

Welcoming Children to Science Centers and Museums: A Report from Europe with a Focus on France

by Nathalie Caplet

Children's Museums or Family-friendly Museums: A European Overview

Museums and science centers all have their own relationship with children. Some have decided from the start that children will be their main target; some cater to families with a strong emphasis on activities for children. Other sites have exhibitions for the general public, and specific ones for children. Through a variety of tools, children can be encouraged to participate in exhibitions otherwise targeting the general public. Examples from around Europe and from France in particular will give a flavor of initiatives from the other side of the Atlantic.

For some sites, in Europe as in the United States, children are the one-and-only target audience (adults being merely there to accompany the children in their discovery). These clearly define themselves as children's museums.

Strangely in France, no institution has decided to name itself specifically a children's museum or science center. Although I have talked with a number of museum colleagues about this, we have not come up with a clear answer as to why this is so. Elsewhere in Europe, some sites can be noted for taking such a stand. Here are a few examples. The FRida & freD - the Graz Children's Museum, in Austria, which opened in 2003, aims to introduce children to the complexity and diversity of the world through hands-on activities. The Children's Museum in Brussels is inspired by the one in Boston. Through play, it wishes for children to develop their knowledge of themselves and of others. In Riga (Latvia), the only science center is the Children's Science Centre, open since 1995. Lisbon's Children's Museum (Museu

das Crianças) offers exhibitions and activities for informal learning, tapping into children's imagination and creativity. The themes cover science, history and arts.

Eureka! The Museum for Children in Halifax, UK, is a particularly striking example. Its target audience is children from 0 to 11! Not only do they have special galleries for children under 5, but within these, specific areas for non-walking babies where they can explore sensory experiences. Pushing the concept further, Eureka! actually has its own nursery where in addition to childcare, the children benefit from the museum's educational philosophy and experience. They spend time in the museum's gallery every week and benefit from unlimited free access to Eureka! during and after their time at the nursery—right up until the age of 11. Eureka! appointed a director of play in October 2007 to oversee the development of play-based activities.

Most of these institutions, and many others, are members of the association of children's museums Hands-on Europe, which also welcomes non-European institutions.

Although they are not officially called children's museums or science centers, some French sites have a very similar approach but prefer to define themselves as catering to families, or children AND their parents.

The Vaisseau is linked to the local council of the Bas-Rhin *département*, situated in Strasbourg in the East of France. This science center defines itself as a giant educational tool, particularly aimed at children aged 3 to 15, which "allows everyone in the family to learn and have fun together." The message to the

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In *Youplaboum ton corps*, 3 to 6 year olds discover their bodies in the setting of a fairground.
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The explainer who helps with the visit is keen to involve the accompanying adult so that the themes and the questioning can form a basis for further conversations at home.

parents is “you’ll have a unique opportunity to spend quality time with your children while gaining first-hand experience of science and technology!”

The trilingual center (French, German and English) opened in 2005. It was designed in partnership with the biggest French science center, Paris’ *Cité des sciences et de l’industrie*, using the best interactives of the *Cité des enfants* (the *Cité des sciences*’ specific children’s area described below), and creating some new ones. Some of the studies carried out by the *Cité des sciences* for the making of the *Vaisseau* were then used by the *Cité* as part of its redesigning of the *Cité des enfants*.

The *Jardin d’acclimatation* is a large Paris public garden with a small entrance fee. It hosts a range of activities mainly for children, some fairground merry-go-around, some playgrounds and a range of indoor activities. Within the *Jardin d’acclimatation*, the *Exploradome* is a small science museum. It offers, in its permanent exhibition, forty experiments on physical phenomena for children and parents to do. The target audience is really children aged 4 to 14 year olds.

Also at the *Jardin d’acclimatation*, the *Musée en herbe* presents “exhibitions-games,” often on themes such as various painters, linked with

art and society and “specifically designed for a family audience.” Using humour for active pedagogy is their motto.

Dedicated Children’s Areas

Among the museums and science centers which target the “general public” some (a growing number) have chosen to develop a dedicated area for children, sometimes as young as 2 or 3.

One example is the *Deutsches Museum* in Munich, where kids aged 3 to 8 enjoy the *Kids’ Kingdom*, a huge hands-on area for experimentation on themes like music, water, and planets. Last June *Technopolis*, the Flemish Science Centre located in Mechelen, Belgium, opened a new area devoted to children 4 to 8 years old. In a lifelike setting, interactive exhibits fill the various zones : *The City*, *The Park*, *Under Construction* and *My Body*.

La Cité des sciences et de l’industrie in Paris, has been running *La Cité des enfants*, its children’s area, since 1992. Its experience was exported to *Le Vaisseau*, mentioned above and mostly dedicated to children. Recently their approach was used to design a “Children’s base” for 6 to 11 year olds, at Toulouse’s space museum, *La Cité de l’espace*.

But *La Cité des sciences et de l’industrie* has gone one step further. It has recently opened a second permanent exhibition area for children. Families now have a choice between the area for the 2-7 year olds and one for ages 5 to 12. *La Cité des enfants* for the 2 to 7 year olds spreads over 1700 m² (about 17,000 sq ft). It can welcome 400 visitors at once. Five themes are developed: *I Discover Myself*, *I Know How to Do*, *I Find my way around*, *I Experiment*,

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and All Together. The first three themes are centred on the child’s development and his physical, cognitive and spatial capabilities. The last two offer an opening towards the world and others.

There is no doubt that younger children, the “non-reader” audience, is quite a specific one. From the age of 2 to 3 to the age of 6 to 7, they are already very receptive, and to science in particular. But they need to be addressed in a very specific way, since their autonomy, reading abilities, and attention span are very different from those of older children. From the age of 7 to 8, the children are more independent, and even if most exhibitions are based on interactives with no actual texts, there can be a few lines of instruction, which is out of the question for younger ones.

For the Youngest Ones

Specific areas for children under 6 are still not that common in France. The science center, *Le Forum départemental des sciences*, in Villeneuve d’Ascq in the north of France, has been quite a pioneer in the area. *Le Petit Forum* has been presenting exhibitions specifically designed by their team for 3 to 6 year olds since it opened in 1996. Far from the idea of teaching facts to the children, the intention is to induce questioning and reasoning in young minds. The exhibition *Little Square Becomes a Cube* is about the interpretation of shapes. The take-home message is that one shape can hide another; that from close by, far away, or from a variety of points of view, the image is different. Examples are taken from the shapes of clouds, of constellations and other forms.

Similarly Cap Sciences, another science center situated in Bordeaux, has a *Petit Carré des*

3-6 ans with exhibitions dedicated to the younger ones. It has very similar intention of developing a personal approach and the premise of scientific questioning. However the operating mode is different from *Le Petit Forum*, and it is worth looking at the different approaches. In most children’s exhibitions, the young ones visit accompanied by their parents. At the Petit Forum, each group of 30 children is divided into four for the activities. The explainer who helps with the visit is keen to involve the accompanying adult so that the themes and the questioning can form a basis for further conversations at home.



An activity area in *The Little Science Explorer* exhibition, the young adventurers gather at base camp ready to explore the “island” with their senses and some tools such as binoculars and hand-held lamps. ©Cap Sciences.

In Cap Sciences, as at the Petit Forum, the sessions run for one hour at particular times, and the children need to be booked in. However, a maximum of 15 children follow any one session and the explainer, who accompanies the children-only group, is actually part of the scenario, a character in the story. He is, for example, the only inhabitant of the island in the exhibition *The Little Science Explorer*, the children being a group of visitors coming to help him

...children in France are increasingly invited to experience museums and science centers in a personal and active way.

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European Websites to Explore:

FRida & freD - The Graz Children's Museum, Austria
<http://www.fridaundfred.at>

Children's Museum in Brussels, Belgium
<http://www.museedesenfants.be/>

Children's Science Centre in Riga, Latvia
<http://www.pagrabi.lv>

Children's museum (Museu das Crianças) in Lisbon, Portugal
<http://www.museudascrianças.eu/>

Eureka ! The museum for children in Halifax, UK
<http://www.eureka.org.uk>

Hands-on Europe
<http://www.hands-on-europe.net>

Le Vaisseau in Strasbourg, France
<http://www.levaisseau.com>

Le Jardin d'acclimatation, Paris
<http://www.jardindacclimatation.fr/>

L'Exploradôme, Paris
<http://www.exploradome.com>

Musée en herbe, Paris
<http://www.musee-en-herbe.com>

The Deutsches Museum, Munich, Germany
<http://www.deutsches-museum.de/en>

Technopolis, the Flemish Science Centre, Mechelen, Belgium
<http://www.technopolis.be/eng>

La Cité des enfants of Paris' Cité des sciences et de l'industrie, France
<http://enfants.cite-sciences.fr>

explore the various environments. In all exhibitions of the **Petit Carré des 3-6 ans**, the children take their shoes off to enter a different world, and are led through a story as they approach a variety of science themes.

Most museums and science centers would agree that children need to be in an active position to learn as well as have fun. Working things out for themselves also helps them to get involved. Many hands-on interactives give clues rather than instructions that are too directive. Children's imaginations are also needed when they immerse themselves in a story within a context, such as in the Arabian setting of Cap Sciences' new exhibition for 3 to 6 year olds **Kif kif, le calife** which initiates the children to abstract notions of measuring.

Involving Children in General Exhibitions

When they are not in an exhibition specifically designed for them, how are children welcomed in exhibitions for the general public? In Cap Sciences, we place great emphasis on including a number of activity areas in all our exhibitions, which change every year. These have a variety of benefits. They are run by science students or young graduates, and this format allows them to interact with the general public, to develop a mutually fruitful dialogue. The students get initiated to science communication, a skill they will carry along for the rest of their careers, and they get paid! The interaction is much more than just a touch-screen for the general public. Not only do visitors interact with science but also with scientists, providing an opportunity to change the image they might have. This is also important for the children, because a more



*In the palace of **Kif kif, le calife**, the children learn all about measuring and use their own bodies to appreciate lengths, angles, and weights. ©Cap Sciences.*

positive image of scientists may contribute to their future study choices.

The exhibition layout is designed so as to alternate the more traditional exhibition zones (which nonetheless always include many hands-on interactives) with activity areas. In order to include everyone, these activities are adapted for primary school level. However, although the children are often "in the frontline" the adults are just behind benefiting from the content as well. The child is almost "an excuse", "an alibi" for the adult to participate!

Some of the exhibitions we present are produced by ourselves, while others come from other museums and science centers. In all cases, the activity areas are designed by Cap Sciences staff. The 2007-2008 exhibition presented in Cap Sciences, **At the Time of Mammoths**, is from the National Natural History Museum. One of the activities designed for this exhibition is based around puzzles to identify the differences in morphology among mammoths and African and Asian elephants, while listening to a story by the explainer. In this example, the type of "game" may seem to appeal more to children but the content, such as the trunk differences among the three species, will be of interest to all. In some areas of the exhibition, other activities will be mostly for children. In the area we have named the grotto, children are invited

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to paint in semi-darkness with ochre finger paints, on large vertical sheets, in the manner of prehistoric men. They can then take their paintings home with them. In this exhibition another classic technique is used to involve children. A booklet is available for them to fill in during their visit, to guide them through their discoveries. This type of quiz trail is used in a number of other sites, such as at the Exploradome in Paris. Once again, the fact that the child is in an active position helps to awaken his interest and induce learning. As with the activities on offer in the exhibition, we know that filling in the booklet will quickly involve the adults in the group, which will help to develop a joint experience of the visit.

The Caen Memorial is a Normandy museum dedicated to 20th century history which reflects on the fragility of world peace and human rights over a 5,600 m² (about 56,000 sqft) permanent exhibition. There, specific visits conducted for families are centered around the handling of historical objects normally only displayed in cases. This provides an opportunity for children to relate closely to history and to events which may have been part of their individual family history.

Another possibility is to develop various levels of interpretation for exhibitions. At Nausicaa, the French national sea center in Boulogne-sur-mer, in the north of France, the children are led by Raya, a friendly stingray character which explains the messages in simple terms. On panels or multimedia animations, having a special character, often inspired by the world of cartoons, allows for parallel visits for children and adults.

Conclusion

We have seen that through old techniques or more original and innovative methods, children in France are increasingly invited to experience museums and science centers in a personal and active way. Once they have acquired the culture of museum visits (with their school, holiday club, or with their family), once they have developed a friendly connection with science, they will grow with it, keep it for life, and probably pass it on to their children. Playing, touching, trying, experimenting may be fun, but they are also serious activities with important and lasting consequences. designing schools. ☀

European Websites to Explore Continued:

La Cité de l'espace, Toulouse, France
<http://www.cite-espace.com>

Le Forum départemental des sciences, Villeneuve d'Ascq, France
<http://www.forumdepartementaldessciences.fr>

Cap Sciences, Bordeaux, France
<http://www.cap-sciences.net>

Le Mémorial de Caen, France
<http://www.memorial-caen.fr>

Nausicaa, Boulogne-sur-mer, France
<http://www.nausicaa.fr>

European network of science centers and museums
<http://www.ecsite.net>



In L'eau à la bouche, an exhibition on water for general audiences, children identify clues in the exhibition, to fill in their booklets. ©Cap Sciences.