



ESC Trip Information – 6th – 11th August 2019

The Euro Space centre is a unique European education centre dedicated to space travel and learning about the risks, benefits and preparation required for space travel. The complex provides workshops, master classes, exhibitions and an array of interactive hands-on visual displays with an emphasis on making science fun. All activities are led by teachers from the Belgium Ministry of Education. All programs provide on-site dorm rooming, meals and up to 7 hours activities per day.

The Space centre is located in the Redu region of Belgium, just 1h30 from **Brussels**, 1h from **Namur**, 1h from **Liège** and 236h from **the Moon...**



Pupils will participate in a selection of activities available at the Space centre such as:

Flight simulation: -

During the flight simulation activity groups of 7 -9 pupils have to work together to reenact a simulation of a satellite launch. Pupils are informed of the importance and variety of different roles involved in the launch of a new satellite. Once allocated roles pupils have to use a Houston base station simulation area and a simulation shuttle to launch the satellite. Using a script-like structure pupils must communicate and partake in their individual roles in order to successfully launch the satellite. In an exciting, realistic time-pressured setting the

group will also face unseen/ scripted challenges along the way where they must work together as a team to determine who is in the correct location and has the correct equipment required to solve the problem.

Moonwalk:-

Using gravity simulation and virtual reality equipment, pupils will experience the feeling of walking on planets with different gravitational field strengths. They can investigate the difficulties astronauts face when carrying out simple everyday task on planets with different gravitational field strengths. Using this research the pupils can discuss and further research suggestions how to overcome these problems during space travel.

Rocket theory / Launch

Students will design and build a model rocket, taking into consideration how the shape, size, mass and design may affect its flight. They will also consider the safe landing of the rocket and features that they can design to ensure the rocket returns safely to the ground. During this exercise they will investigate the effects of friction, air resistance, streamlining and pressure.

Multi Axis Chair/ rotation chair

Using the multi axis chair pupils will experience the difficulties astronauts can face while trying to control flight in orbit. Attempting to complete simple tasks while moving through different axes can help pupils understand the physical and mental difficulties experienced in space. The rotation chair shows pupils some of the training that astronauts must complete before traveling in order to physically condition their bodies to withstand the conditions in space.

Zero Gravity wall.

On the zero gravity wall pupils can experience not only the feeling of zero gravity but the difficulties it adds to simple tasks. They can investigate the effects that slight movements and limited forces can have in zero gravity situations. While on the zero gravity wall pupils will have to work with each other to solve simulated issues with a faulty satellite. They will have to work together to investigate the problem and devise a plan under zero gravity to fix the satellite using the materials provided.

Further information on the activities involved can be found on the ESA website <http://www.eurospacecenter.be/en>

Proposed Trip Itinerary –subject to change

Tuesday 6 th August (DAY 1)	Leave Dollar at 20:00 travel to Dover
Wednesday 7 th August (DAY 2)	Ferry from Dover to Calais. Visit to the chocolate factory/Chocolate class (am) This includes a talk on chocolate production from Bean to slab and you all get to decorate a chocolate bar to take home Arrive at ESC afternoon Intro/ safety talk/ room allocation. Dinner at ESC
Thursday 8 th August (DAY 3)	Breakfast Activities itinerary arranged by ESC all day Lunch and dinner at ESC Evening visit to Bouillon Castle visit / town centre
Friday 9 th August (DAY 4)	Breakfast Activities itinerary arranged by ESC all day Lunch and Dinner at ESC Use of planetarium/lecture theatre as cinema
Saturday 10 th August (DAY 5)	Breakfast Activities itinerary arranged by ESC all day Lunch and Dinner at ESC After dinner depart for ferry in Calais
Sunday 11 th August (DAY 6)	Coach Travel to Dollar ETA 11:00am