

Escape the Plane Crash



An interactive escape room simulating a plane crash that explores a new way to measure collaboration.

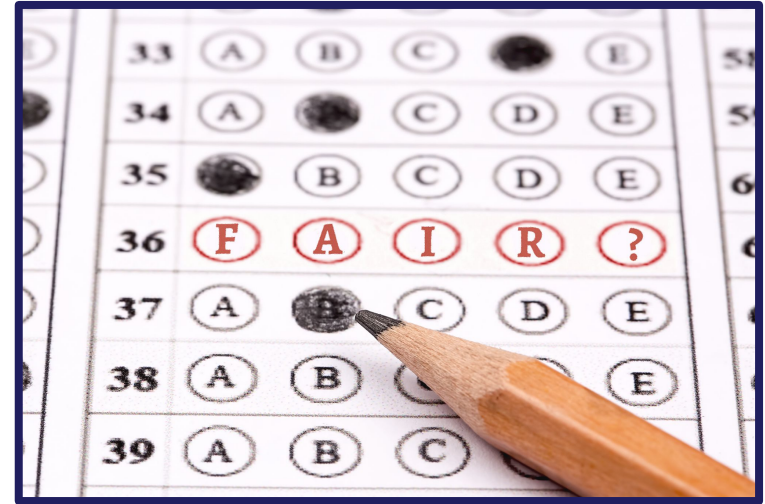
12 minutes. 3-4 participants. Tricky puzzles. Reimagining assessment through immersive collaboration.

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Context

Millions of students take standardized tests every year, but how effective are these tests at measuring skills like collaboration and communication? While collaboration is one of the most demanded 21st-century skills, it is rarely assessed in authentic, dynamic settings.

Escape rooms are an unconventional assessment tool that captures real-world skills. Instead of testing content recall, the escape room evaluates communication, collaboration, and problem solving.



[Credit](#)

Context

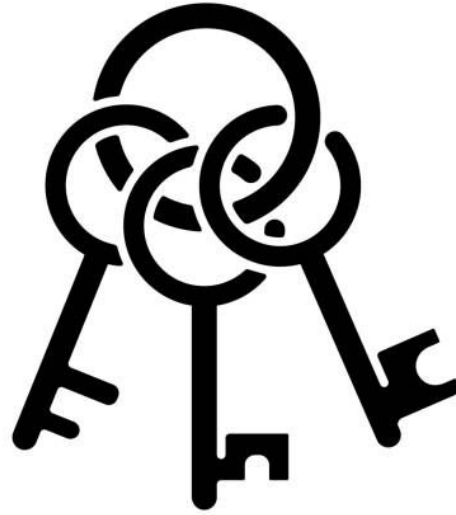
Guiding Questions:

How might we turn our ideas into tangible things we can share with people?

How might we use people's feedback to create better versions of what we make?

Challenge Framing:

Design a functional, themed 12-minute escape room with interconnected puzzles that tests how well a group collaborates, by prototyping, testing, and iterating.



Prototyping + Testing



From an unused cart in the Bay Studio to a fully stocked beverage cart using available materials

Some materials in the cart were a bit misleading during testing, and had to be removed/adjusted



Initial Flow

After testing, added...

Puzzle pieces that created a radio

Flight attendant badge with a key on the back

More informative audio cues

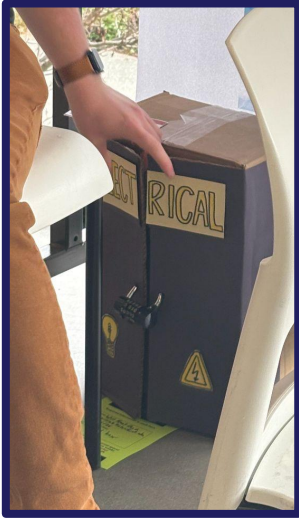


Prototyping + Testing

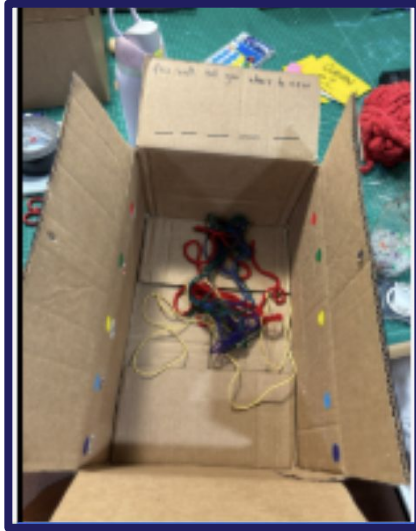


Utilized the Product Realization Lab to 3D print a hidden message, increasing durability and preventing premature discovery

Prototyping + Testing



Leftover cardboard boxes
became our best friend



Originally (left), the wires in the electrical box were just for show (which was misleading and detracted from collaboration). After our second test, we decided to add a decoding element to lead them to the BADGE clue (right).



Boarding passes
required for color order,
stickers required for
letters

Iteration + Learning



First Test Set-Up

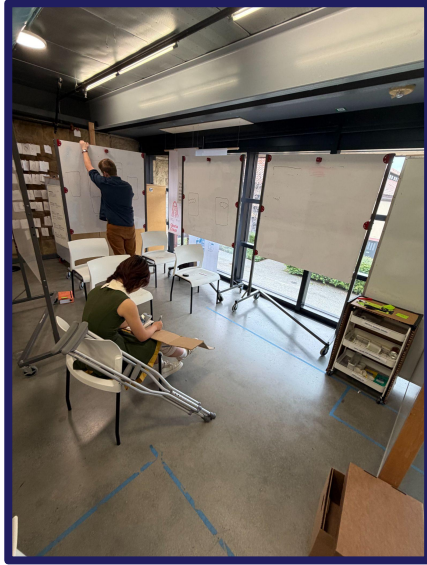


Puzzles were skipped because they weren't necessary to the final escape, our sequencing was poor, and we didn't have any constraints

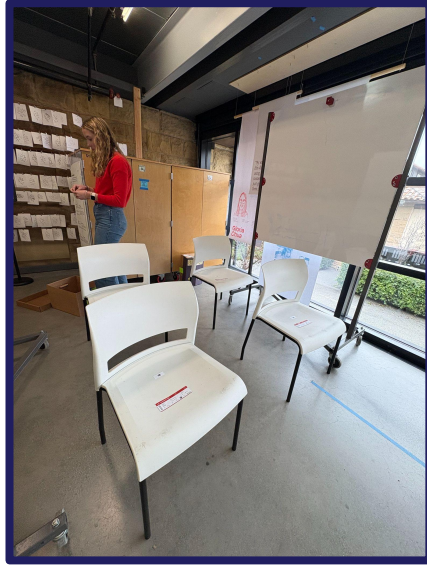


We learned to enforce staying in seat to promote collaboration and verbal communication

Iteration + Learning



Second Test



Added walls for more realism



Enforced remaining in seat until completion of a certain puzzle to foster collaboration

Results

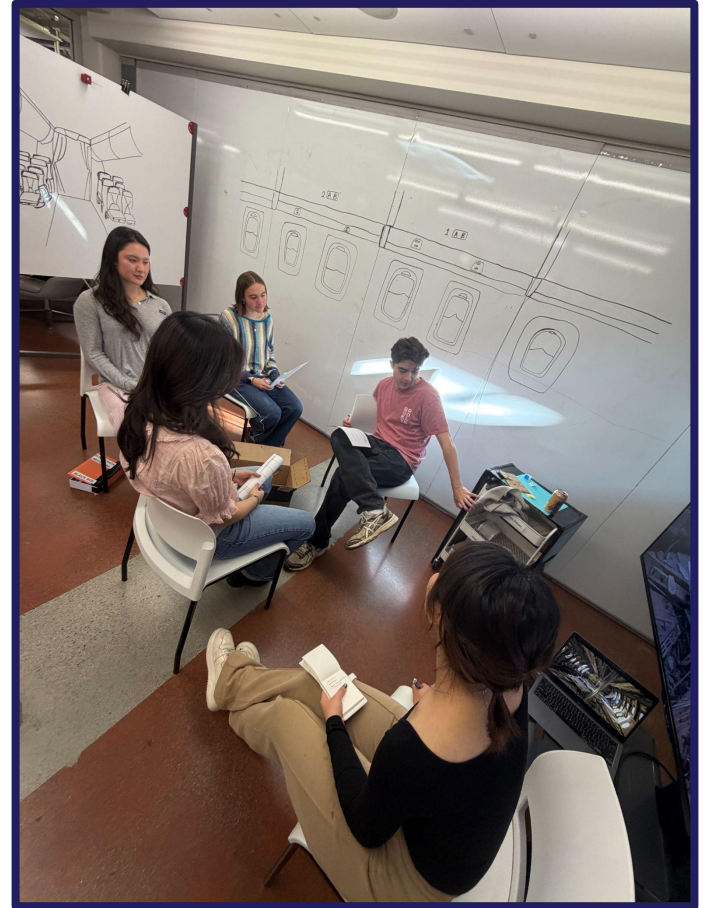
- Through prototyping and testing, I learned that making changes is inevitable and the only possible way to improve the product. It is really difficult to see where improvement is needed without having an outsider perspective.
- Additionally, designing for collaboration is different than designing individual puzzles; adding constraints increased verbal coordination and shared problem solving.
- I think enhancing the immersiveness of the escape room could be an interesting next step (collapsing, interactive walls; cockpit experience)



Results

Having the debrief session (as pictured) gave us insight into what went well and what could have been better. For example, the electrical box was deemed the most collaborative puzzle while the “braille” puzzle could have been better instructed.

Overall, the experience ran smoothly and was a testament to our collaboration as a design group!



VideoStory



Timelapse Escape (from in class testing)



Team Walkthrough