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Building the Engineers of Our Future

Introduction

On floor one of the blue wing lies an exhibit labeled “Engineering Design Workshop.” Here one can usually find a collection of small children milling about, some in a state of intense concentration. Everyone there is working on their claw for the daily competition, where all the different children come up with a design for a the best grabbing mechanism (similar to what you might see at a carnival to pick up stuffed animals). The materials are limited to say the least: a few plastic sheets, some paper clips, and some rubberized bricks, but with these limited materials come myriad different executions of what might seem to be the simple claw.

Once their claws are built, children are free to test the claws with various different media using automated machines. If the test ends up beating the performance of the days previous best in that medium, a child can notify an attendant and get their claw’s name displayed proudly on screen.

Analysis

First and foremost, a good exhibit must be interesting and entertaining, with special regard to being aesthetically so. The fact is: if an exhibit is not interesting enough for people to look at, it does matter what it has within. There can be no doubt that this exhibit performs wonderfully in that regard. With the combination of its hands on approach, bright colors, and the chance for a day’s fame on the leaderboard, this exhibit was easily the best bustling at the museum. The exhibit had no shortage of entertainment value, in fact listening around for a bit one can here exclamations of “Jackpot!”, “We did it!” or simply “Yay!” coming from all around.

Additionally, an exhibit at a technology museum has the unique requirement beyond that of a history museum or similar that it should actively involve the viewers, and incite a sense of curiosity and a drive for improvement, as needed in actual technological industry. Here too this exhibit succeeds. Due to the nature of the exhibit: construction, it is able to seemly involve the viewers. With the competition aspect, the drive for continuous improvement comes about automatically. Some children even go as far as to branch off the work of others, as embodied by

10 year old Delilah's statement, "my friend had a design, I looked at it and thought 'oh, I can modify that.'" this drive for improvement is in many regards the essence of development, for science and technology in particular, and this exhibit does a good job at bringing about those passions for improvement in the children attending.

In conjunction with the previous two points, a good exhibit should also leave the pertained with a feeling of success or pleasure. It is in that regard where this exhibit shines above any other at the museum, due largely to the leaderboard television exhibiting all the best scores of the day. As one child and his brother exclaimed, after toiling away at a claw, and having it come out on top for the day: "We did it! We made the leaderboard! This is awesome." As far as can be seen, there is simply no equally exciting exhibit anywhere else at the museum. This excitement is critical for developing young minds, and what more, it keeps them coming back to the museum. Those victorious children actually have visited "many times before," always in search of a new exhibit to experience some hands on engineering.

Recommendations

Going into the future, this exhibit has some things that should be kept constant, but also some things that could be changed to really improve the quality of the exhibit. Starting off, the exhibit could really benefit from showcasing the designs that have worked in the past, thereby allowing the current museum goers a look at what has worked before, jumpstarting them to creating even better designs. Doing this of course runs the risk of simply creating a bunch of copy cat designers, however this risk could be abated by perhaps only showcasing one previous design per day, perhaps even each day showing the best design of the previous day. This way every body would be able to collaborate off of each other, but also off of the work done by the combined efforts of people there the previous day.

The idea of a "claw game" is well known, along with the seeming impossibility of winning anything in them. This well known phenomena could be put to use, through having standard "game claws" for people to compete three claws against, or maybe through the creation of an arcade style pay-to-play claw machine, but with the added ability to use your own claw in the game. This would create a more tangible reward for excellence in design, allowing children to take some thing home to have forever in exchange for their impressive work.

As it stands, there are a couple of museum faculty around the exhibit, tasked with handing out materials and teaching how to operate the machines. Their role could stand to be greatly enhanced, perhaps in providing assistance to struggling young engineers, or even as masters of ceremony, providing entertainment and wit to the exhibit, to be appreciated by children and their otherwise standing around parents alike.

Conclusion

As according to the website, “the Museum's mission is to play a leading role in transforming the nation's relationship with science and technology,” and there can be no doubt that this exhibit works wonderfully towards furthering this transformation. The “Engineering Design Workshop” beautifully captures the essence of engineering, that of incremental improvements until success, and does so in a way that captures and rewards the attention of young minds. Many aspects of this exhibit, such as the leaderboard dynamic, should be implemented on a much larger scale across the entire museum. While the exhibit is not without fault, it still stands as a prime example of what an exhibit at a museum of technology should be.