

#### The inventor geniuses

Ingenious inventions, exciting experimenting and crazy flashes of inspiration! Ideal for children aged 8 and over.

Bicycle, trampoline, car, jeans, skateboard and candy floss – all that first had to be invented! By whom actually? And why? And what was the world's first invention?

People worked for a long time on many inventions; some inventions were a mishap, others a coincidence. Many inventor geniuses urgently needed something that did not yet exist and suddenly had a flash of inspiration!

What ideas do you have? What would you like to invent? How do you imagine it and how could it work?

Go in search of flashes of inspiration – and also become an inventor genius yourself!

An exhibition by the Graz Children's Museum FRida & freD.

# Information goals & thematic focus areas of the exhibition

- We are all inventors!
- In addition to a good idea, a lot of patience and perseverance, imagination and curiosity are required for inventions.
- The effects of inventions on the history of mankind are shown.
- The aim is to awaken appreciation for the fact that almost everything that we use on a day-to-day basis has not always existed. There is an unbelievable number and diversity of inventions!

# **Exhibition concept**

Accident, ingenuity or calculation - people invent something new every day! If you think about inventions, you automatically analyse that – nature excepted – everything around us has been thought of, developed and improved by people. What did inventions mean for people in the past, what current inventions are important today and what is needed now and in the future and should be invented? People who worked on an invention were and continue to be dismissed as "cranks". They have visions of thinking the unthinkable, of achieving something that has never existed before and launching something entirely new into the world. They are the ones who have the imagination and develop ideas that perhaps appear absurd at first glance and yet have the potential to fundamentally change the world or to do so at least on a small scale. And often the path from fantasy to invention is a long one but one that can pay off because Albert Einstein already knew: If an idea does not first sound absurd, then it's worthless.

**Invented, discovered, researched!** In the participatory exhibition, children learn about inventions: *When was the first bicycle, when the first car? Who built the first telescope and how did it work? Have there always been jeans? Who invented paper, who printed the first book? How did people use the telephone in the past? And did the first computer look like today's computers?* Access to these multi-faceted topics is done in an entertaining and easily understandable form and manner. By examining different inventions of the past and present and through their own actions, the children experience physical phenomena and acquire scientific insights. In addition to experiencing with all the senses, the special characteristic of this exhibition is that the children use the invention itself to find out something about the invention or first produce or complete the invention to convey all the things that can be invented. Perhaps the inventors of tomorrow will be inspired: What would I like to invent? What is needed? How could it work? Many ideas will be crazy, many will be strange – and worthy of being remembered!

The **focus will be placed on the people behind the inventions**, the moment of their flash of inspiration will be defined. The children examine the inventions themselves in their activities; they access them via the inventors and the interesting, exciting, funny stories of how they arrived at their flashes of inspiration. Very appealing illustrations run through the entire exhibition and capture the **moment of the flash of inspiration**.

The interactive stations are **grouped into areas**. They recall the rooms in which the visitors would also encounter them in their everyday life: in different landscapes, in public municipal outdoor and indoor areas and of course in their living and work rooms – **landscape**, **roads & pavements**, **urban area**, **library**, **hospital**, **office**, **living room**, **teen room**, **shop**. The room impressions are created via the partitioning walls that are covered with scenery images. Carpets with corresponding floor motifs supplement the room setting. In the interest of conveying information in the most vivid way, **many inventions are shown in an early stage of development**, **others in their form that is usual today**. In the shelf elements, firstly artistically designed dioramas are presented, the "**diversity boxes**", and secondly, everyday and original items like in a museum. Comics or object texts inform about the stories behind the inventions. The **puzzling original objects to try out and** research "crazy inventions" can also be found on the shelves. The flashes of inspiration stations are connected to the outer edges of the network of wall systems. These are special items of multimedia furniture that react to the flashes of inspiration of the visitors with **flashes of light that are** easily visible and make clear what inventor potential there is in every one of us.

# **Flashes of inspiration**

## **Collect flashes of inspiration**



All visitors receive a wristband with a bar code when they enter the exhibition. This band is regularly used at the flashes of lightning stations (and also at the photo station) during the visit to the exhibition. The children can find out about the invention of the bar code when they use their flashes of lightning arm band, on which there is a bar code printed, for the first time at the flashes of inspiration stations. There are a total of five flashes of lightning stations with the same programme. With the bar code armband, the children collect flashes of inspiration by answering quiz questions; their photo is also saved on it. All the results collected are printed on a patent certificate when the visitors leave the exhibition.

The **blue category of the flashes of inspiration questions** deals with various inventions in the exhibition; the children find the right solution by moving the syllables to the right place.





The orange category of the flashes of inspiration questions deals with various inventions in the exhibition, the children find the right solution by moving the letters to the right place. The **purple category of the flashes of inspiration questions** deals with the inventions on the shelves, some of whom are highly absurd, that do not have an explanation, but have a number tag.







The green category of the flashes of inspiration questions deals with questions relating to inventions by Styrian industrial companies.

## Photo flash of inspiration

The children sit down in a photo booth and take a photograph of themselves. They can repeat that as often as they want until they like a photo. Then they confirm and can now pull as many flashes of inspiration from the edge of the screen to their face as they want and turn, enlarge or reduce them. If the child is satisfied, he or she confirms and the photo moves symbolically onto the printout. This photo is printed on the patent certificate when the child leaves the exhibition.



## **Certificate flash of inspiration**

The child's name, all the flashes of inspiration that he or she has collected and the child's photo are printed on the patent certificate when the child leaves the exhibition. The comparability of the number of flashes of inspiration achieved results gives the activity the nature of a challenge which is very popular among the children.



## **Patent folder**



The children are taught what needs to be done when you want to register a patent, how it works and that children can indeed by inventors too.

When they leave the exhibition, the children take a brochure from the Patent Office with them. They stick their patent certificate to the cover. The brochure informs them about the individual steps from inventing to applying for a patent and also serves as a workbook for the child's very personal invention.

## **Inventor sticker**

The children learn that virtually everything around them first had to be invented. They are stimulated to also examine this after visiting the exhibition.

When they leave the exhibition, the children take a sheet with inventor stickers with them.



## **All inventions - Carpet**



The children learn that the first invention was already made a long time ago and that the number of inventions has exploded over the course of time. In the foyer area of the exhibition, the children find four carpets that are lined up with one another lengthwise and prepare visitors for the topic. The following text is to be found on the carpet: Almost everything around us first had to be invented! But when? And by whom? How was it invented? What exactly was invented? And where? And why? It is not always known! A lot of things we can only guess... In addition, there are the names of inventions on it that are sorted in an approximately chronological order.

## Children's opinions on the topic of inventions



*Children learn that they should reflect on their personal opinion regarding the topic of inventions.* The children find little cards with questions on the topic of inventions, examine them and hang the cards on the reflection wall in order to present their opinion to the general public.

- I have already used this invention today!
- That is the most important invention for all people in the world!
- That is my favourite invention!
- That still has to be invented!

#### Car



The children learn that Carl Benz built the first car but was not convinced that it could cover long distances. The children also learn that his wife Ms. Bertha took the initiative and travelled a long journey with their sons to prove to her husband that he did not have to work on his invention any more. The children sit down in a model of the Benz patent car, which is a quarter of the size of the original, and travel together with Bertha, Eugen and Richard Benz the historical route from Mannheim to Pforzheim. The children experience the same car breakdowns that actually happened in 1888 and help to replenish the cooling water, fill up with stain remover as fuel, repair the ignition cable and clean the petrol line with a hat pin. The children also start the horse-less carriage with the flywheel.

## Windscreen wipers



The children are taught that windscreen wipers were invented by a woman when she was watching other people. The children sit in a car whose windscreen is misted up. The children activate the windscreen wipers with a button. Only through the movement of the windscreen wipers does an illustration become visible that shows a road junction where people got out to clear the snow from the windscreens of their cars. Mary Anderson is also standing at the junction and is watching the people and drawing valuable conclusions for her invention.

### Hospital: microscope



The children learn how the microscope was invented, how it works, that the microscope is an important invention for medicine and that "worlds" can be discovered with it that have been hidden to people up to that point in time. The children find a microscope and a slide on which they can discern a tiny comic strip. Only with the aid of the microscope can the children clearly see a tiny comic strip on the invention of the microscope.

## Hospital: penicillin, X-ray & stethoscope



The children learn that there are important inventions in medicine, for instance, penicillin, X-ray and stethoscope. They learn that penicillin was developed as the result of a mishap, that X-rays were developed by chance and how the stethoscope was invented. After instruction by a doctor, the children examine a life-size doll. When they use the stethoscope, they learn interesting things about the invention of the stethoscope, use the X-ray plate, learn interesting things about the invention of the X-ray device,

administer an antibiotic and learn interesting things about the invention of penicillin.

#### Shelf

Important inventions around us: soap, money, mirror, cogwheels, saw.

**Diversity boxes:** 



**BILLY SHELF:** The children learn that the inventor of the most well-known book shelf in the world had the idea during a meal and used the serviette to outline a draft.

**CAT'S EYES:** The children learn that cat's eyes were invented from observations of nature (bionics).

### Library: printing



*The children learn how Gutenberg's printing works with movable letters.* The children find an abstracted printing press and a "typeset box" with different mirrored letters. They can print out the text that they set with the mirrored letters. With a mirror that is attached to the lid of the printing press, they can discover what their text looks like in its correct form.

### Library: spectacles



The children learn that the reading stone first had to be invented and that spectacles developed from it. They also learn what different types of spectacles there were already and why there are spectacles for short-sighted and long-sighted people. The children use a reading stone that they move backwards and forwards on the comic strip about the invention of the spectacles. In places, the text is large and can be read without the reading stone; in others, it is very small and can only be read with a reading stone.

#### Library: Braille script



The children learn that the Braille script is named after its inventor and that this invention makes life easier for blind and visually impaired people. The children learn that Louis Braille himself was blind and already made his invention when he was 16. The children find a table with several symbols that can be recognised by touch, and brief words in Braille script. There are buttons next to them. They can also see and feel a portrait of Louis Braille and the

instructions on what has to be done. When they assign the symbols to the right words in Braille script, they will hear via the headphones, step by step, the story of how the Braille script was invented.

#### Library: secret script



The children learn that people were already interested hundreds of years ago in communicating messages that could only be read by those for whom the message was intended. The children learn the encryption techniques Caesar disc, Skytale and Polybius square. The children will find three workstations at a table. There are instructions on writing and decoding secret scripts in the books. When the children decode the specified secret script, they will learn more abut the invention of these secret scripts.

### Library: paper, script, alphabet & printing



The children learn what inventions are required so that a book can be read. They find out about the invention of writeable materials, the invention of scripts, the invention of the alphabets and about the different inventions in order to reproduce texts. The children learn that Johannes Gensfleisch zu Gutenberg invented the printing with movable letters made of metal and changed the life of many people with long-term effect with this invention.

In the library, the children find a large book with the title "What inventions can be found in a book?" and leaf through it. All the pages are white only; as soon as they have opened to a particular page, they are projected onto from above. The illustrations and texts displayed are static in part and animated in others.

#### Dynamite



The children learn that inventions are not only to be rated as positive but that they can also have negative effects. The children meet Alfred Nobel and the scene of a blasting. If they connect the two cables with one of the three dynamite capsules and press the lever down as with blasting; they will learn why Alfred Nobel actually invented dynamite, what negative effects his invention had and what he donated his fortune to.

## **Lightning conductor**



The children learn that the inventor of the lightning conductor risked his life during a decisive experiment on what flashes of lightning are and how the lightning conductor works. The children find a historical picture that shows a famous scene: Benjamin Franklin is flying a kite with his son during a storm. The children move the cloud on the sky with a rotary knob. Depending on the location of the cloud, a flash of lightning strikes – in the tree, in the house and in the kite and the children hear via headphones information about flashes of lightning, Franklin's experiment and the invention of the lightning conductor.

## Shelf

Important inventions around us: stirrup, toilet paper, candle.

Diversity boxes:



**CRISPS:** The children learn that crisps were invented because somebody got very annoyed.



**CLONING:** The children learn what became possible due to the invention of cloning and they are confronted with the question of what they think about that.

## Living room: television & moon boots



The children learn how television works, how the television set was invented, that the first landing on the Moon was decisive for this, that many people around the world bought a television and that the moon boots were invented as a result of this historical event. The children enter a lounge scene; there are moon boots in front of a cosy armchair. There is a television opposite, with an antenna. The picture on the television is a test card and the request that the children should set the antenna properly. When they have

done that, they sit down and the film starts. Around halfway through, the television programme stops and the children have to set the antenna correctly again.

#### Living room: melody & dance



The children learn that "ideas and thoughts" are also an invention and that also melodies and dances first had to be invented. In a short film, the children see how a composer invents a melody. He is inspired by a walk through the park and then composes a melody in his studio. When he is finished, the children are also to dance to the melody – and perhaps invent a new dance.

#### Living room: vacuum cleaner



The children learn that the inventor of the vacuum cleaner was inspired by the "dusty blower" (bellows to clean railway seats) and developed the idea of being able to clean something with air further. They learn that the vacuum cleaner was originally so big that it was transported from house to house by a horse-drawn carriage, was seen as too loud and expensive, and that vacuum cleaner parties were celebrated in noble circles. The children find a presumed vacuum cleaner but one that blows instead of sucks. They blow a comic strip free in a sofa and thus obtain information about the invention of the vacuum cleaner.

## Living room: puzzle



The children learn that a toy that they are undoubtedly familiar with was *invented by a map manufacturer.* The children find a sofa and a table on which they build a puzzle. When they have put it together, they see a comic strip that tells the story of the invention of the puzzle. When they are finished, they press the button, the puzzle slips downwards and can be built by the next child.

#### Living area: dishwasher



The children learn that a woman invented the dishwasher because she was annoyed that her staff frequently broke crockery when they were washing up. The children find an abstracted dishwasher and to the side of it is a drying rack with four red plates. When the children place the red plates in the dishwasher and switch it on (they activate a crank), the red colour on the plates disappears and comic strips about the invention of the dishwasher become visible.

## Shelf

Absurd inventions - who can guess them?

Diversity boxes:



**NUTELLA:** The children learn that Nutella was invented during the war due to financial hardship.



**TEA BAG:** The children learn that not the inventor himself but actually his customers invented the tea bag.

### Compass



The children learn that it is possible to produce even a compass from simple materials and a few movements of the hand, how a compass works and how the compass was invented. The children find various materials and instructions and build a compass. When they set their compass on the water, it turns towards the north. They thus find out which of the four stories about the invention of the compass is true.

#### Telescope



The children learn that a telescope must consist of at least two lenses that have to be correctly arranged. The children put a telescope together correctly and when they look through it find out how the telescope was invented. This information is placed so far away that it cannot be easily read with the naked eye from the child's position. The children only find the solution with the telescope.

## Water vehicles



The children learn that the dugout canoe was the first invention with which people were able to move on water. The children find a dugout canoe in front of a large screen. They sit in it and set out to sea using a stick. If they use the stick alternately on the left and right, they are propelled over the water and approach the different water vehicles.

## Shelf

Absurd inventions - who can guess them?

Diversity boxes:



**PARACHUTE:** The children learn that a balloon pilot developed the parachute further and made it safer.



**PULL-UP NAPPY:** The children learn that the pull-up nappy was invented because a mother was fed-up with a wetness problem.

## Shelf

Absurd inventions - who can guess them?

Diversity boxes:



**MINI SKIRT:** The children learn that the inventor of the mini skirt was brave and that this invention caused a furore.

## Shelf

Absurd inventions - who can guess them?

#### **Diversity boxes:**



**KEVLAR:** The children learn that the material Kevlar was invented when the inventor was actually looking for a different material.

## Inventing



**Challenge-based learning – solving problems!** In this area of the exhibition, the children invent something themselves and solve the challenge of the week. The children find a briefly formulated challenge and various materials and tools. With this equipment, they accept the challenge and tinker around how they can solve the problem. This week:

Tennis match: Send a tennis ball into the basket with the ring device. You may only touch the ring and the ball at the beginning when you place it on the ring. Then you are not allowed to touch the strings any more.

## **Smiley**



The children are taught that a graphical achievement is also an invention and that the invention of the smiley made a man very rich but not the inventor himself. The children sit down in front of a frame that shows a picture of a smiley and the request to smile. If the children smile, they therefore make a smiley face and an image story about the invention of the smiley becomes visible. The story is visible as long as the child smiles; otherwise, it is not visible.

#### Keys



The children learn that even everyday items such as keys also first had to be invented and that there were already locking mechanisms thousands of years ago that, however, were not very similar to today's keys. They learn what locking mechanisms there are today and are confronted with the question of which ones will be invented in future. The children find a very complicated lock on a door that they can open with a lot of perseverance. If they succeed, the children open the door and behind it receive information about keys and locks. As soon as the door is closed again, the lock locks automatically.

## Pulley



The children learn that the pulley was invented in order to be able to lift heavy things, how a pulley works, that Archimedes is often associated with this invention but that the pulley was already invented before. The children find a construction site situation. There are several large sacks in a wire basket; the top one can be lifted up. The children try to pull up the sack without a pulley and with a pulley. They discover that they can easily lift up the weight via redirecting the rope several times, but that they cannot lift it up without a pulley. A comic strip on the invention of the pulley can be found under the heavy sack.

## Shelf

Important inventions around us: sewing needle and linen, concrete, drill & screw & dowel, matador, cooking pot, pasta, dentures & toothpaste.

Special inventions: skateboard as a recharging device

Diversity boxes:



**LEGO:** The children learn that the invention of Lego was possible due to the recognition of trends.



**FRISBEE:** The children learn that the frisbee was invented in a bakery and was fun for the inventors.



**TRAMPOLINE:** The children learn that the trampoline was invented by a child who wanted to have fun.



**TEDDY BEAR:** The children learn that the invention of the teddy bear was inspired by a love of bears.



**SKATEBOARD**: The children learn that the skateboard was invented out of boredom.

### Office: pocket calculator



The children learn what possibilities have been developed to calculate difficult *invoices.* The children find an oversized pocket calculator in which they type invoices. With the right solution, they learn interesting things via the headphones about the invention of the pocket calculator and which variants there have been up to now.

#### **Office: computer**



The children learn that the first computer looked different to a computer today and that the first computer was invented by Konrad Zuse. The children find the replica of a laptop and a "plug system" in which they can insert the different components of a computer. When they do this, Konrad Zuse tells them what this special component is needed for. Zuse also includes in his narration how he invented the first computer, what it could do and what it looked like.

#### **Office: pencil**



The children learn that the pencil was already invented many thousands of years ago and originally consisted of lead but today does not contain any lead. The children find apparently white sheets, shade in the sheets with pencil and can then read the story of the invention of the pencil.

## **Office: correction fluid**



The children learn that a small and very simple invention made a woman very rich. They learn that this invention that is rarely used today was very useful at the time. The children take a sheet of paper that is printed on both sides. On the front side, the story is told what happened before this invention was made. The children learn what the invention itself was about when they read the mistake-ridden text on the reverse and paint over the many spelling mistakes with white paint.

## **Office: telephone**



The children are taught how the first telephone worked and that it does not have much in common with today's telephone from a purely visual perspective. They learn how telephony developed further and that the invention of the telephone triggered the biggest patent dispute of all times. The children find three different telephones and a telephone book. The oldest telephone rings out when they activate the start button. They lift up the receiver, hear information, ultimately put the receiver down again, which causes the telephone with the dial

plate to ring. Various telephones ring out, one after the other, and the children themselves also dial numbers to obtain the information about the invention of the telephone.

## Shelf

Important inventions around us: flute, watch, chocolate, fishing net.

Diversity boxes:



**COFFEE FILTER:** The children learn that the coffee filter was invented so that coffee tastes better.



**POST-IT:** The children learn that the Post-it was developed on the basis of a personal requirement.

#### **Bicycle**



The children learn that the wheel was invented many thousands of years ago and that it is not entirely certain where it was invented. The children learn that the first bicycle was invented in Mannheim by Karl Drais due to the climate that changed at short notice. They also learn how the bicycle has been developed further over generations. The children sit on an abstracted bicycle and rid through a landscape. In a film, the milestones of the invention of the bicycle are conveyed; in between the children answer questions and confirm their answer by steering to the

right or left. They are also asked to run with their bicycle so that they remember that the first bicycle did not yet have any pedals. They then also step on the pedals.

#### Hand axe



The children learn that the hand axe was the first invention by humans and what it was used for. The children find a small scene – a hole in the ground, a piece of wood and an animal skin – and a hand axe. If the child uses the hand axe to dig in the earth, to cut into the wood or to process the animal skin, the correct illustration becomes lighter. The three illustrations show that the hand axe was the first invention and what tool would be used today for the same activity.

#### Shop: hook-and-loop fastener



The children learn that the hook-and-loop fastener was invented as the result of observing nature (bionics). The children pull up an advertising poster that is stuck to the base using a hook-and-loop fastener. If they manage to open the hook-and-loop fastener, they will see the comic strip behind it on the invention of the hook-and-loop fastener.

### Shop: jeans



The children learn that one of the most popular items of clothing, the jeans, was invented in a team and was originally intended as work clothing. The children take various pairs of jeans from a clothes stand (numbered from 1 to 5) and stand in front of a mirror with them. Via headphones, they hear the story of the invention of the jeans.

#### Shop: zip



The children learn how the zip was invented, that several people worked on it and that patience and perseverance were needed for the invention. The children find a "clothes stand" and several panels of material that are printed on both sides with comic strips on the invention of the zip. They connect the parts with the aid of zips and can then read the two comic strips on the invention of the zip.

## **Teen room: figures in books**



The children learn that "ideas and thoughts" are also an invention and that the figures in books first had to be invented. In the attachment to the books Harry Potter and Pippi Long-Stocking, the children read a comic strip about how the hero and the heroine were invented. So that they can slip into these roles themselves, the appropriate costumes are on hand. They also find several books on the topic of inventions here – particularly non-fiction but also fiction.

#### Teen room: perspective



The children learn that there was also an invention in art that is indispensable today: the painting of a perspective situation. In a picture frame, the children can see between five images that all play with different perspectives, a comic strip about the invention of painting perspective situations.

#### Teen room: radio



The children are taught how a radio works, how an attempt was made to communicate information over large distances and how the radio was invented. The children find a radio that they can look into, plus text with instructions. The children cut off wire of a certain length, pull off the insulation and make a coil out of it. They plug this coil into the radio. They can now receive several broadcasters; a radio article about the invention of the radio can be heard on one channel.

## **Teen room: balloon**



The children learn that the balloon was an accidental invention as Michael Faraday was actually researching hydrogen and that the invention was not initially perceived as *such*. The children find a huge deflated balloon. It is printed on two sides with a comic strip about the invention of the balloon but the comic strip can only be read when the balloon has been inflated. The children pump up the balloon with an air pump and see the comic strip about the invention of the balloon on the inflated balloon.

### Teen room: battery



The children learn that animal experiments were necessary for this invention, what components a battery consists of and that a battery can drive a motor. The children find three containers that are filled with different liquids and different sticks. Only one of the containers contains all the important components of a battery – but which one? To find this out, the children now connect the clamps with the sticks, get electricity from the battery and thus set a motor in motion that rolls out a panel on which the comic strip about the invention of the battery can be seen.

## Teen room: light bulb

The children learn that the invention of the light bulb was very important in order to have light in the evening and at night without any danger. They learn that Thomas Alva Edison registered more than a thousand patents, what pioneering inventions he made and in what disputes he was involved. The children find a bed that is darkened with a curtain and offers a cosy place to retreat. In this small "cave", the children can switch on different light bulbs with different light switches. When they have put on the light in their place of retreat, they can read the comic strip "It dawns on Edison!".



## **Demonstrations**

So that the visitors can also understand inventions that are not possible in the large exhibition context as they take too long, are too dangerous or need consumables that are too expensive, the following inventions will be demonstrated by the team.

- Printing
- Steam engine
- Film
- Photography
- Gramophone
- Morse device
- Computing machine
- Robot
- Typewriter





## Inventions and innovations from Styria

More than half of the technical scientists in Austria are active in Styria; Styria is therefore a region of inventors. There are inventions, developments and research in Styria on a continuous basis. To make this clear to the children, items from Styrian industrial companies are presented to the children on the shelves; these inventions are explained by brief texts suitable for children, denoted as news from Styria, the region of inventors. The inventions from Styrian industrial companies are also linked with the flashes of inspiration stations. A question is asked to them for each invention; if they answer it correctly, the name of the invention is part of their flash of inspiration certificate that they print at the end of their exhibition visit and take home with them.

## Archduke Johann

The children learn that Archduke Johann, who is well-known to them, was a Styrian innovator and visionary who was responsible for many positive changes of his time whose effects are still noticed today.



## Inventions from the region – Items from industrial companies in the region

3D print objects, energy glass; folding box; figures with RFID; conveyor belt; household compressor DELTA; cow sensor; avalanche beeper; solid wood cube; sound absorber; Soletti; Taurus locomotive; Yankee drying cylinder; Z wood loading crane

## Inventions from the region – handled in cooperation with a school

Vios shoes; Puch bicycle; Tesla; Cheese Krainer sausages; slow motion

## Shelf

Diversity boxes:



STREAMER: The children learn that the streamer was invented as the result of a mishap.



**TIN CAN & TIN OPENER:** The children learn that the invention of the tin can required another invention.



**ICE LOLLY:** The children lean that the ice lolly was invented by a child but that the idea was not pursued further until years later.



CANDY FLOSS: The children learn that inventors can have diverse occupations.

## Flying





The children learn that people have dreamt of flying for hundreds of years and they meet Icarus, Leonardo da Vinci, the Montgolfier brothers, Otto Lilienthal, the Wright brothers, Ferdinand Graf von Zeppelin and Daniel Bernoull. The children sit in the flying machine of the

Children's Museum and "fly" past the history of aviation.

## **Children's Museum**



In the foyer area of the Children's Museum, the children learn via a film that William Henry Goodyear invented the idea of a children's museum in 1899. The children also learn who had the idea of setting up a children's museum in Graz, who had the idea for the architecture of the building, who invented the name FRida & freD and that the team at FRida & freD invents new exhibitions every year.