

Scientific Museum Tour with Let's Science!

IBSA Foundation for scientific research is very pleased to present the museum tour, which offers a fascinating glimpse into the world of science. With this innovative project, secondary school classes can participate in workshops at science museums free of charge. The students can experience research in a new, hands-on way and benefit on multiple levels.

Workshop offered

Museum of Anatomy, Basel

- ***Blood vessel preservation (corrosion technique):*** Under the expert guidance of a taxidermist, the participants will learn exciting facts about a particularly fascinating anatomical taxidermation technique: using plastic to make the blood vessels visible on a pig's kidney and experience for themselves how a work of art is created.

Age: For young people aged 14 and over.

Duration: 90 minutes.

Curriculum 21 reference: Nature and Technology, Understanding Body Functions.

Up to 15 people per workshop. Dates: Mon. to Fr. 9:15 a.m. to 5 pm.

Museum of Communication, Bern

- ***Data on the web – a look behind the click:*** What happens to my data on the Internet? How much is my attention worth? What is big data? And where does AI get its intelligence from? In this workshop, we're going to look where most people tend to look the other way. We're going to scratch the glittering surface of the Internet and take a critical look behind the click. Young people examine their own behavior and consider possible future scenarios.

Age: Cycle 3 and upper secondary education.

Duration: 90 minutes.

Curriculum 21 reference: Media and Informatics module 1/Media. Groups of 25 or more participants will be divided. A visit to the museum is possible before or after the workshop.

- ***(Micro-)chips (the exhibition runs from 13.11.2026 – 18.07.2027):*** They are crammed into smartphones, cars, modern light bulbs and even my cat – microchips are everywhere in our everyday lives. A highly complex, globally networked industry provides the building blocks for our increasingly digitalised world. This exhibition takes you on a fascinating journey into the world of chips: it makes the invisible visible, sparks curiosity and inspires wonder.

Age: Cycle 3/Secondary Level II

Duration: 60 minutes guided tour, followed by an independent visit, recommended duration 30 minutes.

Curriculum 21 reference: Module Media and Information Technology, 1/Media.

Only one class at a time (max. 24 students). A second group can only start after a minimum interval of 30 minutes.

Kulturama – Museum of Mankind, Zürich

- ***Right in the middle of the heart:*** How is our heart constructed? What is its function? How does the heart develop during pregnancy? And where does the heart symbol come from? Original specimens from different mammals and models illustrate the structure and function of the heart. An examination

of the symbol, which is ubiquitous in language and image, takes place. The individual's heart rate and blood pressure are measured, and the heart tones of different animals are compared.

Age: Cycle 3 and Secondary School II.

Duration: 120 minutes.

Curriculum 21 reference: NT 7, Understanding the Functions of the Body. Dates:

- ***From the fertilized egg to the baby:*** Using real specimens and models, we explain what happens in the womb during pregnancy, why we humans are born prematurely, or what we need to look out for when we hold a baby. In the second part, you will deal with further questions independently. How is a due date calculated? How long do pregnancies last in the animal world? How well can the strapped-on pregnancy simulator cope with everyday situations? A short film about pregnancy and childbirth rounds off the event.

Age: Cycle 3 and Secondary School II.

Duration: 120 minutes.

Curriculum 21 reference: NT 7, Understanding the Functions of the Body.

- ***Bones and skeletons:*** Over 200 individual bones form the human skeleton and enable us to walk, stand or dance. But how are bones moved? Bones protect, support, and move, bones live and heal. What is the function of our spine? What are bones made of and how are they structured? Basic material for our skeleton or an ingredient in many foods - we encounter bones everywhere!

Age: Cycle 3 and Secondary School II

Duration: 120 minutes.

Curriculum 21 reference: NT 7, Understanding bodily functions.

- ***How we learn:*** We learn throughout our lives. Consciously or unconsciously, on purpose or by chance, by example or practice or from mistakes. $a^2 + b^2 = c^2$. The capital of France is Paris. Tears trigger compassion and smiles have a sympathetic effect. We can walk on two legs without losing our balance. Chocolate tastes good, but too much causes nausea. But how exactly does this learning process work? What happens in our brain? What tools and techniques help us to learn?

Age: Cycle 3 and Secondary School II

Duration: 120 minutes.

Curriculum 21 reference: NT 7, Understanding bodily functions.

- ***Our senses:*** They are as vital as oxygen and food. They make life and experience possible, thanks to them we can act and react. Touch, sight, hearing, taste and smell shape our consciousness and give our surroundings a face. The sensory organs begin to develop during pregnancy. The rapid development of the first months in the womb culminates in a flood of sensory impressions - birth. After that, the senses function in the new world. They quickly become accustomed, stimulate our brain, and drive it to peak performance.

Age: Cycle 3 and Secondary School II

Duration: 120 minutes.

Curriculum 21 reference: NT 6, Exploring senses and signals, NT 7, Understanding bodily functions.

Mühlerama, Museum of Food Culture, Zürich

- ***Baking crispy "Bürli" and fine "Weggli" & Mill Tour:*** "Weggli" and "Bürli" are typical, regional pastries. It's not easy to make, but let's try it! As the prepared "Bürli" dough rises, we mix the ingredients for the

“Weggli” and process them into a fine, supple dough. Now let's start shaping! While the “Bürli” and “Weggli” are baking in the oven, we go on the tour of the mill: the imposing 100-year-old mill extends over three floors up to under the roof. Everywhere there are different machines. Wheels are turning, belts whirring. It is shaking and rattling. On the one-hour tour with a mill expert, the students will experience first-hand what it takes to produce one of the most important ingredients of our diet: flour.
Age: From 4th to 9th grade.

Duration: 3 hours. Curriculum reference: Nature and Technology, 7/Understanding Body Functions. Class size: max. 25 children and 2 adults.

Technorama, Winterthur

- **Radioactivity in everyday life - Natural radiation:** Radioactivity is not only found in nuclear power plants, but also in foods such as mushrooms and diet salt, in normal rose fertilizer and, of course, in the air. The decay of certain atomic nuclei, which produces radiation, is part of our everyday lives and takes place in every household. This workshop is all about testing various objects and substances for radioactivity. We use the Geiger counter to detect radiation and investigate where it comes from and how we can protect ourselves from it. This workshop is intended as an introduction to the topic of radioactivity and focuses on radioactivity in everyday life.

Age: 12, 13, 14, 15+.

Duration: 45 minutes.

Curriculum 21 reference: Subject area curricula NT.2.1.1c, Subject area curricula NT.1.1.

- **Do not try this @home -- Microwaves:** In our time, everything has to happen quickly. A microwave is very helpful for this! But how does it work? And why can't you boil eggs in it? And why can't you use metal objects in the microwave? Microwaves are electromagnetic waves in the frequency range from 1 to 300 GHz. How they can heat food is the focus of this workshop. But not only that: do the experiments that are not normally allowed. A microwave is not only practical, it is also fun!

Age: 12, 13, 14, 15+

Duration: 45 minutes.

Curriculum 21 reference: Departmental curricula NT.1.2.b, Departmental curricula NT.2.1.1b, Departmental curricula NT.2.1.2b

Allow me to introduce myself – I am the DNA: Have you ever wondered why you are exactly who you are, with these ears and this eye color? Have you ever looked at your genetic material? What is it, anyway, and where can we find it? You'll isolate your own DNA (deoxyribonucleic acid) from cells in your oral mucosa and prepare an extraction solution using common household substances. By precipitating the DNA with alcohol, it becomes visible in the form of white strands, which you can take home in a glass pendant.

Age: 12, 13, 14, 15+

Duration: 45 minutes

Curriculum 21 Reference: Subject-specific curricula NT.8.3, Subject-specific curricula NT.8.2.a

WOW Museum, Zurich

- **The whole museum as a workshop:** The WOW Museum makes topics such as optical illusions, colour theory, perspective drawing and sensory perception exciting and fun to experience. Because at the WOW Museum, the exhibition is not just viewed, but you become part of the exhibits.

The many aspects behind the theme of illusions and optical deception can also be ideally explored at the WOW Museum. Because it quickly becomes clear to us: everyone sees things differently. This is a great starting point for discussing topics such as (cultural) differences, different viewpoints and perspectives.

Dive into the fascinating world of optical illusions with the materials provided by the museum or with your own.

Age: 12, 13, 14, 15+

Duration: Intro tour: 20 minutes, plus approx. 30 minutes of independent visit

Curriculum links: NT 6.1, 6.2, 6.3

Environmental Arena, Spreitenbach

The walkable intestine with the interactive tour 'The World of Food'

This tour explains why biodiversity is so important for our food and what we can do to consume sustainably and eat in an environmentally friendly way. We show you how food production affects our environment, give tips for a balanced diet, explain how to avoid food waste and demonstrate how to recycle packaging materials properly. The big highlight: the edible intestine.

Age: Cycle 3 and Secondary II

Duration: 45 min. tour, 30 min. indoor course (trying out alternative vehicles). Plus exploring the exhibition, optionally with the Postenlauf (individual time, depending on the number of posts)

Link to the curriculum: NT 7, NT 9,