

Designing for everyone

DESIGN MATTERS
2023 MX



Alejandra & Regina
Bortoni

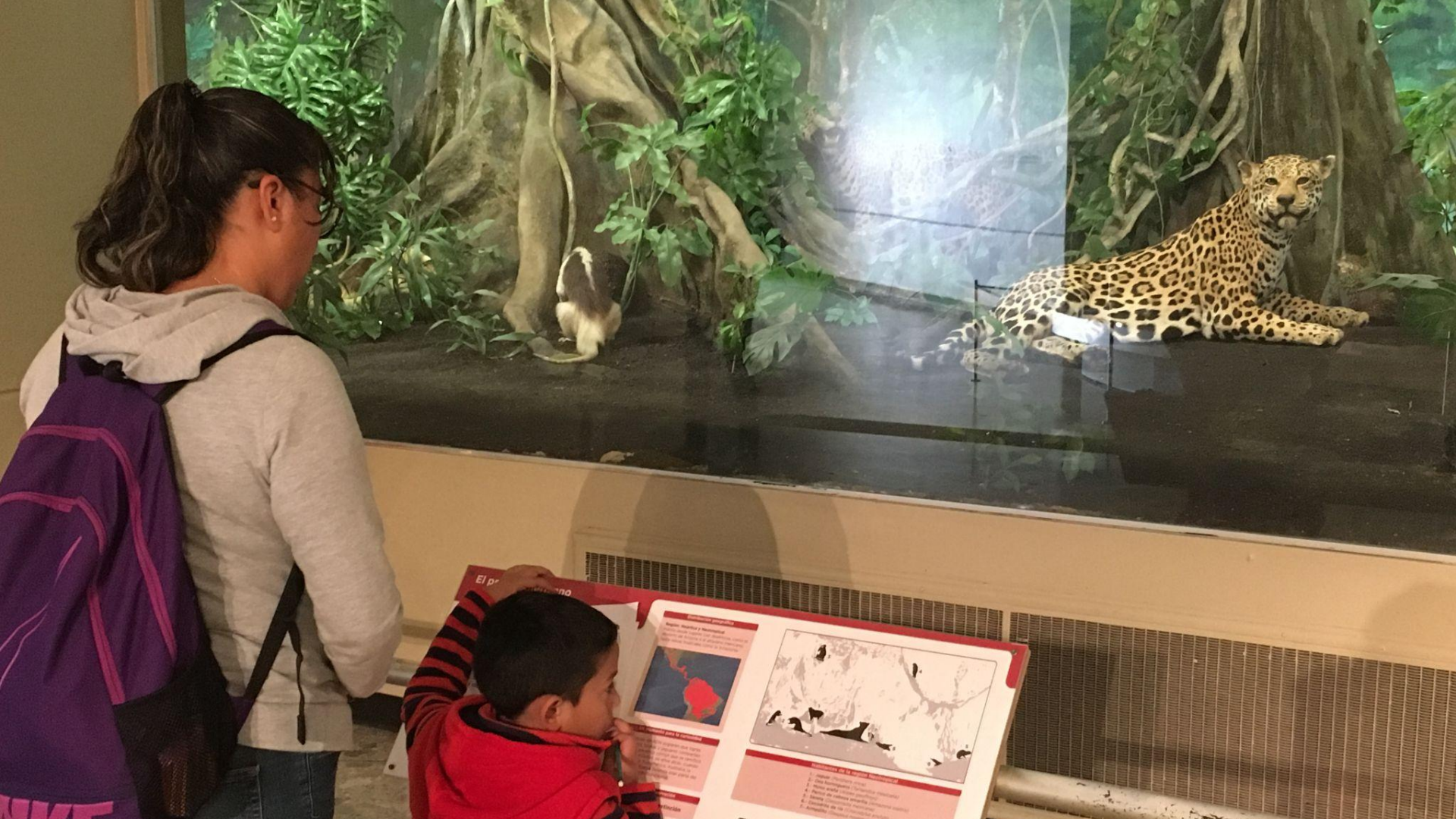
openn.

Founders & Directors

@openn_inclusivedesign







El pr
del jaguaro

Características generales

Distribución geográfica y hábitat

El jaguaro habita en las selvas húmedas y secas de América Central y del Sur, desde México hasta el norte de Argentina. Su hábitat incluye bosques primarios y secundarios, sabanas y áreas de transición.



Características de la especie

- 1. Pelaje: naranja con manchas negras.
- 2. Tamaño: machos de 100 a 150 kg, hembras de 70 a 100 kg.
- 3. Longitud: hasta 1,5 m.
- 4. Vida útil: hasta 12 años.
- 5. Alimentación: carnívoro, se alimenta de mamíferos y aves.



Biogeografía

Distribución d

La Tierra es hasta ahora el único planeta que tiene vida, misma que existe en el mar y en el cielo, pero la diversidad que vemos no es fortuita sino el resultado de la evolución de la Tierra y la constante interacción tanto en el tiempo como en el espacio.

Desde la década de los 70 del siglo XX, la biogeografía ha experimentado un renacimiento. Hoy en día, el estudio de la distribución de la vida en el planeta se ha convertido en una disciplina clave para comprender los impactos del cambio climático y la pérdida de biodiversidad.

Un pescador
que parte...

Museums and Education context in Mexico

- Mexico City is **one of the city's with most museums in the world (roughly 170)**.
- Half a million visitors to museums each month in Mexico City, **93% of them Mexicans**. This represents 0.1% of Mexico City's population and 0.6% of the country's population.
- **Mexican students performance are the worst ranked among OECD countries**.
Critical reading, math and science skills are poorly reported, 41% of Mexican students do not reach the basic level reading comprehension skill, and 55% do not achieve a basic level of math skills.









Carnivora

Megafauna
de la Edad
de Hielo

EVOLUCIÓN DE LA VIDA






**How can we make the MNHCA
more inclusive?**

Diferente región... clima, flora y fauna similar

La zona costera tiene diferentes climas húmedos, a veces de alta humedad, debido a que gran parte del tiempo se encuentra rodeada por el agua. Los ecosistemas terrestres y acuáticos están muy influenciados por el clima, la humedad y la proximidad al agua. Esto se refleja en la gran variedad de especies que habitan en esta zona.

Los paisajes y ambientes son similares por sus costas húmedas, por ejemplo, en Arica, se encuentran un cultivo de papas, un cultivo de maíz, trigo y cebada, y un cultivo de frutas y verduras.









Map labels: Lago Mayor, Fuente Las Niñas, Avenida de los Compositores, Club Cofista, Acceso Avenida de los Compositores, Museo Nacional de Antropología, Puerta Acuario, Zoológico, Fuente Nezahualcó, Estado Mex, Acceso Avenida de los Compositores, La Tapalia, Restaurante El Lago, Avenida Lomas, Acceso Avenida Lomas, Museo Nacional de Antropología, Puerta Acuario, Zoológico, Fuente Nezahualcó, Estado Mex, Acceso Avenida de los Compositores, La Tapalia, Club Cofista, Acceso Avenida de los Compositores, Fuente Las Niñas, Lago Mayor, Restaurante El Lago, Avenida Lomas, Acceso Avenida Lomas.

Checklist items:
- \$12.00
- \$27.00
- \$18.00
- \$9.00
- \$5.00
- \$3.00
- \$2.00
- \$1.00
- \$0.50
- \$0.25
- \$0.10
- \$0.05
- \$0.02
- \$0.01

Handwritten notes on map:
- Ninos mayores
- Inca
- con Discal

MIÉRCOLES 6 DE JUNIO DE 2018

13 hs. - Es sencilla mente espectacular Fabian y se abuelo
de Capitan Gomez Resas

FANTASTIC PHYLOGENETIC TREE ON COMPUTER & KÖPPEN-BEIGER CLASSIFICATION SYSTEM - IT TAKES A SCIENTIST 7 TO UNDERSTAND! WOW! THANKS FOR NOT DUMBING IT DOWN, -T. THASON, BOTANIST AT LARGE we don't understand you

EXCELENTE MUSEO, MUCHA VARIEDAD. ☺

Mistly Mastly postly Moibly

Hi? = I? from Japan

Que bonito les quedó! Muchas felicitades

Llegamos tarde Dichy y Dan. ♥

No me odies por fa ñ Dichy y Dan x2 ♥

Jueves 7 de Junio 2018

ana

Evolución humana

Una mirada a nuestros orígenes

Durante millones de años, el hombre se fue desarrollando a partir de los primates. Los científicos han descubierto que el ser humano y el chimpancé compartimos un ancestro común que vivió hace unos 6 millones de años. Desde entonces, el ser humano ha experimentado cambios físicos y culturales que lo han convertido en el ser más inteligente y adaptable que existe en la actualidad.





Un museo de visita 2018
MUSEO NACIONAL DE LAS CULTURAS

Durante mayo y junio el Museo Nacional de las Culturas presenta una muestra de su colección

Museo Nacional de las Culturas

Los Inuit

Instrumentos y herramientas

Desde el descubrimiento de los primeros restos humanos en el continente americano, el estudio de la prehistoria y la arqueología ha sido una de las disciplinas más importantes de la ciencia. En el caso de México, el estudio de la prehistoria y la arqueología ha sido una de las disciplinas más importantes de la ciencia. En el caso de México, el estudio de la prehistoria y la arqueología ha sido una de las disciplinas más importantes de la ciencia.

Museo de Historia Natural **JUNIO 2018**

SALAS RENOVADAS

Registra tus datos de contacto en el sitio web del museo

ESTAMOS RENOVANDO ESTE MUSEO

Los trabajos de renovación de las salas de exposición del Museo de Historia Natural están avanzando a gran velocidad. Los visitantes podrán disfrutar de un espacio más amplio y moderno, con mejores condiciones de iluminación y sonido. Además, se han instalado nuevas vitrinas y paneles de información para facilitar la comprensión de las exposiciones.

¡MÁS NOS TOCA HACER HISTORIA!

NAUTIC



La evolución

Quinta extinción masiva al final del Cretácico (hace ca. 66 millones de años)

Informational panels with diagrams and text, including a circular diagram with the number 66 and a percentage sign.



Comparte invitado:
¡Bienvenido!
a las salas interpretativas del
Museo de Historia Natural

Te pedimos atender las siguientes
indicaciones:

- 1. No fumar ni consumir alcohol.
- 2. No tocar ni pisar a los animales.
- 3. No hacer ruido ni hablar en voz alta.
- 4. No llevar comida ni bebida.
- 5. No utilizar celulares ni cámaras.
- 6. No utilizar flash.
- 7. No utilizar linternas.
- 8. No utilizar bastones.
- 9. No utilizar zapatos de tacón.
- 10. No utilizar maquillaje.
- 11. No utilizar perfumes.
- 12. No utilizar joyas.
- 13. No utilizar maquillaje.
- 14. No utilizar perfumes.
- 15. No utilizar joyas.
- 16. No utilizar maquillaje.
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- 45. No utilizar joyas.
- 46. No utilizar maquillaje.
- 47. No utilizar perfumes.
- 48. No utilizar joyas.
- 49. No utilizar maquillaje.
- 50. No utilizar perfumes.

AGRADECIMOS TU COOPERACIÓN

Por tu seguridad y la de los animales, por favor, no hacer ruido ni hablar en voz alta.





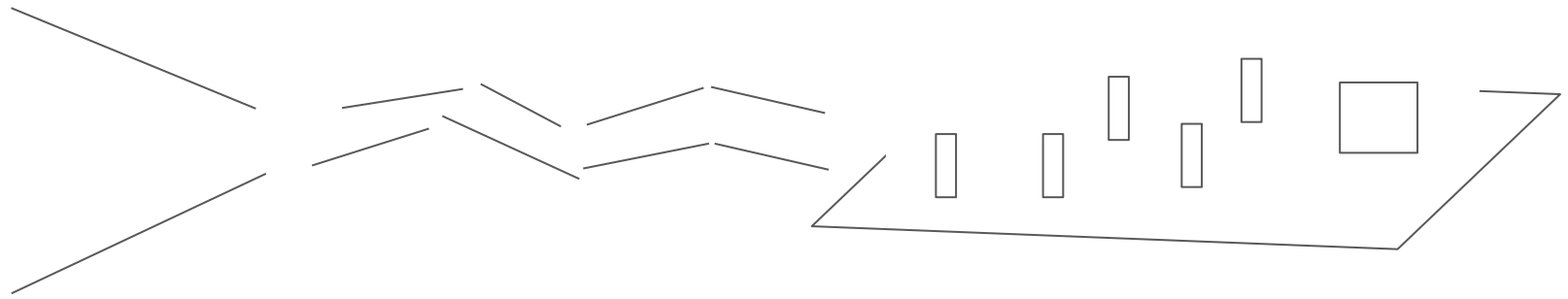
San Blas

PRECAMBRIOS
Cambrio
Ordovicio
Silúrico
Devónico
TRIPALÉOICO

SRE
UNIVERSIDAD DE LOS RIOS



PLANNING	WELCOME	START	NAVIGATION	ROOM EXPLORATION	ATTENTION TO AN OBJECT	EXIT
Purpose	Entrance	Zones	Distribution	Path/ Tour	Language	Memorability
Motivation	Payment	Signage	Sections	History	Elements identification	Learning
Location	Events	Starting point	Maps	Information	Visibility	
Previous information	Tours		Guides	Behavior	Sounds	
Opening hours	Signs		Information modules	Guides	Comprehension	
Access	Regulations			Activities	Learning	
					Support material	

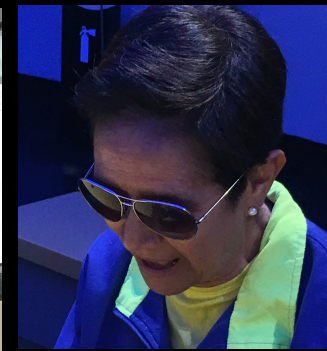


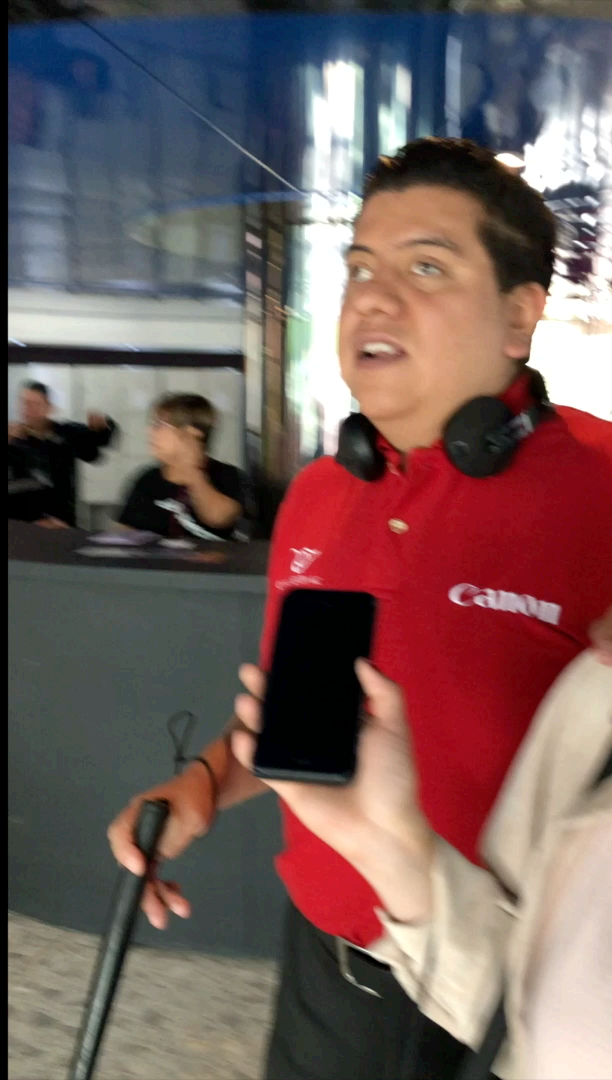
DISABILITY	PLANNING	WELCOME	START	NAVIGATION	ROOM EXPLORATION	ATTENTION TO AN OBJECT	EXIT
Hearing	80%	80%	100%	100%	100%	70%	100%
Visual	20%	0%	0%	0%	0%	0%	0%
Mobility	100%	90%	90%	70%	60%	70%	100%
Cognitive	10%	30%	0%	0%	50%	50%	10%

DISABILITY	PLANNING	WELCOME	START	NAVIGATION	ROOM EXPLORATION	ATTENTION TO AN OBJECT	EXIT
Hearing	80%	80%	100%	100%	100%	70%	100%
Visual	20%	0%	0%	0%	0%	0%	0%
Mobility	100%	90%	90%	70%	60%	70%	100%
Cognitive	10%	30%	0%	0%	50%	50%	10%



How can the MHNCA be more inclusive with visitors with visual impairments?





ACCESO A SALAS

Inicio de Fila

Museo de Historia Natural
Administración General del Patrimonio del Estado
Tabla de Costos
Abierto de martes a domingo y festivos de 10:00 a 17:00 horas

Por favor prepare su pago

Adultos mayores	\$85.00	\$135.00
Estudiantes y maestros	\$65.00	\$105.00
Boleto libre	\$35.00	\$65.00
27 de mayo a 1 de julio	\$100.00	\$150.00
Adultos con discapacidad o movilidad reducida	\$100.00	\$150.00
Boleto para niños de 6 años	\$20.00	\$35.00
Boleto para niñas de 6 años	\$20.00	\$35.00
Boleto para niñas de 6 años	\$20.00	\$35.00
Boleto para niñas de 6 años	\$20.00	\$35.00
Boleto para niñas de 6 años	\$20.00	\$35.00
Boleto para niñas de 6 años	\$20.00	\$35.00

Recomendaciones

- Se prohíben vender o consumir alcohol y drogas ilícitas.
- Se prohíben llevar armas blancas y fuego.
- El acceso de mascotas de compañía queda restringido a las áreas de exhibición.

Los puntos de venta cuentan con el sistema de pago en línea.
Boleto electrónico, código QR y boleto impreso.
Consulte siempre el sitio web, asegure que su móvil responda en forma a la QR code.
CopaMUSEO y CDMX

Documentos de información y regulaciones del museo.

Marketing and Motivation



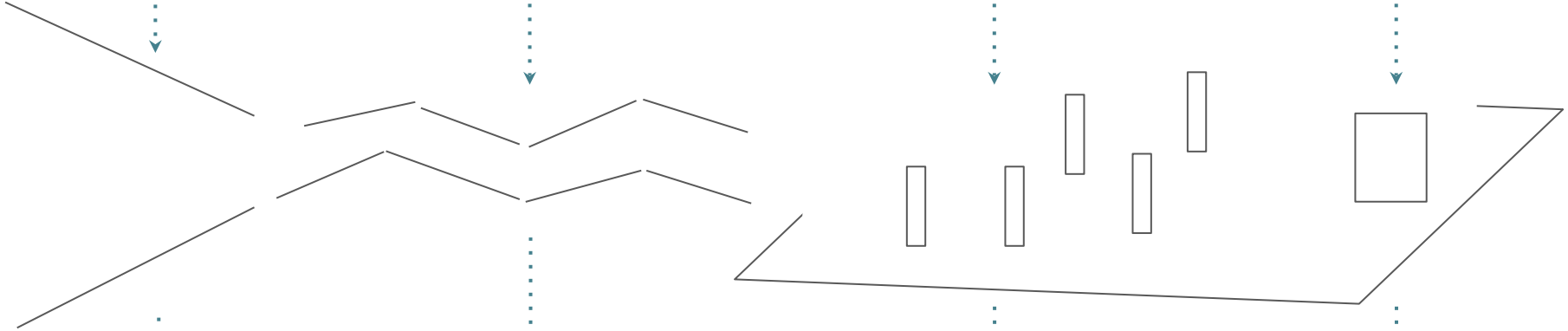
Navigation



Interaction with the space (exhibition)



Interaction with the object (exhibit)



How do they find out about the museum and plan their visit?

How do they navigate the museum?

How do they approach the exhibition and what influences their journey?

How do they interact with an exhibit/ object and how do they understand it?

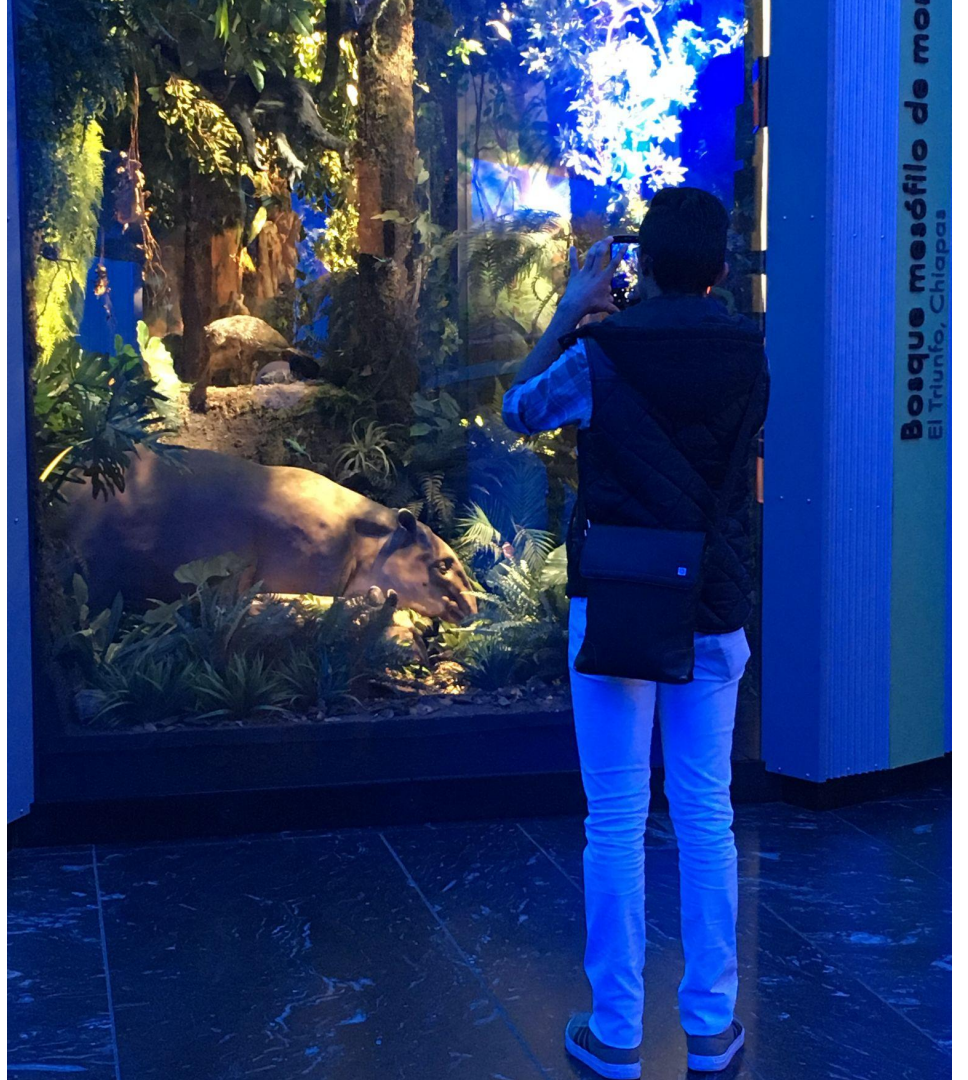
Choosing a specific section:

MEGADIVERSE MEXICO

This section: Megadiverse Mexico, aims to communicate the country's richness and explain what some of its protected natural areas are like.

Megadiverse= term to signal countries that concentrate the largest amount of endemic species (species that do not live elsewhere), vascular plants and vertebrate animals.







NO TOCAR

Laguna costera Marismas Nacionales, Nayarit

Las lagunas costeras son ecosistemas de agua dulce o salada que se encuentran en la zona de transición entre el mar y el continente. Estas lagunas son importantes por su biodiversidad y por ser un hábitat para muchas especies de aves, peces y plantas. En Nayarit, las lagunas costeras son un recurso natural muy valioso que debe ser protegido y conservado para las generaciones futuras.

Estos ecosistemas son ricos en diversidad biológica y ofrecen servicios ecosistémicos importantes como la purificación del agua, la regulación del clima y la protección contra las inundaciones. Casi todas las lagunas costeras están unidas a los manglares, como los de Marismas Nacionales.

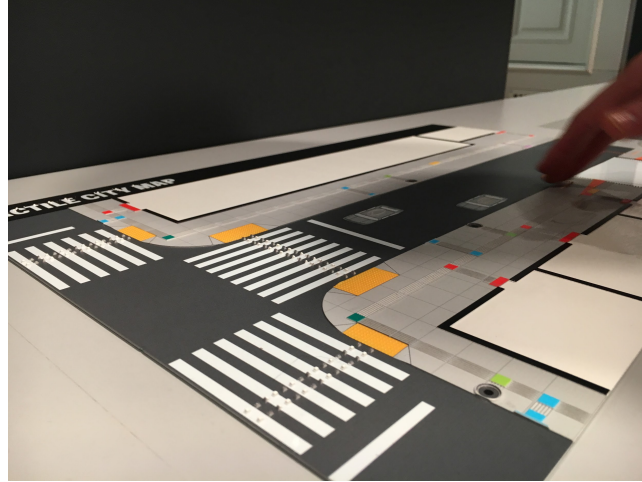


Co-design!



**3 different
sessions for all
12 participants**

References for concepts

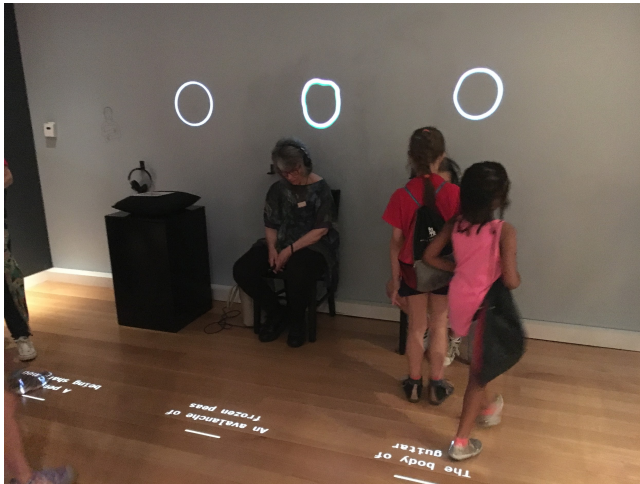


Sensory Appetites

Color and shape can amplify taste and smell. A bulbous lollipop tastes extra sweet. We associate red with the smell of cherries and brown with the smell of chocolate, spice, or tobacco. Designers stoke our appetites and craft our memories by associating flavors or smells with textures, patterns, and colors.

Sensory Materials

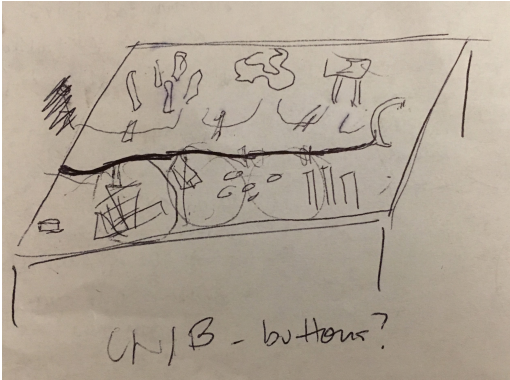
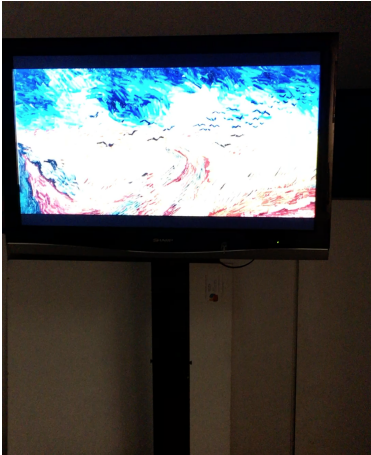
Products are designed with materials meant to influence our emotional and physical responses. Materials have shape, texture, hardness, and weight. A substance can be hot or cold, fuzzy or slick. A glass vessel or a slab of metal makes a distinctive sound when plunked or pinged. Visible textures applied to flat surfaces entice viewers to touch the world with their eyes. New materials sense and react to their environment.



References for translation concepts



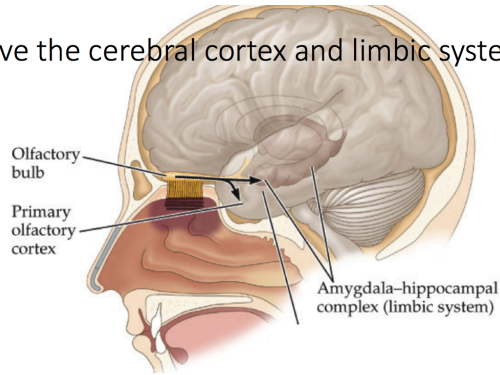
References for translation concepts



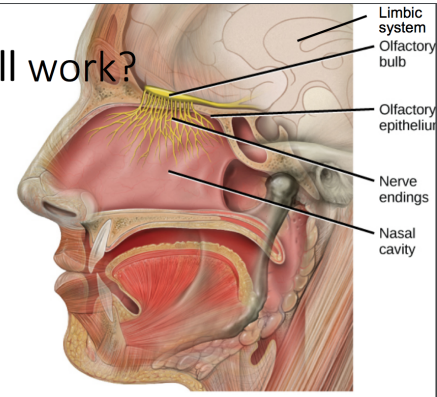
Gustation and Smell

- Both use chemoreceptors
 - most primitive senses
 - translate chemical stimuli into action potentials that our nervous system can make sense of
 - taste buds & nasal passages detect molecules in food and the air around us- strongest at birth

- Both involve the cerebral cortex and limbic systems



How does smell work?



Types of Icons in Audio

	Auditory	Visual
Spearcon:		6 inches deep
Auditory Icon:		
Symbolic earcon:		

Prototyping Sound

- Using your body
- Using the world around you

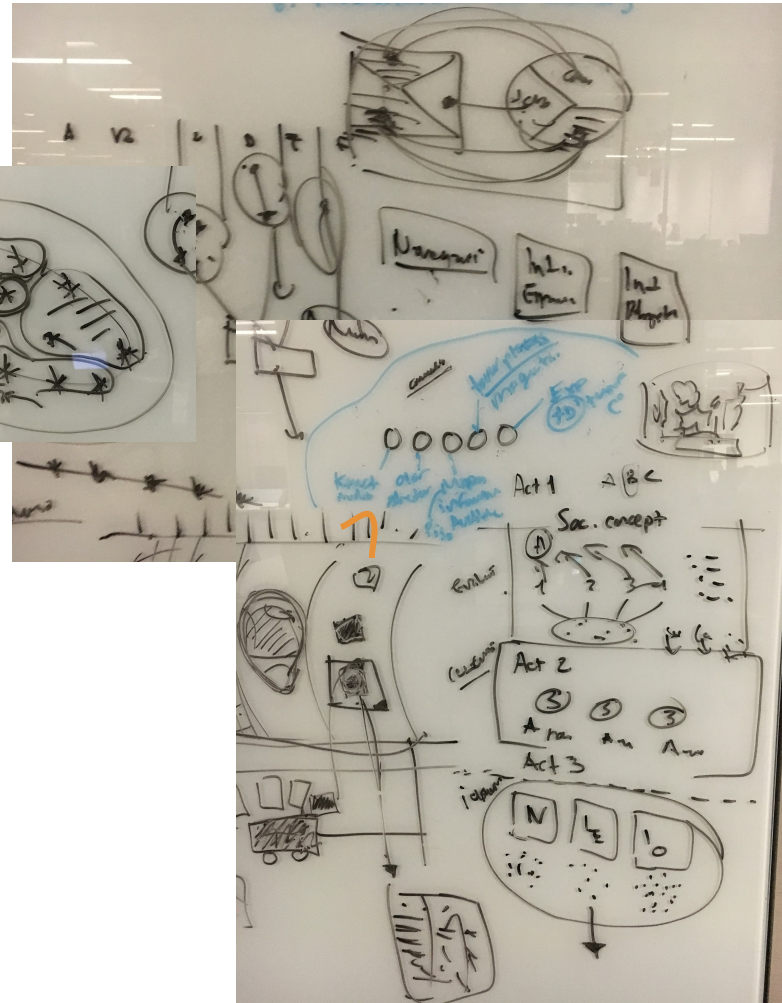
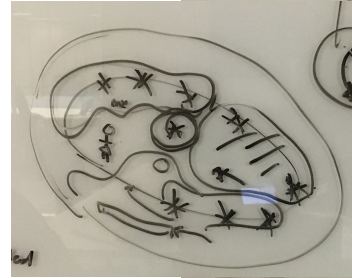
How might we avoid obtaining basic ideas only?

How might we understand the deeper needs for a translation?

Sacrificial Concepts

Sacrificial concepts are early, raw, potentially flawed concepts made visual/physical and used as a medium for creating reaction, response, and discussion among users and design teams.

We don't spend a lot of time on the concept itself, so that's how it's being sacrificed.



Official plan for Co-design: protocol, activities, groups

To Do's and list of materials

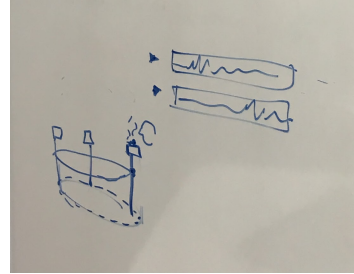
- Acabar guía
- Hacer proto audios
- Probar equipo/ dejarlo listo
- Revisar checklist
- Reconocer/ensayar taller

- Rotafolios
- Post-its
- Plumones (varios)
- Cámaras - fotos
- video - 2 min
- Grabadora - audio - 2 min.

- Prototipos**
- Audifonos aislantes
 - Computadora → (Grabar audios)
 - Olores
- Materiales para prototipos**
(ninguno)

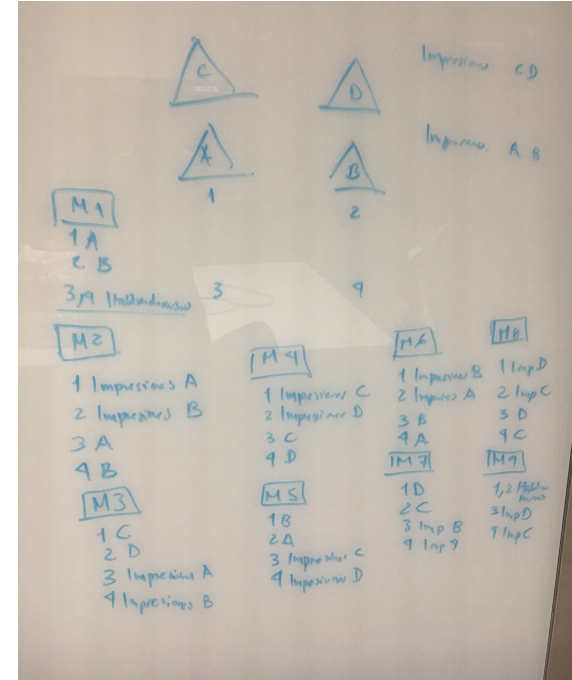
Sacrificial Concepts

- Solista**
- P1 = Kinect** - audifonos
- grabar cada sonido
- Bosque**
- P2 = Olor** - aromatizantes
- estacionos - orden
- holders
- Desierto**
- P3 = Mapa informativo**
- Texturas para cada uno
- audifonos bt
- info grabado
- Brasos**
Sup...
- P4 = Maqueta táctil**
- planitas, etc...
- Busque**
- P5 = Experiencia 4D**
- spray difuser
- tocan
- ventilador...

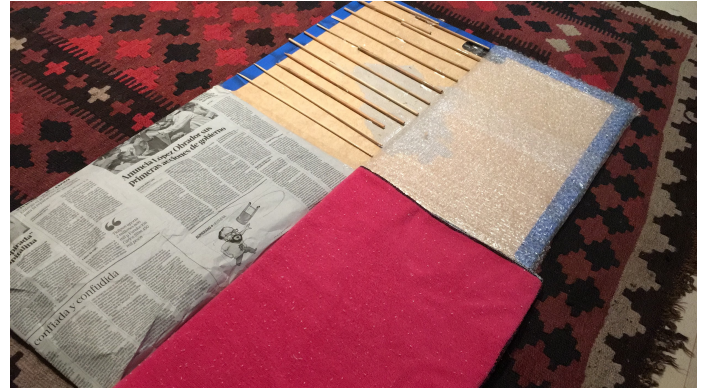


- A - Kinect
- B - Piso
- C - Olor
- D - Maqueta
- D - 4D

Teams Rotation plan



Preparing concepts



Sacrificial Concept 1

Touch mini diorama

- Desierto de cactáceas. Tehuacán, Puebla. **(Dessert)**



Sacrificial Concept 2

Smell elements from
a region

- Bosque de coníferas
y encinos.
Bassaseachic,
Chihuahua. **(Forest)**



Sacrificial Concept 3

Move and hear as if you were inside diorama: as they virtually touched an element, they hear its sound (animal or plant)

- Selva tropical húmeda.
Montes Azules, Chiapas.
(Jungle)



Sacrificial Concept 4

Step on, and hear different information
on each texture

- Bosque mesófilo de montaña. El Triunfo, Chiapas. **(Forest)**



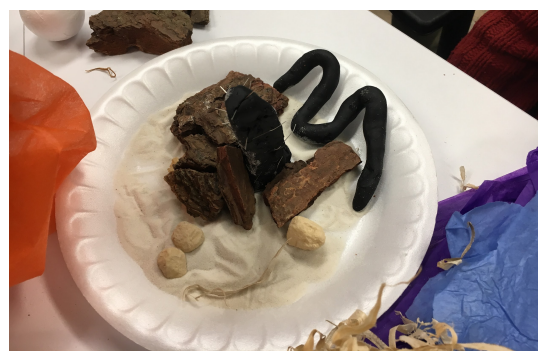
Sacrificial Concept 5

Multi-sensory experience:
hear environment and feel
textures, humidity and
movement

- Pradera de alta montaña.
Volcán Popocatepetl,
Puebla. **(Prey)**



Prototyping



Share ideas for other territories



Co-design DEBRIEF

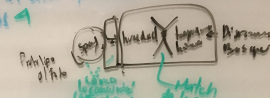
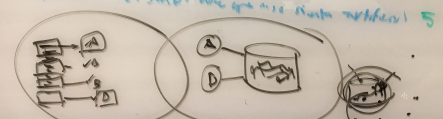
Immediate findings learned from their prototypes

No to un todo
 La historia no les dice nada si es artificial
 Magenta no es relevante que sea pequeño 1

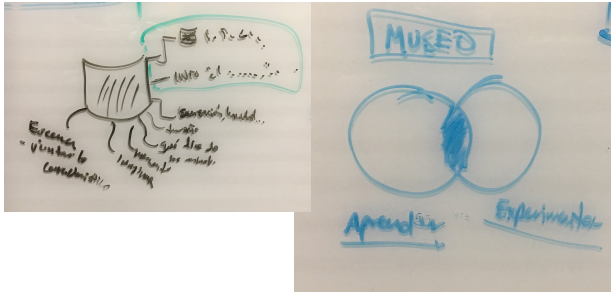
- Les gusta que cuente una historia
- To car los mantiene engaged 1
- Buscan tener control
- El tacto es el medio que prefieren para tener control 1
- Audios debe estar bien ambientado
- También, en palabras conversacionales 1
- Lenguaje más accesible, menos técnico, más descriptivo
- Fin tacto con pie tiene que relacionarse con el audio 3
- El tacto con los pies desde algo que se relaciona 3
- La construcción por ejemplo en la forma 1 - (brazos más - resacas)
- Una experiencia que inspire a la siguiente
- Baja visión, mayor concentración en el contenido visual
- Olores relacionados a reacciones 4
- Exploración por objetos 1
- Interacciones adoc a los objetos
- Tipos de vegetación por tipo de olor
- No quieren volver 1

= Importante tenerlos sentir los limitantes de espacio 2

- Les gusta explorar, pero no les gusta la inmediatez 2
- Si no les dices por dónde se pueden mover, no se atraen
- Les da control de lo que quieren saber 3
- Una guía para el importante 3
- El toque es el único que debe info 3
- El tacto en los pies es un momento control puntos 3
- El olor los atrae mucho más a la realidad 1
- No les gusta volver al olor 4
- La suma de toda las elementos los hace sentir mejor la experiencia en el taller por todos los elementos 4
- 1
- Sentir en el lugar aparte calor 5 tipos
- Al entrar en un espacio hay un explote y ellos muestran los otros 5
- El diferencial para ir a un museo a ver una obra es exponerse en los otros sentidos 5
- La posibilidad del sonido hace que sea más atractivo 5

1 Magenta 2 Azul 3 Tapaté 4 Olor 5 10



REAL FOREST: Subject			DIORAMA: Translation of subject		PROPOSAL: Translation of subject	
AFFORDANCES	SIGNIFIERS	ACCESS	SIGNIFIERS	ACCESS	SIGNIFIERS	ACCESS
-Humidity	-Water/wet environment -Ground texture	Touch Smell	-Water effect in diorama with light reflection	See	-Soft humid ground of the model -Audio about the humidity levels and the additional name “Cloudy Forest”	Touch Hear See
-Temperature	-Wind -Cloudy sky	Touch See	-Additional title of diorama “Cloudy Forest” on label -Temperature range written on label	See	-Audio about the temperature range written on label	Hear
-Freshness	-Air -Plants odor	Smell See	-Light reflecting on plants and scenery setting	See	-Smell of fresh plants through hole -Audio with sounds of wind and water	Smell Hear
-Color	-Light showing colors	See	-Colored elements in diorama	See	-Color of plants on the model	See
-Plants	-Texture of plants -Sound of plants with wind -Smell of plants	See Touch Hear Smell	-Plants replicas in the diorama -Text about some plants written on label	See	-Plants replicas on the model -Audio about the vegetation and plants found -Smell of the plants through hole	Touch Hear Smell See
-Animals	-Sound of animals -Shapes of animals	Hear See	-Animals replicas in the diorama -Sounds through speakers -Text about some animals written on label	See Hear	-Animals replicas on the model -Audio with sounds of animals -Audio about the animals	Touch Hear See

Definition...

Conflict between trying to make an existing exhibit accessible vs. creating an inclusive exhibit from scratch:

When translating an object, will we be making the object accessible/ translating it as it is?

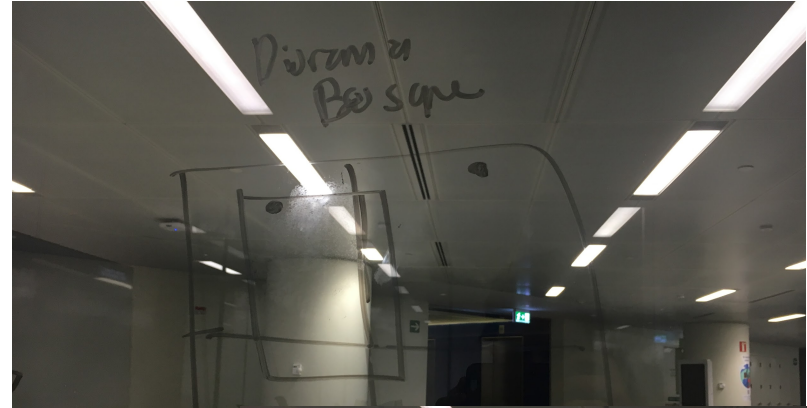
or will we create a whole new experience for that object?

Making the association for accessible interaction

We should translate the Forest, not the Diorama of the Forest!

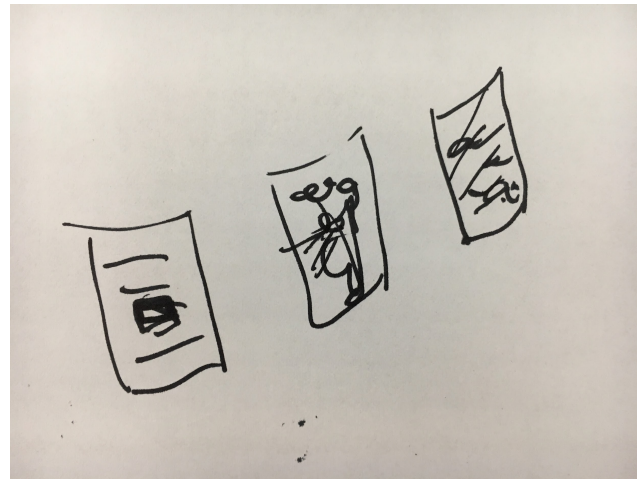
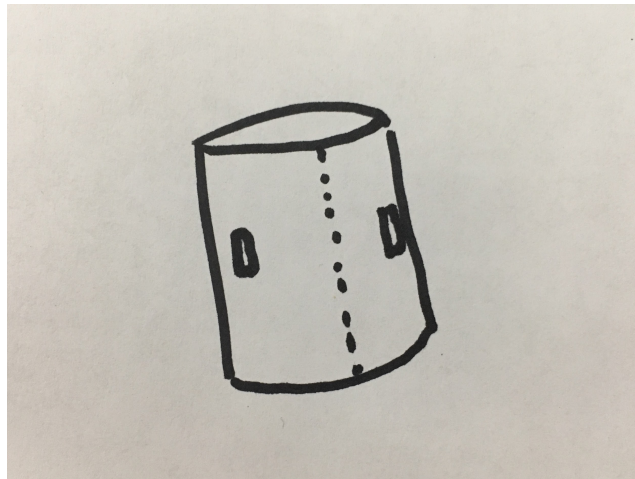
If the affordance is “Humidity” what signifiers will make a user feel humidity?

What signifiers did users prototype as the most functional and why?

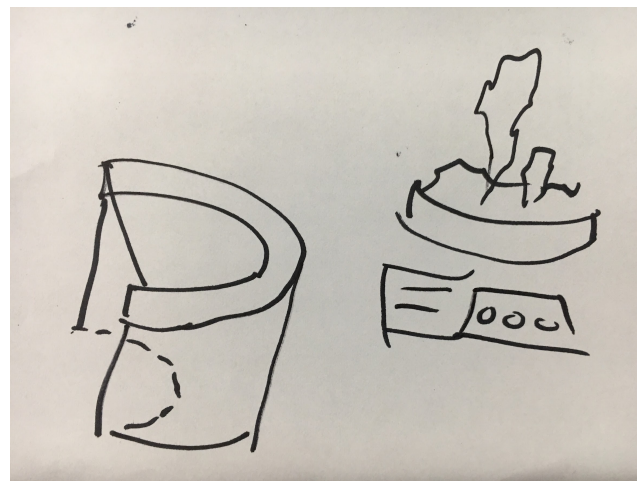
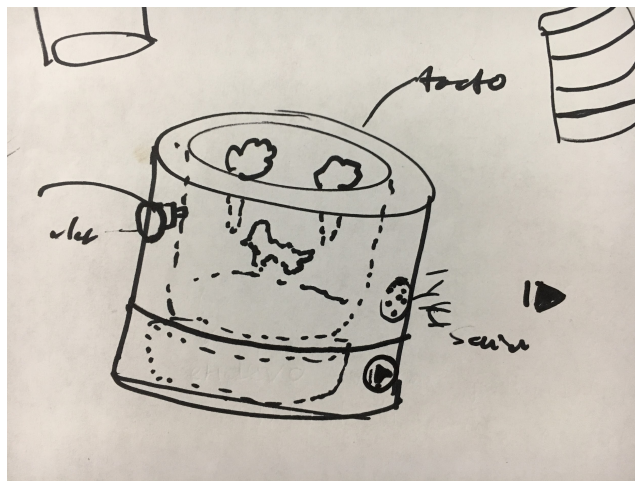


Sketches for final prototype

The shape of the diorama?



Transporting the diorama?



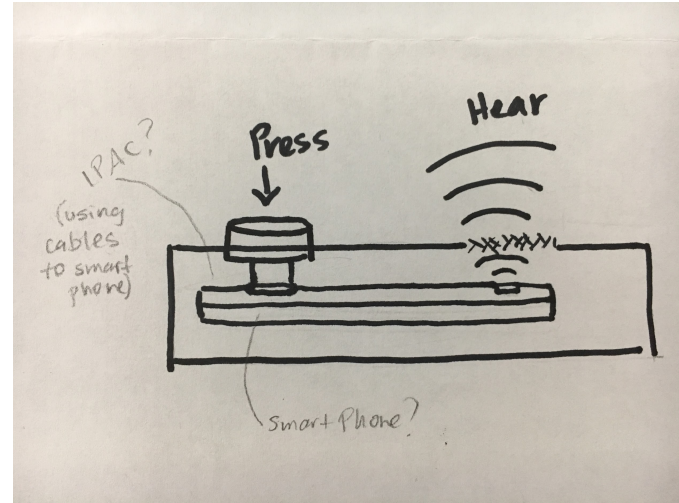
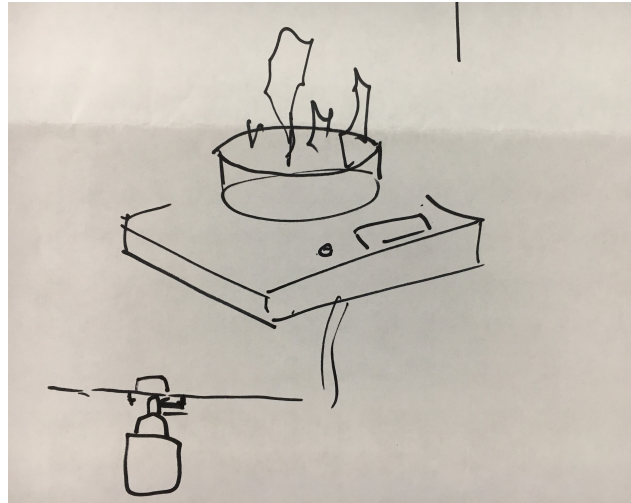
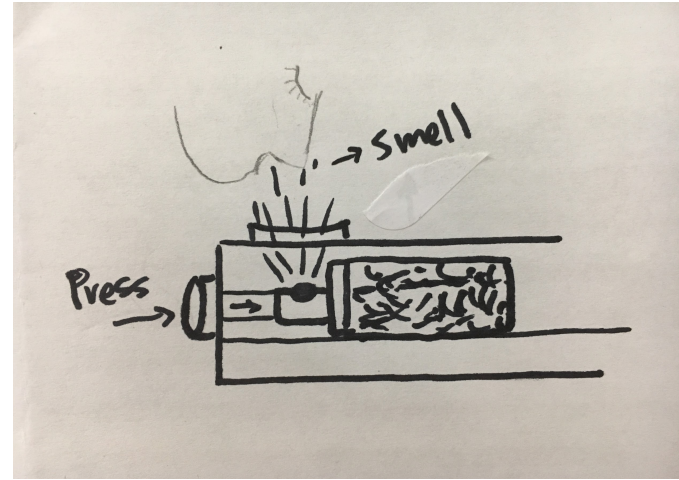
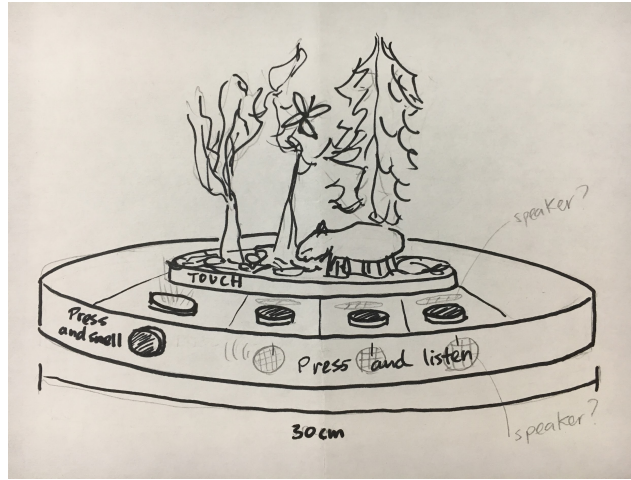
Final prototype

Iteration after synthesis

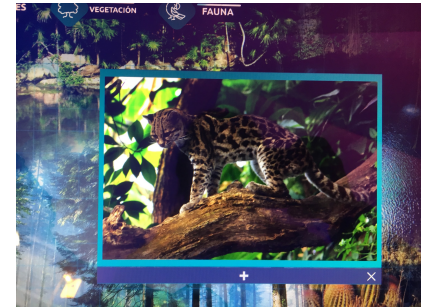
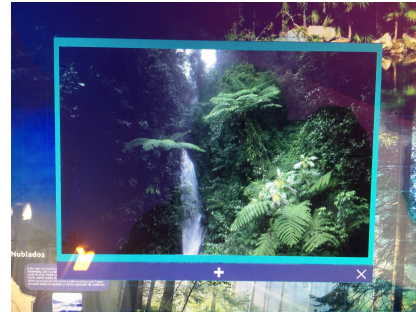
Laser-cut pieces: what material is easier to put together?

What level of programming?
Touch button and hear

How to dispense smell?



References for prototype's content



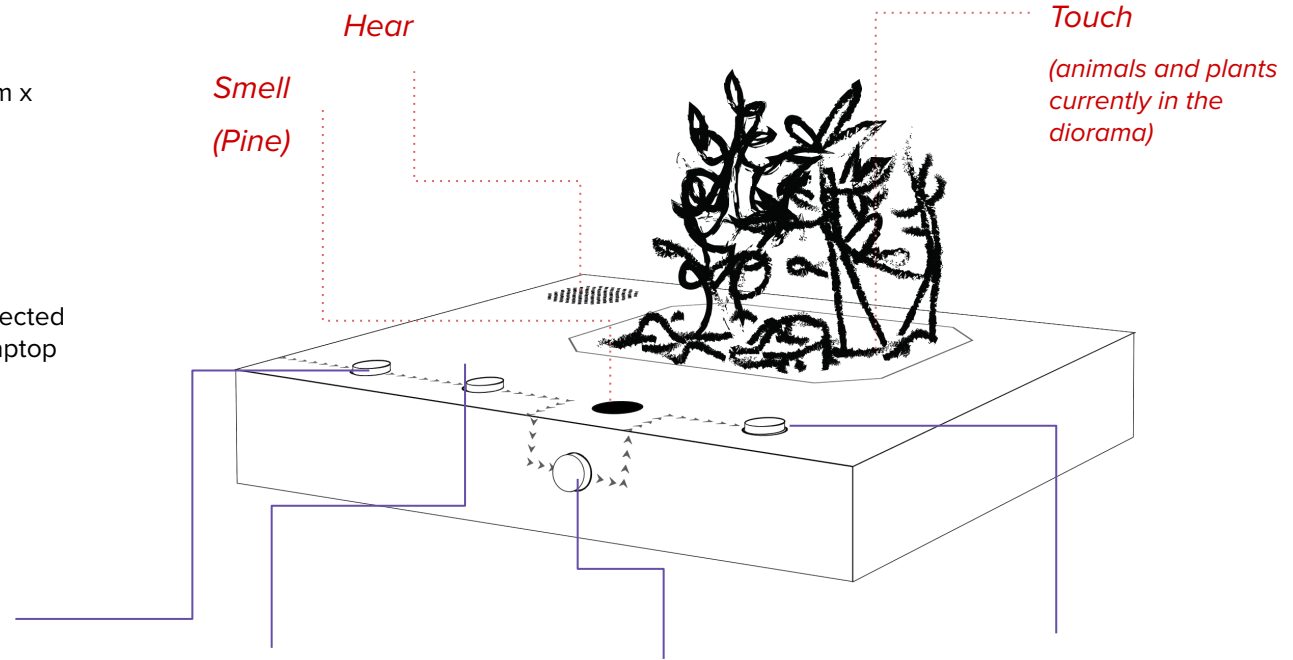
Mountain Mesophilic Forest: Accessible Diorama



Size:
50cm x 40cm x
6cm

Material:
MDF

Interior:
Cables connected
to external laptop



Press to hear:

Introduction

“Hola esta es una representación del diorama del Bosque Mesófilo de montaña que puedes tocar, oler, y presionar los botones para escuchar...”

Press to hear:

Info. card

“Los bosques nublados... (lo que está escrito en el diorama actualmente)”

Press to hear:

Plants

“Las plantas que se pueden encontrar en este bosque son...”

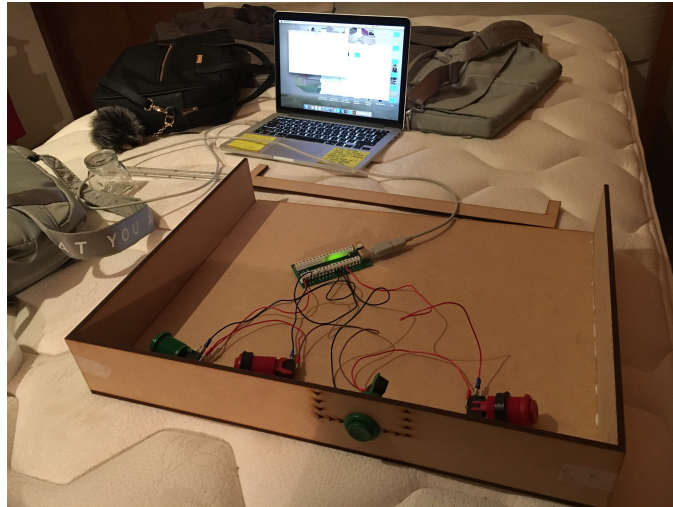
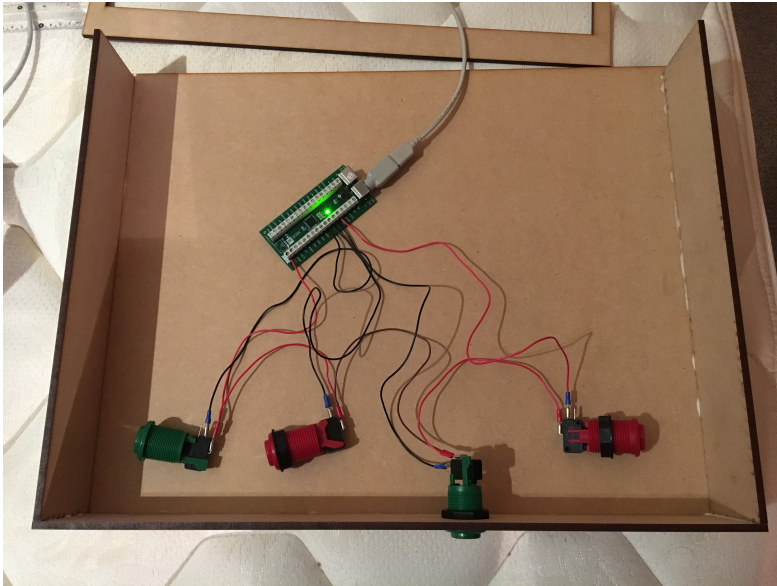
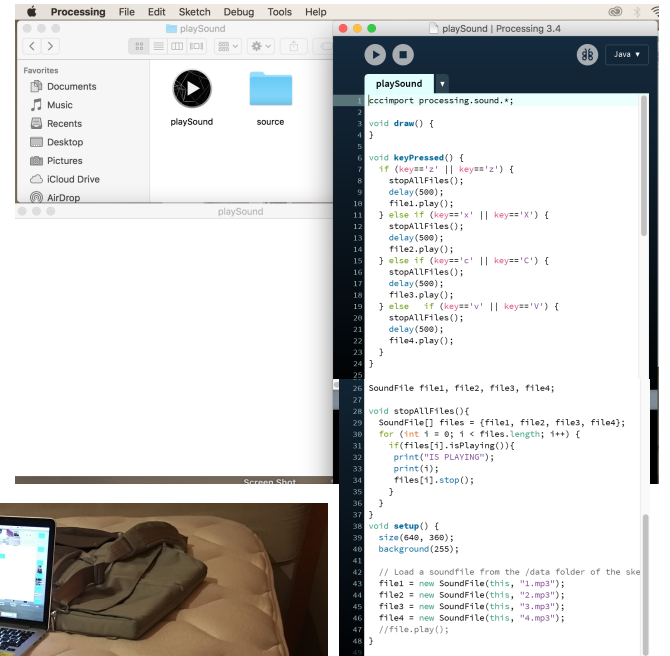
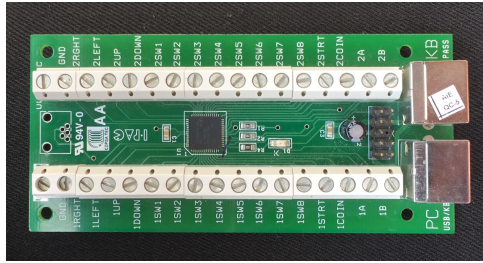
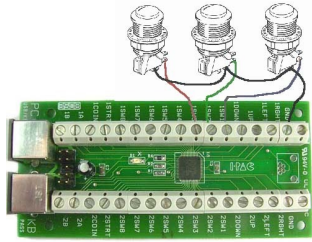
+Acércate a oler ¿a qué huele?

Press to hear:

Animals:

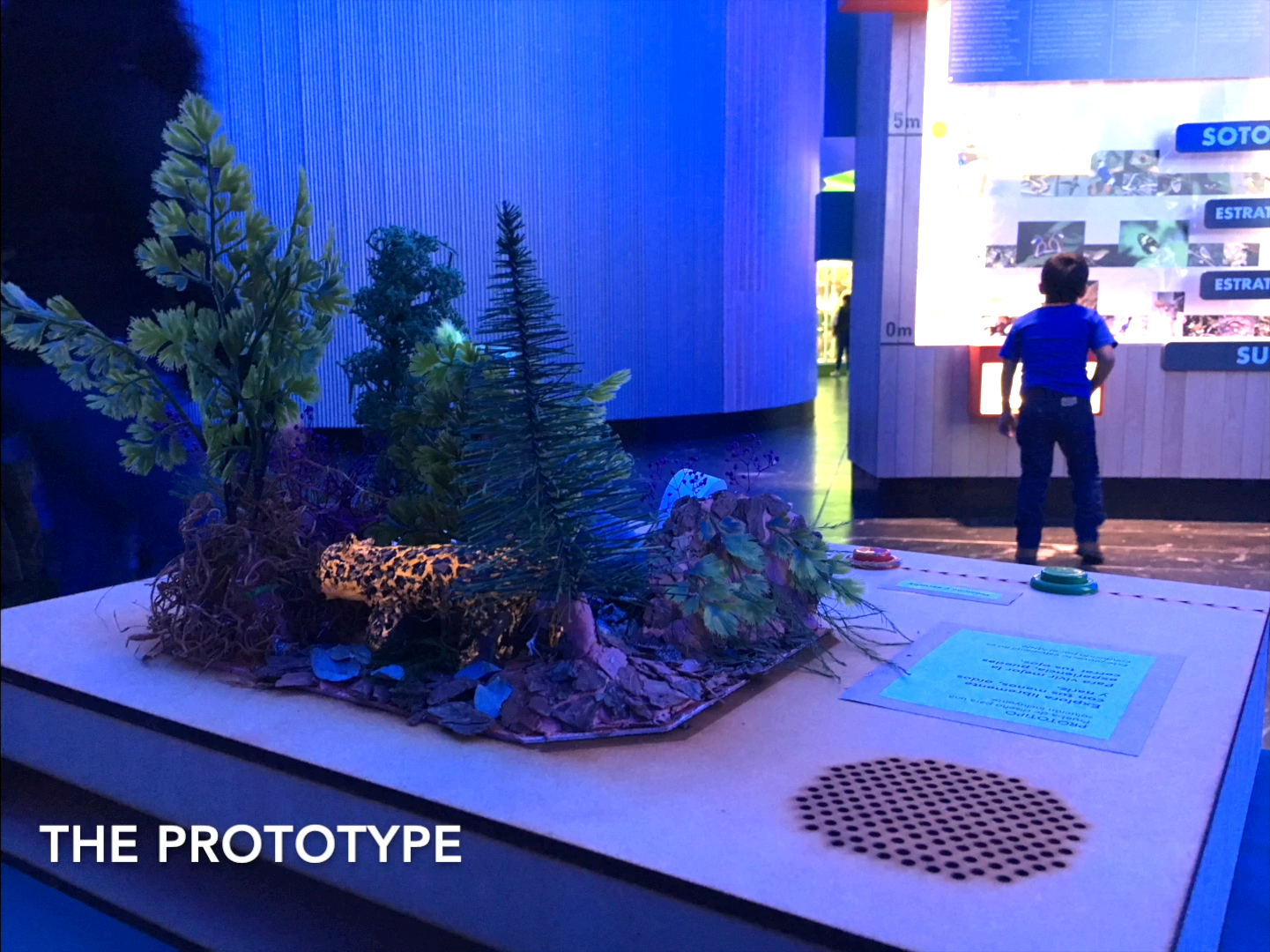
“Los animales que se pueden encontrar en este bosque son...”

Building the electronics



Building tactile representation





THE PROTOTYPE

Some relevant findings to be adjusted:

The first introductory audio worked perfectly, it automatically helped visitors engage with the translation and invited them to start exploring.



Some relevant findings to be adjusted:

Visually impaired visitors didn't detect the tactile linear guide, so hardly none of them found the button on the front side, neither they understood the sequence.



They didn't find the lead to open the olfactory hole, they skipped it thinking it was part of the surface, and felt unsure if they could open it because they thought they might break something.



Some relevant findings to be adjusted:

The audios were too long for visitors that could see, but long enough for blind visitors.

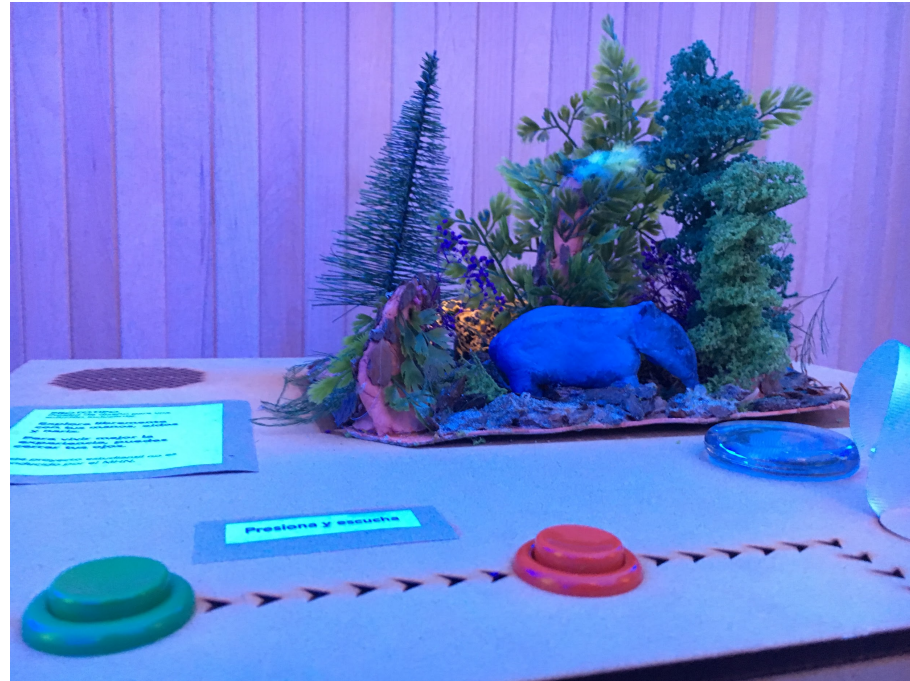
Visitors wished the interesting facts were translated too, because it's what they wished they learned about.

E.g. smelling coffee or touching coffee grains...



Some relevant findings to be adjusted:

When visitors started touching the tactile representation, most of them pressed the buttons on the way accidentally.



Some relevant findings to be adjusted:

HEIGHT: tall participants had to bend too hard to reach the smell dispenser.

Visitors on a wheelchair had a hard time reaching out for the tactile representation and their chair wouldn't let them interact comfortably.

Most children were able to touch comfortably, but some shorter children had to be carried by their parents to reach.



Some relevant findings to be adjusted:

Having the tactile version of the diorama with all the elements in the same place did not allow users to explore each element thoroughly with their hands.

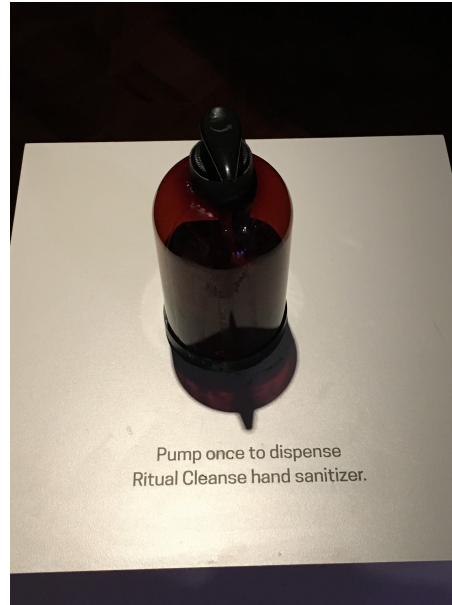


Other considerations

We realized hygiene should be taken care of when having tactile interactions.

Consider offering hand sanitizer at the beginning of the exhibition. This is important because there will be many people touching around.

The same for the smell dispensers, they should be designed so that noses don't have direct contact with the glass.



TRANSLATION DESIGN POST USER TEST

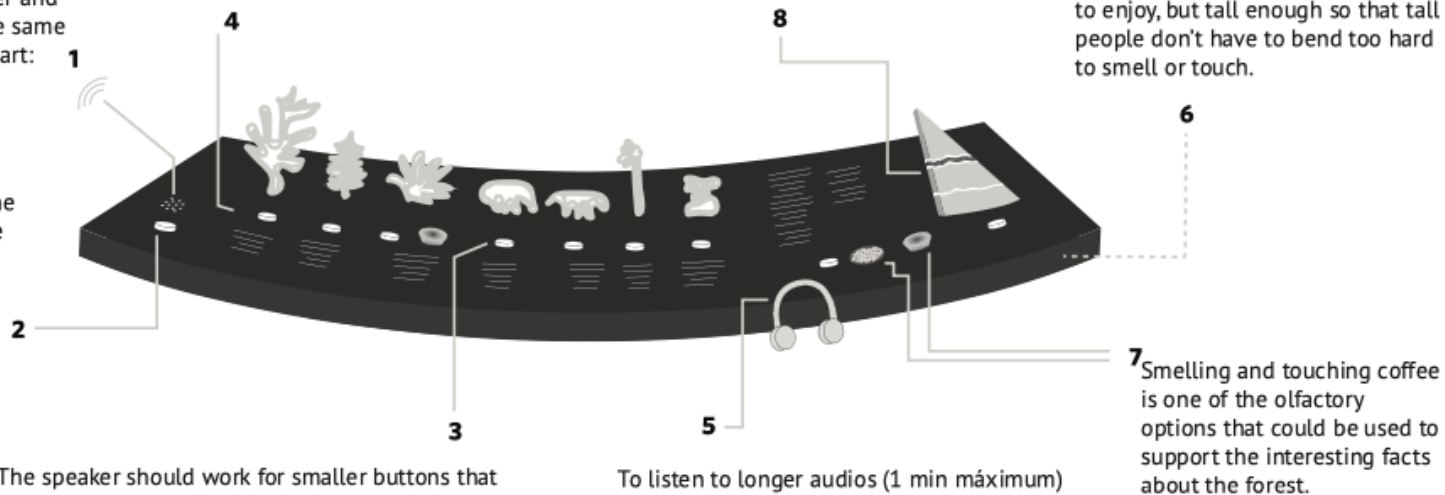
To be installed permanently next to the diorama, it would need to have an audio, through a speaker, inviting people to get closer and start interacting with it, the same audio instructing how to start: "touch the button".

There should be one button only closer to the edge of the platform that introduces the translation, like the audio from the first button that worked so well: "This is a representation of the first diorama..."

There should be enough space between buttons, smell dispensers and the tactile representation. There shouldn't be more than one row of elements so that people don't have to reach further and accidentally press buttons on the way.

Touching a model that represents the change in altitude of this region showing the forest in contrast with the sea level and textured to represent the cliffs.

Height: this is challenging, it should be short enough for children to reach and people on a wheelchair to enjoy, but tall enough so that tall people don't have to bend too hard to smell or touch.



The speaker should work for smaller buttons that have very short audios, ideally they should be next to the element (animal or plant) they are touching or smelling to learn about it. The audio then could combine information about that element with the sound that element naturally emits. E.g. "Rooaar! the Jaguar in the humid forest is very hard to find and is the only carnivore."

To listen to longer audios (1 min maximum) with more explanation, it is best to provide headphones. This information should contain only interesting facts with friendly language. E.g.: "did you know this forests are the principal generators of the famous south coffee? Next time you enjoy a cup of coffee remember it comes from the Humid Forest from Chiapas..."

REAL FOREST: Subject			DIORAMA: Translation of subject		PROPOSAL: Translation of subject	
AFFORDANCES	SIGNIFIERS	ACCESS	SIGNIFIERS	ACCESS	SIGNIFIERS	ACCESS
-Humidity	-Water/wet environment -Ground texture	Touch Smell	-Water effect in diorama with light reflection	See	-Soft humid ground of the model -Audio about the humidity levels and the additional name “Cloudy Forest”	Touch Hear See
-Temperature	-Wind -Cloudy sky	Touch See	-Additional title of diorama “Cloudy Forest” on label -Temperature range written on label	See	-Audio about the temperature range written on label	Hear
-Freshness	-Air -Plants odor	Smell See	-Light reflecting on plants and scenery setting	See	-Smell of fresh plants through hole -Audio with sounds of wind and water	Smell Hear
-Color	-Light showing colors	See	-Colored elements in diorama	See	-Color of plants on the model	See
-Plants	-Texture of plants -Sound of plants with wind -Smell of plants	See Touch Hear Smell	-Plants replicas in the diorama -Text about some plants written on label	See	-Plants replicas on the model -Audio about the vegetation and plants found -Smell of the plants through hole	Touch Hear Smell See
-Animals	-Sound of animals -Shapes of animals	Hear See	-Animals replicas in the diorama -Sounds through speakers -Text about some animals written on label	See Hear	-Animals replicas on the model -Audio with sounds of animals -Audio about the animals	Touch Hear See

Roadmap of Interventions for Inclusion at the MNHEC

Less effort

More effort

FIELD OF ACTION	SHORT TERM	MEDIUM TERM	LONG TERM	
DIFUSION AND DRIVERS	<p>Information about accessibility in the museum on the internet</p> <p>Broadcasting of inclusive practices in the museum</p>	<p>Audio on website introducing the museum</p> <p>Advertising and awareness creation through inclusion organizations</p>	<p>An accessible website for the museum</p> <p>Accessible coordinates and instructions to get to the museum</p> <p>Audio signage at the Chapultepec Forest that helps get to the museum</p>	<p>Higher impact</p> <p>Lower impact</p>
NAVIGATION	<p>Indicators where the restrooms are</p> <p>An inclusive feedback section for visitor comments</p> <p>At the entrance, a welcoming audio to confirm we arrived at the right place, like the Torre Mayor building that has an audio reproduced every time it senses people approaching saying "Welcome to the Torre Mayor"</p>	<p>Interactive tactile map at the entrance</p> <p>Museum app for iphone that gives them what orientation information they might need, and where they are</p> <p>Special guides for cane users</p> <p>Create a consistent system that allows visitors to find the same elements across each section</p> <p>A system that informs about the crowd numbers in each section (similar to Six Flags with information as to how many people in each game's line</p>	<p>Tactile floors at key junctions</p> <p>Each vault with its own personality or identification system using sound, color, and so forth</p> <p>0342015: regulation norm that determine accessibility in the Work Environment by the Mexican Secretary of Work</p> <p>Informative pamphlet in braille</p> <p>Mobile carts available for anyone who wants to ride to each section instead of walk</p>	<p>Higher impact</p> <p>Lower impact</p>
INTERACTION WITH EXHIBITION ROOM	<p>Staff training and disability sensitization</p> <p>Special group tours using objects they can touch</p> <p>Special tours using an inclusivity cart like the AGO</p> <p>Inclusive activities where vision impaired patrons can interact with other visitors</p>	<p>Specialized staff that can help describe the environment and objects</p> <p>Inclusive conductive thread</p> <p>Ways in which they can have an individual cultural experience without a third-party interfering their learning possibilities</p> <p>An inclusive patriotic policy, enacted through</p>	<p>Beacons</p> <p>Inclusive signage</p> <p>Audio tour</p> <p>Clear change of floor textures indicating change of sections</p> <p>Changes in light, temperature or sound effects</p>	<p>Higher impact</p>



Takeaways

- **Designing for the extremes** truly improves the experience for everyone
- Codesign is key= Identify the problems together and ideate solutions **together**
- **Diverse groups** come up with the best solutions
- **Simplest solutions** are the most effective
- Inclusion and accessibility **doesn't require additional investments**



Thank you

