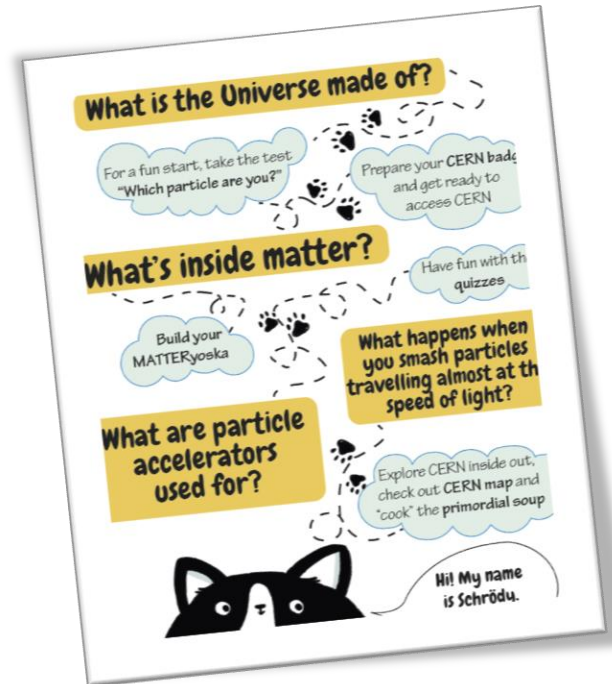
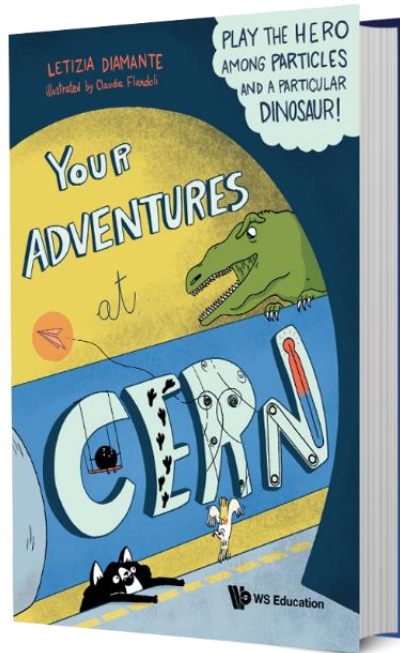
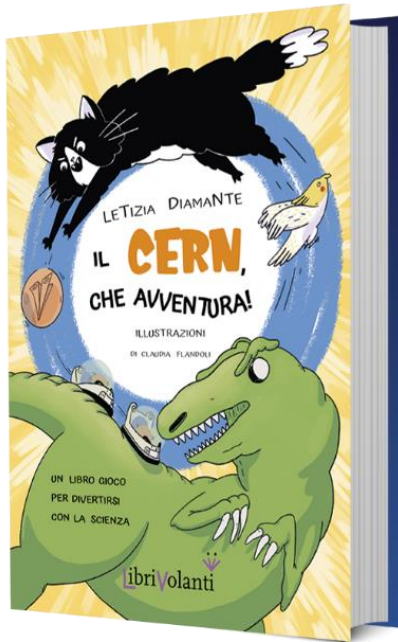


# your adventures at CERN

## Letizia Diamante



Available on Amazon (<https://amzn.to/3ONu13R>),  
online stores and at CERN (CERN souvenir shop in  
building 33/reception and library bookstore)

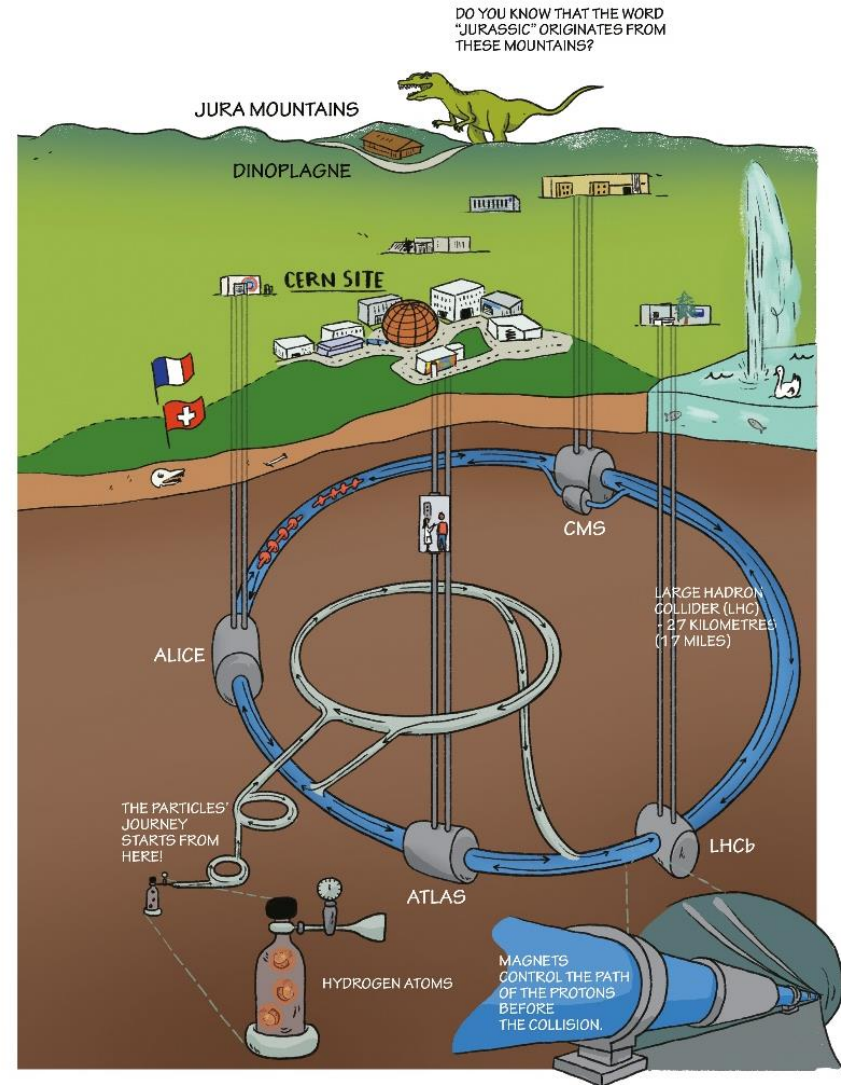


# The setting is a unique place: a scientific wonderland

The Jura Mountains



CERN



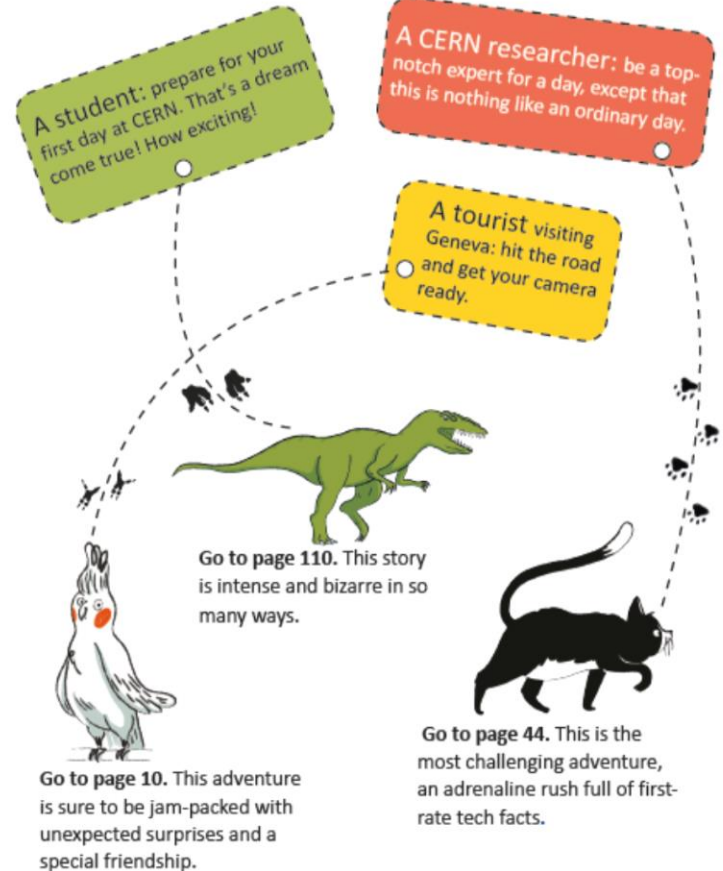
Illustrations by Claudia Flandoli

# Mission

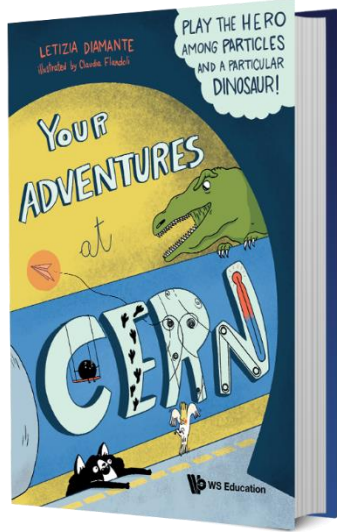
- Having a **fun** and interactive reading time 😊
- Familiarising with particles and the unsolved mysteries of the universe
- Encouraging curiosity beyond what readers learn/learned at school
- Producing a visually interesting book
- Attaching science to three fictional adventures (**gamebook**, choose-your-own-adventure format)

## Who would you like to be?

First, choose who you would like to be. The options are:







# Your adventures at CERN

*As soon as you open this book, **YOU** become the main character!*

*You will be catapulted to **CERN**, one of the most famous laboratories in the world –*

*✨ a real scientific wonderland ✨*

*of underground tunnels, massive experiments and technological marvels.*

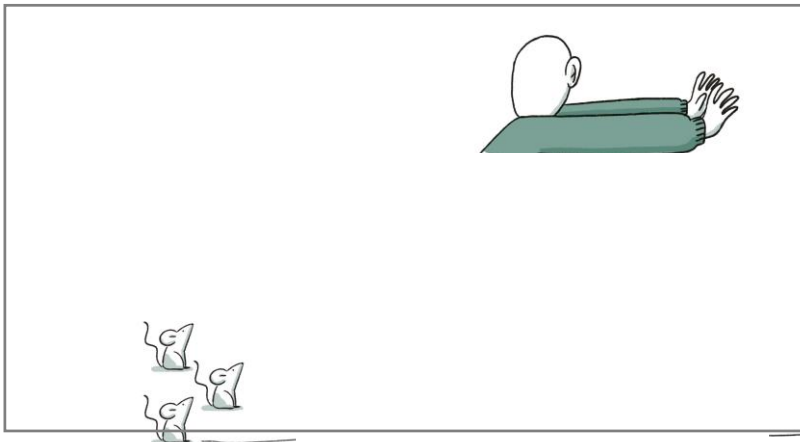
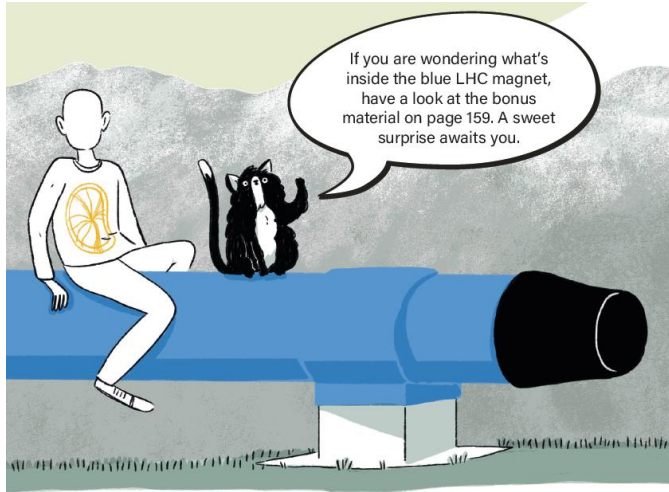
*You can choose to play the role of a researcher, a student or a tourist, but keep your eyes open for a threatening dinosaur... Is it coming from the nearby Jura Mountains, the same place that gave Jurassic its name?*

*Prepare yourself for a rather bizarre adventure filled with loads of brain-tickling facts about particles and science wonders. Unfold the story, explore the unsolved mysteries of the Universe, and most importantly, have fun with the games and quizzes!*

*Are you ready to face the huge prehistoric beast and discover the secrets of tiny particles?*



# Everybody can feel included!



## «Your adventures at CERN»

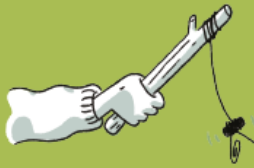
### «Il CERN, che avventura!»

includes

- 3 adventures
- 3 recipes (bonus material)
- A glossary written by the cat Schrödy
- A lot of science-related games, quizzes and fun facts

### Quiz

Which objects can you fish out with the magnet?



- a) Keys, sewing needles, nickel coins, scissors and a paperclip  
b) Everything except the cat food and plastic cap  
c) Everything except the cat food

(Answer on page 152)



### Science Byte

Did you know that falling cats have actually contributed to modern physics?

When dropped from upside down, cats are able to turn super fast, without any outside force, and land perfectly on their feet. In the late 1800s, some physicists thought that falling cats were defying the laws of physics. The mystery was solved only in 1969, and it turns out that cats do not break any physics laws.



When falling, the cat bends at the waist thanks to its ultra-flexible backbone. It forms a V shape and twists the front half of its body first.



Its front legs are pulled in, so its upper body rotates quickly: it's the same trick that figure skaters use to spin faster.



Then the cat flips its back part of the body, tucking its back legs under its body and extending its front legs.



No problem for Schrödy! He lands uninjured!

When it is about to land, all its legs are stretched out, so rotation stops.



50




This bottle was sent by your research team. Write or doodle a thank-you message on the label.

[illegible]

**Curiöusly CERN**

Itsy-bitsy particles, giant detectors

.....

 **Quiz** Accelerators for a myriad of uses

.....

**Curiöusly CERN**

The biggest "SUPER freezer" in the world

.....

**170 pages packed  
with fun activities 😊**

# Book-related activities



Science festivals

Museums

Schools

Target: 9-10 years old and above

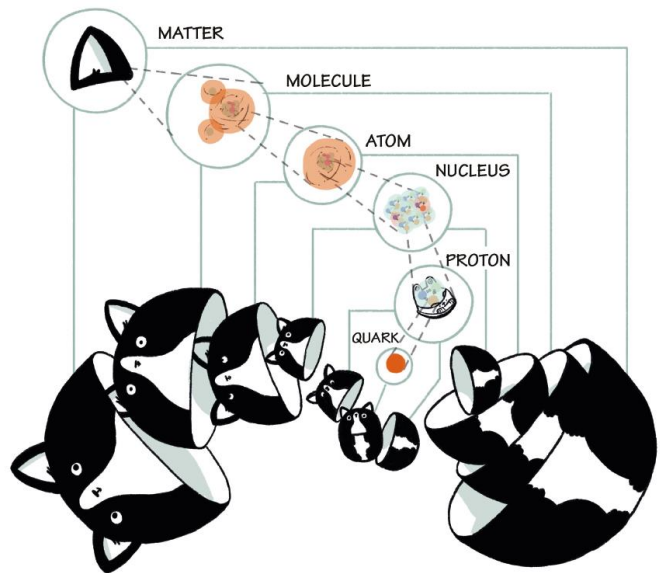
Adults love it too 😊



Free activity sheets related to the book and in **ENGLISH, FRENCH** and **ITALIAN** will be available on the **IPPOG** website.  
(Now available on [letiziadiamante.com](http://letiziadiamante.com))



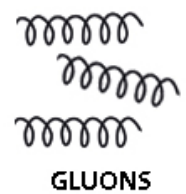
# Activity sheet: Build a MATTERyoshka



How to represent particles?



PHOTON



GLUONS



PROTON



QUARKS



NEUTRON



ELECTRON



MUON



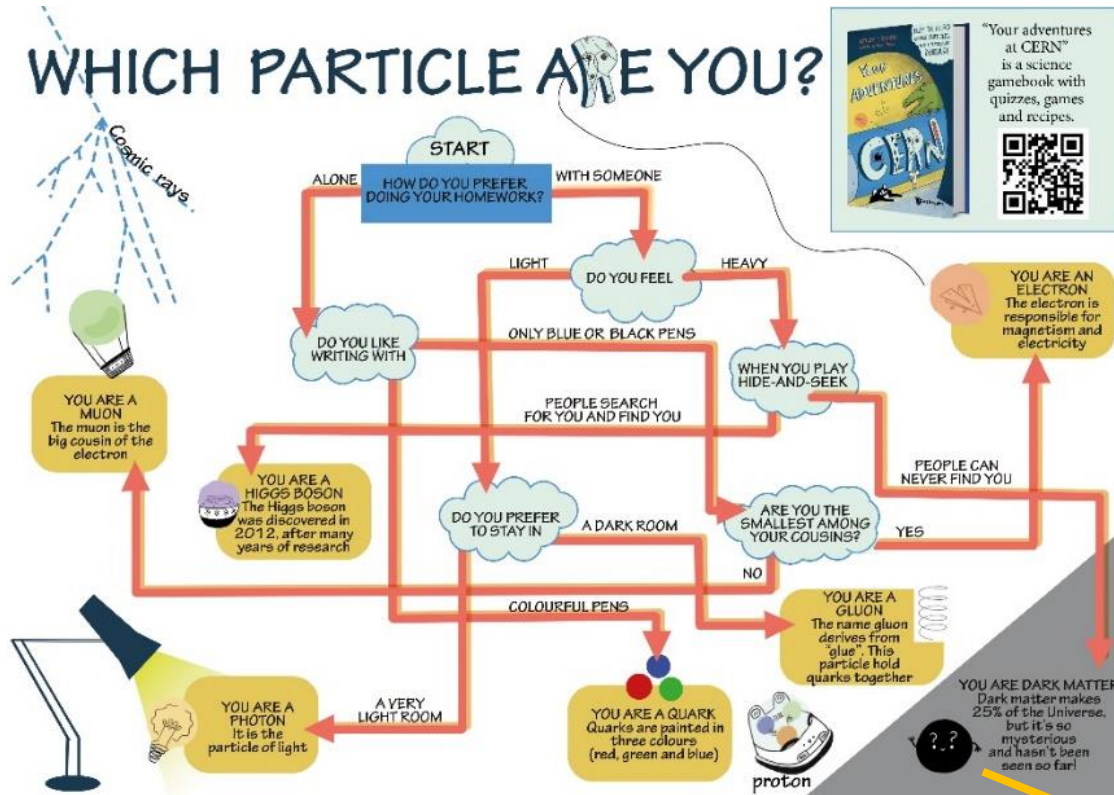
HIGGS BOSON



DARK MATTER



# Activity sheet: Test and "access card"



**CERN**

DATE : \_\_\_\_\_

NAME : \_\_\_\_\_

FAVOURITE PARTICLE : \_\_\_\_\_

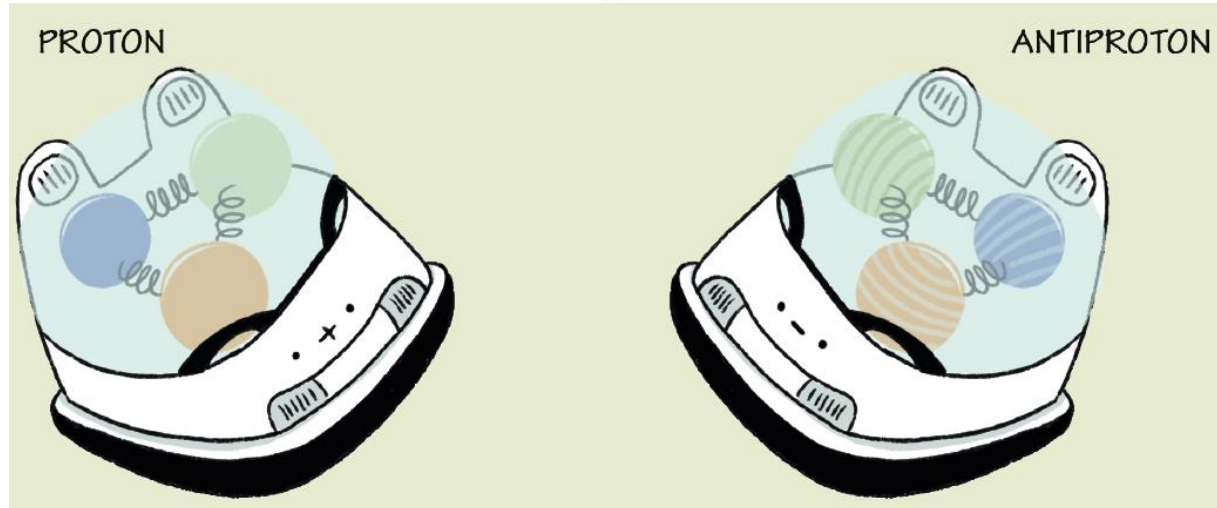
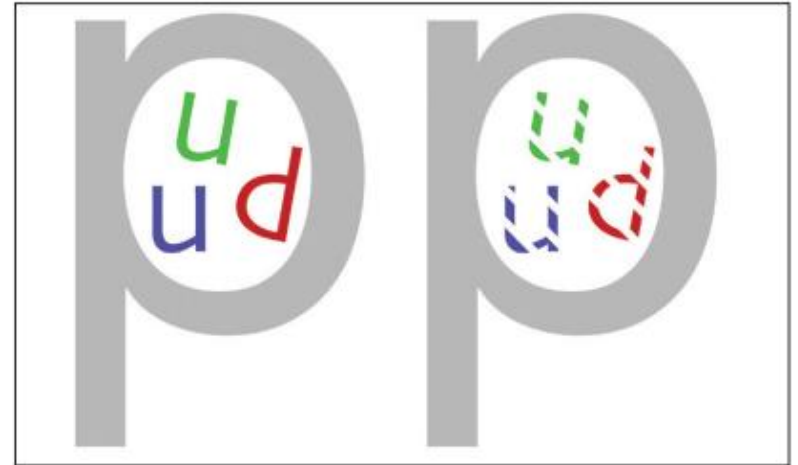
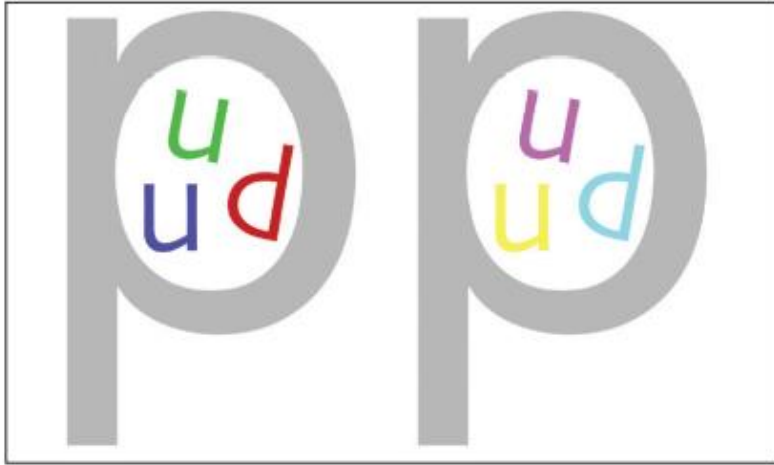
# Particle Memory



Available on: [https://letiziadiamante.com/index IT.html?](https://letiziadiamante.com/index_IT.html?)

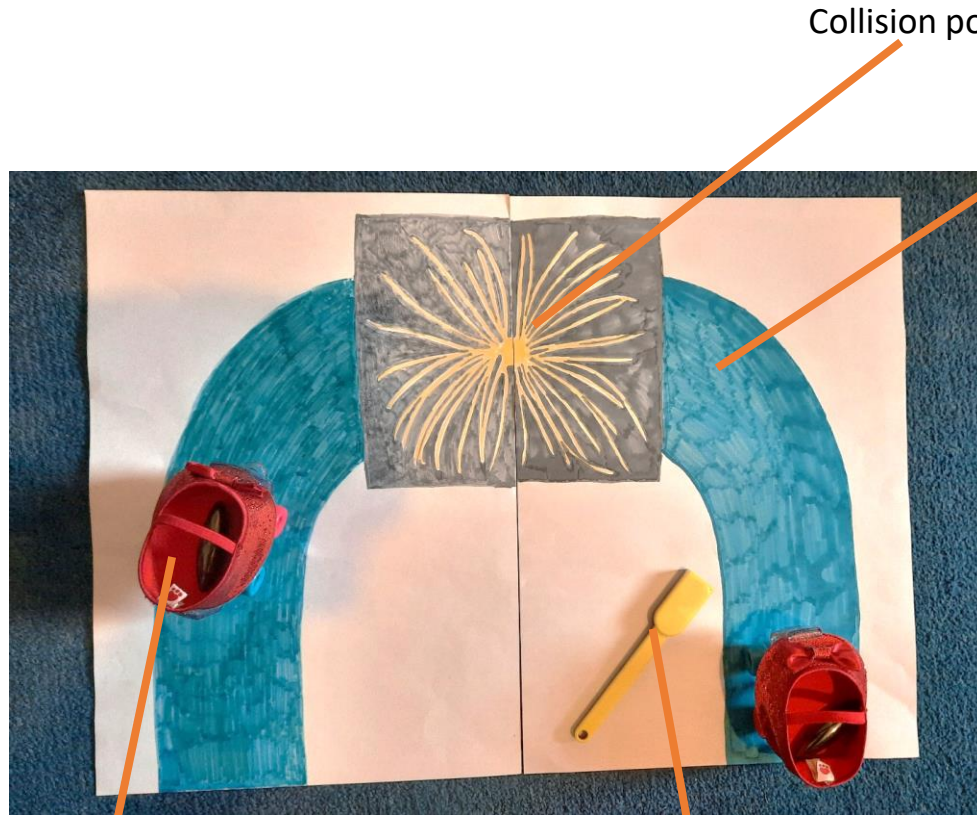


# How to represent antiparticles?



Wiener, Gerfried J., Sascha M. Schmeling, and Martin Hopf. "An alternative proposal for the graphical representation of anticolor charge." *The Physics Teacher* 55.8 (2017): 472-474.

# Magnetism: Mini-accelerator controlled by magnets



Proton  
(with a hidden  
magnet inside)

Magnet to guide the protons

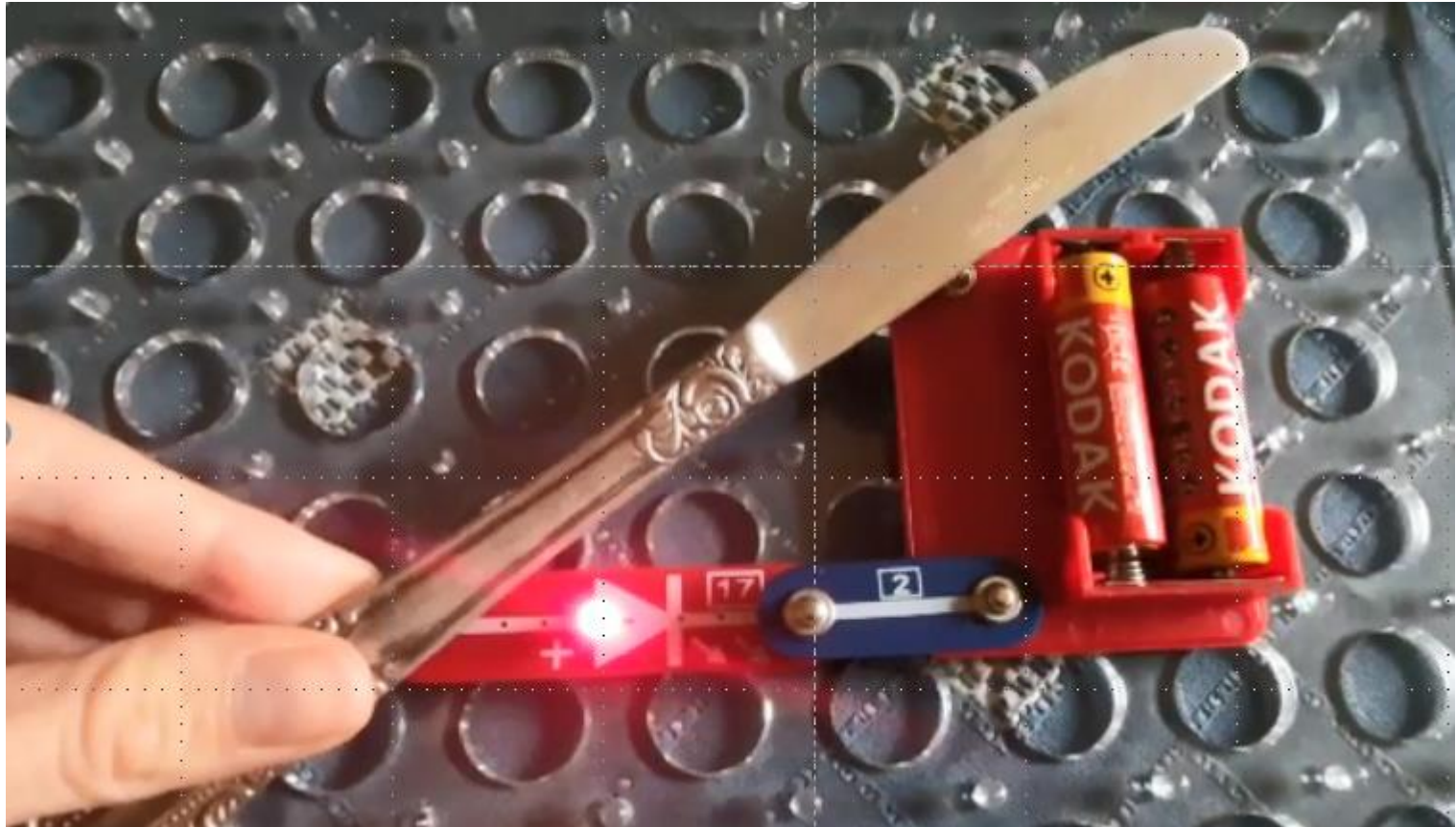
Collision point

Particle accelerator  
(LHC)



# Conductivity: Experiment

- Why are metals conductive?
- Superconductivity can be mentioned.





# Temperature: the extreme thermometer game



Absolute  
zero  
-273,15°C

LHC

Space

0°C

The  
Sun



Guinness  
record in  
ALICE  
(CERN)

# Thank you very much!

## Social media, feedback

Twitter and Instagram: @letiziadiamante

Facebook page and Pinterest: @scientificwonderland

Youtube

Website [www.letiziadiamante.com](http://www.letiziadiamante.com) -> contact form

