


PRODUCED BY

TOULOUSE
Cité de l'espace

## WHAT IS AN ASTRONAUT'S LIFE REALLY LIKE?

Come and share their strange life - take part with them in staggering experiments!

"Astronauts: the exhibition" offers a trail which combines scientific discoveries and original entertainment for all the family.



# 3 GREAT THEMES OF DISCOVERY...

### SPACE: AN EXTREME DESTINATION

You could not fall into a more hostile environment for mankind! Vacuum, extreme temperatures, cosmic rays, deep darkness... Head off to discover the void of space!

### THE INTERNATIONAL SPACE STATION: THE ASTRONAUT'S BASE AND HOUSE

At the same time an advanced base, laboratory and house in space, the International Space Station (ISS) provides its occupants with a far from ordinary life. Between work, leisure and sports activities, the community life, in such a cramped space as an orbiting station, requires a tremendous amount of preparation, physical as well as mental...

### EVERYDAY LIFE: LIVING ON A SPACE STATION

A surprising daily life where nothing happens the way it does on Earth! Try things out, experiment and let the astronauts, who are the voice of the exhibition, guide you.

# SPACE, AN EXTREME DESTINATION






## SURPRISING WEIGHTLESSNESS

**> INTERACTIVE AUDIO**

With some simple objects or through everyday actions, Jean-François Clervoy, a European astronaut, explains in a fun way the phenomenon of weightlessness 3 levels of experience.

***Aim:*** *To offer a definition as correct as possible of weightlessness to the general public.*

## THE RISKS OF THE JOB

**> AUDIO**

Working or even simply entering space is not without risks. Very different dangers to those on Earth! Luca Parmitano, an Italian astronaut of the European Space Agency (ESA) explains the risks that every spacewalk brings.

***Aim:*** *To show visitors the "extraordinary" and inhospitable nature of the environment in space.*

## COSMIC RAY DETECTOR

**> INTERACTIVE MULTIMEDIA**

Without us noticing it, cosmic particles are constantly raining down on us! What are the consequences on Earth and aboard the ISS? Find out with this detector!

***Aim:*** *To explain to visitors the important "shield" role played by our atmosphere.*

***This block is complemented by 4 documentary panels: "Presentation of the Exhibition", "Cosmic Rain", "In Freefall" and "Void Environment"***

# THE SPACE STATION:
# THE ASTRONAUT'S BASE AND HOUSE




## LOOKING AFTER THE STATION

> **NON-INTERACTIVE AUDIO-VISUAL LOOP**

A Russian astronaut cleans a porthole on the International Space Station during a spacewalk outside the craft.

***Aim:*** *To show visitors that some of the planned tasks for spacewalks are to do with the maintenance of the station.*

## AT 28,000 KM/H!

> **INTERACTIVE MULTIMEDIA**

How can you imagine such a speed? Thanks to this audio-visual equipment, you can travel the distance from Toulouse to Paris at the speed of the Station (28,000 km/h).

***Aim:*** *To take up, along with visitors, concepts of speed and travel (terrestrial speed, speed in space, speed of light, concepts about space/time).*




## FIND THE STATION!

> **INTERACTIVE MULTIMEDIA**

An interactive game where you are invited to put several celestial objects at the correct distance from Earth in a limited time.

***Aim:*** *To introduce concepts of size, scale and distance.*

## ON-BOARD EQUIPMENT

> **DISPLAY OF OBJECTS**

The astronauts embark, taking a multitude of objects with them – A short tour of this space "gallery" with technical equipment and personal effects.

***Aim:*** *To enable visitors to better appreciate and understand the daily life of astronauts on board the ISS.*

***This block is complemented by 5 documentary visuals: 3 "Welcome Aboard" visuals and 2 "Lab and Home" visuals, built into the exhibition's curved racks.***

## MAP OF THE STATION

> **INTERACTIVE MULTIMEDIA**

Use the buttons to explore the ISS and discover its different modules.

***Aim:*** *Discovering the modules at the Station and their functions. Seeing each country's contribution to construction of the ISS..*

## LISTEN TO THE STATION

> **INTERACTIVE MULTIMEDIA**

Use the earphones to listen to sounds on the ISS as if you were there.

***Aim:*** *Becoming acquainted with the Station's soundscape.*

# EVERYDAY LIFE:
# LIVING ON A SPACE STATION

## SLEEPING IN SPACE, RELAXING ON BOARD, GETTING READY TO RETURN TO EARTH

**> AUDIO**

You can watch video-statements of astronauts from the European Space Agency (ESA) on the daily actions of humans on board a space station.

***Aim:*** *To allow visitors to explore an astronaut's personal cabin and all the features that make it up: laptop computer, sleeping bag, personal effects... To demonstrate the importance of physical activity onboard the station.*








## SPACE TOILETS

**> AUDIO-VISUAL ANIMATION**

In very low gravity, nothing in your daily life is like it is on Earth... even how the toilets work! – A life-size tour of the I.S.S. Toilets, guided by the ESA's Italian astronaut, Samantha Cristoforetti.

***Aim:*** *To explore space toilets and their functioning, and use this example to understand the adaptations required of all current equipment used in modern life to weightlessness.*

## DRINKING IN WEIGHTLESSNESS

**> INTERACTIVE AUDIO-VISUAL**

Astronaut Jean-François Clervoy invites you to try experiments: drinking in weightlessness, either from a classic terrestrial cup, or from a cup specially designed to be used in space.

***Aim:*** *To observe and understand the particular behaviour of liquids in weightlessness.*

## SPACE FOOD

**>DISPLAY OF OBJECTS**

Discover real European, Russian, and American space food.

***Aim:*** *To help visitors understand the requirements for space food (long life, non-volatile, rehydratable).*

## WASHING IN SPACE

**> INTERACTIVE AUDIO-VISUAL**

Through video-statements, discover how astronauts wash themselves aboard the space station.

***Aim:*** *To help visitors understand that it is impossible to wash ourselves in space as we do on Earth.*




# AN ASTRONAUT'S WEEK

> **INTERACTIVE MULTIMEDIA**

Get up close with an astronaut's schedule! By clicking on a task, you can find out about the work going on every hour through a complete document.

***Aim:*** *To help visitors understand that the pattern of an astronaut's day is not so different from the normal pattern of most jobs on Earth, except that the schedule of an astronaut goes right down to the minute... And that the work is carried out in extraordinary conditions!*

***This block is complemented by 9 documentary panels and visuals:***

- *1 "Private Quarters" panel*
- *3 "Sorting & Recycling" visuals built into the racks*
- *1 "Sports in Space" panel*
- *2 "Inside an Astronaut's Body" visuals built into the racks*
- *2 "Astronaut All-in-One" panels*



# “THE CHALLENGE” EVENT

## WORKSHOPS AND EVENTS FOR ALL THE FAMILY AND ANY AUDIENCE

The Challenge comes with a movable counter, a flight-case and a documentary panel presenting the scenario of the animation.










ASTRONAUTS
THE EXHIBITION

# THE HIGHLIGHTS OF THE EXHIBITION

- **A completely flexible** exhibition made up of immersive racks which can adapt to any kind of space
- "Infographic" content for an up-to-date, concise, **fun and graphic presentation of the information**
- **Original and interactive animation equipment** for any audience "The Challenge"
- Exhibition features which are open doors **to many fields to explore** (physics, biology, sciences, research, society, group working...)
- Thematic meetings can be arranged **for the general public and study groups**
- An exhibition **designed with astronauts** who are the voice of the exhibition and guide visitors (speaking directly to visitors)
- Presentation of **unusual authentic objects from space,** which are previously unseen
- Constantly in touch **with the latest scientific news**
- An exhibition for **all the family and any museum:** science and technical, Natural History Museums, Societies and civilisations...






# ASTRONAUT: THE EXHIBITION

- **Area required:** 250 $m^2$
- **Set-up and disassembly:** 3 days for each phase. These times may vary depending on the site's architectural constraints.

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Interim information document of a non-contractual nature. Photos : Manuel Huynh © ESA ©NASA