

# Nuts and Bolts

## Less is More

by Mikko Myllykoski

**Mikko Myllykoski** is Experience Director at Heureka, The Finnish Science Centre. He may be contacted at [Mikko.Myllykoski@heureka.fi](mailto:Mikko.Myllykoski@heureka.fi).

The science center field is young and rapidly growing. Some start the counting from the Exploratorium and the Ontario Science Centre in 1969. Twenty years later there were 240 science centers worldwide, today more than 2400. One of the institutions that was opened in 1989, is Heureka, the Finnish science centre, a museum that on an average attracts 280,000 visitors annually in a 2-hour drive catchment area of 2,100,000 inhabitants. We wanted to pay homage to the achievements of the field by designing a whole exhibition gallery, Heureka Classics, for its 20th anniversary. The idea was to recycle some of our very best exhibits, many known from the Exploratorium Cookbook, some from Galileo Galilei or other scientists and inventors, for this millennium.

### New Design for Classical Exhibitory

In the spirit of Frank Oppenheimer's original idea of a "museum of art, science, and human perception," the exhibit anthology is based on physics and perceptual psychology exhibits. The art part is the design of the exhibition in a fashion which encourages engagement and social interaction in general, and adult-child collaboration in particular.

The inspiration for the design guideline is Nordic simplicity and functionality. In the focus is not so much the single exhibit design, but rather the whole exhibition architecture. The idea behind the concept is to first take away everything, and, then, add only what is needed, in a most consequent way, to support enjoying the phenomena—socially. According to research, 99% of the Heureka visitors arrive as part of a group.

Twenty-one of the total 31 exhibits are clustered into three perfectly round arenas. Each arena consists of three curvy tables with two exhibits on each table. The center of the arena is accessed from between the tables; there is a larger center-piece exhibit. The floor of the center is slightly elevated. This design allows the kids to meet with the adults, who are standing on the other side of the table, on a more equal level. A fourth arena of the exhibition is dedicated to the Flying Carpet, an exhibit that allows visitors to "fly" briefly by releasing compressed air beneath the carpet: here the arena tables serve as benches where visitors can take off their shoes or just sit down.

The Heureka Classics concept is a platform: the exhibition can be renewed by introducing new themes on one or more of the arenas at a time.

### Cool and Credible vs. Cute and Colorful

The materials are chosen to be ageless: black-painted plywood with some black-on-black decoration, thick lacquer on birch table-tops, thick glass and polished stainless steel. Everything stands on a dark grey carpet. Almost all the color is taken away, with the striking exceptions of a bright yellow tennis ball and a bright yellow toy boat that are both focal points of the exhibits: the ball is shot high with a bowling ball cannon, and the boat is sunk by letting air in the water.

The colorless design is in marked contrast to the "cute and colorful for kids" world that many science centers feature. The aspiration of the design team is to respect the children and trust that they appreciate the notion that they are welcome to an adult-looking world. The active children themselves are the colorful spots in the museum.



*Heureka, The Finnish Science Centre, has been visited by over 6 million visitors since 1989. A total of around 18 million people have experienced its exhibitions around the world. Photo by Timo Suvanto, courtesy of Heureka.*



*Design concept of Heureka Classics with thematic arenas. The ten-button multilingual labels lie flat on the table tops. Photo by Timo Suvanto, courtesy of Heureka.*

### Labels for Digi-Natives

The same strict principle of minimalism is adapted in the labels. Making the labels electronic and embedding the 19in. flat screens in the tables, they appear to the visitor to be almost on-demand at each exhibit. The printed trilingual (Finnish, Swedish and English) labels tend to discourage readers and occupy much space, remaining almost like a wallpaper blocking views within the exhibition. The screens can display two additional languages, Russian and Estonian, adding much to the accessibility of the exhibition. These languages are the two most important ones for tourists and immigrants in Finland.

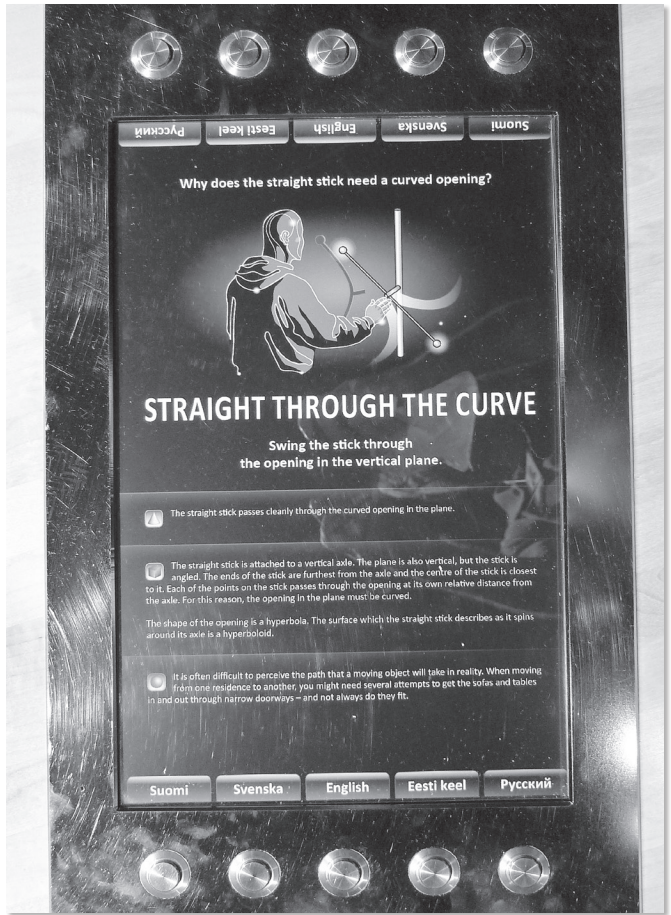
The ten-button interface allows reading of the label from both sides of the table in the desired language. The PCs have a network connection. It is important to notice that the mechanical exhibit is the focus and takes the lead in any case; the label on the screen is only supportive. It is not touch-screen and it does not include links or video clips, even though technically this would be possible.

The template of the label is: a question; a drawing which supports the instruction; the title; what to do; what to notice; scientific explanation; and, finally, a connection to

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The design allows the kids to meet with the adults on a more equal level. Photo by Timo Suvanto, courtesy of Heureka.



The electronic label works in two directions in five languages, takes up less space, and appears to be less distracting than multi-lingual printed labels. Photo by Timo Suvanto, courtesy of Heureka.

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**Related websites:**

[http://www.heureka.fi/portal/englanti/exhibitions/heureka\\_classics/](http://www.heureka.fi/portal/englanti/exhibitions/heureka_classics/)

<http://classics.heureka.fi/>

The increased reading is a result of the medium: the digi-native children feel that the label on the screen is made for them.

everyday life. The drawings are made by award-winning cartoonist Mikko Jeskanen, and they echo the air of the "adult" design approach.

The exhibition has been running for 18 months and has been well received according to the visitor surveys (4.2 approval on a scale from 1 to 5). The guides in the exhibition report two very positive findings that the design team did not really expect: firstly, the kids run less in this exhibition and, secondly, even young children read surprisingly much themselves. Apparently, the low-key design calms the children down a bit and they are not so overloaded by distracting messages of color and sound. The increased reading is a result of the

medium: the digi-native children feel that the label on the screen is made for them.

**Seeing the Forest for the Trees**

At Heureka Classics, there is less space for labels, but more information and more languages available. There is less color, and therefore more attention to the color there is. There is less distraction and therefore more concentration. There is less running around and more attention on the phenomena—even on the labels.

Incredibly wonderful things happen in Oppenheimer's forest of phenomena. Exhibition architecture can support seeing this forest for the trees by designing structure for social interactions. ✨