Design Challenge Resource Collection

Module 2: Exploring Design Challenges

This module is part of a Design Challenge Resource Collection, developed by a cross-functional team at the Oregon Museum of Science and Industry (OMSI) with decades of experience conceptualizing, developing and building museum exhibits. The collection is intended to support exhibit developers and designers as they work to create interactive design challenges.

These modules are designed for someone to read individually or facilitate with a team. There are great benefits derived from collaborating on the exhibit development process. Throughout the modules, activities for groups of individuals are called out in blue boxes.

> ### Team Activity
>
> Discussion prompts and other activities for groups are in blue boxes like this one.

Each module stands alone; there is no specific order to explore the modules, nor is there a need to read them all. However, in some cases, references are made between modules for opportunities to learn more. Finally, these resources are not meant to be prescriptive, but rather examples, tools and approaches the OMSI team has found valuable in the development of non-facilitated engineering design challenge exhibits for the museum floor that are accessible, relevant and engaging for visitors.

The entire set of resources can be found on the *Design Challenge Resource page*

1. Introduction to Design Challenges
2. Exploring Design Challenges
3. Approaches to Exhibit Accessibility
4. Testing a Design: Measures of Success.
5. Exhibit Design Sprints
6. Graphic Development for Design Challenges
7. Prototyping Design Challenge Exhibits
8. Participatory Co-development of a Bilingual Exhibit
9. Documenting Exhibits: The Exhibit Record Tool

Exploring Design Challenges

Before starting on your own design challenge experiences, it can help to look at some examples to help you identify what characteristics you find valuable, compelling, and engaging. Explore some of the design challenge exhibits and activities at your institution, or other places nearby, and use the form below to document your experience. Use one sheet per exhibit. Explore alone or in small groups.

Take a look at Module 1: Introduction to Design Challenges for information about well defined goals and open-ended solutions; see Module 9: Documenting Exhibits - The Exhibit Record for a description of Experience Goals.

Team Activity

Discuss with your colleagues what you discovered while exploring existing design challenges. Think about the experience you want for your visitors:
- What makes a successful experience?
- What are pitfalls you want to avoid?
- How structured do you want the experience to be?
- How do you want to incorporate STEM content?
- What characteristics do you want your design challenge exhibits to have?
- How will technology be involved in the experience? Is the exhibit purely mechanical? Involve electronics? Computer-based?
- How will Diversity, Equity, Accessibility and Inclusion concerns be addressed?

Design Challenge Exhibit: _____

Interact with the exhibit as you would if you were visitors. List what you do.

- _____

- _____

- _____

- _____

- _____

Please rate the exhibit:

Well-defined goal   N/A   1   2   3   4   5   6   7   8   9   10   Open-ended goal

Briefly explain: _____

Well-defined solution   N/A   1   2   3   4   5   6   7   8   9   10   Open-ended solution

Briefly explain: _____

Not collaborative   N/A   1   2   3   4   5   6   7   8   9   10   Very collaborative

BBriefly explain: _____

Not engaging   N/A   1   2   3   4   5   6   7   8   9   10   Very Engaging

Briefly explain: _____

What do you think the exhibit team was hoping visitors would learn, experience, or feel?

Experience Goal(s):

In your opinion, how successfully does the exhibit meet these goals? Please rate:

Learning Goals: Very poorly   1   2   3   4   5   6   7   8   9   10   Very well

Briefly explain: _____

Experiential Goals: Very poorly   1   2   3   4   5   6   7   8   9   10   Very well

Briefly explain: _____

What design and content decisions support (or hinder) these goals?

- _____

- _____

- _____

What can we learn from this exhibit?