Deconstruct the city!

Deconstruct the city! introduces young and old with architecture and engineering and shows them, through various activities, there is more to buildings than you might expect at first glance.

Design you own city plan and experience the challenges of building in the city, create novel structures using soap bubbles, learn how mycelium might form the key to biological building materials and experience how computers aid us in the design of buildings.

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Brussels - Then and now, in 3D

Due to their mixture of various functions, high population-density and a rich history being expressed through various existing buildings, cities form one of the biggest challenges to architects and urban planners. Ensuring quality-of-life while at the same time respecting the current context and designing for a yet undetermined future is a difficult balancing exercise indeed.

Through a crowd-funded city plan, you can become an urban planner and experience first-hand the challenges of taking into account existing buildings, open spaces, streets, ... and yet add your own buildings to create an interesting and qualitative environment.
Infinite materials

The building industry is one of the biggest producers of waste material with, for Brussels alone, currently producing 650,000 tons of waste each year. It thus has a big responsibility if we ever hope to achieve a more sustainable future.

Through an interactive workshop you can make your own 100% biological building material by using mycelium. This material can not only be “grown”, but is also fully bio-degradable and thus does not produce any waste, unlike conventional materials.

Important: Due to practical limitations it is required for this activity to register in advance.

Check http://visit.brussels/en/sites/ilovescience/m_article/advance-workshop-registration for more information.
Featherlight, strong as steel

Reducing the weight of a structure is often one of the main goals when building as it typically reduces material use as well as cost. To design extremely light, yet strong, structures engineers adapt the shape of the structure so that it uses its material(s) as efficiently as possible.

One of the most important examples of this are fabric structures, where their shape is a direct expression of the internal flow of forces. But how do engineers find these “optimal” shapes? During this workshop you learn how to create these structures and which ideas lie at the foundation of the fluid shapes of fabric structures.
Bending stresses

When building, you typically want to avoid deformations as much as possible. Large deformations typically signify a structure is about to collapse and makes users uncomfortable. Through intelligent design however, we can use these deformations, and the induced stresses in the material, to our advantage making rigid structures from flexible elements.

During this activity you can try this yourself by making small scale models and literally feel how you can use a flexible material to still create a solid and strong structure.
Building virtually

Technology has grown to become an integral part of the architectural design process. Not only does it allow architects and engineers to produce accurate plans or 2D visualisations to communicate the design to their clients, but recent technological advancements have made it possible to use technology as a true design tool and further pushes the boundaries of what we can achieve through computer technology.

But what if we do not have to keep looking at a screen anymore and truly “experience” what we design? This activity explores the possibilities of Virtual Reality and allows you to enter your own personal digital space and release your creativity.