## VIRTUAL TOUR OF ESA ESTEC



## **EDUCATION**

**Format** A live, interactive VIRTUAL TOUR of ESA to discover the world of space, technology

and innovation at ESA ESTEC. In English or Dutch by Robert Willemsen (Zoom,

Google Meet, etc).

**Groups** Educational groups like universities, high schools, etc, that cannot visit the ESA

ESTEC premises in person, but would still like to know more about the space agency's

largest technical centre in Noordwijk, the Netherlands.

**Duration** Normally a Virtual Tour lasts about 1,5-3 hours, depending on the time available, the

format and customized topics chosen.

Programme Lecture format

The VT starts with a standard overview of ESA's space activities. You then choose 3-4 extra topics to customize the VT. Every topic is followed by a short Q&A. Best for a less

active participation, larger (40-100 p) or non-educational groups.

Workshop format

As above but now you make a subgroup per topic and allocate students to each of the subgroups. They work on questions before the start of the VT. After each topic the spokesperson of that topical subgroup presents their findings in a mini-Q&A. For a more collaborative and interactive experience with max. 30-40 p.

## **Topics**

- 0) Overview activities of the European Space Agency (standard start for all VT's).
- 1) Satellite Testing: a virtual panoramic tour of the satellite ESTEC Test Centre.
- 2) IXV Europe's space plane: the experimental atmospheric reentry space plane.
- 3) 3D printing for space: research and applications for future space missions.
- 4) Robotics for Moon & Mars: types of robotic experiments done for exploration.
- 5) CDF Satellite design: how concurrent design helps in designing future missions.
- 6) Astronaut food & nutrition: the what, why and how of eating in space incl. research.
- 7) Spin-offs from space tech: turning innovations into products for everyday life.

Cost For universities and high schools the Virtual Tour is offered FREE of charge by ESA as

an outreach effort to groups that cannot visit Noordwijk due to COVID-19 restrictions.

Book a tour For bookings you can use the Virtual Tour Request Form so we have some info

about your group. You can also contact us by phone or e-mail.

## **MORE INFO**

Video links Here you can watch a video impression of the 19 things about ESA ESTEC.

A tour about research in weightlessness at ESTEC's **ERASMUS Centre**.

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For ESA European Space Agency W: www.spacetoursnoordwijk.com