Curating Experiences

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“Museums have to shift from being merely collectors of information to becoming curators of experiences.”

https://museumhack.com/design-important-museum
Natural History Museums have traditionally been static displays creating a passive learning environment. Consequently, they are not places that foster strong immersive experiences among visitors, which leads to a decrease in attendance.
Intro
Museum Background
Visitor Demographic
Current Experience
Curating A New Experience
Museum Engagement
Current Layout
Main Floor Redesign
The Fossil Lab
Natural History Museum Background
What Is A Natural History Museum

A natural history museum is a scientific institution with natural history collections that include current and historical records of animals, plants, fungi, ecosystems, geology, paleontology, climatology, and more. They are meant to educate the public as well as act as places of research for scientists.
The Benchmark for American Museums

- The Smithsonian Institution is the world's largest museum, education, and research complex
- 19 museums and the National Zoo
- Aim to shape the future by preserving heritage, discovering new knowledge, and by sharing resources with the world

**Collection**

- 145 Million specimens & artifacts

**Education**

- Goal to promote understanding of the natural world

**Research**

- Center for research and discovery
Visitor Decline At The NMNH

50% decrease in attendance in six years.
Visitor Demographic
Why Do People Go To Museums

Self-Expansion
- Look to enlarge their worldview
- Want new experiences, knowledge, connections, and a wider perspective.

Social Bonding
- Visit with children
- Use it as a way to enrich their child's education
- Field trips fall into this category

Children's Welfare
- Visit with friends and family
- Use it as an opportunity to engage with friends and family in meaningful conversation

Identity Confirmation
- Visit to confirm one's values and interests
- Have a concern for life, science, and nature
- See visiting academic places as a part of their identity
Visitor Demographics

- 34% Adults with Children
- 51% Adults in Groups
- 15% Adults Alone

Age Demographics of the NMNH

- 33% >44
- 35% 12-29
- 32% 30-44
The Experience Generation

US. Population

- 26% Millenials
- 25% Gen-X
- 21% Baby Boomers
- 7% Silent Gen
- 1% Greatest Gen

Ages 18-34

- Choose to buy experiences rather than objects
- Museums are therefore at odds with concerts, amusement parks, theaters, etc.
Types of Visitors

Visitor Segmentation

- Traditionalists: 32%
- Social Explorers: 18%
- Parent Facilitators: 16%
- Activity Seekers: 24%
- Disengaged: 10%
Visitor Segmentation

34%

B. Technology Seeking
Activity Seekers, Parent Facilitators, and Social Explorers

66%

A. Technology Averse
Traditionalists & Disengaged
What Do People Want To See?

Reason For Visit

- Nature & Animals: 73%
- Science: 39%
- Art & Culture: 33%
- Global Issues: 23%
- IMAX Films: 15%
- Tours: 9%
- Hands-On Activities: 9%
- Live Programs: 6%
- Other: 8%
What Do People Want To See?

Activities Reported by Visitors At The NMNH

- Watched films in a theater/exhibit: 46%
- Hands on activities: 36%
- Talked to an expert/volunteer in an exhibit: 18%
- Used a computer in an exhibit: 16%
- Went to Forensic Anthropology: 18%
- Went to the Discovery Room: 17%

*on average visitors reported two activities*
Current Experience
Experience Rating at the NMNH

Below Excellent

2004

2010

2013

Excellent

Superior
How can I get my child more excited about science and nature?

Needs advanced content that appeals to educated adults

Current tech isn’t intuitive

Funeral like atmosphere

No emphasis on modern issues

No new information on repeat visits

No community events

Nothing fun for adults to do

No emphasis on modern issues

More interactive exhibits

More seating

Few non-English materials & options

Common Complaints
Curating A New Experience
Key Goals

- Promote active learning for all ages
- Create an environment that fosters unique experiences
- Encourage more museum engagement
Museum Engagement
New Events

Digs & Drinks
HOSTED AT THE CMNH

Crystals & Cocktails
HOSTED AT THE CMNH

Drawing Dinos

Escape the Museum
HOSTED BY THE CMNH
Subscription Box

- Can be implemented at any museum
- Boxes contents are modeled after the museum collection
- Mystery/puzzle box
CMNH Kirtland Hall of Prehistoric Life Redesign
new floorplan

- Jurassic Exhibit
- Cretaceous Exhibit
- Triassic Exhibit
- Ice Age Exhibit
- Cleveland Shale Exhibit
- Early Fish Exhibit
- Permian Exhibit
Natural materials are used throughout the space to give a nature vibe. A board walk is used in the dinosaur and ice age era sections to guide the viewer. It is incorporated to make it feel like the viewer is moving through a natural space or park, where they are often used. In the sections of early fish a fake stone flooring is used to give the feel of moving to a rocky underwater space to correspond with the subjects.
cleveland shale concept
early fish + permian concept
ALLOSAURUS
Allosaurus fragilis

NAME MEANING: DIFFERENT LIZARD

TIME: LATE JURASSIC

SIZE: 33 - 39FT

LOCATION: NORTH AMERICA

DIET: CARNIVORE

Solitary or Pack Hunter?

Different Lizard?

A Day in the Life

Jurassic

Plaque Example

embossed skeleton

color corresponds with the era
This is a view of the ice age exhibit. Underneath the mezzanine is a small cave-like section where fossils in the case would be. Behind these are cave paintings mimicking those from early humans. The lighting in this section would flicker like a fire, further immersing the visitor in an ice age environment. This section would also feel cooler than the rest of the room.
The cretaceous exhibit is centrally located in the hall. It features a large fabric over the ceiling in which projections of the sky would be. Periodically an asteroid would shoot across the screen and change the lighting and feel of the space. This calls back to the asteroid that triggered the end of the dinosaurs. The landscape and pedestals the dinosaurs are on have plants relating to the era. In addition sounds would be played, for example dinosaur roars, wind, generally nature.
This is what the room could look like during a night event. The sky projection would change to reflect a night sky and the overall lighting would become dim. The exhibit lighting would take on a blue hue and the dinosaurs would be lit from underneath in the colored lighting. The edges of the path would become lined with a neon glow to help direct visitors. Fog could also be implemented to further set the mood of nature at night. The sounds of nighttime creatures would also be played.
The back wall of the cretaceous exhibit has an Edmontosaurus in its suspected habitat of a marshland. Above that is a pterosaur perched on a ledge. A petrified wood and early mammal exhibit are located on the large tree. Also in this section has the extinction interface.
This is a more detailed view of how the dinosaur anatomy interface would look. A thin translucent fabric would be stretched across the skeleton and an image would be projected onto it. The images would be of the brain, muscle structure, and what it would look like fully fleshed out. This would be on both the Triceratops and the T. Rex.
This is an example of the screens on the anatomy interface. It would allow a visitor to see the anatomy of a triceratops and a t. rex.
This is a detail of the extinction interface. It is placed on the brink of the ice age and cretaceous exhibits to mark the major extinction of the dinosaurs.
This is an example of the screens on the extinction interface. This is used to educate visitors about the various factors that lead to the multiple extinctions we’ve had during Earth’s history, as well as how these factors are affecting today’s species.
The Cleveland Shale exhibit is a feature point for what makes Cleveland special for fossils. Here would be all of the Devonian era fossils and would also inform as to what makes Cleveland a special place for the fossil record. It also features our Dunkelosteous skull, which is a highlight of the collection.
This is the half theater. It is made from digital glass and would show time progressing through the ages. There is metal detailing next to the screen that connects to the upper mezzanine. On this there would be cut outs of various creatures that are back light. The backlit colors would change and correspond with what is shown on the screen.
The early fish exhibit would take on an aquarium feel. The cases are rounded and would seamlessly slope up into the ceiling. On this ceiling the shapes of fish would move above giving an underwater feel. The lighting would also shift in blue hues and have light reflections projected onto the floor. This section also features a "river" that runs from the early fish display to the permian display. It has the 5 main steps fish took to become amphibians on land. These could be seen in augmented reality by use of QR code and a phone.
This is an example of how an augmented reality evolution river would look. Here it is centered on one subject, Tiktaalik. A visitor could scan a QR code and point it at the river and see these creatures in AR. They show the evolution from fish being in the sea to going on land. The visitor could see the name and additional information on the subject using this.
The jurassic exhibit also features the large projected sky that would cover part of the ceiling. It features three jurassic dinosaurs.
The Fossil Lab
What is the Fossil Lab?

- An interactive space where people can learn about the process and steps that fossils take from field to museum.

- Different specimens would rotate through the space.
Branding

Logo variations
1 Excavation Pit

2 Field Prep.
5. Dino Assembly

6. Dino Model
This is where a visitor can explore Earth’s Timeline. The earth would be projected onto a 3D globe. This would correspond to the era that is selected in the interface.
The Cretaceous Period

Most notably this period was known as the high point of the Age of Dinosaurs. It is also known as the end of their era, as this age ended with their mass extinction set off by a giant meteor collision. This marked the beginning of the first mammals and flowering plants, with insects evolving in tandem.

85-95 F

Major Fauna

- Baryonychinae
- Suchomimus tenerensis
- Siamosaurus suteethorni
- Eumeralla taxon
- Ichthyovenator
- Irritator challengeri
- Gara Samani taxon
- Sigilmassaurus brevicollis
- Spinosaurus aegyptiacus

Name Meaning: "heavy claw"
Size: 25-35 ft long
6-12 ft tall
Time: Early Cretaceous
Location: Europe

Major Flora

First Flowering Plants

Oak, Maple, Willow, and Elm Trees Appear

250m Above Sea Level

Climate

250 m Above Sea Level

19% Oxygen

This is an example of the screens on the timeline interface. These allow visitors to dive further into different eras and to learn about them. Paired with the globe it shows how the continents were formed and all the other events that were concurrently evolving.
Design-A-Dino is an interactive space where a visitor can create a dino. With this dino they can go to Meet-A-Dino. This is a place where a visitor can interact with their dino in a virtual reality place.
This is what the Meet-A-Dino screen would look like. In this space a visitor can interact with the dino they created earlier. One could have the option of changing the environment to match the dino, giving it the right food, learning more about it, and switching to a new dino. It would respond to your movements and interact with you.
This is an example of the Design-A-Dino process. Visitors can create a dino while also learning about them and the different species. Once one is created a QR code can be scanned to get the graphic, see the dino in AR, and potentially buy a 3D printed miniature of the dino.
This is a mockup on what the mini 3D printed dinos size and what boxes they would be packaged in. They are packed how fossils are packaged and stored in wooden crates.
Thank You!
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