

Contextualising

"Fruit salad"

Week1



and friends.

It consists of 50 cards featuring various and random symbols. Every card has a unique composition of symbols and necessarily shares one of them with any other card from the deck.

The player's goal is to spot the only symbol that is common between his game and the card in the center. As soon as he spots a match, he pronounces its name out loud and wins the card.

impaired.

During the first week of our research, we discovered that Dobble relies entirely on visual perception, making it inaccessible to visually impaired individuals, such as blind players. This realization sparked our curiosity, leading us to explore how we could redesign Dobble to be more inclusive, ensuring that a broader range of players could engage with and enjoy the game equally.

The Dobble (or Spot it) is a game of recognition and reactivity that generates very joyful moments within families

Dobble is very simple to play, which makes it a very accessible game. Its symbols are universal, and thus cross language and age barriers. However, it only relies on sight, and systematically excludes those who are visually

Reference



Inspired by reference, we decided to try to combine dobble games with barrier-free design and redesign the graphics in a touchable way.

Tactile Picture Book for Blind Children/ (2016) by Zrinka Horvat

This is a tactile fairy tale book for blind children.

The main idea of this tactile picture book was to choose and depict the motives in a way they do not rely on visual memory, but rather on haptic interactions and their associations with the existing objects.

https://www.behance.net/gallery/30101433/Tactile-Picture-Book-for-Blind-Children? moduleId=193565567#moodboard



Hong Kong Museum of Art launched the /Beyond Seeing: A Multisensory Art Project

In collaboration with the Beyond Vision Projects, the Hong Kong Museum of Art launched the "Beyond Seeing: A Multisensory Art Project", delivering a series of on-site and outreach accessible art experiences for people with visual impairment and low vision.

Through different forms of sensorial engagements, the project offers them a brand new experience in exploring the world of art.

https://hk.art.museum/en/web/ma/exhibitions-and-events/beyond-seeing-a-multisensory-art-project.html? utm_source=chatgpt.com

Also think about: How to translate Dobble visual symbols into tactile ones? How to convey the essence of the symbols through touch? Will their be losses?

How close do we want to be to the original game? To its symbols, to its rules?



Touch Shape Test Process

1:Made by K



At first, I attempted to simplify and make the shapes tactile by using either pure line drawings or a combination of lines and dots.

However, during the process, I realized that pure line drawings are more suited for visual recognition, as sighted players naturally perceive the enclosed space within the lines as a whole shape.

I simplified the patterns into abstract designs composed of basic geometric shapes, aiming to make them easier to recognize through touch and memorize in a short time. I created a version with bright and high-saturation colors, allowing low-vision players to use color as an aid for identification and recall. I also tested how these colors appear to individuals with red, green, or yellow color blindness.



My design is inspired by Braille, a tactile language that enables visually impaired individuals to read independently.

I concept of Braille-like dots to create a new form of expression, allowing users of different abilities (Visually impaired people) to perceive information through both touch and visual.

Maybe dots are a familiar way of perceiving things for the visually impaired.

I compared different shapes and ultimately chose a design with more dots. I hope to enhance the tactile experience.

I hope is can make our Dobble game more accessible to visually impaired players, transforming it from a purely visual game to a more inclusive one.





3D Print Test







So we chose to present it through 3D printing, because 3D printing is physical and can be touched. The plastic material of 3D printing also makes the shape more clear and easier to feel.

What forms?

What fruits? Research of style and logic

We tried to keep the same shape for the outside fruits and the inside ones: our banana and pineapple did not at first, that's because sometimes the representation we have on fruits is in a certain way. We tried to vary their drawing, angles of representation to obtain 8 fruits expressed both from the outside and the inside.

Iterating through feedback

Game name: Fruit salad

Week1 reminder

We worked based on the dobble/spot it game, translating its visuals symbols both figuratively and physically.

The feedback we got was to emancipate us from its rules and its logic that are quite specific and complex to work on. Also, we were reminded that the game had to be fun before anything else, a good thing to keep in mind.

Week2 reminder

So we wondered what to keep from dobble? Get rid of its logic but keep its principle:

a recognition game

What other recognition games do we know ?

Where's wally? One element to spot in a very complex setting ---> too short in a week

Memory game, very universal game, but also sight based. Easy rules: each player has to find as many pairs as possible

The set is simple, rigid cards are shuffled and displayed face down. The deck is composed of symbols that all exist in pairs. One by one, each player has to flip 2 cards. The goal is to collect as many pairs as possible.

We thought of simple geometric shapes: round, circle, square

But it could add a level of fun if the symbols were themed.

We thought of fruits, universal and very graphic shapes, with interesting textures. Definitely playful

We had to sort a few technical details:

sizes of the cards

Not too small cards because we want to be able to feel the textures properly, but not too big, otherwise it's hard to have a quick overview of the shape and to be reactive

amount of cards:

Unlike dobble, no constraint, its not based on a complex mathematical equation, so completely up to us! We started trying with 32 cards, 16 pairs, but it would take a lot of printing time, something to keep in mind as each card takes about 20 min to print Also, we feared it would be too complex, it's not a visual memory we're testing there but more touch memory which is less commonly challenged in games

By the way, it would be interesting to see if visually impaired people would be more reactive than others?

So we agreed on working on 16 pairs of fruits

We realised that fruits were represented either in their global shape or sliced, and their heart is often very graphical We thought we could twist the rules a bit and benefit from the duality of the representation of fruits: in our game, the goal is to match a fruit outside, its global shape, with its inside, recognizable by the textures, seeds.

- But in this new scenario, not all the fruits inside are obviously recognizable
- Grapes and raspberries for example dont have an emblematic inside
- Whereas apple, kiwi, lemon do with their seeds and quarters

Week2_Fruit Shapes test







At first we thought of simple geometric shapes: round, circle, square.But it could add a level of fun if the symbols were themed.

Fruits, universal and very graphic shapes, have very interesting textures as well.

There are 2 main representations of fruits: outside shape and inside shape Which one to choose? Why not combining them to challenge the game?

Thus, we decided to incorporate the inside and outside of fruits into our game, creating a tactile memory experience where players close their eyes and rely solely on touch to find matching fruit textures, challenging their sensory perception and memory skills.

3D Printing Process

Made by Di Zheng

"Fruit Salad" Final Shapes



I used blender to model our fruit graphics and printed them out using 3D printing. We tested different card sizes. Since we wanted players to quickly recognize the cards while playing, we tried three sizes: 4 cm, 5 cm, and 6 cm.



After getting feedback from testers, we decided to go with 6 cm for all the cards. This size works better, especially for people with bigger hands (like some men), giving them more space to feel the details.



4cm



5cm



6cm



Rule Card



At first, we wanted to stick with a circular shape, but after testing the prints, we realized the designs were too small and hard to recognize.

So, we switched to a square shape instead. This makes the fruits much clearer and easier to understand.

During the game, the rule card can be placed nearby as a reference. If players forget whether a fruit corresponds to the inside or outside, they can quickly check the rule card to figure it out.



Text Feedback

The fruit shapes can be felt, but since they're unfamiliar, it takes a bit of time to recognize them.

The shape and features of each fruit help with identification. For example, the banana looks a lot like a crescent moon, making it super easy to recognize. The kiwi can be identified by the little dots in the center.



Final choice



Fruit Salad_Game test



Di Zheng

Rule:

As a tactile memory game, we aimed to make it more inclusive while ensuring players can easily engage and enjoy the experience. To achieve this, we established simple yet challenging rules: all cards are placed face-up in random positions on the table. Each player has a fixed 20-second time limit to explore by touch and match as many cards as possible. The player with the highest number of correct matches wins.

(For a detailed gameplay demonstration, refer to our video.)

Final Outcome_Video

https://youtu.be/fMvtzLpd9RM

While Ke counts to 20, Di tries finding pairs.

Fruit Salad

