

Deje označené ako REFLEXY sú riadené zložitým procesom nazývaným REFLEXNÝ OBLÚK. Jeho súčasťou sú senzorické receptory, nervové dráhy a efektorové štruktúry, z ktorých sú tvorené napríklad svaly alebo zčazy. Ak sa podnetom aktivujú senzorické receptory, rýchly signál putuje nervovými dráhami do centrálného nervového systému. Tu sa informácia spracuje a vytvorí odpoveď. Následne sa táto odpoveď rýchlo prenáša späť nervovými dráhami k efektorovým štruktúram, čím sa vyvolá konkrétna reakcia, napríklad v podobe pohybu svalov.

Ľudský reflex predstavuje rýchlu a automatickú reakciu na vonkajší podnet, ktorá slúži na zachovanie zdravia.

Reflexy majú kľúčový význam pri zachovaní bezpečnosti a jeho efektívnom fungovaní v reakcii na vyvolanie. Sú rýchle a automatické, čím umožňujú okamžitú reakciu na potenciálne nebezpečné situácie. Tento proces je súčasťou zložitého algoritmu, ktorý organizmus používa na udržanie rovnováhy a operatívne prispôbenie podmienkam.



Science and Technology Experience Center -

We introduce MOTIO, a unique experience center focused on popularizing science and technology, built on the premises of the University of Žilina in Slovakia. Our goal was to create an innovative environment that enables young people to acquire technical skills and understand scientific principles, with a particular emphasis on the field of transportation.

Thanks to our expertise and innovative approaches, we have succeeded in creating a center that fosters the interest of children and youth in science and technology. MOTIO is a place where experiential learning becomes a reality, providing a foundation for future generations of technicians and scientists.

The proposed interior layout is designed to create a universal and adaptable exhibition space based on the principles of:

"Hands-on, Science", „Minds-on Science", „Hearts-on Science"

Following our previous successful projects (Technical Museum Košice, Science Experience Center Aurelium Bratislava, and MatematikUm iQlandia Liberec), this project is also a proof of our ability to execute complex and innovative projects at the highest level, continuing the dissemination of scientific and technical knowledge.



-  History of Transportation
-  World in Motion
-  Drive and Energy
-  Traffic Safety
-  Construction and Robotics
-  Your Carbon Footprint
-  Light, Signaling, Sensors
-  Joy of Movement
-  Interactive Classroom

Exhibition Map



 Lever Car Outdoor Exhibit

Interactive Exhibits:

We designed and created 38 interactive exhibits that reveal the secrets of movement, propulsion, and robotics. These exhibits are crafted to engage visitors in hands-on experimentation and learning.



Competition Table - Reflex



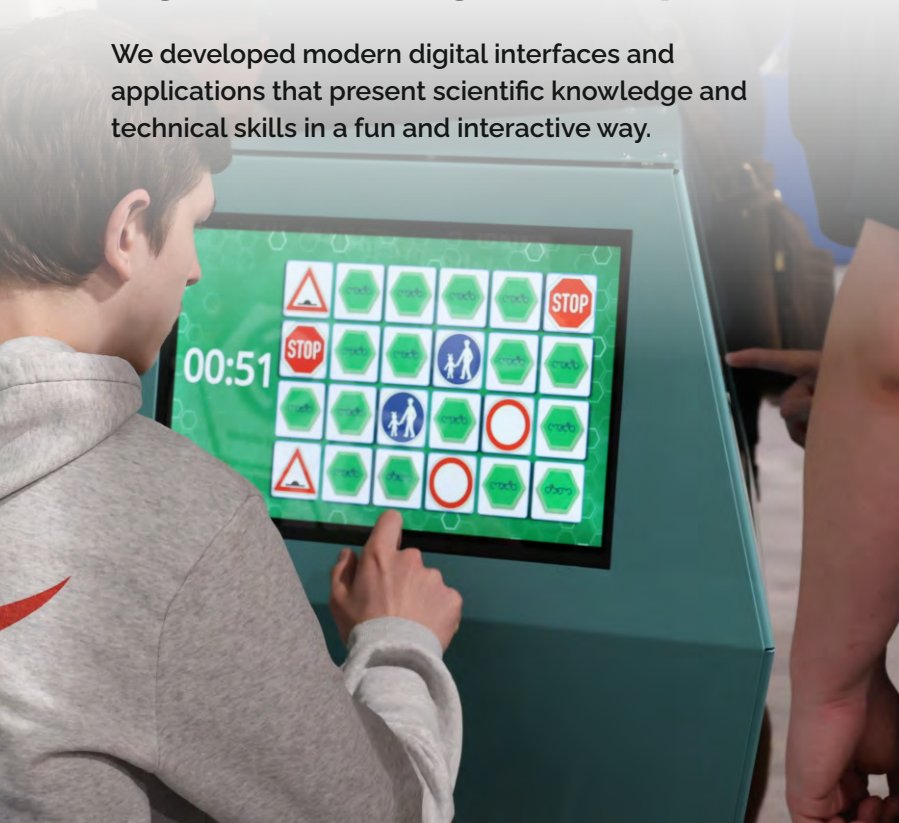
Black Hole



Potential of Metals

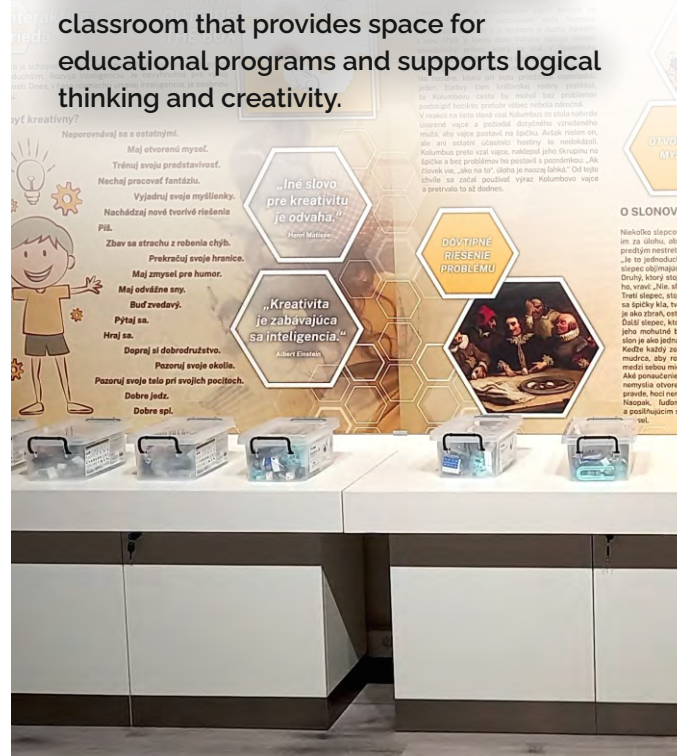
Digital Technologies and Applications:

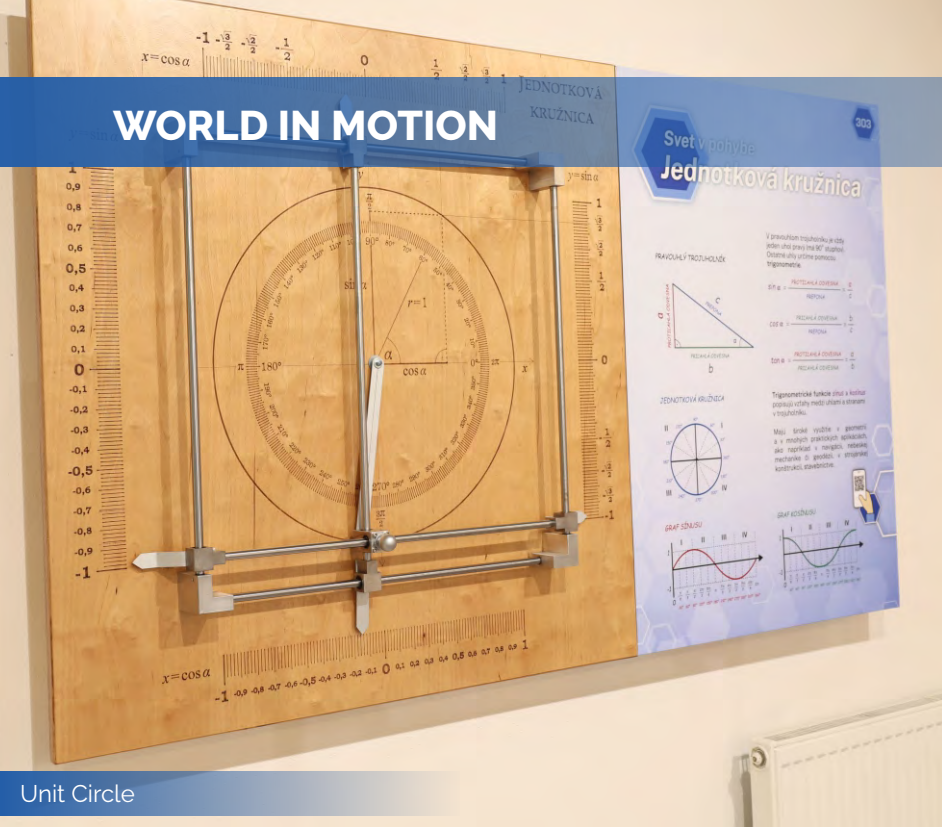
We developed modern digital interfaces and applications that present scientific knowledge and technical skills in a fun and interactive way.



Interactive Classroom:

We established an advanced interactive classroom that provides space for educational programs and supports logical thinking and creativity.





WORLD IN MOTION

JEDNOTKOVÁ KRUŽNICA

Unit Circle



The Fastest Route - Brachystochrone



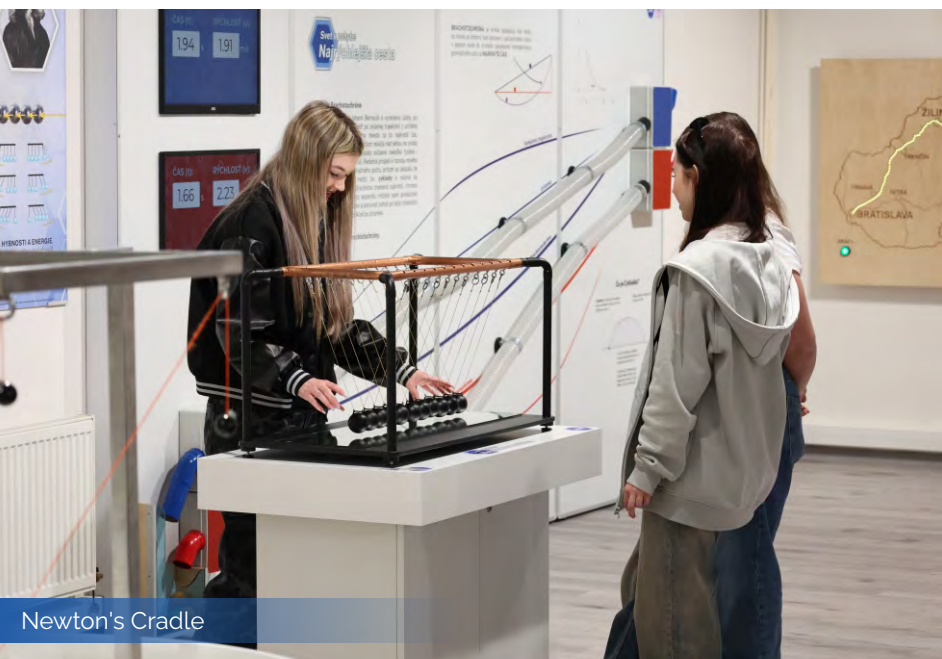
Gaussian Distribution



Traffic Simulation - Where Do They Meet?



Kinetic Energy - Bicycle



Newton's Cradle

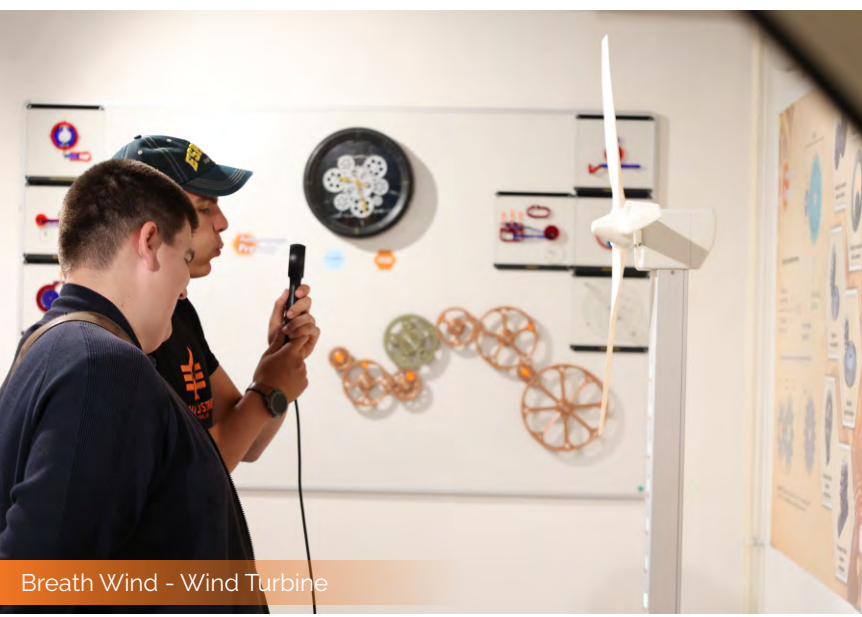


Airflow - Bernoulli's Principle



DRIVE AND ENERGY

Segment Speed Measurement



Breath Wind - Wind Turbine



Properties of Materials



CONSTRUCTION AND ROBOTICS

The Bridge - Romanesque Arch



Teach the Robot to Draw

TRAFFIC SAFETY



Maze



Van de Graaff Generator



Peripheral Vision



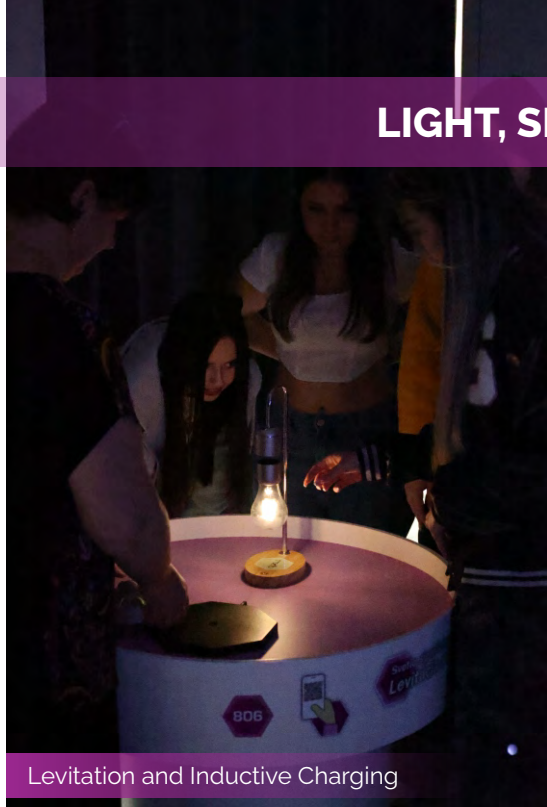
Precision of Movement - Wave Path



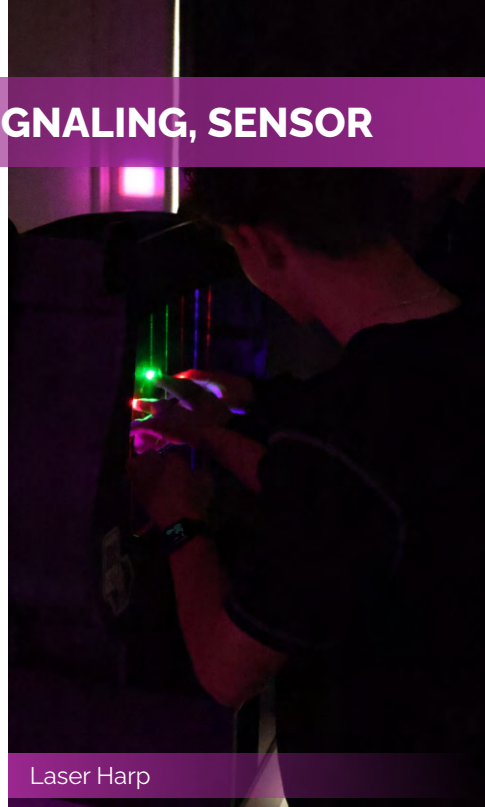
Reflex Meter



Laser Pendulum



Levitation and Inductive Charging



Laser Harp



Dark World - Laser Balancer, Spectrometry, Laser Harp



Virtual Reality



JOY OF MOVEMENT

Interactive Wall



Watch the video
of the MOTIO Science Center
opening on our YouTube channel:



croto

This project was developed in partnership with:



ŽILINSKÁ UNIVERZITA
V ŽILINE



Nadácia

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