



## Press release

### **Geopythafibotonpolyhypotesaeder! Matheliebe.**

*The Liechtenstein National Museum's new travelling exhibition plays with mathematical models and proves that mathematics is not just practical arithmetic but living and breathing science.*

Do you think mathematics is boring? Do you think mathematics is hard to get your head around? Not in the Principality of Liechtenstein! The National Museum's new travelling exhibition "Geopythafibotonpolyhypotesaeder! Matheliebe" makes the fascinating world of numbers, formulae and sequences come to life. Visitors will soon realise that, rather than just being arithmetic, maths expresses the world in abstract precision.

Many of the roots of mathematics lie in the natural sciences and are based on observations and experiences. At the same time, mathematics is an ancient human science in its own right and a tool that has come to be adopted by all branches of science. Mathematics dominates us and is part of our everyday lives, be it in the chips in our smartphones or in the control modules of our cars. However, at the same time, maths is becoming less and less visible. Indeed, many people feel uneasy when they become aware of the power that lies behind calculating operations. Therefore, being able to do maths means being able to understand the world at least a little better. Rather than the subject, it is often the teaching methods that prevent people from catching the maths bug.

Maths teacher Georg Schierscher from Liechtenstein has set himself a goal: to awaken people's love of mathematics. However, Schierscher emphasises that that much of the existing visual teaching material is poor. Therefore, while at the Liechtenstein Grammar School in Vaduz, he created his own models designed to bring mathematics to life. He built parts of these himself and also received help from apprentice workshops at businesses and manufacturing companies in the local region – or he simply drew inspiration from objects in everyday life. That is exactly how the football came to be a truncated icosahedron and the car headlight turned out to be a parabolic reflector.

The human senses feed the brain, so as much as possible pupils should be able to experience mathematics using their senses. Understanding begins when you have the whole reality in front of your eyes, said Schierscher. What's more, the economy also benefits from graduates with a passion for maths. Schierscher is now retired and wants to make his collection accessible to future generations of school pupils. From 22 November 2012, the Liechtenstein National Museum will be showing Schierscher's impressive world of mathematics in an exhibition spread over 400 square metres. The collection includes around one hundred physical models, objects from nature and everyday life, computer graphics and animations, stamps, coins and medals with mathematical motifs. The exhibits are organised into seven key themes: Growth and Shape (growth processes), Gold Mine (geometry related to the golden ratio), Models with Corners and Edges (polyhedrons and their geometric properties), Archimedes Returns (great ideas about circles and spheres), Following in the Footsteps of Engineers (mathematics in engineering, in road construction and structural

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engineering), Mirror, Mirror on the Wall (reflections, symmetry) and Filigree, Fractal, Dynamic (mathematics inspired by cauliflowers, clouds and stock market prices).

Visitors are frequently invited to participate. They can dangle from the FRIEND climbing safety device for mountaineers and see how logarithmic spirals can save lives, or see infinite reflections of themselves through the calculable illusions generated in the hall of mirrors.

“Geopythafibotonpolyhypotesaeder! Matheliebe” is a travelling exhibition designed to be shown in locations such as schools and public buildings.

Press images are available at:

<http://www.flickr.com/photos/landesmuseum-liechtenstein>

**The exhibition was made possible thanks to the following municipalities, companies, private persons and foundations from Liechtenstein:**

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