce them to the experience, two booklets for the mentor and mentee to guide them, topic question cards, meeting instruction sheets, and a few pens.



# ment

experience meant to bring people together



# Mockups

**Cards:** Each deck represents a life skill we saw as important to the development of high school students preparing for college, as well as futures in the sustainability field. These core topics include get-to-know-yous, self-advocacy, future planning, and financial literacy. The purpose of these card

decks is to spark deep and meaningful conversations between mentee and mentor on topics that will help them in their transition from high school.

**Passion Deck:** The Ecorise Passion Deck focuses on sustainability and environmental justice, and is specifically tailored to students who are interested in pursuing careers in these fields. We see this deck as a way for Ecorise to focus conversations with their students on the issues they feel matter in this area, and it opens the opportunity to infuse the Ecorise

curriculum into the mentorship experience.

**Table:** When it comes down to it, this mentorship experience revolves around the meetings between mentors and mentees. Here is an example of what materials might be used in a meeting. The booklets will be open on the table for both participants to see and refer to, which maintains a therapeutic alliance between mentor and mentee. Likewise, the shared instructions card helps them come together to navigate the meeting.

We see this experience as a way for not only students, but also mentors, to learn from each other, grow as current or future sustainability and environmental justice professionals, and create a bond with someone that will last. These materials are a conduit to the kinds of meaningful and deep conversations that can change a student's course trajectory, and it is moments like the one shown here that add up to that hopeful outcome.



# Implementation

## A GUIDE TO QUICKLY GET STARTED USING MENT

Ment is designed to be low effort to implement with mentor and mentee pairings. Here we have compiled a quick guide on the steps that are necessary to implement Ment. Implementation should only take a single individual.

Ecorise will need to use their alumni network or other connections to identify mentors. We tested both college students and young professionals, and both groups were successful. During our testing, we paired mentors and mentees according to high-level shared traits such as gender and area of academic interest. Although it could be easier for mentees and mentors with shared interests to form deep personal connections, Ment is designed to be robust enough to be beneficial to any pairing of mentor and mentee because it is intended to provoke deeper sharing through the discussion questions.

The next step is to create a timeline for mentors and mentees to meet. Ideally this would be on a weekly or bi-weekly schedule. We also recommend meeting at least 6 - 8 times for 45 - 60 minutes to reap the benefits of Ment. In this amount of time, mentors and mentees should be able to form

a deep, trusting relationship and begin to work together towards planned goals.

The mentors and mentees will need to be provided with supplies. There are templates already made for the pages in the shared journal, the card design, and the shared instruction design. These would need to be printed out. Although testing during the prototype stage was done in a digital platform, we still believe that having physical copies of materials will benefit the relationship. The digital platform is effective enough to develop deep connections, but a physical memento would allow mentors and mentees to have a physical artifact that they could touch and feel and be reminded of their experience and growth during the program long after it ends.

There is a great opportunity to modify Ment. Expansion packs like the Ecorise passion deck could be made in a variety of areas. This could include practice interview questions, impromptu speaking topics, ethics, etc. Ment could also include a digital community hosted on a platform like discord or slack. A QR code within the Ment box would link to join the community.

## Implementation & Next Steps

From our secondary research and stories from stakeholders, we have been able to see that mentorship is highly effective in promoting the success of mentees in their academic and professional careers.

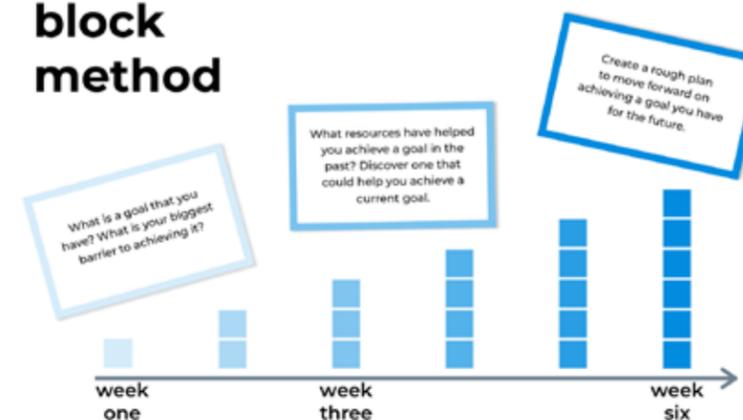
We also know from talking with both Ecorise and educators that teachers are already overworked, so we looked for a solution that would not add extra responsibilities to the plate of educators. We need-

ed a solution that was low-cost, simple, and effective.

We have seen first hand that Ment can offer a rewarding experience to mentees and mentors alike. Students gain personalized guidance from mentors in key areas that are not typically taught in standardized education, and mentors are supported with a platform to structure their recommendations to their mentees.

*I think this is an incredibly beneficial experience! If anyone gets the chance to do it, they should. - Mentee*

### building block method



When students feel as if they are lost trying to summit a mountain, Ment provides mentors with the tools to guide them.

Ment springboards mentors and mentees into a therapeutic-like alliance from day one so they can grow trust and empathy as they learn together.

# Acknowledgements

A special thanks to our wonderful professors Gray Garmon and Katie Krummeck for providing guidance throughout this project. Their support was invaluable in both creating this opportunity as well as helping us learn along the way. Thank you to the three other capstone groups for their camaraderie and feedback throughout the design process. And of course, thank you to Ecorise.

Thank you as well to Luisa Gil Fandiño, Pam McClendon, Gary Reynold, Theresa, William, and Aria Gonzales, Jim Walker, Patricia Gonzales, Denis Carleberg, Teju Adisa-farrar, Nicki Sirianni, Rin P, Brittany Jayroe, Seth Feingold, Mike Oppenheim, Avery Wollock, Felipe Martinez, Abby Guidry, Eli Melendrez, Scout Jones, and Safiq Sindha for generously donating their time and helping us uncover key insights that drove the development of this concept.





*Experiential  
Learning  
Playbook*

# Our Team



## AUDRA COLLINS

*B.S.A in Computer Science & Design Strategies Certificate*

Audra is from San Antonio, Texas, majoring in Computer Science. With a passion for promoting diversity in the technology industry, Audra will be continuing her journey post-graduation as a Software Engineer in the Seattle, Washington area.



## CARTER RIEGEL

*B.S.A in Computer Science & Design Strategies Certificate*

Born in North Carolina and raised in Ohio, Carter Riegel is now a senior at the University of Texas at Austin majoring in Computer Science. He plans to start a career in User Research after graduation and is looking forward to finding out how he can impart meaningful impact in the city he now calls home.



## KATRINA GAEDCKE

*B.F.A in Acting & Design Strategies Certificate*

Katrina is an Austin native and an aspiring actor. She is the co-founder of a film company called Dropout Films Productions, and she is deeply passionate about psychology and philanthropy. In January of 2022, she will be moving to the heart of the film industry, Los Angeles, California, to complete her degree.



## LILY LOZANO

*B.B.A in Marketing & Design Strategies Certificate*

Lily is from Laredo, Texas and majored in marketing at UT Austin. After graduation, Lily will stay in her favorite city of Austin and begin a Business Development Consulting job at Oracle.



## MAKITO NAKAGAWA

*B.S.A in Human Ecology & Design Strategies Certificate*

Maki is from Japan, Texas, and Georgia. He aspires to use design, ethnography, and photography to translate community-level needs and reshape systems to be more restorative. He will pursue design for social impact in Austin, and soon abroad.

# Getting Started

## INITIAL PROBLEM STATEMENT

*“EcoRise students need ways to connect to successful careers in sustainability.”*

## RESEARCHING ECORISE

At the start of the semester, our main avenue for researching EcoRise was through the organization’s official website. We scoured the site’s many tabs and pages, in order to get a holistic understanding of EcoRise’s mission, and the programs they offer. To highlight the most important information, we compiled EcoRise’s advantages, challenges, strengths, and threats. Next, we noted interesting quantitative data, and identified which areas where the organization was either underperforming, or surmounting expectations. Lastly, we drew from the

qualitative and quantitative data we had gathered to define problems that we were interested in investigating. At this point of the project, we were curious about a few things; how EcoRise recruits and retains educators, how they cater to different geographical regions, and how they were keeping students engaged virtually. We soon realized that students and teachers in the EcoRise program were unclear about the curriculum, and students weren’t receiving sufficient support to pursue careers in sustainability post-program.

## IDENTIFYING STAKEHOLDERS

During our initial launch phase, the Stakeholder Mapping worksheet helped us to explore all potential stakeholder groups connected to EcoRise. Our main stakeholders included EcoRise’s leadership, employees, students, teachers, school staff, and partners, such as sustainability professionals. Based on what we learned in our secondary research about EcoRise’s mission and program details, we then decided that the most important stakeholders for us to connect with were students, teachers, and sustainability professionals.

In addition to our secondary research, we were able to ask EcoRise directors, Brittany Jayroe and

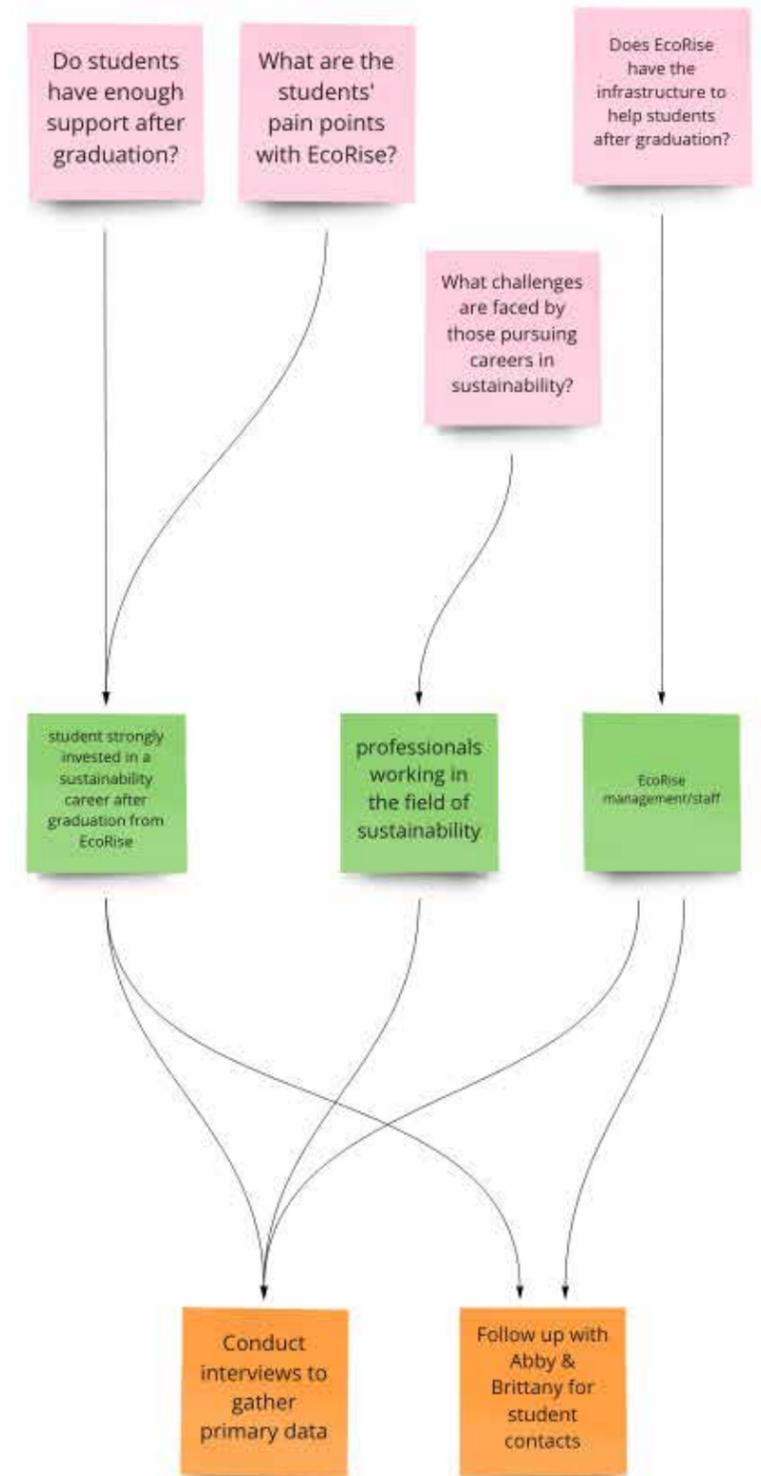
Abby Randall, some brief, clarifying questions. In class, we also had the opportunity to speak to three very insightful people; Mr. Arista, a teacher at a design thinking school, Peter Goldstein, a licensed architect and middle school teacher, and Caleb Martinez, an EcoRise student. Through these short interviews, we gained a deeper understanding of the day-to-day life of an EcoRise stakeholder, and their interactions with EcoRise.

Following this preliminary research, we narrowed down some unanswered questions and crafted a research plan for who we needed to talk to in order to learn more.

What do we want to know?

Who do we need to talk to?

What will we do?



# Research

## WHO WE TALKED TO

We set out to conduct our primary research in the form of interviews. Thanks to our previous stakeholder mapping, we identified four key stakeholder groups to interview: students, sustainability professionals, campus sustainability facilitators, and educators. We created individual interview guides for each group, consisting of broad questions to help us get to know each interviewee, as well as tailored questions to gain specific insights, relevant to that individual.

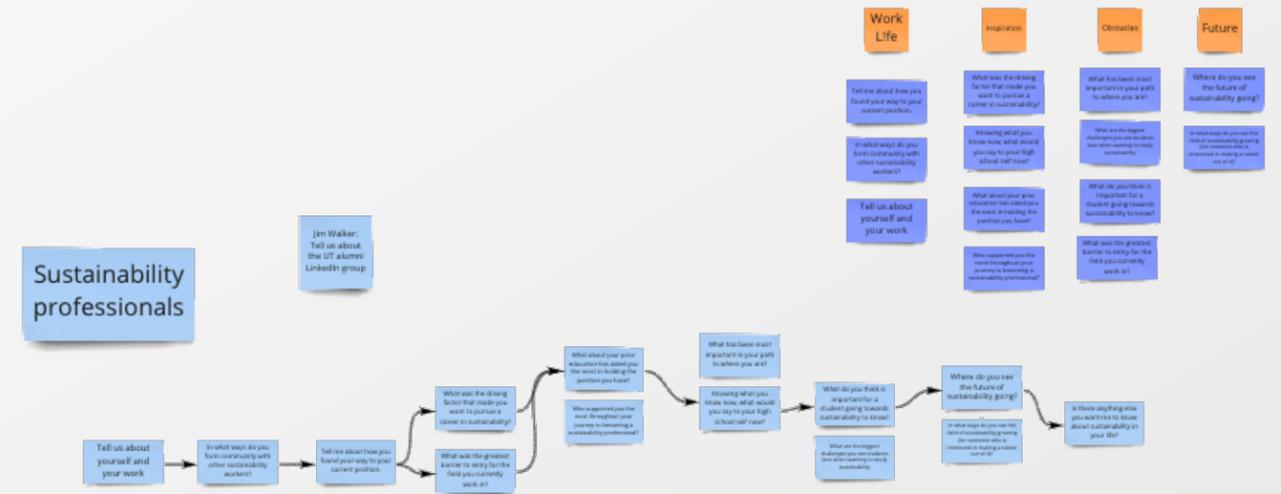
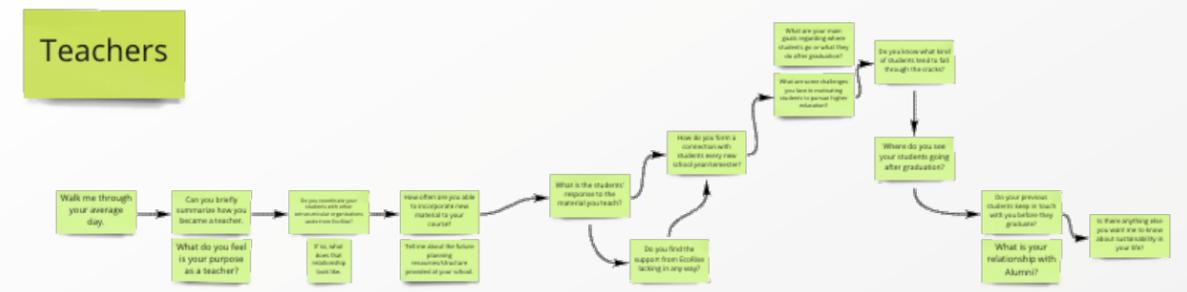
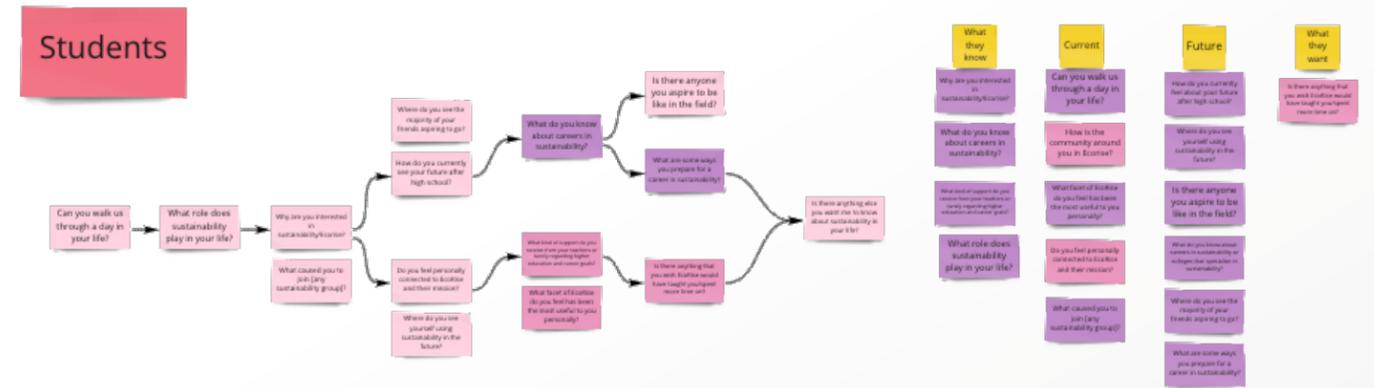
After each interview we conducted detailed reflections, in which we described who we interviewed, the stories they presented, the emotions we observed, and any key takeaways. Once we completed each reflection, we developed a persona for the interviewee, and then synthesized the most critical information and any supporting quotations. The areas of interest included how the interviewees' lives and goals were connected to our problem space, as well as what challenges they had faced while attempting to meet their goals.

# Insights

## RESEARCH SYNTHESIS

With our reflections and personas in hand, we sat down together as a team, gathered all of our reflection insights, and sorted them into categories. These categories ranged from what skills are most important for finding a career in sustainability, to the obstacles that students face when trying to enter the field. From these groupings, we refined the insights in each category and synthesized them into more concise and meaningful versions. We then determined which insights were most impactful in terms of our problem space, and aligned on our direction moving forward with the project. Knowing which insights we were most confident in, we sorted through the stories we'd heard and determined which of them best connected to and supported our insights. These would be the stories that we would highlight in our midterm presentation.

We returned to our original problem statement and drafted a number of new statements, based on the data and stories we had encountered throughout our interviews. From our original problem statement, which read "Ecorise students are struggling to connect to successful careers in sustainability," we generated two new problem statements. Our first read "Designing a curriculum capable of preparing students to pursue sustainability careers in their individual fields of interest is a daunting task." Our second read "EcoRise students are confronting overt and hidden barriers to entry in the field of sustainability." With these new problem statements solidified, we began to explore how we could best frame our future ideation sessions with How Might We questions. We developed four questions that would function as guidelines to keep us on track with our stakeholders' needs once we reached the ideation phase of our project.



1.

## INSIGHTS

**SUSTAINABILITY IS STILL A DEVELOPING FIELD THAT HOLDS A LOT OF UNCERTAINTY FOR STUDENTS.**

Each of our core insights were derived from the experiences and stories that we heard from our interviewees. Our first insight was largely based on the experiences of a former EcoRise student, Sophia.

2.

## INSIGHTS

**SUSTAINABILITY IS A CORE HUMAN VALUE, AND IT IS TRENDING TOWARDS BECOMING A CENTRAL COMPONENT IN THE LIVES AND LIVELIHOODS OF EVERYONE.**

Our second insight was inspired by a story told to us by UT's Campus Environmental Center Coordinator, Brianna Duran.



### **SOPHIA RIVERA** Former EcoRise Student

Originally she wanted to pursue a career in mechanical engineering, but after participating in a number of internships through the EcoRise program, she realized that her true passion was for civil engineering and construction. Sophia envisions herself running a sustainability-related construction firm some day, but she might never have discovered this aspiration without her experience with EcoRise internships. Though her vision for her future is exciting, Sophia explained that she still feels unprepared for a career in sustainability, feeling that she needs much more experience in the field before she enters the professional field. Two educators in sustainability who we interviewed also echoed Sophia's sentiment, explaining that they began their careers with little to no knowledge of the sustainability field, instead stumbling into it by coincidence.



### **BRIANNA DURAN** UT Campus Environmental Center Coordinator

Brianna always knew that she wanted to be involved in environmental and sustainability work. In college, she participated in a life-changing Tropical Ecology study abroad program in Ecuador, and upon returning home promptly switched her major to biology, botany, and environmental studies. Shortly after graduating college, Brianna found herself moving across the globe to Auckland, New Zealand, where she joined the city's waste minimization team. It was there, overseeing high school students, that she discovered her passion for working with young people, so when her current role at UT became available, she knew it would be the perfect fit for her. Like Sophia, Brianna didn't have a clearly defined career path, but she allowed herself to be guided by her values, the love and appreciation of nature that she developed during her childhood.

## INSIGHTS

3.

**WE NEED TO EXPOSE AND DISABLE THE HIDDEN BARRIERS TO ENTRY FOR THE FIELD OF SUSTAINABILITY.**



**KRISTEN LEE**  
Program Manager at the University  
of California, Santa Cruz

4.

**STUDENTS MUST LEARN TO REFRAME THEIR UNDERSTANDING OF SUSTAINABILITY SO THAT THEY CAN DISCOVER OPPORTUNITIES IN THEIR OWN FIELDS/COMMUNITIES.**

Our third insight was developed from our interview with Kristen Lee, the Sustainability Program Manager at the University of California, Santa Cruz. They described to us the many factors they've encountered which might hinder a student's ability to get involved in sustainability. Factors such as socioeconomic status, citizenship, and lack of diversity can all impact a student's ability and motivation to start a successful career in sustainability. Kristen explained that students with full-time jobs often cannot afford to accept unpaid or low-paying internships, as they would directly impede their financial stability. Students without US citizenship are barred from many internships and work opportunities, as they cannot be compensated through traditional pay systems. Furthermore, the field of sustainability lacks diversity, which leads many BIPOC students to feel like outsiders in the industry, and token hiring is also a major deterrent.

Lastly, our fourth insight also emerged through our hugely impactful interview with Kristen Lee. Kristen explained how misleading the mainstream narrative of sustainability, or as they described it, "Buy a Prius, save the polar bears", can be, and how that false illusion of what sustainability represents can lead students to believe that they don't have a place in the field. They taught us how to reframe our understanding of sustainability, in order to combat these misconceptions. To expound upon this technique, they offered this example about recycling: "Everyone knows that recycling is a responsible, sustainable thing to do, but in addition to that, when we don't recycle, new landfills have to be built, and they will most likely be built in predominantly minority or low-income communities."



# New Problem Statements

From our original problem statement, which read “Ecorise students are struggling to connect to successful careers in sustainability,” we formulated two new problem statements:

1. Designing a curriculum capable of preparing students to pursue sustainability careers in their individual fields of interest is a daunting task.
2. EcoRise students are confronting overt and hidden barriers to entry in the field of sustainability.

# How Might We

Based on the premise of our new problem statements, we developed a handful of How Might We questions to aid our prototype ideation.

In connection to our first new problem statement, the questions read:

1. How might we help students navigate sustainability career development in their field of interest?
2. How might we provide experiential learning opportunities for students pertaining to their individual fields of interest?

Our first question came about in response to the stories and advice we heard from a variety of educators and professionals in the field of sustainability. The consensus was that the best way for college-bound students to find a job in sustainability is to major in their field of interest, then look for opportunities to tie in sustainability (such as internships, student organizations, and co-ops). Additionally, EcoRise students that we spoke with explained how their internships and meetings with sustainability professionals provided them with insight into the field and potential roles they could pursue.

Our second question was developed through our understanding that experiential learning is the most important method of education for EcoRise students. We found that opportunities to participate in sustainability-related projects acted as huge motivators for students interested in pursuing a sustainability career. One EcoRise student, Abraham, told us about an internship that provided him the opportunity to complete a heat mapping of his neighborhood, and surrounding areas, in Austin, Texas. Originally, Abraham was only interested in mechanical engineering, but through this experience he found himself inspired to incorporate sustainability into his future career as an engineer. Stories like these led us to formulate this question, and ask ourselves how we could provide an experiential learning experience that would help motivate and inspire students to pursue sustainable careers.

In connection to our second new problem statement, the questions read:

1. How might we work to dismantle the barriers of entry for minorities?
2. How might we create a more inclusive environment in the field of sustainability?

Both of these questions were derived from stories provided to us by educators and professionals in sustainability, like Kristen Lee, who described the difficulties minorities face when trying to enter a field with an exclusive image. The predominantly white culture, along with the barriers of socio-economic status and lack of diversity, lead students to feel underrepresented and unwelcome in the field.

# Prototyping

In the early stages of the prototyping phase of our design process, we underwent a series of rapid ideation sessions. First we utilized the Solo Brainstorm exercise provided by our instructors, wherein every member of the team quickly sketched one idea for each of our three How Might We Questions. At this point in the process we had narrowed down and refined our How Might We questions to the three following:

- How might we help students to **see themselves** in sustainability?
- How might we **encourage** students to create **spaces** for sustainability in their own lives?
- How might we **cultivate** a more **inviting** environment in sustainability?

This exercise resulted in a variety of different concepts that we felt had a lot of potential, but we still weren't sure what we would be next for us. During our next team meeting however, we utilized the Crazy 8s design method, which completely altered our course for the remainder of the semester. Despite being a relatively simple exercise, it allowed us to generate a large quantity of possible solutions, which we then grouped based on whatever general concept they related to. As we were grouping these ideas, we began to notice something remarkable. Although they had scarcely been present in our prior ideation session, gamification and experiential learning emerged as the founding principles of a significant number of our ideas. It was a pattern we could not ignore. Though we took a moment to align on whether or not this was a viable path to pursue, we soon decided that this was the route we wanted to take. Our next task was to create a newspaper headline that summarized our concept, and after each coming up with a handful of possibilities and sharing them with the group, we settled on one that Lily had written: **Field trips, challenges, and more: how students are learning about sustainability in 2021.**

## ASSUMPTIONS

For more information on these exercises, visit:  
<https://www.iamnotmypixels.com/how-to-use-crazy-8s-to-generate-design-ideas/>

Once we'd identified gamification and experiential learning as the concept we would move forward with, we had to align on the assumptions that we were making, in order to ensure that we'd design a prototype that would either prove or disprove them. We started with a breadth of preliminary assumptions, which we went on to condense into three primary ones:

- Students love games and are likely to get invested if the activity is fun and exciting.
- Competition is a good way to get students engaged in a subject matter.
- Gamification addresses the problem of students not knowing how to get involved, or feeling like they don't have a place, in sustainability.

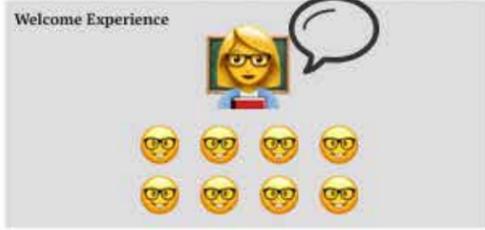
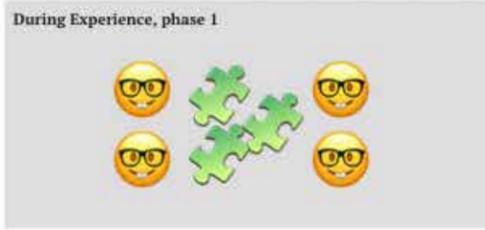
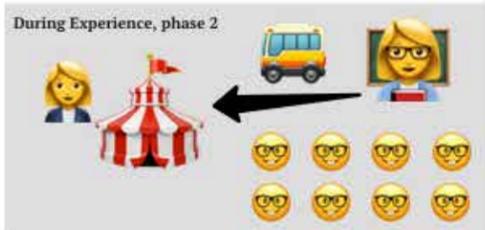
## EXPERIENCE

With these assumptions in mind, we moved on to the next exercise provided to us by our teachers, Storyboarding.

Here we detailed the experiential journey that we wanted our prototype to be able to provide to our stakeholders, and through this activity we narrowed our concept even further. This was the moment in our journey that we first pinpointed the concept that would one day become our final deliverable, though at this time, we only understood it as some kind of experiential learning division that could be added to Eco-Rise's curriculum. With the foundation of our solution finally in place, the critical question became, how do we prototype an entire curriculum in a way that can be rapidly tested and iterated? We knew this was something to consider, but we did not realize how significant of a barrier it would present until we thought we were ready to move forward.

## Storyboard your Idea

**Instructions:** Draw a storyboard that maps out the experience you are hoping to create for your stakeholder. Take the assumptions you generated in the last exercise and match them to the phase of the experience that is most relevant. Generate new assumptions as well.

<p><b>Pre-Experience</b></p> 	<p><b>Welcome Experience</b></p> 	<p><b>During Experience, phase 1</b></p> 	<p><b>During Experience, phase 2</b></p> 	<p><b>During Experience, phase 3</b></p> 	<p><b>Post Experience</b></p> 
<p><b>Assumptions:</b></p> <p>It addresses the problem of students not knowing how to get involved/feeling like they have a place in sustainability.</p>	<p><b>Assumptions:</b></p> <p>Students love games and will be likely to get invested if the activity is fun and exciting.</p>	<p><b>Assumptions:</b></p> <p>It introduces sustainability to kids at a younger age, instills passion before bringing in the professional aspect.</p>	<p><b>Assumptions:</b></p> <p>The proximity of activities will inspire personal connection to sustainability.</p>	<p><b>Assumptions:</b></p> <p>Experiential learning is a proven reliable teaching method, so it should help students gain a stronger grasp of sustainability and how it impacts their lives.</p> <p>Competition is a good way to get students engaged in a subject matter.</p>	<p><b>Assumptions:</b></p> <p>Students will be inspired to have a sustainability-centered career.</p>

# Prototyping

## CRITERIA

In addition to testing our assumptions, Maki encouraged us to take a moment to define specific criteria for what our prototype should accomplish. In our first pass at this, we formatted our major criteria into four questions:

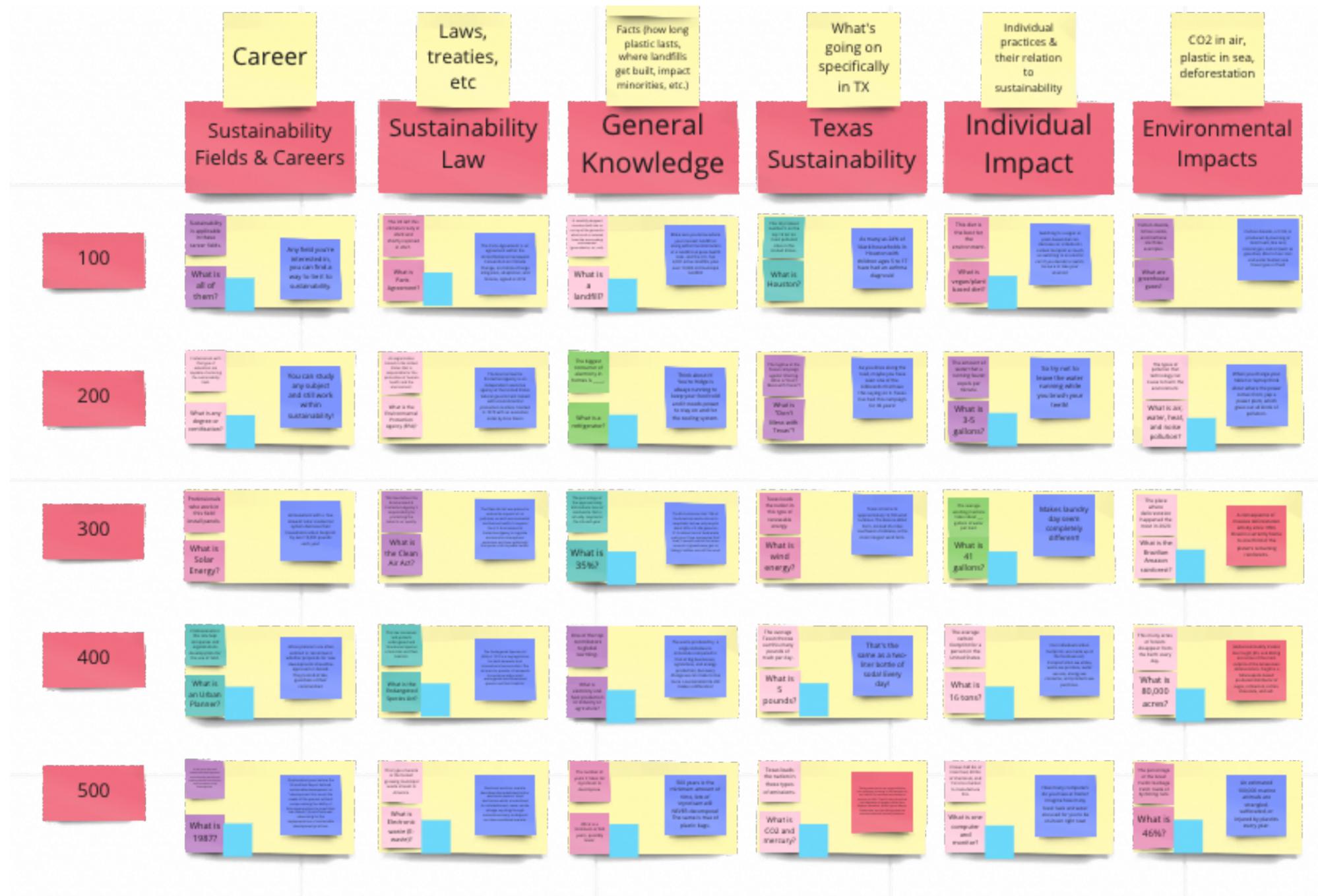
- Does this **connect** students to sustainability fields?
- Does this **personalize** sustainability?
- Does this spur **curiosity** and **passion** for sustainability?
- Is this **fun** enough?

With these in mind, we voted on all of the activity ideas we had generated in our efforts to uncover a solution, and we landed on a challenge for who could collect the most litter. We then attempted to craft a condensed version of this activity that would not overly burden our test subjects or water down the intended learning experience. After spending a large portion of our meeting time debating the merits and drawbacks of every potential iteration of our littering challenge prototype possible, we took a step back and decided to revisit our prototyping criteria.

With regard to the problems we had just encountered, we added three more conditions:

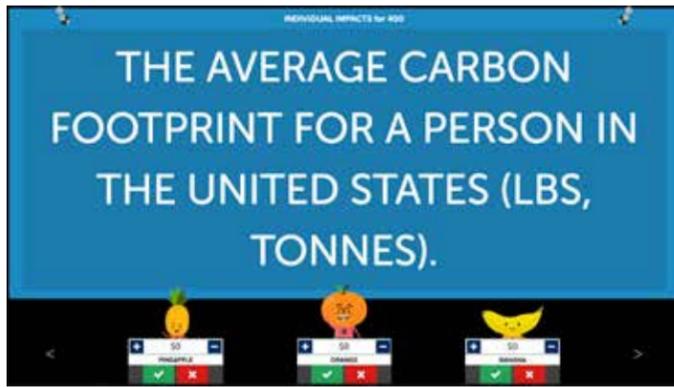
- Does the implementation of this prototype leave us enough time to **iterate**?
- Does it stay true to the overall **goal** and **intention** of the activity?
- Can we garner a sufficient quantity of **participants** to test and give feedback on this prototype, so that our **data** will be viable for iterations?

These new guidelines now in place, we went back to the drawing board. It was there that we were reminded of the idea to create a sustainability-themed game of jeopardy, and determined that that would be the most effective way to accomplish all of our goals within our time and resource constraints.

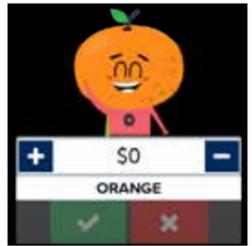
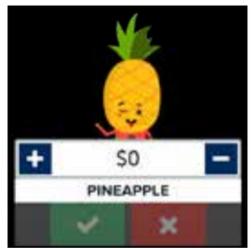


## JEOPARDY

The creation of Jeopardy was surprisingly uncomplicated. First we settled on our six categories, which were Career, Sustainability Law, General Knowledge, Texas Sustainability, Environmental Impacts, and Individual Impacts. Then, between our Tuesday class meeting and our Thursday team meeting, we each took the time to research a handful of related sustainability questions of various difficulty levels. It took almost no time to locate an online tool that would allow us to create a jeopardy game, and then all that remained was to copy and paste the questions we'd come up with from our Miro board.



FIELDS AND CAREERS	LAWS AND ACCORDS	GENERAL KNOWLEDGE	ENVIRONMENTAL IMPACTS	INDIVIDUAL IMPACTS	GREEN TEXAS
\$100	\$100	\$100	\$100	\$100	\$100
\$200	\$200	\$200	\$200	\$200	\$200
\$300	\$300	\$300	\$300	\$300	\$300
\$400	\$400	\$400	\$400	\$400	\$400
\$500	\$500	\$500	\$500	\$500	\$500



## Testing

Prior to our first testing session, we also drafted a series of pre- and post-experience questions. These questions would not only ensure that we gathered thorough feedback, but they would also allow us to judge whether or not our subjects actually learned from the game. Additionally, we elected to test jeopardy with college students, in addition to high school students, because that was who we had greater access to. Furthermore, as the overall goal was to take a student who was not an expert on sustainability, and provide them with a fun experience that helped them learn more, we deemed that the age difference would not invalidate our data. Even so, we asked our subjects to attempt to channel their high school selves as they played the game and answered the questions.

### PRE-JEOPARDY QUESTIONS

Prior to the commencement of the game, we would open with an introduction to our project and a short ice breaker to ease our players into the experience. Then, we would separate them into breakout rooms and ask the following questions one on one:

- What does sustainability mean to you?
- How much do you feel like you know about sustainability?
- In what method do you believe you learn best?
- Do you enjoy experience-based learning?
- Do you enjoy friendly competition? Do you feel motivated by a challenge?
- Describe a time you were excited to learn at school.

### POST-JEOPARDY QUESTIONS

At the end of the game, our players would be sent back to their breakout rooms, along with their original interviewers, to answer the following questions:

- After doing this activity, do you feel your perception of sustainability has changed? If so, how?
- Describe your experience with this activity.
- What was the most enjoyable part of this experience?
- How could we improve this experience for you?
- After doing this activity, what would be your next steps in learning more about sustainability?
- Do you feel like this activity will impact the ways in which you engage with sustainability?
- Would you want to experience this with your friends at school?
- Based on your experience, what age range would you feel is best suited for this game?

Finally, we would share with them our key experience characteristics diagram (which will be further explained in the following section), and ask them two final questions:

- What are your thoughts on this division of activities?
- Do you have any activities you'd like to suggest?

# Testing

## *Qualities and examples of Sustainability Experiences*

### EXAMPLE: RECYCLING

During our team's research, we realized that our games, challenges, and field trips would have to be modified according to student age group, in order to be as effective as possible. Elementary aged students and high school students have different needs, and therefore require different structure to their activities. Students perform better with activities that appeal to their current learning capacity and goals.

Based on our research, we created a chart detailing the most important experience characteristics for each age group, which should be incorporated into the design of their respective activities. Additionally, we provided succinct examples of activities that adhere to the specified characteristics for each age group. We used the theme of recycling for the elementary and high school examples, in order to convey that, with the appropriate modifications, any idea can be applied to all age groups.

### *1st-5th*

EASY, QUICK,  
CREATIVE, INCLUSIVE  
HANDS-ON



Arts and crafts with recyclable materials

### *6th-8th*

CREATIVE, RELEVANT,  
APPEALING,  
RELATIONSHIP-  
BUILDING, LOW  
STAKES



Storybook about the lifecycle of something in your backpack

### *9th-12th*

CHALLENGING,  
INTENSIVE,  
COMPETITIVE,  
APPLICABLE,  
CUSTOMIZABLE,  
COMMUNAL



Compete to design/engineer with re-used materials



# Iterate

To test our assumptions, our team invited three groups, each consisting of three students, to play our Jeopardy game. The first two groups were college aged, and the last group was composed of high school students. Each time a group played, we monitored how each participant interacted with the game, then used their feedback to iterate on the jeopardy game. This allowed us to improve the overall experience of the game, as well as it's effectiveness in addressing our assumptions and the original problem we were trying to solve.

From each iteration of the game, we learned something new that greatly impacted the creation of our final deliverable.

## *Finding #1* EXPERIENTIALLY LEARNING PERSONALLY APPLICABLE INFORMATION CONNECTS PEOPLE TO SUSTAINABILITY.

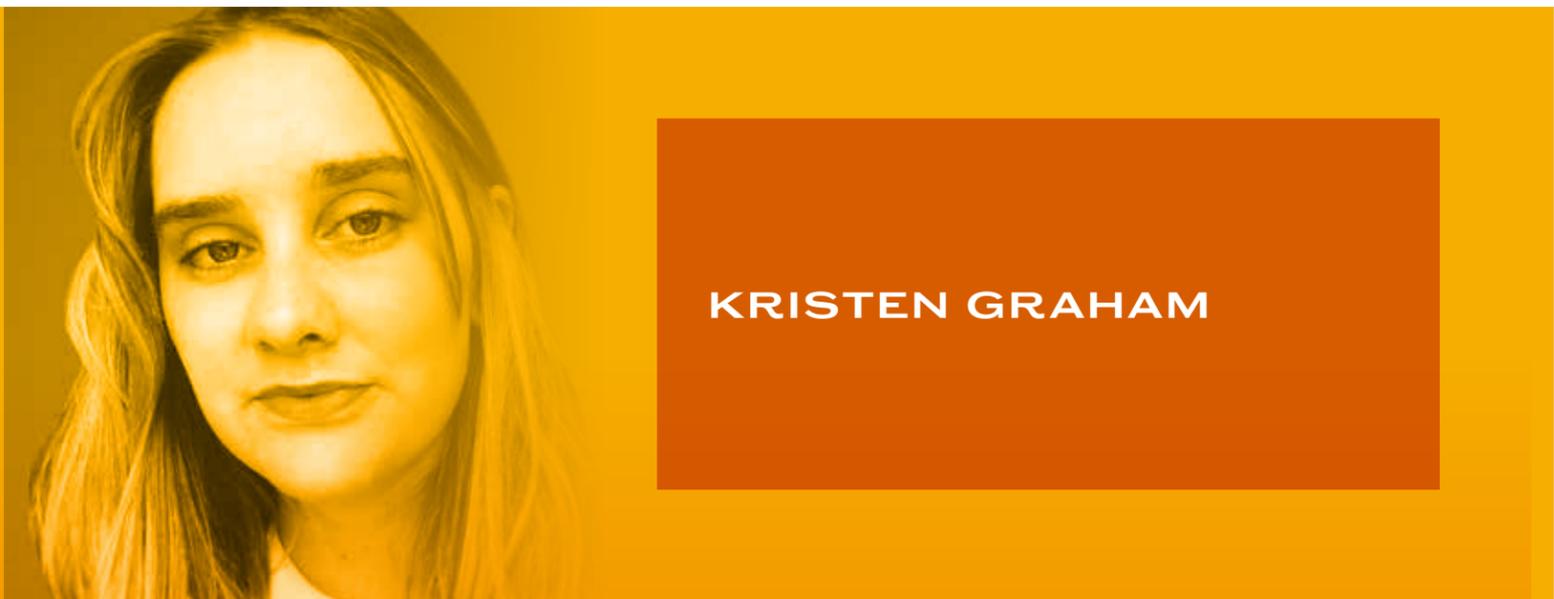
During the first iteration of the jeopardy game, we discovered that students are more likely to become engaged when they relate to the information they are learning. One interviewee in particular mentioned how he was inspired to change his house work habits after learning how much water is used by simple household chores, such as doing a load of laundry. In the same vein, we heard that the higher level categories, such as Sustainability Law, weren't as interesting to hear about, so we added additional, personally relevant facts to each question. That change allowed the second group of students to be even more engaged with the information they were presented with.

## *Finding #2* COMPETITION AND COMMUNITY MOTIVATES BETTER LEARNING.

This finding was reinforced in each iteration of the game. The element of competing against others, especially one's peers, consistently inspired the students to try harder when faced with a difficult question. Some students even sought out more challenging questions in order to increase their score. Their goal in doing this was to win the game and beat their peers, but in doing so, they were actually expanding their knowledge by challenging themselves.

## *Finding #3* CLEAR NEXT STEPS ARE NECESSARY TO CHANNEL CURIOSITY AND PERPETUATE CONNECTION TO SUSTAINABILITY.

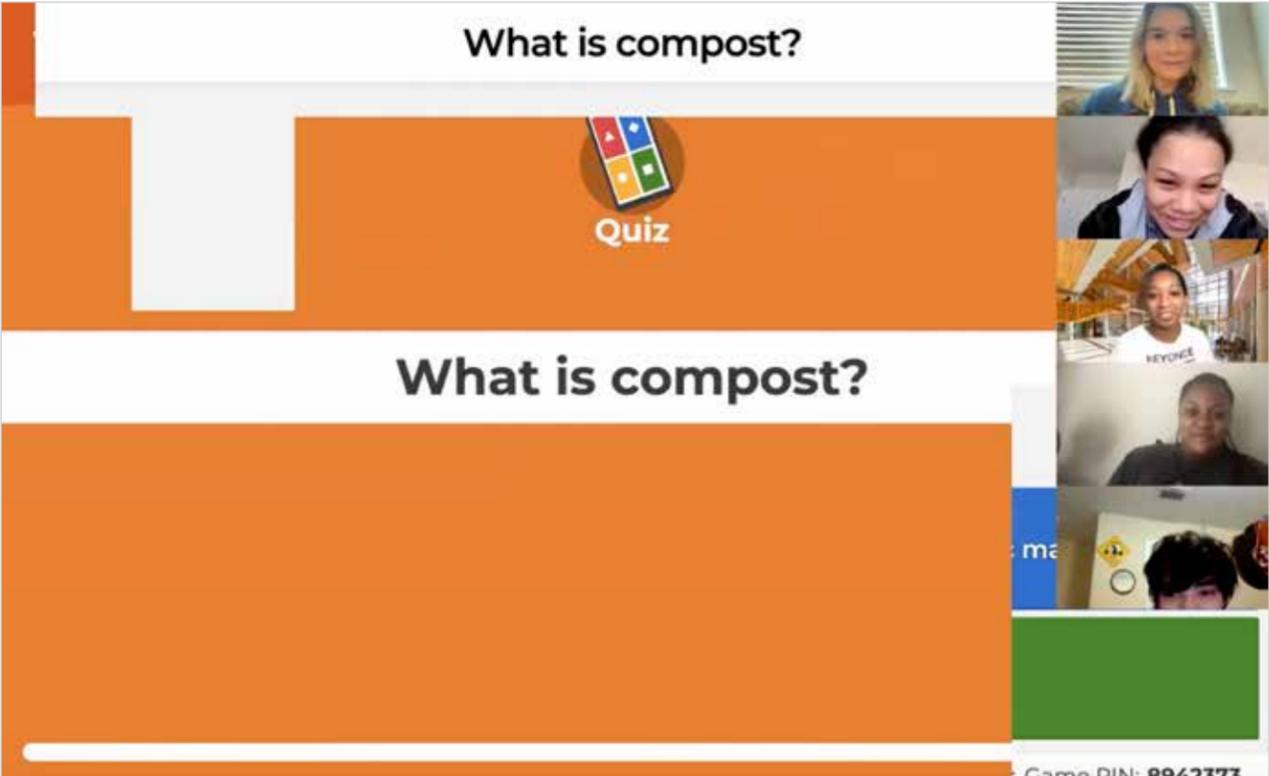
This finding wasn't clearly highlighted until our second iteration. Our first testing session revealed success in engagement, but after completing the second iteration, we noticed that students were eager to learn and having fun during the game, but were unsure how to learn more after the fact. Even as ramped up as the students were to learn, it can be difficult to know where to start without more resources to provide guidance. Ideally, in a curriculum, a game like this one would be played as a precursor to a larger lesson plan, in order to feed the interest developed during the activity.



Determined to gather a more in-depth understanding of how to utilize games and challenges in an educational setting, our team reached out to Kristen Graham. Kristen is a graduate student working towards her Master of Fine Arts at the University of Texas at Austin, and she is also a former middle school teacher. Currently, she is working on a project centered around the way students learn, and the impact of gamification in the classroom. Our team interviewed Kristen to find out more about her research, and what she's learned regarding the impact that lesson plan gamification has on students.

From our interview with Kristen, we learned several things:

- A) Working as a group in a collective mindset is beneficial for students' learning, as well as encouraging them to take charge of their own education.
- B) In current school systems, students are taught what to learn and how to learn. This forces students to focus on memorization, which is not a successful method of learning.
- C) When integrating games or activities into lesson plans, the way they are presented to students is important. If the activity appears to be more monotonous and not fun, students will be hesitant to engage. It is also important for activities to not require too many resources or additional training, so that they are not hard for teachers to implement.



# Iterate

## KAHOOT

Throughout our interviews with individuals who had tested our prototype, we learned that one game students particularly enjoyed throughout their education was Kahoot. Kahoot is a multiplayer learning game that allows users to take multiple choice quizzes via a website (which can be accessed on a cellphone or computer). Kahoot boosts student engagement, participation, and motivation through competitive, game-based learning experiences.

To test if this style of activity would be impactful with a sustainability topic, our team invited back the winners of our past prototyping sessions to test out a sustainability-focused Kahoot. Through this we saw that, even in a setting where students do not know each other, engagement and desire to learn through Kahoot was extremely high.

# Iterate

## CRITERIA

In addition to testing our assumptions, Maki encouraged us to take a moment to define specific criteria for what our prototype should accomplish. In our first pass at this, we formatted our major criteria into four questions:

- Does this **connect** students to sustainability fields?
- Does this **personalize** sustainability?
- Does this spur **curiosity** and **passion** for sustainability?
- Is this **fun** enough?

With these in mind, we voted on all of the activity ideas we had generated in our efforts to uncover a solution, and we landed on a challenge for who could collect the most litter. We then attempted to craft a condensed version of this activity that would not overly burden our test subjects or water down the intended learning experience. After spending a large portion of our meeting time debating the merits and drawbacks of every potential iteration of our littering challenge prototype possible, we took a step back and decided to revisit our prototyping criteria.

With regard to the problems we had just encountered, we added three more conditions:

- Does the implementation of this prototype leave us enough time to **iterate**?
- Does it stay true to the overall **goal** and **intention** of the activity?
- Can we garner a sufficient quantity of **participants** to test and give feedback on this prototype, so that our **data** will be viable for iterations?

These new guidelines now in place, we went back to the drawing board. It was there that we were reminded of the idea to create a sustainability-themed game of jeopardy, and determined that that would be the most effective way to accomplish all of our goals within our time and resource constraints.

# The Playbook

As is detailed throughout this compendium, our team identified long-term experiential learning as an ideal solution to EcoRise's problem. Thus, we wanted to provide them with a final deliverable that would serve two purposes.

First, it had to offer clear-cut demonstrations of the kinds of experiential learning that we believe will be effective, so that it could be immediately implemented as a resource for EcoRise teachers.

Second, we felt it was crucial to provide the building blocks of the former component, by way of both our discoveries through testing, and other supporting studies, in the hope that the possibilities for future growth and iteration of our deliverable would be limitless. The identification of these two critical components are what led us to our playbook. Within this book, we explain the purpose and benefit of experiential learning, illustrate the key elements that we identified, and provide a series of ready-to-go experiences for K-12 students of all ages.

Download the playbook at

<https://drive.google.com/drive/u/1/folders/0AOFDr775jTAaUk9PVA>



# The Playbook

## INSIDE THE PLAYBOOK

After the table of contents, we first provide a brief explanation of what the playbook is and what purpose it serves. Following that, we delve into the concept of experiential learning and why it is important. Page four defines and elucidates the key characteristics for designing an experience, broken down between elementary, middle, and high school aged students. Next, the activities. Pages five through nine provide explanations and instructions for the games and challenges that our team architected, once again separated by age group. Page ten lists three familiar games which we adapted to align with our goals of sustainability education, and which only vary by age group in regard to question difficulty. Similarly, page eleven details two field trip ideas, requiring only minor adjustments according to the age of the students. Lastly, we've included a series of experiential learning resources for the benefit of whoever is utilizing the playbook; one of the main pieces of feedback we received in our testing sessions was that the participants were amped up from the activity and wanted to learn more, but lacked a sense of direction as to where to begin researching on their own. This is something that teachers should keep in mind when making use of this playbook; time for follow-up reflection, questions, and/or research promotes greater success of the activities. Our references page serves to reflect this principle.

In addition to the two aforementioned primary purposes, we also kept some other key priorities in mind as we were designing this playbook. Former middle school teacher and current MFA student Kristen Graham taught us that it's important to be mindful of teachers when designing our activities. Teachers are under so much stress as is, so the activities should not be complicated to conduct, and they should include very clear instructions. Another huge factor we considered was accessibility. EcoRise has worked diligently to promote diversity and provide support to BIPOC students, so, as many predominantly BIPOC school districts are underfunded, we structured our activities to require as few resources as possible. For example, one of the games we included is Kahoot, which is typically played with a projector and many personal electronic devices, but we came up with a way that teachers could conduct the game with nothing more than a stopwatch and some pen and paper.

Our number one goal for this playbook is to teach students that, while sustainability is an important issue to be cognizant of, it is also personally relevant and can actually be fun to engage with. We believe that if this message is reinforced throughout a student's K-12 education, that foundation of what sustainability means will propel them through their journey to becoming a sustainability professional. Furthermore, it is our hope that this playbook may one day become available to every teacher, not just those affiliated with EcoRise, so that it can help to spur passion for sustainability within students from all walks of life.



## What's Next

Our playbook includes a variety of experience-based activities, and through our testing sessions with Jeopardy and Kahoot, we received a large quantity of detailed feedback that allowed us to iterate effectively. That being said, those were the only two games we were able to test over the course of this semester-long design endeavor. It is our belief that, because all of our examples are rooted in the same key characteristics, there is a high likelihood that they will see rates of success equal to that of Jeopardy and Kahoot. Nevertheless, we recommend conducting additional user testing on the other activities we've described, in order to gain insights that are specific to each individual game, challenge, or field trip. Additionally, if a greater quantity of activities is desired, we welcome anyone to utilize our design characteristics and make their own additions! Once EcoRise is satisfied with the breadth and efficacy of the activities in the playbook, all that remains is to give it to teachers and watch it work.

# PEARED

*A Mentorship Program*



# Project Overview

The concept of the Peared mentorship program stemmed from the core problem space of helping EcoRise students in their transition to post-high school opportunities and specifically answering: Where can EcoRise step in to level the playing field and enable all students to become self-starters who make a change in the green community?

To answer this question, our team leveraged design thinking processes consisting of user research, insight building, and solution ideation and prototyping.

This led to the creation of Peared, a mentorship program that matches a mentor and a mentee based on backgrounds and common interests.



# Meet Our Team



## RACHEL BRADLEY

*B.S. in Mechanical Engineering, December 2021*

Rachel believes design is important because it has the power to impact everyone's day-to-day lives - whether they realize it or not! During her time in college, she has served as an officer for the Texas Theme Park Engineering Group and plans to pursue a career in Themed Entertainment. Fun Fact - Team Maisie was named after Rachel's cat!



## KEVIN DAO

*B.S.A in Computer Science, May 2021*

Kevin believes design is important because of its ability to shape our everyday experiences. During his time in college, he helped organize HackTX while a part of the Freetail Hackers organization. After graduating, he's headed off to Boston to continue his career in design. Fun Fact - he fostered a little kitty last summer named Mochi!



## WIS ESCHER

*B.S. Advertising, May 2021*

Wis is passionate about design's exploration of the world through the eyes and the art of craft to draw deep human connections. In her UT experience, she was involved on the web team at Texas Rocket Engineering Lab, Creative Director at Texas Design Journal, and a member of Longhorn French Society, SPARK Magazine, eXtended Reality Alliance, and University Fashion Group. Next she is headed to New York for a design role in the tech industry. Fun fact - she is also involved in the fashion industry as a model!



## ANGEL JIMENEZ

*B.S. in Art and Entertainment Technologies, May 2021*

Angel believes design is important because it can greatly improve the outcome of a project, as well as creating ideas along the process. During his time at UT, Angel has been involved in many organizations, such as the Longhorn Band and the Mexican-American Culture Committee. He also received a minor in French and a certificate in Design Strategies. After graduating, he will be going into the entertainment industry and hopes to travel and learn more about the world. Fun Fact - Angel loves to play competitive video games.



## SER LEE

*B.B.A. in Management Information Systems, May 2022*

Ser finds design important because it has universal themes in problem solving which has helped her become more open-minded and creative. During college, she has been involved with Texas Enactus, a social entrepreneurship organization. She is headed into the tech industry this summer, and plans to continue being there full-time! Fun fact - she love to ballroom dance, especially waltz!



## DEVINA PARIHAR

*B.S. in Electrical and Computer Engineering, May 2021*

Devina believes design is important because it has the ability to shape people's beliefs, experiences, and decisions without them even knowing! During her time in college, some of the key organizations she was involved with included Design For America, Texas Design Journal, and the Responsible AI Institute. After graduating, she will be headed into the tech industry! Fun Fact - Devina loves plants and has a special affinity for moss and lichen.

# Stakeholder Research

During the course of our research, we were able to interview the following relevant stakeholders:

## RELATED PROFESSIONALS EcoRise, UT Austin, Industry



GAMAL



ABBY



BRIANNA



JEFF



MIKE



JORDAN

## STUDENTS 2 focus groups



## TEACHERS CityLab, Olathe HS

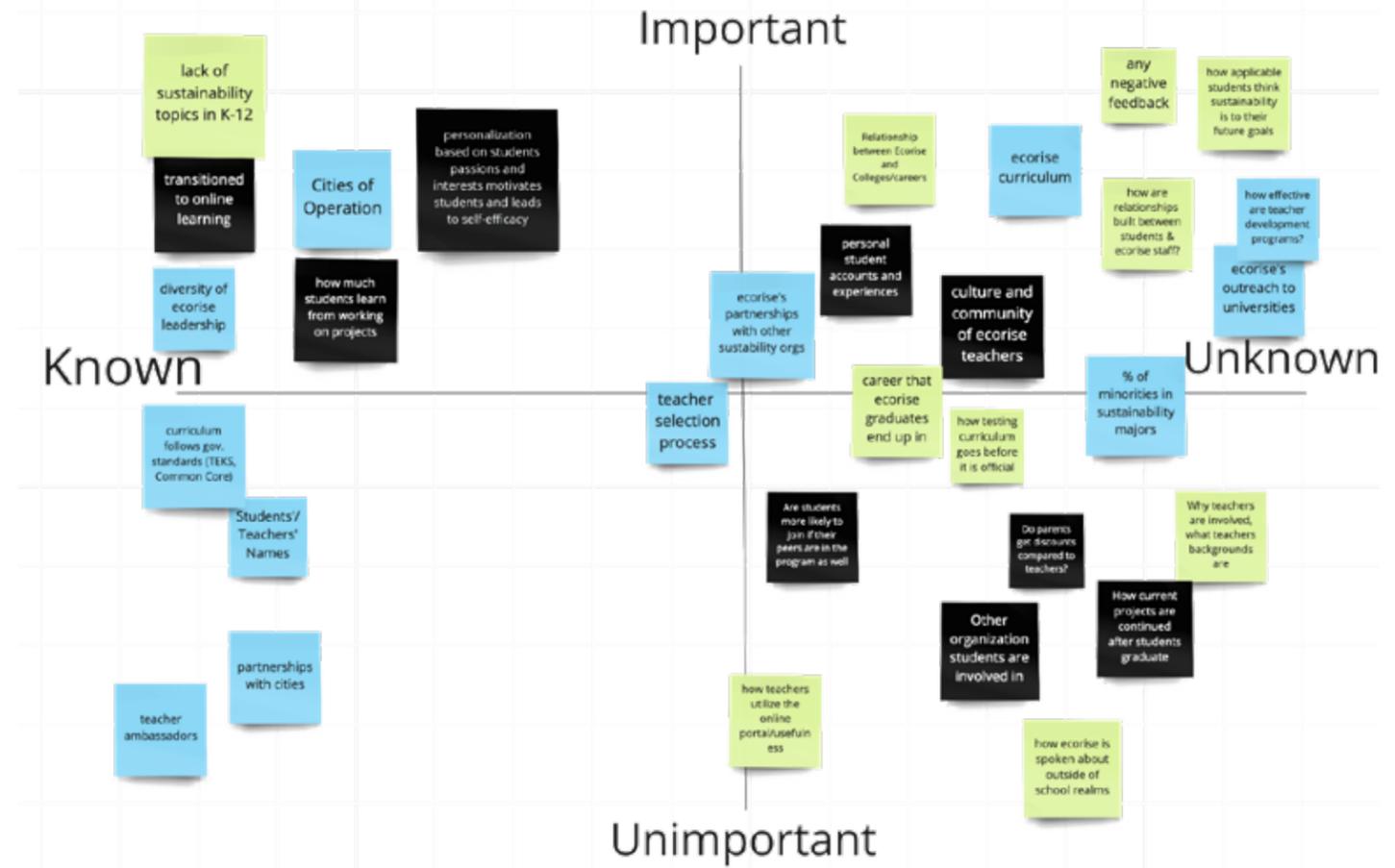


PETER



CODY

## Additional Design Method - Week 1 Assumption Mapping



## ASSUMPTION MAP

The team's first additional design method was the assumptions map. We had just gone through Stakeholder Mapping and were trying to understand the many different points of view that applied to our problem space. Our own thoughts were brought in to understand and answer questions we had about our client EcoRise. Thus, we started to map our assumptions by how important we thought the assumptions were and if those assumptions were known or unknown to us. We then categorize our assumptions into three

groups, desirability represented by black, viability represented by blue, and feasibility represented by green.

The map served as a growing field of located hypotheses our team could explore, implement, and gain further knowledge on our problem scope. It was a great reference point for checking off learned information as our project progressed, allowing direction to move forward.

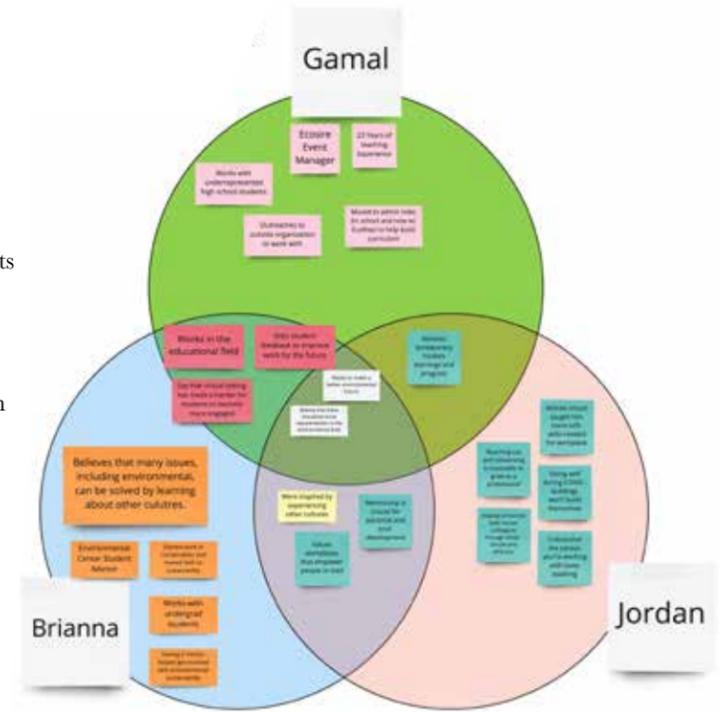


## VENN DIAGRAM

Half way through our empathize phase we had already interviewed some of our stakeholders, more specifically professionals. We had started to collect sets of data and in order for us to make a more concrete connection between what we had currently gathered and the issue we wanted to take on we needed a way to organize the data. Thus we used the venn diagram to compare and contrast ideas that were said during our stakeholders discussions.

We used data collected from Gamal Sherif, an EcoRise Event Manager, Brianna Duran, a UT student advisor for the Environmental Center, and Jordan Frazin, a former intern from the Center of Maximum Potential Building System.

The Venn diagram helped in creating some of our first insights that we would end up using. These important ideas were the ones all three of the stakeholders talked about. Some of the key ideas that stood out were that most of our stakeholders value a



workplace that empowers people to lead, they believe that bureaucracy hinders learning and progress, and that there should be more representation within the environmental field.

# Stakeholder Research

## STAKEHOLDER NARRATIVES

*“Studying abroad in Iceland cracked my view right open about how everything is connected.”*

**JORDAN FRAZIN** *Architect at Whole Systems Design Collective*

Both Jordan and Brianna reflected on their college study abroad experiences as starting their spark of passion for sustainability and environmental science. Having the opportunity to see how others live and how the environment impacts everyone differently was a very eye opening experience for both. Jordan and Brianna may not be in the fields they are today if it were not for those impactful and inspirational experiences.

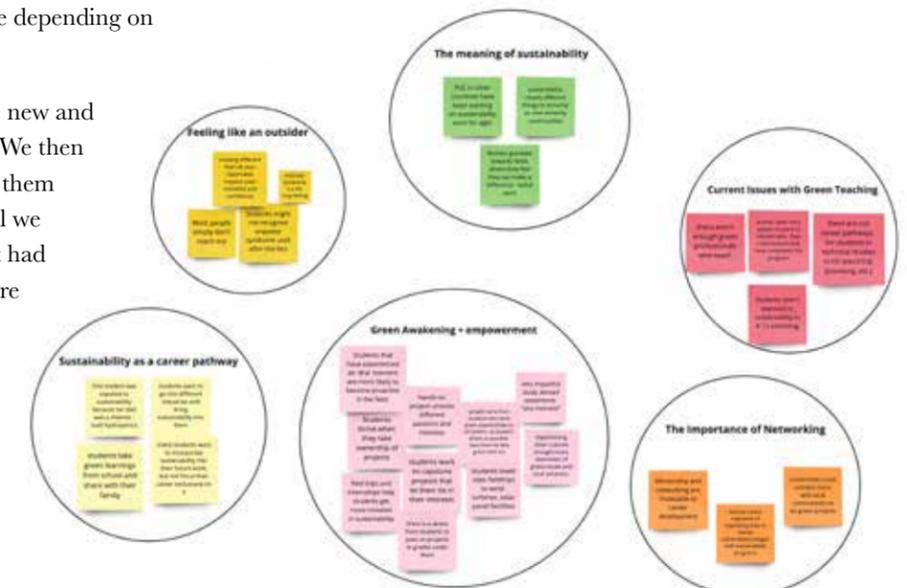
*“Communities of color across the world have been working on environmental work for ages... It was an ‘aha’ moment.”*

**BRIANNA DURAN** *Program Coordinator at the UT Campus Environmental Center*

## AFFINITY MAP

We later interviewed more stakeholders, including several groups of students. To organize all this data we decided to work with an affinity map. Unlike other design tools that might rely on organizing ideas in a predefined structure, the affinity map lets one observe data and create their own structure depending on what patterns one observes.

We started by placing many of the new and old insights that we had gathered. We then started color coding and grouping them in clusters. We kept doing this until we had a good amount of groups that had a specific theme. These themes were “Feeling like an outsider”, “The meaning of sustainability”, “Current issues with Green Teaching”, “Sustainability as a career pathway”, “Green Awakening + empowerment”, “The importance of Networking”, and “The importance of Networking”.



and empowerment”, and “The importance of Networking”. We used these groups to propel us into the next part of the design process, creating our insights.



# 1. IMPOSTER SYNDROME

*the sensation of not belonging*

Imposter Syndrome is common, especially within underrepresented groups in a white-male dominated space such as in green careers



# 2. A GREEN AWAKENING

There is a period of awakening that catalyzes people to take action in sustainable work.

Our Imposter Syndrome insight was born from our secondary research on under-represented groups in green careers. Statistics showed that while individuals of color made up 36% of the US population, they only made up 16% of the staff in numerous surveyed environmental organizations.

This led us to wonder - how might a sense of belonging factor into the underrepresentation of people of color in green fields?

*“It felt like I was almost running a race - **it felt like everyone had a head start, and I had to work to catch up.**”*

**JEFF J.**

Students who lack exposure to opportunities are often overwhelmed by the experiences and accomplishments of their peers.

*“Most non-profits skew towards light-skinned middle-class folks... **we want to make sure we are getting diversity.**”*

**GAMAL S.**

To see yourself represented in the industry you want to work in, makes that industry that much more approachable.

Our Green Awakening insight was directly inspired by one of our strong stakeholder narratives from Jordan and Brianna, which can be found on pages 78.

*“Studying abroad in Iceland **cracked my view right open** about how everything is connected.”*

**JORDAN F.**

*“Communities of color across the world have been working on **environmental work for ages...It was an ‘aha’ moment.**”*

**BRIANNA D.**

Our interviewees reiterated how experiences such as studying abroad or visiting a solar panel plant stirred their passion for sustainability and inspired them to devote their career to bettering the planet.

Through our focus groups with high school students, we found that the majority had little-to-no exposure to sustainability growing up. This was a huge opportunity for our team moving forward.



### 3. MENTORSHIP

Mentorship is extremely valuable for young minds going into post-school life.



### 4. THE POWER OF NETWORKING

Time and time again, our interviewees echoed how invaluable connections were to their personal and professional growth.

Upon completing their first mentorship session, a student exclaimed:

*“I actually got a lot more out of this than I thought! Thanks for talking with me.”*

*“This IS normal, this WILL happen to you freshmen year. It’s normal that you feel this way.”*

JEFF J

This is what Jeff explains to incoming university students - and this is the **perspective and guidance** mentors could provide to their mentees.

Mentorship is valuable because each mentor **passes along tips and strategies** to overcome challenges in university and recruiting. Mentees also gain **support and guidance** for future goals.

Jeff brings seniors to university campuses to show them what an actual classroom looks like. This experience “breaks down so many barriers because...”

*“It has them thinking ‘I wanna go to college right now. I can understand what the professors are talking about.’”*

JEFF J

Mentors continue that work by making university and green careers within actual reach for students.

Time and time again, our interviewees echoed how invaluable connections were to their personal and professional growth.

For instance, Jordan explained how networking impacted his life and allowed him to gain mentor and career opportunities.

*“I kept in touch with my professor at Oregon University, where I did my training. **Through a connection I made**, I took a job in Bellingham where I had **a great mentor**, which is the number one thing I look for.”*

JORDAN F.

After we asked Jordan for advice on networking, he responded, “people find it flattering when you ask them for advice,” and that students have to be “willing to seek out experts and people [they] want mentorship from.”

This insight was continually reinforced, proving to our team that networking could be a powerful tool if wielded properly.



## 5. STUDENT EMPOWERMENT

Students taking the lead and initiative in their projects promotes green-learning



## 6. HANDS-ON ENVIRONMENT

When students were given full ownership of a project, they stepped beyond their comfort zone and pushed forward bold ideas, bolstering growth.

When students were given full ownership of a project, they stepped beyond their comfort zone and pushed forward bold ideas, bolstering growth.

This idea was reinforced by a quote from Cody, a high school teacher at Green Tech Academy in Olathe West High School.

*“Growth came from students who were given **opportunities to be leaders.**”*

**CODY J.**

Another one of our stakeholders from the UT Office of Sustainability, Brianna, mentioned that a huge perk of her organization was that students could take full ownership of their projects with zero micromanagement.

With great power comes great responsibility, and with great responsibility comes great learnings.

*“The whole environment is a very **tactile** place where you can **interact with sustainability practices...** They are right in front of your face - touch them, learn about them, use them... I realized how **powerful** that can be.”*

**JORDAN F.**

Stakeholders such as Jordan reiterated that they learned the most while outside the classroom, tinkering with different materials in their environment, and overall engaging in a tactile environment.

This ties closely with our Green Awakening insight, which also emphasizes the value of leveraging experiential learning as a mechanism for growing as a green professional.

# Ideate

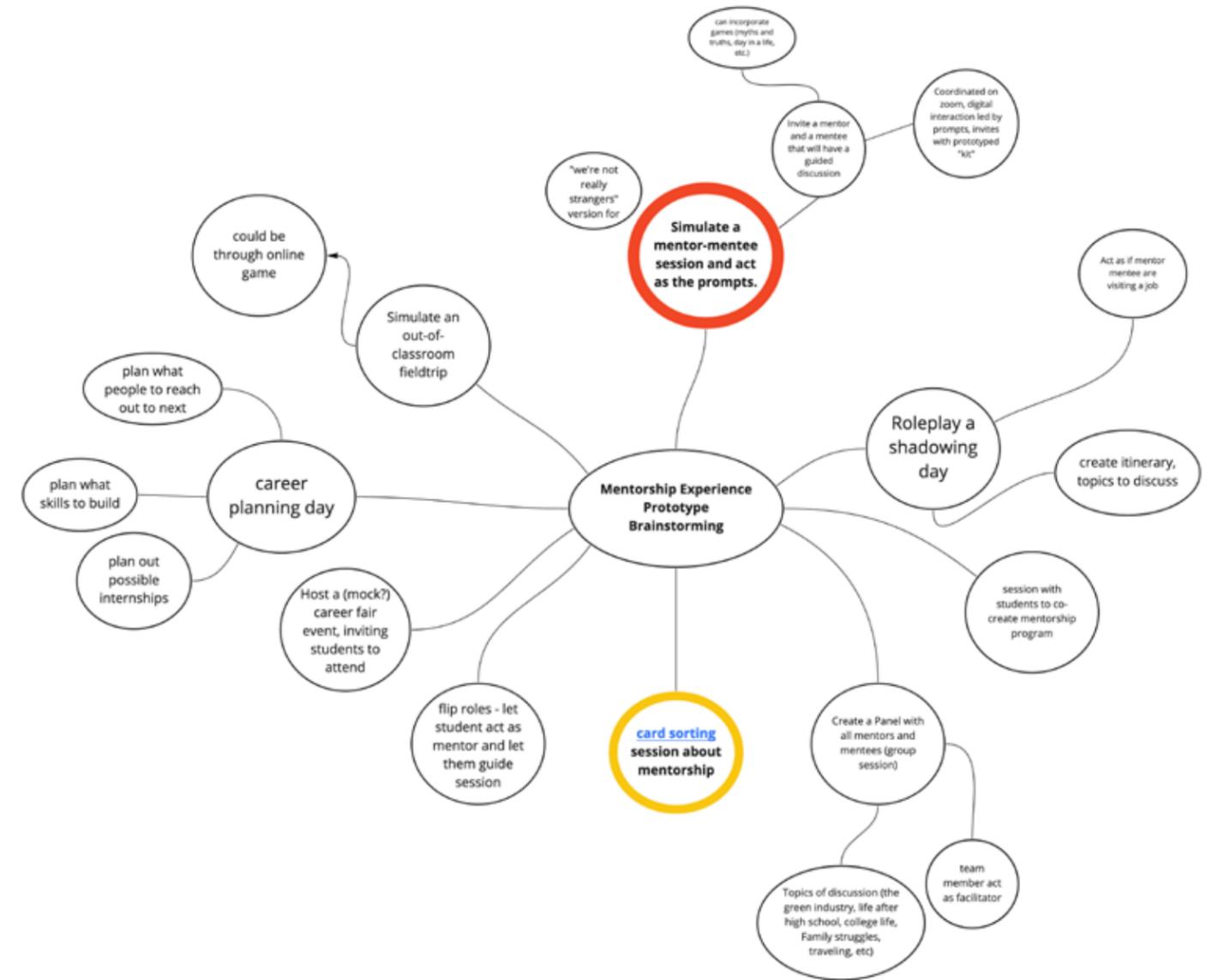
## PRIORITIZATION GRID

After defining our insights we started brainstorming ideas for a potential prototype. At first, these ideas were just that, ideas, we had the freedom to come up with any possible ideas with no time, money, or resources restrictions. However, we then needed a way to organize these ideas, so we decided to plot them on a prioritization grid.

The prioritization grid is an xy grid that lets one organize sets of data by prioritizing the most potentially useful sets of data. We set the x-axis as "Feasibility for the team". Would we be able to prototype this idea with the time end resources we had? And the y-axis as "Value to the User". How valuable would this idea be to accomplish our goal, improving the experience of an Ecorise high

school student's transition into higher-ed or the workforce?

This method helped us see which ideas were the most useful and filtered out impossible or impractical ideas. For example, some of the high prioritizing ideas included a networking bond between mentor and mentee with similar backgrounds, and an organized kit that would help students in their transition into post-graduation plans. Part of some of the low priority ideas were still benign to our solution and helped reinforce our solution. For example, many ideas included mentorship between like-minded people. The prioritization grid helped be a step closer to having a prototyping idea.



## Additional Design Method Prioritization Grid



## MIND MAP

We then used a mind map to narrow down our brainstormed ideas and solidify a prototype idea. The mind map method begins by creating a central idea that the entire ideation session bridges off of. This central idea goes, you guessed it, the center. This is the jumping-off point. The goal after is to write down and make pathways of bubbles that grow from this central point, creating webs of thoughts and ideas, that flow into new clusters and create categories.

Our central idea was Experience Prototype Brainstorming. We then connected several of our potential ideas to the overarching goal and individually expanded on them by adding and connecting more bubbles. Afterwards discussing as a group and expanding on some ideas we decided on creating a mentorship program (outlined in red) and added card-sorting (outlined in yellow) as a bonus to our prototype.

# Concept

Peared is a mentorship program that matches a mentor and a mentee through surveys to align based on backgrounds and common interests. There is also a reflection survey that reaffirms the success of the match, where our matching resulted in 100% of “Yes” responses to the question “Do you feel aligned with your match?”, based on the results from participants in our testing sessions.

Our concept reflects the necessity of there being a comfortable space for the pear to have as

found through our insights and prototyping. The solution encompasses continuous touchpoints over the course of 7-8 months, guided sessions with discussion and reflection materials, and experiential activities to engage the mentor and mentee for an all-encompassing solution to provide an avenue for confidence growth, leadership, and a career trajectory.



PICTURED: The matching components imagined digitally in the way we tested, adapted from the Google Survey Forms. Shown on the left and right screens are Mentors (referred to as peareds) and student Mentees (referred to as peareds) surveys, the middle shows the reflection survey along with reflection materials and notes.

As our design solution grew from the roots of a matching philosophy, the concept became a branded vision called Peared. With EcoRise’s sustainability and inspirationally lead identity, we embodied the environmental aspects into the brand name with the mission being to foster fruits

of knowledge in sustainability careers and personal development, eliciting positive feelings of growth and a metaphorical connection between seeds representing the pears fruitfully growing along the way.



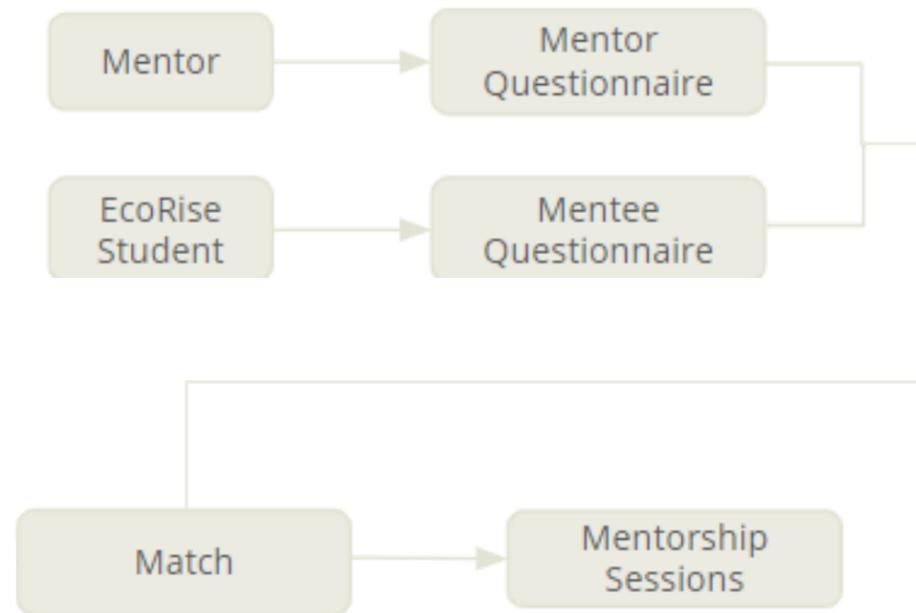
PICTURED: The physical version of the materials envisioned, showcasing the stationary, including a survey, roots & fruits cards, and an itinerary guide called “planting seeds”. These materials will guide sessions, progress, and experiences.

# Prototypes

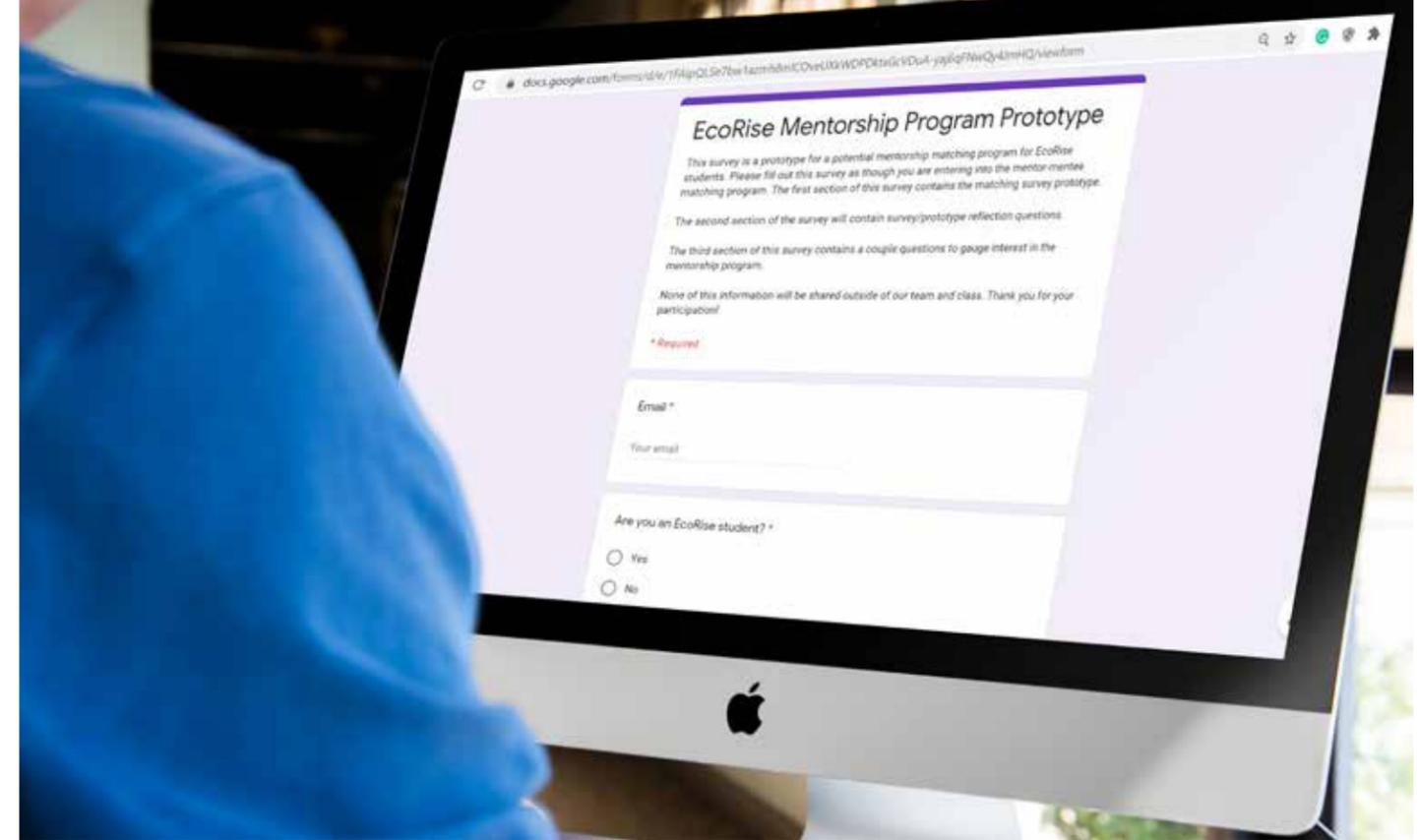
## METHODOLOGY

First, we had a survey which served to simulate the matching process. Second, we prototyped what the actual mentorship session would look like through a guided itinerary. Third, we led the matched pair through a guided reflection of the session to get feedback and understand mentorship values.

*\*College Students, Industry Professionals, Academia\**



*\*interests, professional goals/journey, background\**

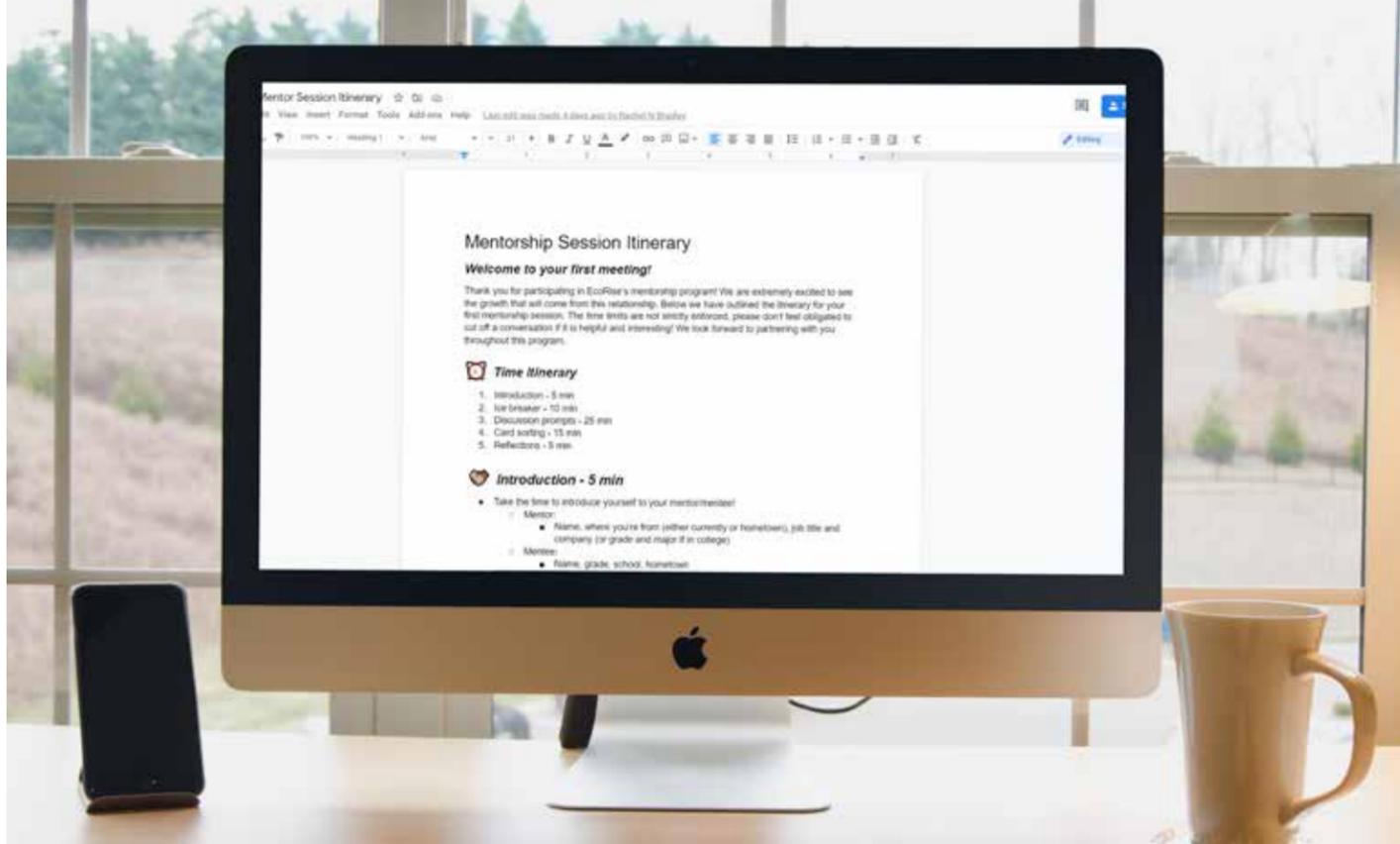


PICTURED TOP LEFT: The Google survey, given to both the mentor and mentee, shown as a mockup.

## SURVEY: SIMULATING A MATCHING SERVICE

A core component of our solution is that the mentor and mentees will be paired (if indicated that they wish to be paired) based on interests, goals, as well as other background information (gender, race, first generation student, etc). We found through our secondary and primary research that representation and having a pair who may have shared similar experiences with each other in mentorship can play a very important role for underrepresented populations in certain fields, such as green careers.

We simulated this matching component as a prototype through Google Surveys with dedicated surveys/questionnaire for prospective mentors and mentees.



# Prototypes

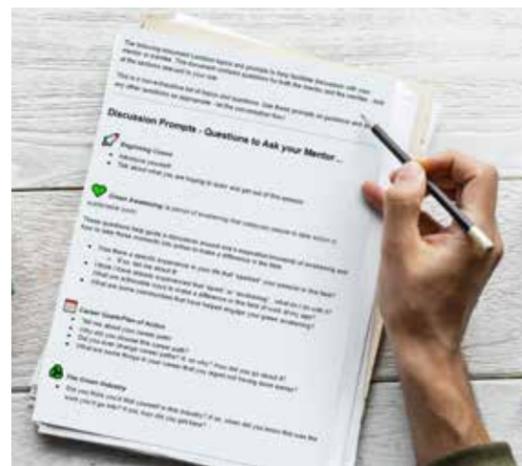
## MENTORSHIP SESSION

The session itinerary, provided to both the mentor and mentee, shown as a mockup

For prototyping the mentorship sessions, we recruited both students from the stakeholders we talked to be mentees as well as UT students involved with the office of sustainability to be mentors. We directed them to complete our prototype matching questionnaires described previously, and our team used these responses to match 5 mentor-mentee pairs.

We conducted the prototype mentor sessions with these 5 pairs over Zoom and had one of our team members lead the session with each of the pairs.

Prior to the session, we gave each pair a mentorship session itinerary (shared through google docs) as well as a discussion prompt sheet with questions derived from some of our research



insights to provide guided discussion if needed. Our team member present in the mentorship session led an icebreaker activity to begin with, however, for the actual discussion part of the session between the mentor and mentee the team member had their camera off and stayed as an observer until it was time for the reflection exercises.

The discussion prompts sheets we provided both the mentor and mentees prior to the session, shown as a mockup above).

## PROTOTYPE SESSION REFLECTION

One of the reflection exercises, card sorting, shown as a mockup (left).

The session reflection served as both a way for our team to gauge how the session went, but also as a way for the matched pair to understand what parts of mentorship they value as well as obstacles in the way of a fruitful mentorship.

### Card Sorting Activity

We led each matched pair through a card sorting exercise, conducted through a shared google slides document, in which the pair individually placed and ranked cards with different “mentorship values” from least to most valuable to them. Similarly, we conducted a second card sorting activity in which the pair placed cards with different “obstacles to mentorship” on a scale of “this is not an issue for me” to “this is a large complication/hurdle”.

### Prototype Reflection Questions

Lastly, In order for our team to better understand how the prototyped mentorship session went and could be improved, we asked the paired match a series of questions regarding how they felt about the match, thoughts on the session and guidance materials, what they would have liked more of in the session, and so forth.

# Prototyping Takeaways

## MATCHING QUESTIONNAIRE PROTOTYPE

Prototyping a matching service through google surveys was quite effective in understanding what questions were helpful and seeing if based off of the question responses we were able to make a solid mentor-mentee match. We did not get the chance to refine the matching survey questions based off of feedback, which would be a good next step.

## MENTORSHIP SESSION PROTOTYPE

Prototyping a mentorship session was a really interesting experience for our team as well as our participants. It essentially was like a real single mentorship session that we got to sit in on and take notes about the pair's interactions. It was great to see that the mentorship session prototype was something that our participant mentor and mentees also enjoyed, which is a good indication of the concept in general.

# Next Steps

This semester, Peared created a foundation for the mentorship program concept, including an MVP and prototype sessions to validate the idea. Moving forward, Peared wants to continue blossoming the project by continuing its work in...

1. Prototyping
2. Networking
3. Creating Peared experiences.

### Prototyping

Future testing sessions should include former Ecorise students and industry professional mentors for feedback.

### Networking

We want to start developing the network of potential participants of Peared. Such individuals would include teachers who would be interested in having their students involved with Peared, as well as individual students who want to become mentees. Potential mentors include professionals and former Ecorise students. Peared would be a rewarding way to reengage former Ecorise students back into the Ecorise community and give value to current Ecorise students.

### Creating Peared experiences

From our survey of over 40 responses, the majority of students were interested in field trips and experiential learning meetings through a mentorship program. The team should continue creating event/meeting ideas for its mentee/mentor "pears."

### Career Planning Ideas

- Creating 5-10 year roadmap for the mentee with suggested goals and milestones
- Help mentee develop personal objective or mission statement using their skills, interests and passions
- Read and discuss articles related to professional goals or interests

### Field Trips

- Tour of mentor's university or office + lunch
- Visit to recycling/water facilities
- Volunteering



# Acknowledgements

This project would not have been possible without the help from several different individuals. We would like to thank Gamal Sherif, Abby Randall, and Brittany Jayroe from EcoRise for their partnership throughout the entire semester. We would also like to thank Jordan Frazin, Brianna Duran, Mike Gutierrez, and Peter Goldstein for setting aside time for us to interview them as it gave us invaluable insight. A special thanks to Cody Janousek and Jeff Jones for not only allowing us to interview them, but for giving us the opportunity to speak with their students as well. Thank you to Srikari Punyamurtula, Shreya Kabra, Izi Munera, Jack Rouse for participating as mentors in our prototype sessions and to Sheryl Bradley and her students at Trivium Academy for participating as mentees. Finally, we would like to send a huge thank you to Gray Garmon and Katie Krummeck for their outstanding leadership, support, and encouragement throughout the entire semester. We would not have been able to do this without you!



PUTTING  
SUSTAINABLE  
FUTURES IN  
REACH AFTER  
SCHOOL



# PROJECT OVERVIEW

Over this past semester, we had the fantastic opportunity to work with EcoRise in our senior design capstone. What started as a project centered around connecting high school students to future career opportunities in sustainability turned into a quest to build a long-lasting community and toolkit for students to lean on as they personalized their career journeys. We began our work diving into the nitty-gritty details of sustainable careers, high school logistics, and EcoRise programming. We then began interviewing a wide array of stakeholders from high schools, colleges, and professional communities to learn about how different individuals tied sustainability into their lives. As the semester progressed, we developed concepts that slowly transformed into our culminating product idea: Rise Club, a student-led high school club designed to give students the tools, resources, and community they need to create fulfilling careers with a core theme of sustainability.



# MEET OUR TEAM

Hi! We are Team SUP3R, a group of seniors from The University of Texas at Austin with a mix of interdisciplinary majors and backgrounds. This semester we worked on a project with EcoRise to support high school students in their program to transition to careers or higher education in sustainability. Just as we learned so much about the challenges faced in sustainability and the high school experience by empathizing with various individuals throughout the semester, we hope that sharing our journey through this project will be just as informative.



## ALBERT ESCOBEDO

Hello! I'm Albert Escobedo. I am a 4th-year Arts and Entertainment Technologies major working on a certificate in Design Strategies. In my free time, I produce and compose audio for different mediums such as video games and films and lead a human-centered design organization called Design For America - UT Austin. When I graduate, I plan to pursue a career in UX Design, product design, or project management.



## ALICE TIAN

Hi, I'm Alice! I'm a senior Management Information Systems major at UT Austin, interested in pursuing a career in user experience design or research after graduation. Outside of class, I like to do anything arts-and-craft-related, including bullet journaling, sewing/embroidery, and jewelry making. After graduation, I will be staying in Austin (yay!) and joining Dell Digital Design as a Product Designer.



## AROOJ SHEIKH

Hi! I'm Arooj, a senior Marketing major and Design Strategies certificate student at UT Austin. I love traveling, learning languages, and trying new foods. I'm the author of "The Fundraising Strategy Playbook: An Entrepreneur's Guide To Pitching, Raising Venture Capital, and Financing a Startup." I'm an international keynote speaker and startup advisor that speaks on entrepreneurship and fundraising strategy.



## CHINMAYEE KULKARNI

Hi! I'm Chinmayee, a senior Computer Science major with minors in Business, Design Strategies, Entrepreneurship, and Informatics. When I'm not in a class, I love to sketchnote, DIY, and cook. My hobbies and coursework focus on bringing creativity and joy to what I make. After graduation, I will be collaboratively innovating and building the next generation of tech products and features as an Associate Product Manager at Google.



## CHRISTINE HUYNH

Hello! I'm Christine, and I'm currently a senior studying Advertising and Design Strategies. I love exploring new coffee shops, sewing my own clothes, and getting to know people! I'm great at roasting potatoes, I'm pretty terrible at running, and I'm learning to be a better designer and a better friend. After graduation, I'll be a user experience designer at Capital One in Plano, Texas, and hope to design things that create better experiences and behaviors, and in turn, better relationships with ourselves, with others, and with the world to come.



## SCIA VERMA

Hello! My name is Scia (pronounced Seeya), and I'm a 5th-year mechanical engineering major pursuing a certificate in Design Strategies. I am passionate about finding the intersections between creativity and technicality in my work. I also love playing with my 9-year-old Shih-Tzu named Wookiee, designing graphics on Illustrator, theorizing about Marvel movies, and setting out to make cookies but eating all the cookie dough instead. After graduation, I hope to make the world a happier place as a project manager in the themed entertainment or construction industries while also volunteering with humanitarian and animal rescue organizations!

# THE DESIGN PROCESS

- 1. EMPATHY** We start by familiarizing ourselves with the people we are designing for through interviews, secondary research, and a lot of absorption of new perspectives.
- 2. INSIGHTS** We then take all that we learned and pull the most critical findings out to form insights that guide the rest of our process.
- 3. DEFINING THE PROBLEM** After identifying insights, we further highlight our users' exact problems and where we might design to improve their experience.
- 4. IDEATION** We then moved to brainstorm and develop a range of solutions and ideas that could potentially work and benefit our users.
- 5. PROTOTYPING** Then, we put our ideas and assumptions to the test as we return to our users with a prototyped experience and see where our solution is good and where it needs a tweak, change, or pivot.

# EMPATHIZING



As we began our design journey, we were so excited to dive right into it, but we were acutely aware that we were not the stakeholders here through our previous design experiences. To truly understand the problem, we had to research the context and speak with those experiencing the pain firsthand.

We performed secondary research and looked into current EcoRise programming, sustainable careers, and the high school to college transition to gain background context. We looked from educational curriculum to professional databases to formal research reports to our team's favorite Reddit / Twitter threads, among other sources. This analytical and strategic approach allowed us to develop a solid understanding of the space we would be working in and allowed us to create deep, probing questions for our interviewees.

After a few weeks deep in the trenches of secondary quantitative and qualitative data, we were ready to venture out and speak with real people. We contacted the high school and college students, EcoRise staff, and other sustainability professionals to hear their current problems, their life journeys thus far, and their goals for the future.

A mission that started as connecting students to future opportunities in sustainability became more about the process of finding clarity in ambiguity. This problem hits home for a lot of us college seniors right now.

## SECONDARY RESEARCH

We created a set of research objectives to create a more focused approach to our research process. We wanted to know what the college application process looked like, what kinds of online discussion was happening around the topic of jobs in sustainability, and what options were available for students looking to pursue a career in sustainability.

We learned that applying to colleges can be a daunting one as there are not many resources at individual schools to support every student. We learned that the average school usually has about 471 students to 1 counselor. This ratio is not nearly enough to account for students' many diverse experiences and interests, hoping to be successful as many counselors take a "one-size-fits-all" approach to college counseling.

Our digital ethnographic research looked at online forums such as Reddit subreddits and Facebook groups focused on careers in sustainability, such as r/Environmental\_Careers and the Green Jobs Network Facebook group. These online groups were beneficial at pointing out resources and creating a community for those that wanted to pursue a career in sustainability. One fascinating point that we found from looking at all these forums was that there were many perspectives and avenues for people to take when pursuing a career in the environmental industry. We learned that sustainability was an expansive field. Many people are online and in-person willing to share resources and advocate for others to navigate a path into the sustainability field.

Our foray into this world led us to look at what was immediately available to students right after high school. We looked at the different jobs and skill requirements for a wide range of entry-level jobs. We found many vocational opportunities and white-collar jobs needing a wide range of technical proficiency and soft skills. There were many opportunities to incorporate sustainability into a career, but we needed to understand how to bridge the gap between students and employers.



## STAKEHOLDER STORIES

We were privileged to hear incredible stories from our interviewees. All of their journeys helped shape our design work and overall end product, but those of Lesly, Megan, and Henry resonated with us most.

### LESLY NAVARRO

Lesly Navarro is a Freshman at Abilene Christian University majoring in Mechanical Engineering. She grew up in Stony Point and has always had a deeply-seated passion for improving the living conditions of her home community. As a first-generation college student, Lesly is determined to lift her family out of poverty. That motivation has driven her to utilize the resources and opportunities she has found through EcoRise as entirely as she could. Lesly is continuing her EcoRise project to improve her town's water quality from high school in a summer internship with EcoRise in the coming months. Her particular story resonated heavily with our team because, despite all of the hardships she has faced, Lesly continues to serve as a shining example of how students can succeed if provided the access they need to tangible resources, rewarding opportunities, an inspiring community.

*“The best thing [EcoRise] asked me was what can I help you with?... I loved the panels, mentors, and accountability structure.”*

### MEGAN HARRIS

Megan Harris is a Senior at The University of Texas at Austin, majoring in Environmental Engineering & Spanish while also participating in the Liberal Arts Honors program. She grew up in San Antonio, admiring the surrounding wildlife in hikes and participating in outdoor activities such as water sports and camp counseling. Her studies and travels have inspired her to learn Spanish. Megan is a true interdisciplinary from her diverse interests and coursework. Megan admires the beauty of nature and wants to work to preserve and harness it with her interest in hydrology. We learned from Megan that a diverse range of impressions derived from personal experiences and relationships could heighten a sense of direction when looking for a career to pursue. We also gained an insight that direct parental influence through support can have a substantial impact on a person's future pursuits.

*“Throughout four years, you just pick them up (experiences), as long as you're looking for them... It's all about trying new things.”*

*“It makes you feel good that there are people who are doing the same things you are... Working with engineers, seeing that it clicks for them, it builds a sense of community.”*

### HENRY HAMMOND

Henry Hammond is a Geography and Sustainability Studies academic advisor at The University of Texas at Austin. He graduated from Central Michigan University with a Bachelor's degree in Psychology and a Master's Degree in Educational Leadership & Student Affairs. As we heard Henry's life story, we learned how being African American impacted his life, from talks with his mom to the available opportunities. In his interview, Henry delved into the nuggets of advice he provides to his students that we extensively brought into our design work and experiences beyond the classroom.

*“One of the best things to do is just go for it.”*

*“More experiences = more empathy = the closer you are to being an actualized human being.”*

*“Every experience that you have is giving you more knowledge than you had before.”*

# DESIGN METHOD FEATURE

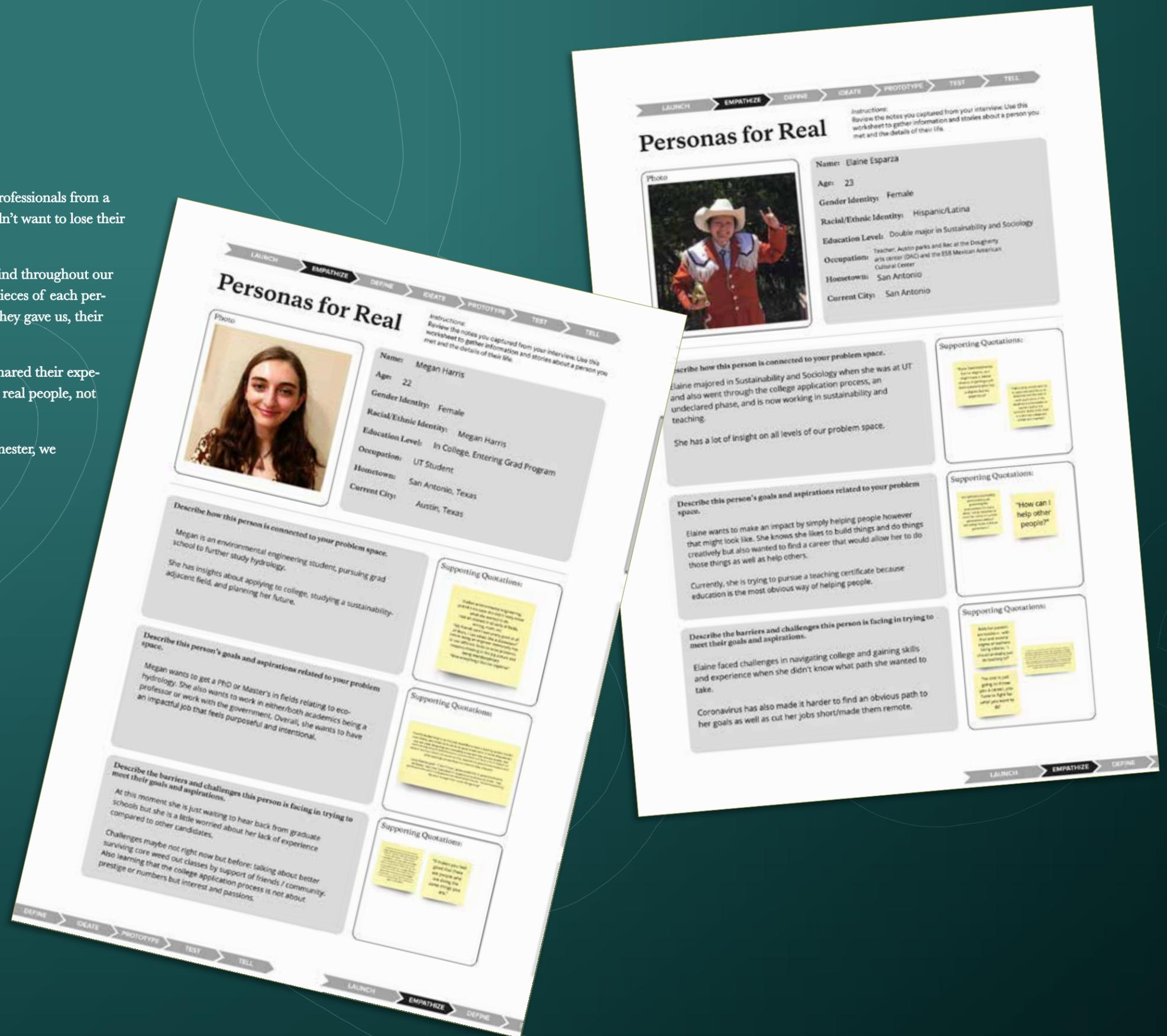
## PERSONAS FOR REAL

After all of our rich and insightful interviews with students all over campus, professionals from a range of industries, and high school students with varying experiences, we didn't want to lose their stories or dilute them in any way.

Personas for Real is a design tool used to keep our users human and top-of-mind throughout our design process. Instead of categorizing our users and just capturing bits and pieces of each person, we made each interviewee their persona worksheet to recall the insights they gave us, their journeys, and how we might be able to design for them.

Using Personas for Real allowed us to retain the humanity of everyone who shared their experiences with us and pushed us to remember that our design work is impacting real people, not just made-up names and faces.

school experience by empathizing with various individuals throughout the semester, we hope that sharing our journey through this project will be just as informative.



# ANALYZING & SYNTHESIZING

By now, from our secondary research and interviews, we had a cornucopia of data, ideas, and stories. While each individual offered valuable information on their own, as our team collectively reflected on our newest findings, we began to see commonalities emerge. Moments of convergence and divergence were formative components of our work moving forward.

## INSIGHTS

**1. EARLY EXPERIENCES HAVE A SIGNIFICANT IMPACT ON STUDENT'S MOTIVATIONS AND INFORM THEIR DECISIONS TO ADDRESS THE PROBLEMS THEY WANT TO SOLVE.**

Through our interviews, we learned about 'aha' moments. Small snapshots served as the motivating factors behind them choosing the path they are currently taking now.

For example, Lesly Navarro, a college freshman at Abilene Christian University majoring in Mechanical Engineering, initially became involved with EcoRise because she wanted to improve the poor water quality in her hometown.

She told us, *"I come from a small town called Stony Point. Our water source is a creek in the area that has trees, branches, leaves, animal feces -- all the 'good stuff.' I want to improve the water quality for my hometown, and I'm in EcoRise to make my project a reality."*



# INSIGHTS

## 2. SUSTAINABILITY AND EQUITY ARE INHERENTLY TIED TOGETHER, AND ESSENTIAL RESOURCES ARE OFTEN INACCESSIBLE FOR THE STUDENTS WHO NEED THEM THE MOST.

In working with EcoRise, we learned that schools from low socioeconomic areas often did not have access to the same resources or the personalized assistance they needed to forge meaningful future pathways.

Our secondary research learned that low-income schools often had one career counselor dedicated to serving 400-500 students, whereas other schools had one career counselor for about 20-30 students. This disparity means that many students may simply not be aware of opportunities that best suit them.

*“Resources are not universal to everyone in high school. There weren’t any resources outside of proactively reaching out.” - Ansh Naikele*



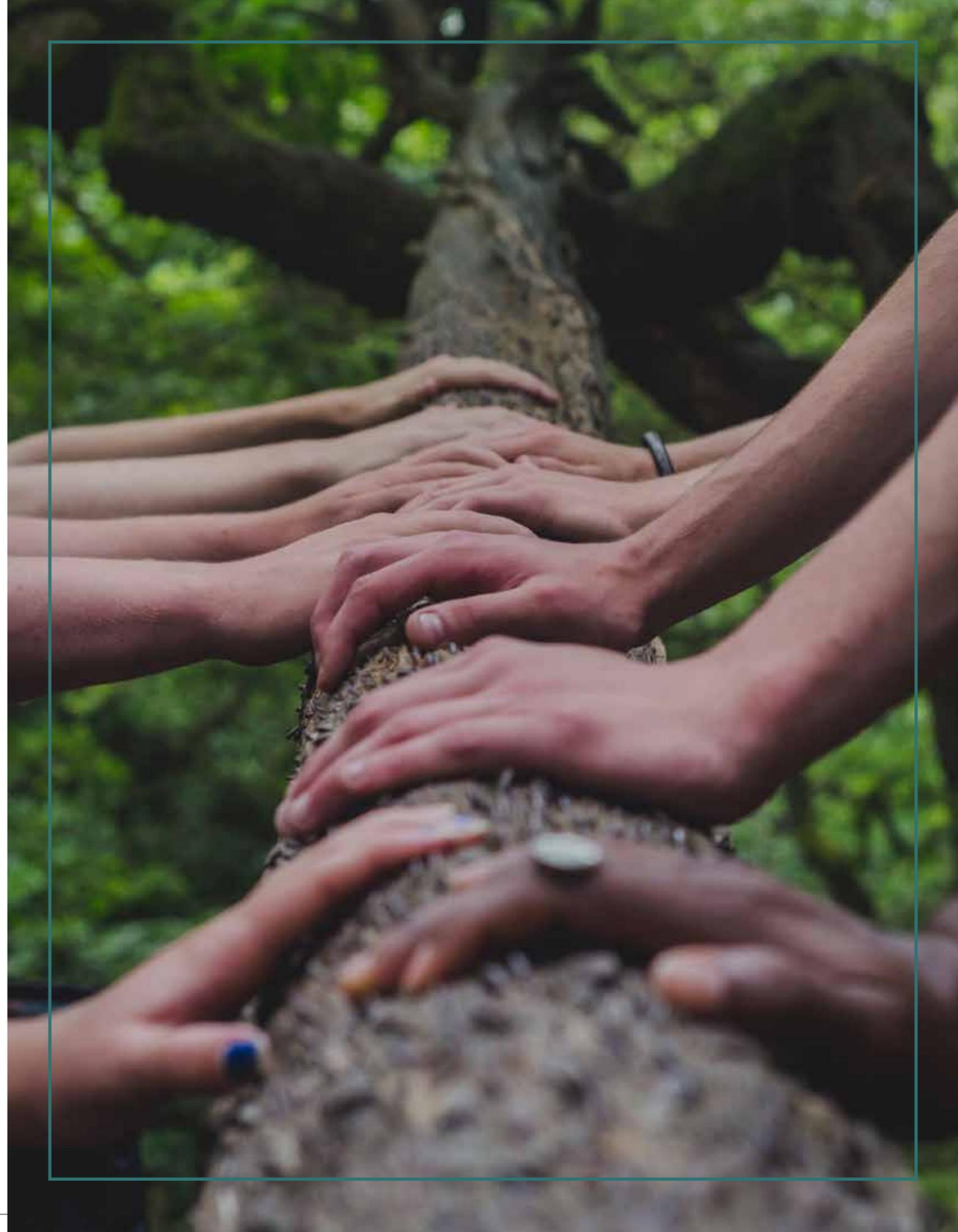
# INSIGHTS

## 3. IMMERSIVE EXPERIENCES, COMMUNITY SUPPORT, AND EDUCATIONAL RESOURCES PROVIDE STUDENTS MORE CLARITY IN THEIR PATHS IN SUSTAINABILITY.

The specific element in a program that will resonate most with a student depends. Hence, it is essential to consider the breadth of resources necessary to meet the needs of the most number of students.

*“Community makes people feel like they are a part of something bigger. It makes them enjoy what they’re doing.” - Lindsey Hutchison*

*“Second Day is a mentorship program, a cohort of people interested in social-oriented careers. It was nice to have people going through this experience too. It’s given me the chance to talk to a lot of mentors. I use LinkedIn a lot, and everyone I chat with puts me in touch with more people. For the most part, I’m just looking for advice” - Alida Monaco*



# INSIGHTS

4. SUSTAINABILITY IS EXPANSIVE BUT IN WAYS THAT MAY NOT ALWAYS BE CLEAR. INCORPORATING SUSTAINABILITY INTO YOUR FUTURE TAKES A WIDE RANGE OF RESOURCES.

For such an expansive field, it is crucial to recognize that there cannot be a one-size-fits-all approach that can appropriately cater to the needs of each individual.

*“As an advisor, I level with students: Where do you wanna be? What do you want to do? Many people go through their lives doing things that they are told to do. You’re spending your money at UT; you get a choice of what you want to do. You bought the car. You might as well pick the color.*

*Choose your adventure and see where it ends up. As they go through the major, they realize, ‘Wow, I didn’t know I could do this!’ - Henry Hammond*



# RESEARCH RECAP

From our research, we identified three typical milestones that are part of the journey through sustainability:

**1. SPARKING SUSTAINABILITY** The moment when they discover motivations to pursue sustainability as a passion or career - **finding the “A-Ha!” moment.**

**2. REACHING RESOURCES** The moment when they start **accessing and using available tools and resources** to find different ways to be involved with sustainability.

**3. INTEGRATING INTERESTS** The moment when they get to **integrate personal interests** with sustainability to define a unique and fulfilling career for themselves.



# PROBLEM STATEMENT

EcoRise students have **found their motivation** for sustainability but are now **discovering and using resources to define their unique path.**

They need **opportunities** to transfer the skills and knowledge they’ve gained through the program into a career involving their passions so that they can **create the impact they want to make.**

In other words,

*“How might we create resources that allow students to channel their passions into an actionable path towards their dreams?”*

# IDEATING & PROTOTYPING

The more we heard from our interviewees and independently researched the topics on our own, the more excited we became to develop potential solutions. After months of researching, interviewing, and scheduling, we made it. Equipped with our key insights, we were ready to begin ideating and prototyping our ideas.

# DESIGN METHOD FEATURE

## CRAZY EIGHTS

After intense weeks of listening, empathizing, and deepening understanding of people in the problem space, we started ideating with Crazy Eights, a tool with heart-pounding, rut-breaking, excitement-inducing energy built right into it.

All you need for this exercise is a piece of paper, a pen, and 8 minutes of creativity! Paper is folded up into 8 squares, and one minute is given to fill each square with an idea that addresses the How Might We question. At the end of 8 minutes, the team shares their thoughts and moves forward with energy and inspiration for what's next.

This design tool allowed the team to rapidly put down on paper what we had been thinking about and where we hoped to go. From here, we discussed, brainstormed more, and arrived at a few ideas we wanted to run with.

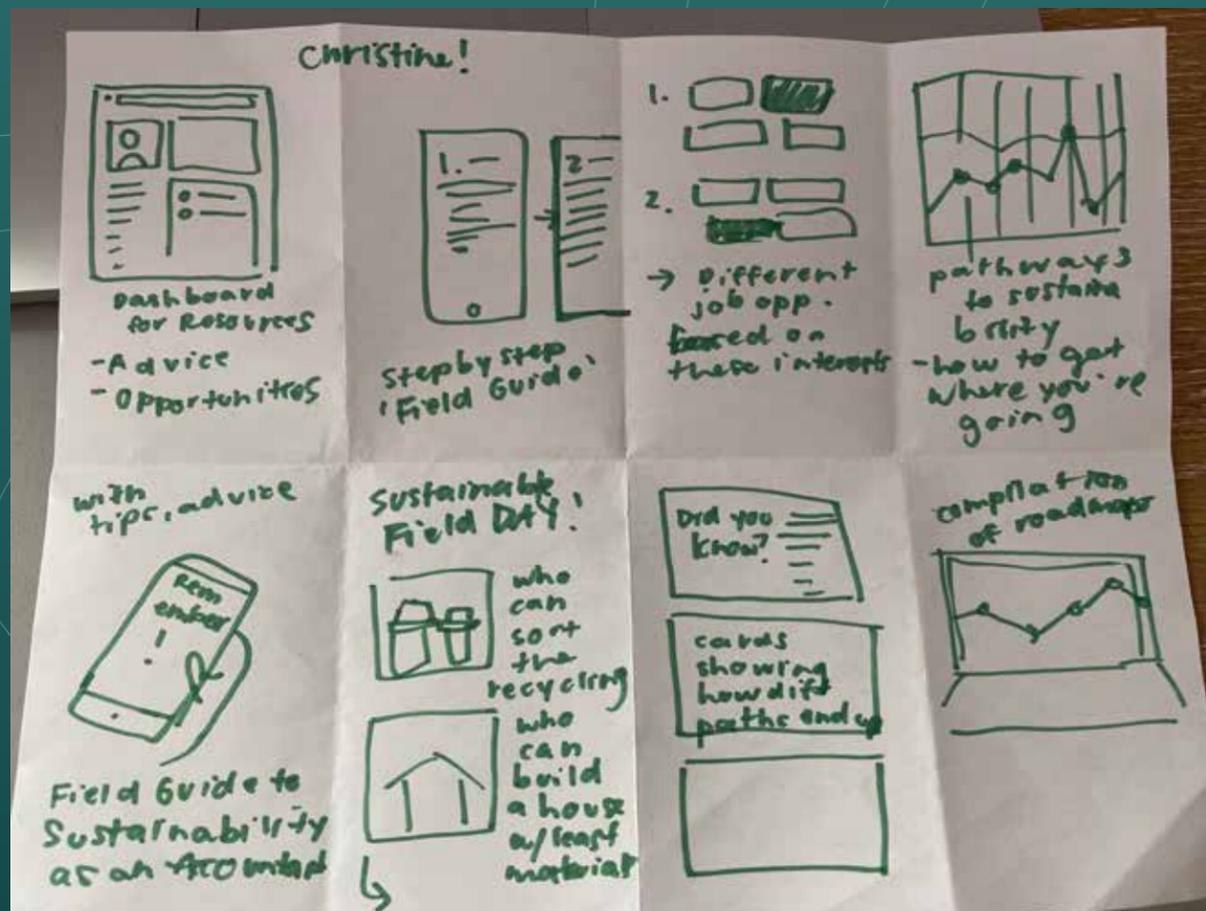
## BUILDING BLOCKS

The “Building Blocks” design method is a framework that allows all the members of a team to align on an idea or implementation by being given a structured format to fill out. It's an excellent tool for the times you have a general idea of your solution but still need to iron out the details and ensure that every team member's thoughts are considered.

This framework is great for finding common ground on the most contentious points. It can be great to get everyone on the same page regarding the timeline, communication strategy, and roles then focus on the components of the project where things are not as defined.

First, the team needs to get aligned on which elements they want to iron out details for. For example, our project required us to consider events, rituals, and space. The features vary from project to project. Next, all team members need to fill out the “Building Blocks” individually over two to three days, so members have ample time to process their thoughts. Finally, all team members should present their ideas at the next meeting/given share time. A team lead or volunteer facilitator can help spearhead the process of walking through each element one-by-one to come to a consensus.

Aligning ideas for each element was far more straightforward than our team expected. It seems that people are naturally drawn to the best ideas for details they are comfortable with or most passionate about. If it appears that your team is still not coming to a consensus, you can put that element on pause and come back to it or take a vote and move on. Overall, this activity drove our team forward and gave us some much-needed clarity as we proceeded in the prototype phase.





# CONCEPT DEVELOPMENT & PROTOTYPES TESTED

## DISCOVERY DAYS

As we discussed how to bring sustainable futures to life for high school students, it became evident that an immersive, collaborative environment would be necessary to foster the growth we hoped to catalyze for the students.

Reflecting on how we became interested in our fields of study, Scia and Chinmayee thought about the Home Depot Saturday Kids Workshops they attended when they were in elementary school. Both talked about how that inspired them to pursue STEM and grow their love for building products. Bringing that same idea to our problem space, our team came up with the concept of 'Discovery Days,' a five-week program designed to help students find their footing and acquire the tools and resources they need to carve out their path in sustainability.

Discovery Days consisted of five key components: inspire, integrate, develop, connect, and share.

**1. INSPIRE** get students inspired to navigate their life and their future with sustainability by providing tools, mentors, and professionals who have integrated sustainability in creative ways

**2. INTEGRATE** give students ways to explore ideas / potential paths that integrate their interests with sustainability for sustainability-related topics

**3. DEVELOP** give students tangible tools and resources that help them design their way forward with more understanding of themselves, networking, and future options

**4. CONNECT** create an environment in which students can be comfortable assessing, maintaining, and making their network while also creating an engaging space for the students to learn from each other

**5. SHARE** allow students to develop their goals and share their progress in the seminar with the session attendees, guest speakers, and friends & family

We believed that this structured format delivered via a weekly 2-hour session on Saturday mornings would help students forge ahead in their paths in sustainability.

# DISCOVERY DAYS

## TESTING OUT DISCOVERY DAYS

To test our idea of ‘Discovery Days,’ our team created a mock presentation that outlined the curriculum this program could follow. We came up with activities, time allotments, and speaker suggestions for each mini session within this program.

We decided to test out this overview with Henry Hammond, a Geography and Sustainability advisor at UT Austin. As Henry had experience in advising students on their plans with sustainability, we believed it would be best to assess the viability of our program with him at a higher level.

## TESTING OUT DISCOVERY DAYS

From our sessions with Henry and with the students, we learned that:

- Not everyone comes in with the same knowledge or definition of sustainability, so it is up to us to set the pace and ensure everyone has the context they need to participate fully in our program.
- Sometimes the most simple, juvenile activities can be the most impactful and fun. We learned that simplicity allows people to focus on the end objectives rather than the rules. It also makes activities more accessible to audiences of a variety of backgrounds.
- The amount of control and structure will have to vary throughout the program. Sometimes, flexibility is best, whereas other times, more control is better. While having a clear direction and “shepherding” help get students involved and engaged, we should actively consider the role of imagination in generating the best outcomes.
- Students do not want school-related activities on the weekend!

## PIVOT: INTRODUCING RISE CLUB

With this feedback, we decided to pivot our initial concept of ‘Discovery Days.’ We realized that we needed to make our programming more accessible for the students who would need it the most and would need to meet them at a venue and time that was convenient for them. Therefore, we see opportunities to find and create intersections between their interests and the field of sustainability. With experiences, resources, mentorship, and friendship, Rise Club can uniquely move students forward in their sustainability journeys.

Rise Club is centered on three core pillars: forming community, exploring sustainability, and building futures.

### Forming Community

- Providing time to socialize, so members have quality time with peers and mentors to create long-lasting relationships.
- Creating memorable, collaborative, and challenging projects brings students a sense of accomplishment when they finish them.
- Having swag that can help the club establish traditions and create physical, visible bonds between members.

### Exploring Sustainability

- Bringing in guest speakers from college and industry to show students how to integrate sustainability into their current plans.
- Host skill-building workshops with EcoRise to examine different facets of sustainability and the relevant job opportunities.
- Going on field trips and volunteering opportunities to experience the interdisciplinary nature of sustainability firsthand

### Building Futures

- Providing mentorship through dedicated advisors who can give students the inspiration, clarity, and guidance to succeed in their future paths.
- Equipping students with tangible tools and resources can help students plan their futures through high school and beyond.
- Developing activities, experiences, and exercises to build hard and soft skills needed to establish successful careers.





## RISE CLUB: A STORY

So what exactly would Rise club look like? We came up with Monica's story to illustrate what a high school student's experience in Rise club might be over a school year.

*Meet Monica, a high school junior at Moore High School in the ecorise program. Growing up, she always helped her mom plant veggies in her garden and over time became interested in sustainability and nutrition, especially after seeing the amount of unhealthy and prepackaged food offered in her school cafeteria.*

*One day after her last class, Monica was walking down the hallway to the busses when she saw this flyer hanging on the wall. "This might be interesting, and I'm already at school, so might as well drop by and see what this club is about," she thought as she walked towards the room.*

*As she entered the room, another student met her with a warm smile and greeted her, "welcome to rise club! We're about to start our first ice breaker activity. Why don't you join us?" Although nervous, Monica quickly opened up as she learned more about her fellow students through an ice breaker activity.*

*Then, she learned about sustainability in energy through a presentation led by the club's president.*

*After the meeting, Monica connects with several new students she met on social media before stopping by the registration table to officially sign up for the club and receive her rise club swag.*

*Through Rise club, Monica was able to form a community with her fellow students and connect with an industry professional through Rise Club's mentorship program. Based on her interests and goals, rise club leaders matched her with her mentor, Jane Doe, a sustainability professional at HelloFresh.*

*Through Jane's mentorship and the several field trips and volunteering experiences organized by the club,*

*Monica learned how vast the field of sustainability is and how she could potentially incorporate it with her other interests.*

*Towards the end of the first semester, Monica learns how Rise club students can propose semester-long projects to work on collaboratively over the next semester. Feeling inspired, Monica proposes a project to develop a sustainably sourced garden and a healthy menu for the school cafeteria as one of the projects they could work on.*

*After her project was approved, Monica meets her new team, and they begin working on the project with the help of Rise club leaders and mentors as they research sustainable produce companies.*

*Over the next few months, in addition to the project, Monica also engages in personal and professional development during the club meetings as she listens to guest speakers, completes future planning and reflection worksheets, and attends resume workshops. These activities helped Monica better understand what she might want to pursue in the future, whether it's college or trade school, and gain tangible items like a resume or portfolio that will help her with that process.*

*As the end of the school year approaches, Monica is busy completing her project with her teammates. As the outcome for all Rise club projects, Monica and her team must present their work in a poster board session along with the other project teams. To prepare, Monica attends a workshop to get presentation tips she could incorporate.*

*On the presentation day, family, friends, club members, and ecoRise staff fill the room to see the completed projects. Feeling well prepared, Monica and her team*

present their work to the audience, bringing fresh food from the garden to further display their work.

After the presentation, the team cheers with a round of high fives. Monica couldn't have been more proud of the work they have completed. And what better way to celebrate than to attend the end-of-year banquet?

**Through Rise club, she was not only able to learn more about sustainability but also developed personally and professionally. Not to mention all the new friends she's made. Monica concludes, It's been a great year.**

So Monica had a great year in the Rise Club that would not have been possible without EcoRise, teachers,

Walking into the banquet hall, Monica reflects on her year. Through Rise club, she was able to learn more about sustainability and developed personally and professionally. Not to mention all the new friends she's made. Monica concludes, "It's been a great year."

and the student leaders. Here is some more information about what supporting Rise Clubs might look like.



## NEXT STEPS

### STEPS TO SUCCESS

Rise Club's success starts with EcoRise. A coordinator can build the resources students need to run their club well and reach out to teacher networks to help get schools involved.

The teacher network could post flyers and make announcements to encourage all students, not just those in EcoRise, to join since no background knowledge is necessary. The teacher would also be a point of guidance for student leaders as they built the club. From there, EcoRise will hand off most of the work to the new student leaders - it'll be their job to plan club activities and host meetings and find guest speakers, but EcoRise and the teachers can provide them with support and resources along the way.

One of the resources we created for students to get started is a shared hub, powered by the Notion Platform, called the Rise Club Student Hub. This hub contains resources to aid students by creating a club, running a club, Community Building & Advocacy, and many workshops and Daily Activities. A section gives mentors, teachers, or sponsors resources to guide young Risers as they go through their time in the Rise Club.

In the daily activities section of our hub are a collection of activities students can use as they plan their semesters out based on the needs of their members and interests. The activities are categorized by type and the educational pillars they are associated with. These resources could be worksheets, environmental literature, and recorded mentor or professional talks. As we move on to the next page, you can see the interactive Year Planning section, where students can plan their semester with supporting checklists and milestones. Here students can use the list of daily activities to customize their club's curriculum for the year to meet the nuanced needs of their members.



# NOTION RESOURCES

## Rise Club Year Planning

Resources Table view

Name	Club Pillars	Phases	Related to 2021-202...	Tags
Officer Year-End Handoff		Quarter 1 - Orientation		Launching
Officer Roles		Quarter 1 - Orientation		Launching
Meeting Logistics		Quarter 1 - Orientation		Launching
Creating Gathering Space		Quarter 1 - Orientation		Launching
Upholding Club Pillars				Launching
Odyssey Planning Ted Talk	Exploring Sustainability	Quarter 3 - Immersion		Future-Planning
Finding a Path	Exploring Sustainability	Quarter 3 - Immersion		Future-Planning
Spreading the Word Schedule		Quarter 2 - Outreach		Recruitment
A Guide to Organization Fairs		Quarter 4 - Celebration		Recruitment
Time Commitment Spreadsheet				Finding Sponsors
Resources for Sponsor Responsibility				Finding Sponsors
Sponsor Outreach Email Template		Quarter 2 - Outreach		Finding Sponsors
Getting Students to Where They Want				Guiding Club Direction
Creating Scope for Your Students				Guiding Club Direction
Empowering Students through Profes:		Quarter 3 - Immersion		Mentorship
Identifying Student Potential		Quarter 3 - Immersion		Mentorship
Understanding Student Needs				Inspiring Students
Local Business Template				Outreach Templates
School Admin Template		Quarter 2 - Outreach		Outreach Templates
Local Government Template				Outreach Templates
Mentor Template				Outreach Templates
Identifying Community Stakeholders		Quarter 2 - Outreach		Local Outreach
Aligning Administration to Your Club's				Communicating with Schol
Defining Your Club's Values				Club Culture
Team-Building Exercises				Team Development
Team Canvas Template				Team Development
Environmentally Friendly Fundraising				Fundraising
Branding Guidelines and Poster Exam				Recruitment
Marketing at Your School				Recruitment
Identifying Potential Sponsors				Finding Sponsors
Reaching Out				Finding Sponsors



Scan the QR code to access our Notion Hub and explore our resources for high school students and teachers as they build EcoRise.

# NEXT STEPS

## GROWTH VISION

So from Monica's Story, we hope to see the Rise Club grow and impact more students in this same way, create more communities, and build bigger futures.

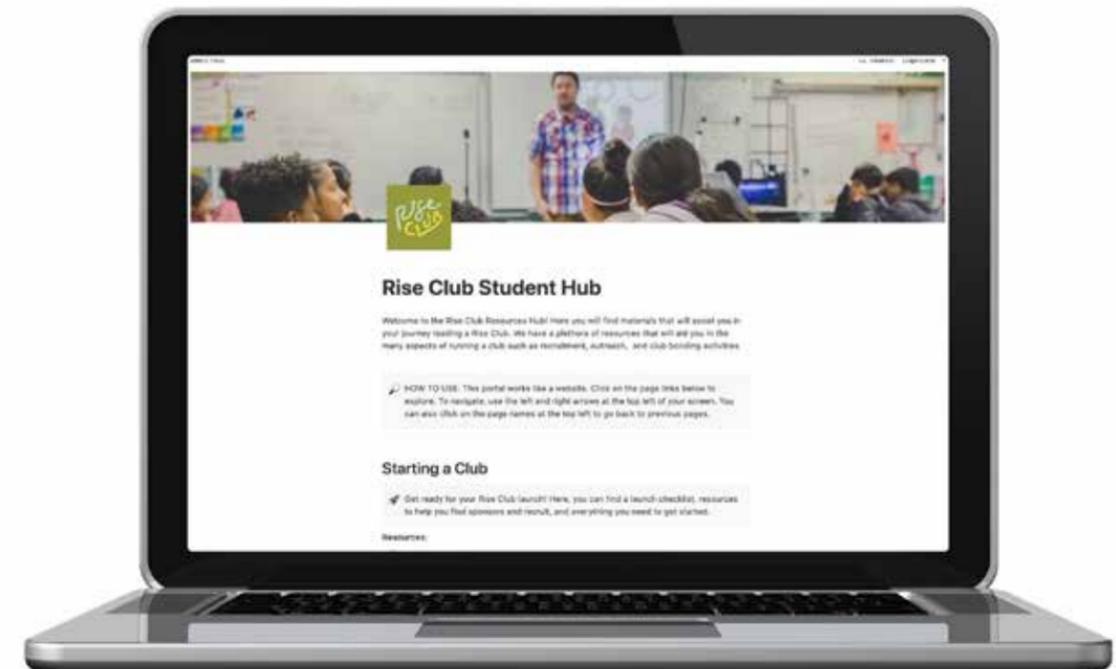
Starting with local, we hope to see a few clubs pop up in a district. The main focus here is seeing the club being built, changed, adapted, and grown by the founding high school students. EcoRise will be responding to feedback, obstacles, and triumphs, and together, the clubs will start shaping and improving the organization.

Then we want to see the club spread regionally across the state and begin seeing traditions emerge and see the club age and change with its members' needs and wants.

Nationally, we hope to see a web of clubs across the country that connect, communicate, and grow together but still keep their individual charms and stay focused on their members.

As a national organization, we hope to see Rise build a firm name recognized the same way the National Honor Society or Key Club is. It can be something all students are familiar with as they join high school and are excited to be a part of, it can be a familiar name on college applications and job resumes that comes with its reputation and high regard,

But at the core, we hope the pillars of community, sustainability, and future building remain strong and are only amplified as Rise Club gets bigger and bigger.



# RISE CLUB IS...

- A full-page yearbook spread.
- A way to connect first-year college students at orientation.
- An organization mentioned in the “thank you” of a LinkedIn post.
- Looked back on as a formative and fun experience.
- A community of students who will be in touch long after high school.

## ACTIONABLE NEXT STEPS

EcoRise can conduct more interviews with their high school students and support teachers to gain more insight into the high school experience, structure, and impact. This research will inform the program specialists in building out and developing the existing Rise Club resources and tools.

After that, EcoRise should pick one high school to host a semester-long prototype with a team of real student leaders to get feedback and gauge interest, student/teacher capacity, and whether the resources and activities create meaningful experiences for those involved.



# ACKNOWLEDGEMENTS

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- Pranav Gupta
- Caleb Martinez
- Emily Howley

### College Students

- Lesly Navarro
- Elaine Esparza
- Megan Harris
- Emily Deen
- Carissa Eckle
- Minji Hong
- Alida Monaco
- Matthew Boiser

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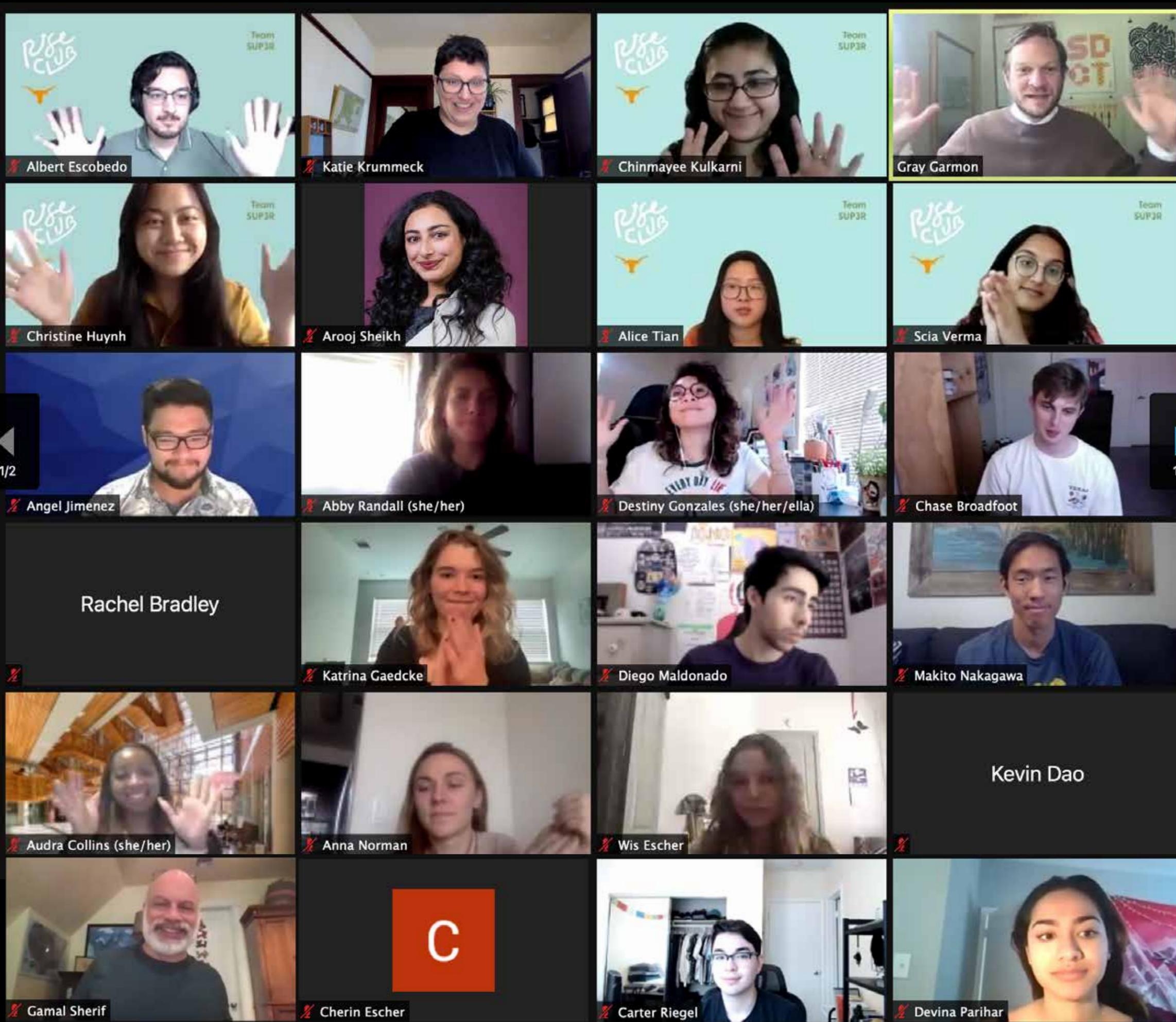
Thank you to the sustainability professionals for meeting with us and sharing their stories of joining the field of sustainability.

### Industry Professionals

*Alicijan Arooj Sheikh*

*Arina Verma    Christine Hynes    Chinmay Kulkarni*

# CLUB



# CONCLUSION

Creating a real-world learning experience like the Capstone course requires partnership with another organization to give the project context, a meaningful challenge and the opportunity for the students' work to be implemented. Special thanks to the EcoRise team and especially Brittany Jayroe, Abby Randall and Gamal Sherif for their engagement with the class and their feedback and support along the way.



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