

Siemens Infinity STARship

A 360 Virtual Tour

The Infinity STARship is a novel and engaging platform offering a varied range of facts, ideas, questions quizzes and case studies. It aims to:

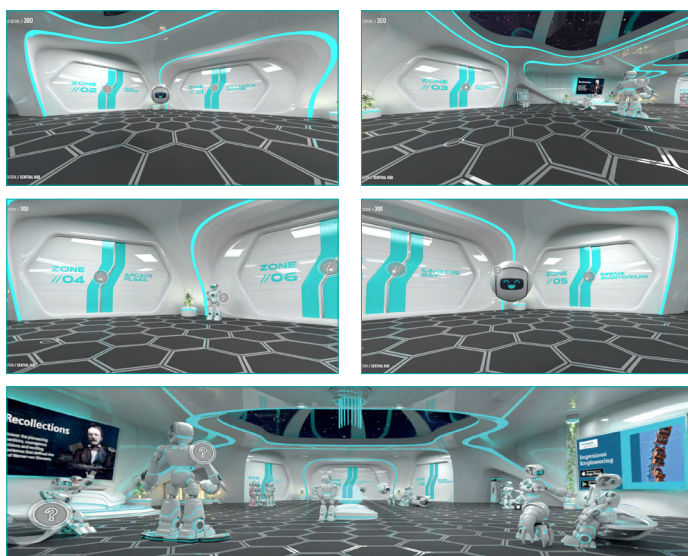
- Present STEM subjects as being stimulating, challenging and fascinating
- Offer ideas about a future in STEM careers that can be interesting and rewarding
- Make connections between subjects studied in school and wider applications in industry
- Show how issues such as sustainability, climate change and energy, which young people are often passionate about, are also key drivers for organisations active in STEM.

The virtual spaceship environment provides an immersive gateway to activities and resources. Several of these activities allow participants to score STAR points and thus encourage continued participation.

Teachers may find content useful, either to support lessons, or to provide students with independent study opportunities to support any of the stated aims above. These notes are provided as a guide to suggested use for teachers.

The layout of the materials:

The spaceship is accessed by following the [link](#). After a brief introduction sequence, users will find themselves on board in the Captain's Bridge where they will be welcomed and advised to watch a short film explaining how the ship can be best explored.



Users can get to any zone from the Central Hub. They can:

- Visit the **Auditorium** to watch a live stage show
- Browse the **Wonder Wall** and learn about young people who have made a future in STEM careers
- Go to the **Arcade** and try out some of the interactive assets and games
- Test their knowledge and understanding in the **Quiz Centre**
- Find out more about STEM opportunities in the **Careers Bay**

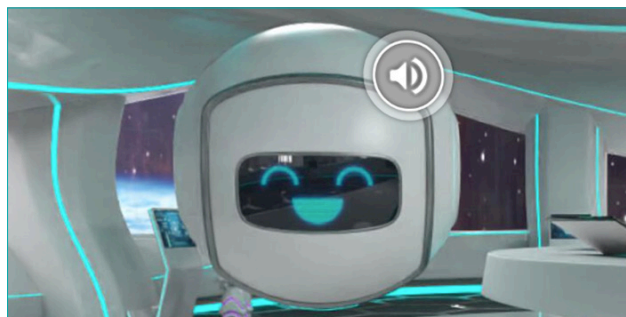
TEACHERS' NOTES

Facts:

These are based both on the context of space travel and also on a wider variety of STEM concepts. They are short and designed to be engaging.

Challenge questions:

These are longer and more detailed questions. They don't assume much in terms of specific prior knowledge but are rather based on application and interpretation. They variously involve students in the interpretation of graphs, calculations, problem solving and application of ideas about power generation and energy conservation. They are all multiple choice and auto marked; they have an appropriate level of challenge for students in KS3 or KS4.



Case study films:

Each of these tells the story of a young person who has made a future for themselves in a STEM career and explores their journey. Between them, the case studies demonstrate how a variety of different people have found different routes into meaningful and engaging work.

STEM quizzes:

There are four of these, one in each area of STEM. They are short multiple choice auto-marked questions, based on prior knowledge and aimed at students in KS3 or KS4.

TEACHERS' NOTES

Interactive learning resources and games:

There is a range of resources developed for Siemens which can be accessed through links. These include:

| Resource: | What participants do when using the resource: |
|-----------------------|--|
| Energy Farm | Manage energy supply on a farm, balancing supply and demand on a budget. |
| Energy Island | Design and operate a generating system to supply a community with electricity. |
| Digital Industries | Learn about cybersecurity and how to stay safe online; find out about the Internet of things and how this is transforming settings such as homes and hospitals; see how digital twins are used to explore and develop the operation of products such as racing cars. |
| Designing the Future | Find out about SMART factories and how they are transforming manufacturing. |
| Self Drive Challenge | Use a simulator to see if they can teach a car to drive itself. |
| Smart Infrastructures | Learn about cities and how they are being made more sustainable; find out how transport, energy, food and manufacturing are being decarbonised; seeing what Green Leaders are and how they lead by example. |
| Formula for Thrills | Design a roller coaster ride to be both exciting and safe, starting by using trial and error and then by calculation of energy transfers. |
| The Human Body | Learn about the human body using real images of organs and seeing how the skeletal, circulatory and digestive systems operate. |
| Lean Machines | Organise and operate a production line to build cars in response to orders and option requests whilst trying to meet production targets. |
| Life without STEM | See how areas of human activity including IT, transport, communications, healthcare and energy have been transformed by developments and inventions in STEM. |
| Digital Twins | Explore with an interactive simulation how car design has been improved and made more efficient by the use of digital twinning. |
| Green City | Respond to air quality data on a simulation to manage activities in a city, balancing safety, happiness and economic activity. |
| Neutralise the Threat | Manage activities in a building to neutralise the threat of infection and disease from the spread of COVID-19. |
| Dress the Site Worker | Apply ideas about safe working to select appropriate protective clothing to site workers. |