

**A few weeks ago we had the opportunity to ask Prof. Beutelspacher - the inventor and creator of our travelling exhibition - some questions about his work.**

## **Questions to Prof. Beutelspacher**

**1. We will now be exhibiting the MiniMathematikum in different European countries. The public interest in the exhibitions seems to be quite large. Did you expect that?**

After in 2002 the ‚Mathematikum‘ was founded in Giessen as the first mathematical hands-on museum in the world, the enormous rush of visitors showed that the ‚Mathematikum‘ is indeed suitable for visitors of all ages. So I am not really surprised.



But we soon found out that young children need a special environment to benefit as much as possible from the exhibition.

A special traveling exhibition was developed for the target group of 4 to 8-year-old children. This was evaluated on a tour of Germany in 2008 at various locations. The results of the evaluation led to a complete revision of the exhibits.

In 2009, the permanent exhibition ‚Mini-Mathematikum‘ was established at the ‚Mathematikum‘ in Giessen. The interest of the audience was again overwhelming.

Since the ‚Mini-Mathematikum‘ started as a very successful touring exhibition, it was natural to continue this practice. It is now also very popular for ten years.

We are proud that our traveling exhibition also attracts so many small and adult visitors abroad. But that does not surprise us.

**2. What are your goals with the touring exhibition?**

Not only children from Kindergartens but also pupils of the first years of school can benefit from the visit to the ‚Mini-Mathematikum‘

For educators and teachers, there is a great opportunity to observe their children exploring the exhibits. You will be amazed at how much curiosity, commitment and social competence the children work on the experiments.

Not only children learn mathematical thinking through the use of geometric shapes and puzzles, etc. Pedagogics can also gain valuable inspiration for their own teaching practice.

The main goal is to get young people excited about math and not to frustrate them, as is often done with the usual teaching methods.

**3. Our partners will observe special target groups of younger children how they explore the exhibits. Is there already any knowledge about it? And are you interested in these results?**

Regular experience is the following: If the children have taken in the entire exhibition in a first, mostly ,wild' tour, they come to rest and focus on individual exhibits. It is amazing that by no means all children have the same favorite exhibit, but that the sympathies are distributed over all the exhibits.

Although the impression is inevitable that all children visiting the exhibition ,profit somehow', this impression is extremely difficult to prove it scientifically. Any hint in this direction is enormously important and can directly lead into the development of better experiments.

**4. Do you feel that the approach of research-based learning in early childhood education is becoming more important?**

Early childhood education is in a phase of fundamental reorientation. Today, a Kindergarten is also seen as an educational institution. A special role is played by the - appropriate to the age of the children - STEM education. For this, research-based learning is the tool of choice.

With experiments and exhibits like in the ,Mini-Mathematikum' this is possible in an outstanding way. The discussion has intensified in some countries but that is not enough. I hope that in future this knowledge is used in practice across Europe.

**Prof. Beutelspacher, we thank you for this interview.**