What’s up with Climbers?
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Learning Outcomes

1. Alignment and fit for your museum
2. Understanding complexity to achieve better end results
3. Longer-term considerations
BEFORE YOU BUILD

A Case Study: MOXI
The Wolf Museum of Exploration + Innovation, Santa Barbara, CA
Working with an Exhibit Master Plan:
Assessing exhibit opportunities
Getting the Board…on Board

1. Strategic alignment
2. Knowing your cost (cu ft)
3. Knowing your “why”
Reasons to have a climber?
Reasons to have a climber?

1
2
3

WOW factor
Reasons to have a climber?

1. Alignment
2. WOW factor
Reasons to have a climber?

1. Risky play
2. WOW factor
3. Alignment
Reasons to have a climber?

- Gross motor skills
- Alignment
- Risky play
- WOW factor
Why have a climber?

most frequently mentioned across all responses

- gross motor
- risky play
- alignment/narrative
- scale/wow factor
MOXI’s WHY?

1. Exhibit designed for target audience
2. Opportunity to articulate educational objectives through exhibit design
3. Placement enhances the visitor experience
4. Unique on Central Coast of CA

IT’S NOT MISSING, BUT IT’S A WELCOME ADDITION.
Working with Conceptual Designs

- What is your style?
- What is your story?
A Tale of Two Climbers: What’s Your Story?

A) Kelp Forest Climber

B) Simple Machines Climber
Iterating on Conceptual Designs

- Cheapest time to make changes to your climber
- Align with educational objectives
- Aligns with exhibit objectives
- Avoid the Frankenstein-ed exhibit experience: Make it make sense in your existing space!
Design & Installation
Project Parameters

- Target budget
- Project timeline
- Target age range
- Experience goals
- Location selection
- Staffing & operations
- Fabricator selection
Project Phases

- Concept Design
  - Stakeholder review

- Schematic Design
  - SD budgeting
  - Fire marshal review

- Design Development
  - DD budgeting
  - Safety code consultant

- Construction Documents
  - Fabrication contract

- Fabrication

- Installation
Key design considerations

- Variety of challenges and destinations
- Staff access for emergencies & cleaning
- Durable & easy to clean materials
- Entry & exit on the same level
- Clear sightlines for caregivers & children
- Design for easily replaceable parts
- ADA Accessibility
- Multiple paths to avoid choke points
ADA Accessibility

- Requires 50% of experiences are ADA accessible
- Equivalent types of experiences
- Transfer platforms with handholds or ramp
- Obvious accessible pathway recommended
Accessible Pathway
Safety Guidelines

● Age ranges
  ○ Ages 6 - 23 months
  ○ Ages 2yrs – 5yrs
  ○ Ages 5yrs – 12yrs

● Access to climber
  ○ Outdoor with 24 hr. access (playground)
  ○ Outdoor/indoor ticketed access (children’s museum)
Material Considerations

- Netting has a lifespan so design for replacement. Netting can be a climb hazard depending on location.
- Stainless steel mesh for non-climb surfaces, very durable & transparent.
- High density plastics for high wear surfaces & direct sun. Easy to clean.
- Metal surfaces are durable but get hot in direct sun:
  - Stainless steel: no maintenance extremely durable.
  - Painted metal: durable and can be easily touch up.
  - Powder coated metal: extremely durable but hard to touch up.
Structural Engineering

- Large or complex climbers require structural engineering
- The building or site location require evaluation by an engineer: floor slab, footers, ceiling and columns attachments
- Engage an engineer as early as possible
Fabrication

- Select fabricator with climber experience
- Understand what they will build vs. subcontract
- Ideally contract with fabricator at end of Schematic Design
- Include a 10%-20% contingency
- Designer & museum shop drawing review
- Shop visit(s) during fabrication
Installation

- Installation planning begins during design
- Identify unloading pathways & staging areas
- Establish a plan for assembly work hours & safety perimeter to protect visitors
- Clear communication of punch list process
- Soft opening/ public opening timeline
Safety and Accessibility Standards Resources

- ADA Standards
- Playground Safety Handbook
- Guide to ADA Accessibility for Play Areas Handbook
- ASTM F1487: Playground Safety Standards (2-12yrs)
- ASTM F2373: Play Equipment Safety (6-23 months)
Great! But what’s it going to cost?
Expense Categories

- Initial Design + Fabrication + Installation
- Annual maintenance + cleaning
- Staffing
- Repairs + Replacement
Initial Design, Fabrication & Installation

- Scale and complexity
  - Simple prefabricated
    - $50k-150k
  - Medium scale
    - $150k-500k
  - Large/complex
    - $500k-$3m
Operational Considerations

- Maintenance + repairs
- Staffing
- Replacement components
Maintenance

● cleaning
● safety inspections
● adjustments
● replacing worn components
Estimated Annual Maintenance Costs*

*excludes staffing
Dedicated staffing

- Yes
- Some
- No
Aspects requiring staff intervention

- controlled entry/exits
- unique features: harness, helmets, spotters
- controlled direction of travel
- crowd control (read… “field trips”)
- accessibility
- “scared or stuck” children
- “accidents”
Operational Considerations

- Maintenance + repairs
- Staffing
- Replacement components
What is one thing you’d like to do to improve your climber(s)?

most frequently mentioned across all responses

- make safer: 15%
- ease of cleaning: 10%
- better sightlines: 10%
- entry & exit, dedicated: 10%
- greater accessibility: 10%
- increase durability: 10%
- improve repairability: 10%
Q & A

Key Takeaways:

1. Alignment and fit for your museum
   *What’s your story?*

2. Understanding complexity to achieve better results
   *Thoughtful design*

3. Longer-term considerations
   *Operating costs*

Safety and Accessibility
Standards Resources

#IA23