**BENEFITS & LIMITATIONS**

*Mechanical Interactives*

**BENEFITS:**

- Teaches concepts in unique ways that kids can’t experience outside of the museum setting
- Engages children in new and different ways
- Repairs can typically be completed by someone on the museum’s staff
- Typically less expensive than digital interactives
- Develops motor skills
- Fun, hands-on way to learn concepts
- Emotionally impactful - kids remember the experience
- Can be large and immersive
- Engages most of the visitors’ senses
- Mechanics of the interactives can be exposed, demonstrating the functionality, even if it’s not the main educational directive

**LIMITATIONS:**

- Ongoing maintenance
- Wear and tear over time
- Safety - balancing fun with challenge and adventure
- Anticipating misuse scenarios
- Staffing for facilitation and ongoing maintenance
- Making the interaction intuitive
- Automatic reset of components
- Operational consumables
- Limited by physics
- Requires physical engagement to operate / interact (accessibility)
BENEFITS & LIMITATIONS

**BENEFITS:**

- Allows the museum to easily extend the experience with online resources
- Allows the museum to capture visitor data
- Allows interaction with things that aren’t tangible (atoms, molecules, etc)
- Allows interaction with things that may not be safe or accessible in real life
- Allows user-generated inputs
- Introduces visitors to new technology
- Creates magical or out-of-this-world experiences
- Scalable - multiple stations can utilize the same content
- Once a program is developed, cost of duplication is fairly low

**LIMITATIONS:**

- Can be expensive to develop the initial content
- Could be solving the wrong problem
- Typically takes longer to make repairs due to staffing limitations and hardware lead times
- Cost of replacement parts can be high
- Hardware required can become obsolete
- Not all software developers are created equal
- Could be lost on older generations
- Doesn’t give a true “hands-on” experience
- Must have power to work

*Developing Exhibits That Do More Than Tread Water*
QUESTIONS & BEST PRACTICES

KEY QUESTIONS TO ASK WHEN DEVELOPING AN INTERACTIVE EXPERIENCE:

• What is the purpose? Why build it?
• Who is the target audience? Age range?
• What are the learning objectives of the experience?
• How will this experience fit into the overall learning story and experience of the gallery?
• Who from our team will work on developing the experience? Are they the right people?
• How will we support this experience after it’s installed?
• What is the budget? To build? To maintain?
• Will this experience travel? If so, how?
• How will this experience integrate into our building? Consider need for power, data, water, etc.
• What does facilitation look like for this experience?
• How does learning change with the addition of this experience?

BEST PRACTICES FOR PRODUCING INTERACTIVE EXPERIENCES:

• Use a single producer for all exhibits in a given area:
  • This provides a single point of contact for all questions, issues, and repairs.
  • This ensures that similar/identical hardware is used throughout the exhibits.
  • Be certain that the fabricator will support the exhibit for at least one year after installation.
• The museum should have a project manager or single point of contact for the project.
• Start with a “big idea” or story line and stay true to this throughout the development process.
• Consider group experiences.
  • Be aware of audiences, layered experiences, and opportunities for intergenerational play.
• Aim for a timeless experience that will be less likely to become dated or obsolete quickly.
• Ensure that the people responsible for ongoing maintenance are part of the development process.
• Know how long the exhibit needs to last and build with that in mind.

Developing Exhibits That Do More Than Tread Water
Please feel free to reach out with additional questions!

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