



2023-2024

# EDUCATION PROGRAMME



GOVERNMENT OF  
MALTA

MINISTRY FOR EDUCATION,  
SPORT, YOUTH, RESEARCH  
AND INNOVATION  
PARLIAMENTARY SECRETARIAT  
FOR YOUTH, RESEARCH  
AND INNOVATION

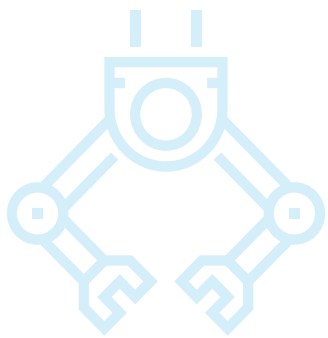


The Malta Council for  
**Science & Technology**

# CONTENTS

<b>PLAN YOUR VISIT</b>	<b>4</b>
<b>STEP 1: CHOOSE A GALLERY EXPERIENCE</b>	<b>6</b>
<b>Exhibition Gallery Information</b>	<b>8</b>
<b>Little Esploras Galleries</b>	<b>9</b>
<b>Ground Floor Exhibition Galleries</b>	<b>10</b>
<b>Upper Halls &amp; Planetarium Exhibition Galleries</b>	<b>12</b>
<b>STEP 2: CHOOSE AN ACTIVITY</b>	<b>14</b>
<b>Kinder 1 – Year 1</b>	<b>16</b>
<b>Years 2 - 3</b>	<b>18</b>
<b>Years 4 - 6</b>	<b>19</b>
<b>Years 7 - 11</b>	<b>22</b>
<b>Planetarium Experience</b>	<b>25</b>
<b>ADDITIONAL ACTIVITIES</b>	<b>28</b>
<b><i>Qtates ta' max-Xatt</i>, Theatrical Performance</b>	<b>28</b>
<b>NSSS Career Orientation Visits</b>	<b>29</b>
<b>FOR EDUCATORS</b>	<b>30</b>





# PLAN YOUR VISIT



**DISCOVER  
EVERYTHING YOU  
NEED TO KNOW  
BEFORE BOOKING  
AN EDUCATIONAL  
VISIT TO ESPLORA  
INTERACTIVE  
SCIENCE CENTRE.**

## What does an educational visit consist of?

We recommend that you plan a visit of at least 3 hours, typically from 9:30am till 12:30pm.

An educational visit consists of:

- An activity such as an interactive workshop, a live science show or a planetarium show/film;
- Reserved time slots in different exhibit galleries, accompanied by an Explainer team member who will facilitate your visit;
- A 30-minute lunchbreak.

## How much does it cost?

€3 per student\*.

Students with a disability card may benefit from a concession fee of €1.50. Supervising adults visit for free.

Please refer to Esplora's [school groups terms & conditions](#).

\*Ticket prices may vary for special activities and events.

## What are our opening hours?

Esplora's opening hours, from September to June, are:

- Monday: Closed
- Tuesday - Friday: 9am - 3pm
- Saturdays, Sundays & Public Holidays: 10am - 5pm

## How can you book a visit?

- Step 1: Choose a Gallery Experience
- Step 2: Choose an Activity
- For school bookings, please contact us on [bookings@esplora.org.mt](mailto:bookings@esplora.org.mt) or call on [2360 2299](tel:23602299).

You'll be greeted by our bookings officer, who will guide you through the programme and answer any queries you might have.

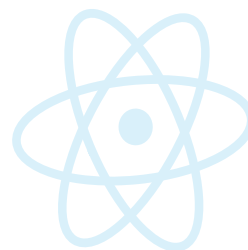
## Educator Tours

A group of educators can book a tour at Esplora, which will be guided by one of our team members. Get in touch on [bookings@esplora.org.mt](mailto:bookings@esplora.org.mt) or call on [2360 2299](tel:23602299) for further details.

Minimum number of educators per group:  
5 educators

## FREE TRANSPORT

State schools may benefit from free transport to Esplora, thanks to the support of the Ministry for Education, Sport, Youth, Research and Innovation. Please contact our bookings office for more information.



# Step 1

## CHOOSE A GALLERY EXPERIENCE

### KINDER 1 – YEAR 1

For bookings for ages from Kinder 1 to Year 1, we will reserve the Little Esploras Galleries for you. These galleries were especially designed to meet the needs of our younger visitors. For more information, please go to 'K1-Y1' on [page 9](#).

### YEARS 2 – 11

If you would like to visit with your students from between Year 2 and Year 11, please select either Option 1 or Option 2.

#### OPTION 1:

### GROUND FLOOR EXHIBITION GALLERIES

Motion, Optics, Electricity, Human Body, Eco-Life and Earth galleries. For more information, please go to [pages 10-11](#).

OR

#### OPTION 2:

### UPPER HALLS & PLANETARIUM EXHIBITION GALLERIES

Engineering & Telecommunications, Nature of Matter, Media Studio, Sound, Illusions, Universe and Living-in-Space galleries. For more information, please go to [pages 12-13](#).



	<b>EXHIBITS</b>	<b>ACTIVITY</b>
<b>KINDER 1 &amp; 2 AND YEAR 1</b>	Little Esploras Galleries	Interactive workshop. Interactive Storytelling or a Science Show
<b>YEARS 2 - 11</b>		
<b>Option 1</b>	Ground Floor Exhibition Galleries	Interactive Workshop or Science Show
<b>Option 2</b>	Upper Halls Exhibition Galleries & Planetarium Exhibition Galleries	Planetarium Live Show or Planetarium Film

Please note that the galleries are available for booking on a first-come, first-served basis. Please contact our bookings officer to confirm availability.



# EXHIBITION GALLERY INFORMATION

## **PULL, PUSH, TAP, LIFT, SLIDE – OUR EXHIBITS ARE DESIGNED TO BE INTERACTIVE!**

Inquiry-based learning is our driving principle. Our fascinating exhibits engage students and encourage them to explore scientific concepts by designing and conducting their own investigations. The informal environment encourages group inquiry and collaboration, allowing students to explain their observations to each other. Our staff are very willing to help you with scaffolding your students' learning to elaborate and evaluate their understanding, rounding out the application of the 5E model.

## **LIFE AT BIGHI**

Delve into the history of life at Bighi (excellent for linking to history/literacy). Inspect medical equipment from when Esplora was a British military hospital and use the interactive stations to follow a timeline and learn about the patients' most common ailments.







## LITTLE ESPLORAS GALLERIES for K1 - Y1



### HOME & GARDEN/BALL FACTORY/OUTDOOR PLAYSCAPE

Our delightful 'Little Esploras' area is ideal for students from Kinder 1 up to Year 1.

The Home & Garden gallery encourages cooperative learning, while the Ball Factory gallery brings out budding engineers. Don't miss the Outdoor Playscape's water exhibits and pirate ship!

The Little Esploras galleries are reserved for the younger age groups of our school bookings.



**OPTION 1**  
for  
Years 2-11

# GROUND FLOOR EXHIBITION GALLERIES

## MOTION

One of our most popular galleries, Motion, is also one of the loudest! Watch your students light up as they internalise Newton's laws of motion, while engaging with our compelling exhibits. Linear motion, inertia, conservation of energy, volume displacement, friction, aerodynamics, gravity, mechanical advantage – we've got them all!

## OPTICS

Your students will step into a world of light and explore reflection, refraction, colour, vision, absorption, spectroscopy, and even peer into an invisible world, thanks to our infrared video livestream!

## ELECTRICITY AND MAGNETISM

Electricity and magnetism can be tricky concepts to explain, but our exhibits allow students to explore them hands-on! Learners can connect an intruder-alarm circuit, explore magnetic fields, convert electricity to magnetism and back again, and interact with the plasma globe.





## HUMAN BODY

The Human Body gallery is all about human life science. Evaluate your diet, view your heart rate, put together a 3D heart, examine different body cells and trace through the digestive system.

## ECO-LIFE

In the Eco-Life gallery, learners can take quizzes about product materials and energy use at home, build their dream home and play a waste-sorting game (mind the dog pool!).

## EARTH

The Earth gallery brings earthquakes, volcanoes and tornados to your students' fingertips. Use our amazing 'Planet Earth' exhibit to explore the surface of Earth and even other planets!





# UPPER HALLS & PLANETARIUM EXHIBITION GALLERIES

**OPTION 2**  
for  
Years 2-11

## MEDIA STUDIO

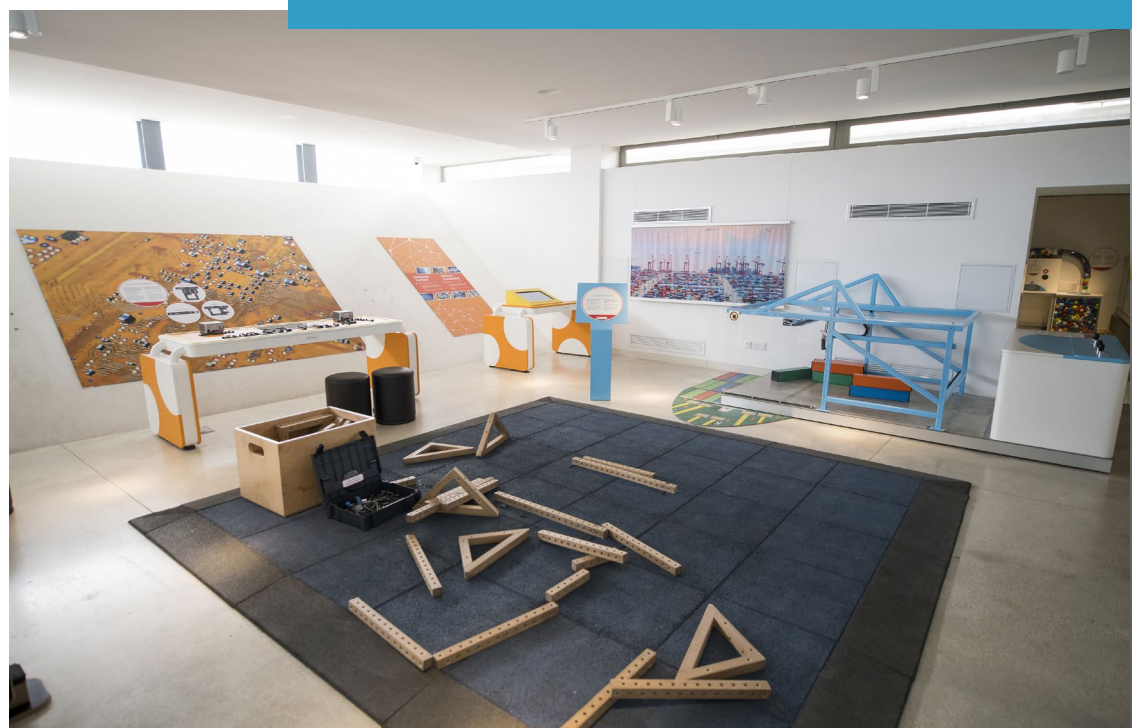
The Media gallery is a hands-on experience with sound looping, stop-motion animation, dubbing and even a green screen (mind the zombies!).

## ENGINEERING AND TELECOMMUNICATIONS

Telecommunications exhibits raise issues of hacking and privacy whilst the Engineering gallery is full of opportunities for building and creating. The 3-D Thinking exhibits, on the other hand, get students to engage with geometry, topology, recursion, logic and spatial puzzles.

## NATURE OF MATTER

This gallery is all about chemistry and allows students to investigate materials science by constructing molecules (including DNA!), learn about smart materials, design their own fireworks display and explore an interactive digital periodic table.





## SOUND AND ILLUSIONS

These two rooms explore our senses. Create music and watch its waveform on the screen in the Sound gallery, and be astounded while your perception is tricked in the Illusion gallery

## UNIVERSE

Use the interactive exhibits in the planetarium building to explore the wonders of nebulae and black holes, and challenge your friends to the solar system quiz. But be quick ... to win, you need to run and stand on the correct answer first!

## LIVING IN SPACE

Get a taste of life in space (and find out how astronauts use the toilet on the International Space Station) and identify planets that may host extra-terrestrial life!



# Step 2

## CHOOSE AN ACTIVITY

	OCTOBER	NOVEMBER	DECEMBER	JANUARY
<b>K1 - Y1</b>	ShapeBird	ShapeBird	ShapeBird	Little Sprouts
	Superhero In You	Superhero In You	Once Upon a Christmas	Beautiful Bubbles
<b>Yrs 2 - 3</b>	Colours Everywhere	Colours Everywhere	Colours Everywhere	Colours Everywhere
	Matata On Tour	Matata On Tour	Matata On Tour (Xmas Edition)	Colouring With Chemistry
<b>Yrs 4 - 6</b>	Body Wonders	Body Wonders	Weatherology (Xmas Edition)	Weatherology
			Arti-Coding (Xmas Edition)	Arti-Coding
	Circuit-Block Tinkering	Circuit-Block Tinkering	Circuit-Block Tinkering	Catch Them Young
<b>Yrs 7 - 11</b>	Body Wonders	Body Wonders	Weatherology (Xmas Edition)	Weatherology
			Akkwatiku	Akkwatiku
	Stop the Hacker	Stop the Hacker	Lunar Mission 1.0	Lunar Mission 1.0
<b>Yrs 9 - 11</b>	Unlocking AI, Inside the Teenage Mind and STI Awareness workshops are available on demand.			
<b>Yrs 2 - 11</b>	<b>Planetarium Shows and Films</b> The planetarium experience includes a live planetarium show or film.			

*\*This workshop is weather-permitting since it is carried out outdoors.  
In cases of bad weather, a different workshop is offered*



	<b>FEBRUARY</b>	<b>MARCH</b>	<b>APRIL</b>	<b>MAY</b>	<b>JUNE</b>	
	Little Sprouts	Little Sprouts	Fossil Detectives	Fossil Detectives	Fossil Detectives	
	Beautiful Bubbles	Beautiful Bubbles	Planet Bootcamp	Planet Bootcamp	Planet Bootcamp	
	Beautiful Bubbles	Beautiful Bubbles	Beautiful Bubbles	Beautiful Bubbles	Beautiful Bubbles	
	Colouring With Chemistry	Colouring With Chemistry	Shadow Play	Shadow Play	Shadow Play	
	Weatherology	Weatherology	Take Off!	Take Off!	Take Off!	
	Arti-Coding	Soil Investigators*	Soil Investigators*	Soil Investigators*	Arti-Coding	
	Catch Them Young	Catch Them Young	Climate Conundrum	Climate Conundrum	Climate Conundrum	
	Weatherology	Weatherology	Take Off!	Take Off!	Take Off!	
	Akkwatiku	Soil Investigators*	Soil Investigators*	Soil Investigators*	Stop the Hacker	
	Lunar Mission 1.0	Lunar Mission 1.0	Climate Conundrum	Climate Conundrum	Climate Conundrum	

These vary in topic, age recommendation and length. Please go to page 24 for more information.

# ACTIVITIES

Kinder 1 - Year 1



## ShapeBird



30



25

Become an ornithologist (bird scientist) for a day and join us on a quest to discover the nest of the mythical bird known as the ShapeBird. Students will discover the colourful world of birds and explore shapes, colours and sizes as they sort and count together.



## Little Sprouts



30



25

Have you ever looked at a plant and wondered where it came from? Or why caterpillars make cocoons? Let me tell you a story about a seed that becomes a plant and an egg that becomes a beautiful butterfly. Through this interactive storytelling session, students will discover how to grow plants from seeds and what plants need in order to grow!



## Fossil Detectives



30



25

Become a palaeontologist for the day! Join our fossil investigation as we explore the wonderful Jurassic Period. Work like a real palaeontologist; dig out and analyse fossils, explore different types of dinosaur and learn about the latest discoveries made in the field of palaeontology!



## Planet Bootcamp



30



25

Calling all trainee astronauts! This is your chance to explore the fantastic celestial features and get to meet all our solar system buddies through a series of fun facts and activities. We will explore things like the Mars Rover and Saturn's rocky rings! So, are you ready for bootcamp?



## Superhero In You



30



25

Do you want to go on a journey of discovery and explore different superpowers? Help us identify strong shapes, get up close and personal to things that are far away or very tiny, and learn about how some animals are very good at being invisible. 'Superhero In You' is designed to introduce students to scientific concepts through dazzling demonstrations that explore how scientists use science and technology to make the world a better place.





## Beautiful Bubbles

🕒 30

👥 25

Who doesn't love bubbles? Bubbles of all sizes going up, this way, that way, and all over the place ... with a little help from the audience! Students will find out what bubbles are made of, how bubbles are formed and the shapes that bubbles can take. They might even get the chance to step inside our famous, human-sized bubble.



## Once Upon a Christmas

🕒 30

👥 25

In this unique interactive storytelling session, we shall go on a journey with Santa Claus to explore how families celebrate Christmas in Malta and Gozo. Accompanied by lovely visuals designed by the Esplora team, a beautiful Christmas story is told with the help of scientific demonstrations.



# ACTIVITIES

Year 2 - Year 3



## Colours Everywhere



60



60-90

Who can resist a science show full of colourful experiments? Watch how a bouquet of flowers can change colour! Fuel students' curiosity with this playful interaction with chemistry. Can we pour out all the colours of the rainbow? Could we make fireworks in our lab? A science show that will surely leave students with a sense of wonder about what else there is to discover about the world around us.



## Beautiful Bubbles



60



60-90

Who doesn't love bubbles? Bubbles of all sizes going up, this way, that way, and all over the place ... with a little help from the audience! Students will find out what bubbles are made of, how bubbles are formed and the shapes that bubbles can take. They might even get the chance to step inside our famous human-sized bubble.



## Matata On Tour



60



25

Code your way to the National Aquarium, Buskett or to the Ġgantija Temples! Students will go on an exciting adventure around the Maltese islands with Matata, our friendly robot designed to introduce young children to simple coding concepts.

*In December, this workshop is given a Christmas twist, during which Matata will be helping Santa deliver presents around the Maltese islands by means of coding.*

*This workshop is supported by Robocoach and digital.com.mt.*



## Colouring with Chemistry

🕒 60

👥 25

Prepare to be amazed by the colourful world of chemistry. Be an artist for the day and create your own designs that you can colour-in using chemistry instead of paint. Nothing harmful, just common, household, safe chemicals!



## Shadow Play

🕒 60

👥 25

Make shadow puppets for your shadow theatre, create coloured shadows, and discover how light travels in straight lines. In this workshop, students will have the opportunity to manipulate light and change the way objects appear as shadows while they explore the relationship between lights, colours and shadows.



# ACTIVITIES

Year 4 - Year 6

## **Body Wonders** 60 60-90

Join us in this live science show to explore how our essential body organs work. Through a series of intriguing demonstrations, discover how food is processed through our digestive system, which one of your eyes is dominant and more.

## **Weatherology** 60 90

Discover the natural wonders of Earth's weather phenomena and experience the largest indoor cloud you've ever seen. In this science show, students will learn about the different types of weather events and explore questions such as 'Why does it rain?', 'What is acid rain' and 'How do different types of tornadoes form?'

*In December, this show is given a Christmas twist, during which we explore the weather in different parts of the world at Christmastime.*

## **Take Off!** 60 60-90

From seeds and birds to engineering marvels, how did nature inspire us to design and build flying machines? Fasten your seatbelt as we fly up, up and away to explore the science of flight. In this science show, students will explore how wings, engines and forces affect how things fly and how man's first attempt at flying has led to an era of powered flight and space travel.

## **Soil Investigators** 60 25

Soil is a very important resource to sustain life. Investigate the properties of soil and conduct a soil survey to check out our soil's physical features. All this and more at the Explora's botanical garden!

This workshop is conducted outdoors and therefore, it is weather-permitting.



## **Arti-Coding** 60 25

Engage in a fascinating blend of science, art and mathematics. In this workshop, students will be able to explore the intricate world of geometry, using coding to create and manipulate shapes. Our drawing robots will help you to unleash your creativity!

*In December, this workshop is given a Christmas twist, during which the art created will be Christmas-inspired.*

*This workshop is supported by Robocoach and digital.com.mt.*

## **Climate Conundrum** 60 25

Join us for a climate-change murder mystery workshop! Who is responsible for the climate crisis? And what can we do to help? During Climate Conundrum, we'll delve into the history of climate change, investigate its present-day impact and explore practical solutions for a sustainable future.

*This workshop is supported by Robocoach and digital.com.mt.*

## **Circuit-Block Tinkering** 60 25

This hands-on tinkering workshop provides students with an accessible way to connect lights, switches, buzzers and motors into working circuits. The format is designed to foster 21<sup>st</sup>-Century Skills, such as critical thinking, problem solving, persistence and curiosity, and we finish by using the circuit blocks to create special effects for a story!

## **Catch Them Young** 60 25

Are you curious and creative? Do you love solving problems? Are you fascinated by the world around you? Then science is for you! But what does a scientist or an engineer look like, and what does it take to become one? In this workshop, students will delve into some STEM stereotypes and discover the skills that STEM professionals need to carry out their amazing work.



# ACTIVITIES

Year 7 - Year 11

## **Body Wonders** 60 60-90

Join us in this live science show to explore how our essential body organs work. Through a series of intriguing demonstrations, discover how food is processed through our digestive system, which one of your eyes is dominant and more.

## **Weatherology** 60 90

Discover the natural wonders of Earth's weather phenomena and experience the largest indoor cloud you've ever seen. In this science show, students will learn about the different types of weather events and explore questions such as 'Why does it rain?', 'What is acid rain' and 'How do different types of tornadoes form?'

*In December, this show is given a Christmas twist, during which we explore the weather in different parts of the world at Christmastime.*

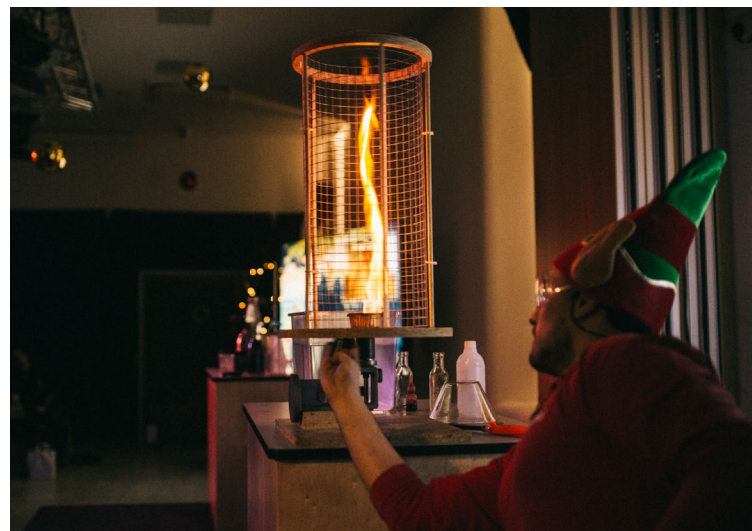
## **Take Off!** 60 60-90

From seeds and birds to engineering marvels, how did nature inspire us to design and build flying machines? Fasten your seatbelt as we fly up, up and away to explore the science of flight. In this science show, students will explore how wings, engines and forces affect how things fly and how man's first attempt at flying has led to an era of powered flight and space travel.

## **Soil Investigators** 60 25

Soil is a very important resource to sustain life. Investigate the properties of soil and conduct a soil survey to check out our soil's physical features. All this and more at the Explora's botanical garden!

*This workshop is conducted outdoors and therefore, it is weather-permitting.*





## Akkwatiku Yrs 9 –11

90

25

Get to know your aquatic neighbours through this interactive workshop. We will play Jenga and board games to explore trophic levels and the importance of maintaining balance for a healthy aquatic ecosystem. Students will have the opportunity to dive in to find out more about overfishing, aquaculture and eutrophication. There is something for everyone to discover.

*This workshop was created in collaboration with AquaBioTech Group as part of the Horizon2020 TAPAS project.*



## Stop the Hacker Yrs 7 –8

60

25

Join us for a code-breaker activity and work together in a team to help one of our science communicators stop the hacker! In this escape-room-inspired workshop, participants must solve a series of pen-and-paper puzzles and race against the clock to outsmart a hacker, whilst also exploring the basics of cyber security and how to be safe online.



## Climate Conundrum Yrs 7 –8

60

25

Join us for a climate-change murder mystery workshop! Who is responsible for the climate crisis? And what can we do to help? During climate conundrum we'll delve into the history of climate change, investigate its present-day impact and explore practical solutions for a sustainable future.

*This workshop is supported by Robocoach and digital.com.mt.*



## Lunar Mission 1.0 Yrs 7 –8

60

25

We're going back to the moon! Join our mission to code our lunar rover. Use your mathematical skills to complete a set of tasks in preparation for humans to go back to the moon. Are you up to the challenge? Students will need to work in teams to code our LEGO Mindstorms EV3 rovers to complete a set of lunar tasks whilst also strengthening their mathematical skills.

# ACTIVITIES

Year 9 - Year 11

The following workshops are offered on demand.

## **Unlocking AI Yrs 9 –11** 60 25

AI has become a buzz word lately. This workshop, taking the shape of an escape room, addresses the myths and misconceptions about Artificial Intelligence by defining what it really is, what is capable of doing and how it is applied in real-life applications.

## **STI Awareness Yrs 9 –11** 60 25

Are you aware of the most common sexually-transmitted infections (STIs)? How do we recognise them? What are some typical misconceptions? The workshop takes the form of an interactive discussion to raise awareness on different sexually-transmitted infections and tackles how easily STIs can spread.

‘STI Awareness’ was developed in collaboration with the GU Clinic at Mater Dei hospital as a teenage guide to reproductive health care.

## **Inside the Teenage Mind Yrs 9 –11** 60 25

Why do certain situations produce different emotions in different people? And how can understanding these differences enhance our empathy and understanding of one another? This workshop involves a series of exercises and discussions, which will help students better understand and manage their own emotions. We will delve into the use of language and how the words that we use can hinder or alleviate our emotional expression.





# PLANETARIUM EXPERIENCE

Have you experienced our interactive space exhibits yet?

The EsploraPlanetarium consists of a variety of exhibits linked with the wonders of space exploration; from the science of our solar system to working on the ISS.

For more information on the planetarium exhibition galleries, please go to page 13.

## PLANETARIUM LIVE SHOWS

available in both Maltese and English

### Space Explorers

**Yrs 2 - 6**

The perfect show for our young visitors. Explore the night sky and go on a trip to the Moon before flying through the solar system to see a planet up close.

### Wonders of the Night Sky

**Yrs 3 - 11**

Take a dramatic tour of our solar system, from the International Space Station to distant planets, and then head out to interstellar space as we explore our galaxy and our place in the cosmos.

## Hearing Loop System

EsploraPlanetarium is equipped with a hearing-loop system for the benefit of people making use of hearing aid devices. Users would need to switch their hearing aid devices to Telecoil mode to benefit from this system.

The Hearing Assistance System is accessible in rows 2 to 5.



# PLANETARIUM FILMS

## Legends of the Night Sky: Perseus and Andromeda

**Yrs 2 -3**

'Perseus and Andromeda' is a fun-filled retelling of the tale of the beautiful, but unfortunate, princess Andromeda who, as a form of divine punishment for her mother's bragging, is sacrificed to a sea monster, but is then rescued by the Greek hero, Perseus.

## Accidental Astronauts

**Yrs 2 - 6**

Follow the adventures of Cy and Annie together with their dog Armstrong as they embark on an unexpected journey into space.

## Cosmix

**Yrs 2 -6**

Have you ever wondered what it's like to be an astronaut? What does it take to become one? After watching Cosmix, you'll be ready to go!

## Magic Globe

**Yrs 2 -8**

On vacation at her grandfather's, a little girl, Mia, accidentally discovers a mysterious piece of astronomical machinery. Edek, Mia's eccentric uncle, tricks the girl into using the tool's secret powers to change the world's seasons.

## Dinosaurs: A Story of Survival

**Yrs 2 -11**

Join Celeste and Moon on a journey of discovery by travelling back in time to before dinosaurs roamed the Earth, and see first-hand how some species of dinosaurs escaped extinction.

## Perfect Little Planet

**Yrs 3 -6**

Discover our solar system through a different set of eyes – those of a family from another star system seeking the perfect vacation spot. Which destination would you choose?

## CELL! CELL! CELL!

**Yrs 3 -11**

Join Raj and Sooki as they embark on a 'cell-tacular' journey through the body and discover all about our cells. P.S., *We have 70 trillion of them!*

## Dream to Fly

**Yrs 6 -11**

Discover more about the first plane, the hot-air balloon and even Da Vinci's flight inventions, with this poetic and touching history of aviation.

## From Earth to the Universe **new**

**Yrs 7 -11**

See the vastness of the universe and learn more about the place of the human race in the cosmos, in this documentary by the European Space Observatory.

## Two Small Pieces of Glass

**Yrs 7 -11**

Telescope development has helped us understand our place in space. Discover how telescopes work and how astronomers have used them to scrutinise the structures within our cosmos.

## To Space and Back

**Yrs 7 -11**

Go on an incredible journey through the universe to discover how the human ingenuity, engineering and technology used in the space industry have paved the way for the devices and applications we use every day.

## Europe to the Stars

**Yrs 9 -11**

Discover the European Southern Observatory in a story of cosmic curiosity, courage and perseverance; a story of observing a universe of deep mysteries and hidden secrets; and a story of designing, building and operating the most powerful ground-based telescopes on the planet.

## The Sun

**Yrs 9 -11**

All of us can feel the sun's warmth on our skin. Discover the secrets of Earth's main source of light and experience never-before-seen images of the Sun's violent surface.

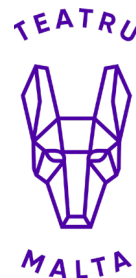
## The Dark Matter Mystery

**Yrs 9 -11**

Is our cosmos dominated by an unknown force? We can't detect it or measure it, and we can't feel it, but we still know it is there. Scientists are on the hunt scouting to solve the dark matter mystery.



# ADDITIONAL ACTIVITIES



National Agency for  
the Performing Arts

Aġenzija Nazzjonali  
għall-Arti Performattiva

## *Qtates ta' max-Xatt* by Teatru Malta

**Target age:** Years 2 – 5

**Dates:** 20<sup>th</sup> - 23<sup>rd</sup> February 2024

**Duration:** 35 minutes

**Language:** Maltese

**Maximum number of participants:** 50

**Location:** Esplora Planetarium

**Price:** €5

This heart-warming puppet show adaptation, born of the 2019 children's opera, will explore the sensitive subject of loss through the eyes of a group of singing stray cats who struggle to come to terms with the 'disappearance' of two of the most important people in their life.

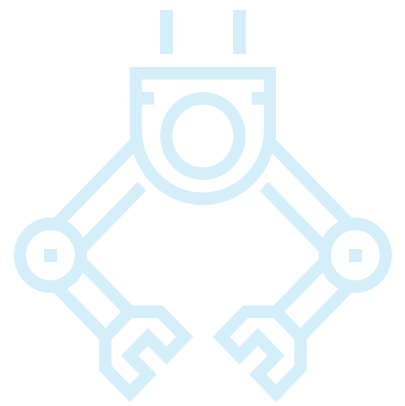
Based on the book by Clare Azzopardi, *Il-Qtates ta' max-Xatt* will travel to Esplora Planetarium and invite schools and their students, to indulge in this melodious interpretation of a story that explores one of children's greatest fears through the cheerful media of puppetry and song.



**For bookings**

Tel: 2360 2299

[bookings@esplora.org.mt](mailto:bookings@esplora.org.mt)



## NSSS Career Orientation Visits

Yrs 9 - 10

**Maximum number of students per visit:** 25

**Duration of visit:** 2 HRS

During the Career Orientation Visits offered by Esplora, students participate in an interactive workshop with discussion-based learning activities that are intended to challenge the stereotypes they have about STEM fields and careers as well as provide them the chance to discover some of the skills and abilities needed by STEM professionals.

Additionally, students will have the chance to engage with members of Esplora's education team in order to learn about different roles held within the organisation and to give them with an opportunity to any questions they might have on science communication.

Esplora's career orientation visits are organised in collaboration with the National School Support Services (NSSS) within the Ministry for Education, Sports, Youth, Research and Innovation, and are available throughout March, April and May 2024. For school bookings, please contact us on [bookings@esplora.org.mt](mailto:bookings@esplora.org.mt) or call on 2360 2299.

Interested in learning more about the science communication roles that exist at Esplora Interactive Science Centre?

Download [Esplora's careers information pack](#) for more information!

### For bookings

Tel: 2360 2299  
[bookings@esplora.org.mt](mailto:bookings@esplora.org.mt)

# INFORMATION FOR EDUCATORS



## Pre- and Post-Visit Resource Packs

Make use of Esplora's [Educators' Packs](#) before and after visiting Esplora! All the activities in the resource pack are directly linked to Esplora's exhibition galleries and education programme.

The four resource packs include interactive activities specifically designed for students in K1-K2, Yrs 1-2, Yrs 3-4 and Yrs 5-6 and are sent by email to all educators who book a visit for these age groups.

The associated pre-visit and post-visit resource sheets for students can be [downloaded](#) from Esplora's website and can be carried out at school or at home.



**Pre-Visit Activity 4 Resource**  
*Electricity: Build a circuit*

Electricity is an essential part of our daily lives. We need it to:

- Heat up water to use for our showers
- Keep food cold in the fridge so it doesn't go bad
- Charge our tablets and other electronic devices

Electricity in Malta is generated at the Power Station in Delmas. We also have electricity coming from an inter-connector under the sea between Bahar ic-Caqhaq in Malta and Marina di Ragusa, in Sicily. Another source of electricity in our homes can come from solar panels or wind turbines.

Wires allow us to transport electricity to our households and to all our appliances. Wires are made of a material called a conductor.

A conductor is a material that allows electricity to pass through. Copper is usually used for the wires we find in our appliances.

What are wires covered in? Have you noticed that wires are always covered in another material, a type of plastic or rubber?

These materials are known as insulators. An insulator is what we call materials that are good at stopping electricity from flowing through. This is very important as it stops us from being anywhere close to the conductor that's carrying a lot of electricity through it.

We use insulators around the conductor to make sure we are safe from an electrical shock. Remember an electrical system controls the rhythm of our heart, our heart beat.

**Pre-Visit Activity 1 Resource**  
*Trick or Treasure?*

Archimedes was an ancient Greek scientist born in Syracuse, Italy over 2000 years ago. He was a man of many talents and invented many useful tools, machines and even came up with some theories of his own, many of which we still use now!

One day, the King asked to speak to Archimedes in the hopes that he would help him solve a problem he had. He explained how he had gone to the local goldsmith to make him a new crown and gave him the exact amount of gold he would need to make it. But when it was done, the King was worried that the goldsmith kept some of the gold for himself and filled the crown with silver instead! How can he know if this is true without breaking his new crown? Archimedes took the problem seriously and thought about it day and night. He was even thinking about it while taking a bath! After he filled up his bathtub to the brim, he started to slowly dip himself into water, making it spill out onto the floor. All of a sudden, Archimedes figured out the solution to his problem! He was so happy about his discovery that he jumped out of the bathtub and ran naked through the streets of Syracuse shouting, "Eureka, Eureka!" which in Greek means "I have found it!"

What did he find exactly? He had realized that the amount of water that overflowed from the bathtub depended on how much of his body he put under water. Therefore, he made the connection that when placing an irregular shaped object into the water, the water that spilled out would be equal to the volume of that object. That's what he needed to solve his problem! He immediately ran to King Hieron to test out his theory by placing his crown into a water tank.

Then, they placed the amount of gold the King had given to the goldsmith into the same water tank. If the change of water level was the same, that meant that the crown was made of pure gold. Was it a trick or treasure? Figure this out during your visit to Esplora.

**Post-Visit Activity 1 Resource**  
*Colour your favourite dinosaur*

Name your dinosaur: \_\_\_\_\_

**Post-Visit Activity 3 Resource**  
*Gut Reaction*

What we need:

- 4 Reusable Plastic Bags
- 4 Slices of Bread/Crackers
- Water
- Marker

1. Label your 4 bags: Control, Dry, Wet, Mixed. Each of these bags represent a stomach which we will be filling with food! Draw a stomach on each bag using a marker.

2. Place a slice of bread into each bag.

3. In the dry bag, squish the bread with your hands for a few minutes.

4. In the wet bag, add 1/2 cup (50 ml) of water into the bag and move it around. Make sure it's closed well!

It's most likely that the bread in the mixed bag looks the most broken down. This is what happens in our stomach. The stomach helps digestion by using muscles as well as stomach acid to squish and squash your food into tiny pieces. Where does your food go next? Have a look at our science show Body Wonders at Esplora to find out!

# FREE ENTRANCE FOR EDUCATORS

Experience Esplora first-hand prior to planning your visit!

Educators and their immediate family members (one other adult and up to two children) are entitled to a FREE entrance to Esplora's exhibition galleries all year round. Please visit Esplora's website for more information.

[\*Terms & Conditions apply.\*](#)



# esplora**shop**

The EsploraShop offers a vast selection of exciting and educational items, ideal for science enthusiasts of all ages.

All educators can benefit from a 10% discount on all items sold at the EsploraShop.

## TEAMBUILDING PACKAGES

Looking for a unique teambuilding activity for your team? Esplora has everything that you could need to bring your team together, with challenges designed to enhance communication and collaboration skills, in-house catering and breakout rooms.

So, what are you waiting for? Get in touch with us to see how we can accommodate your request on [bookings@esplora.org.mt](mailto:bookings@esplora.org.mt).







## CONTINUOUS PROFESSIONAL DEVELOPMENT (CPD)

Esplora offers a set of workshops related to science communication, storytelling and inquiry-based learning, which are being offered to support local educators in the advancement of STEM education goals. These workshops can be delivered at your school or at Esplora. Bookings must be made a minimum of three months in advance of the intended CPD day.

For more information, contact our programmes team on [bookings@esplora.org.mt](mailto:bookings@esplora.org.mt)

## SCHOOL DEVELOPMENT PLAN (SDP)

Looking for the ideal place to discuss your plans for the current school year or to brainstorm next year's action plans? Then why not hold your session at Esplora? For more information, contact our programmes team on [bookings@esplora.org.mt](mailto:bookings@esplora.org.mt)



## ESPLORA PRIZE FOR STEM COMMUNICATION

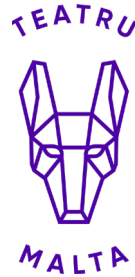
The aim of this prize is to reward students who are good STEM communicators and excel at sharing their passion for STEM with others, during school Prize/Celebration Days. The selected student should show a great aptitude for the 4Cs - Creativity, Communication, Collaboration & Critical Thinking.

SMTs interested in this initiative are invited to email the Esplora Programmes Team on [bookings@esplora.org.mt](mailto:bookings@esplora.org.mt) and provide details of the school and the prize/celebration day.

The prize for the chosen student, per school, is an Esplora Family Ticket (2 adults and 2 children), including the EsploraPlanetarium Experience.



National Agency for  
the Performing Arts  
Aġenzija Nazzjonali  
għall-Arti Performattiva



# THANK YOU



[www.esplora.org.mt](http://www.esplora.org.mt)

ESPLORA | Interactive Science Centre  
Villa Bigli, Kalkara KKR 1320 - Malta

