EXHIBITION GUIDE

ASTRONAUT

Designed by

scitech

Perth • Australia

CR-1268


00:14


ROCKET LAUNCH

CONTENTS

EXHIBITION OVERVIEW

There's no other job where you can find yourself quite as far above the Earth as that of an astronaut. From Moon landings to performing science on the ISS, astronauts have become synonymous with adventure, exploration and endeavour.

Through hands-on and full-body displays, this revealing science exhibition investigates the reality of what it takes to be a space explorer. 26 exhibits relay the physical and psychological effects of living in microgravity on the human body and the technology used to complete a mission. If you've ever wondered what it's like to sleep, eat, shower and use the toilet in space, Astronaut gives you the opportunity to find out.

The exhibition also features how astronauts use team work to solve problems, the need to accurately perform tasks in space, and how astronauts overcome challenges such as communicating with mission control, monitoring damage to their spacecraft or how to land a capsule.

Visitors will be captivated and surprised by this absorbing study into the importance of science in space and the future of space exploration.

VISITOR APPEAL

Astronaut has been developed to engage children aged between 5 – 12 years and their families, although the exhibition provides a broader appeal to fascinate and inform people of all ages.

Different exhibits will appeal to different ages with the G-Force capsule and rocket simulator capturing the attention of elementary school groups, while middle school children take on challenges that involve teamwork, communication and psychology.

General visitors and families will be captivated by the life-like experiences of living and working on a space lab with interactive sleeping quarters, a space garden and replica space toilet.

Great opportunities exist for media exposure and sponsorship, as Astronaut taps into the eternal fascination of what it takes to be a space explorer, breaking the boundaries of life on Earth and unlocking the mysteries of our universe.

ASTRONAUT ZONES

The exhibition is divided into three zones:

1. A 'training zone' where visitors experience some of the challenges involved in becoming an astronaut
2. A 'rocket launch' that simulates blast off
3. A 'space lab' where life and science in space is explored.

KEY MESSAGES

1. Astronauts conduct a multitude of science experiments in space.
2. Astronauts collaborate closely to complete their missions.
3. A wide range of jobs support astronauts on every step of their journey.
4. Physical and psychological limits are tested and understood to support astronauts.

GLOVEBOX

Dexterity and good motor skills are required to make repairs and undertake experiments in unusual conditions. Pressurized space suits make this task even harder. See if you can assemble nuts and bolts using 'Astronaut' style gloves in our test glovebox.

SCIENCE LINKS: Human biology

G-FORCE

As astronauts accelerate, the effects on their bodies can cause problems. Training on a centrifuge helps astronauts to cope with these difficulties. Climb into our 'centrifuge' capsule and turn the wheel to increase the speed of rotation. An accelerometer will tell you how many 'G's' you can spin.

SCIENCE LINKS: Physics, human biology

PHYSICAL TRAINING

Your body is affected by the microgravity of space. Explore how your height or eyesight might change and learn about the importance of exercise to maintain bone and muscle strength.

SCIENCE LINKS: Human biology, exercise science

HOUSTON WE'VE HAD A PROBLEM

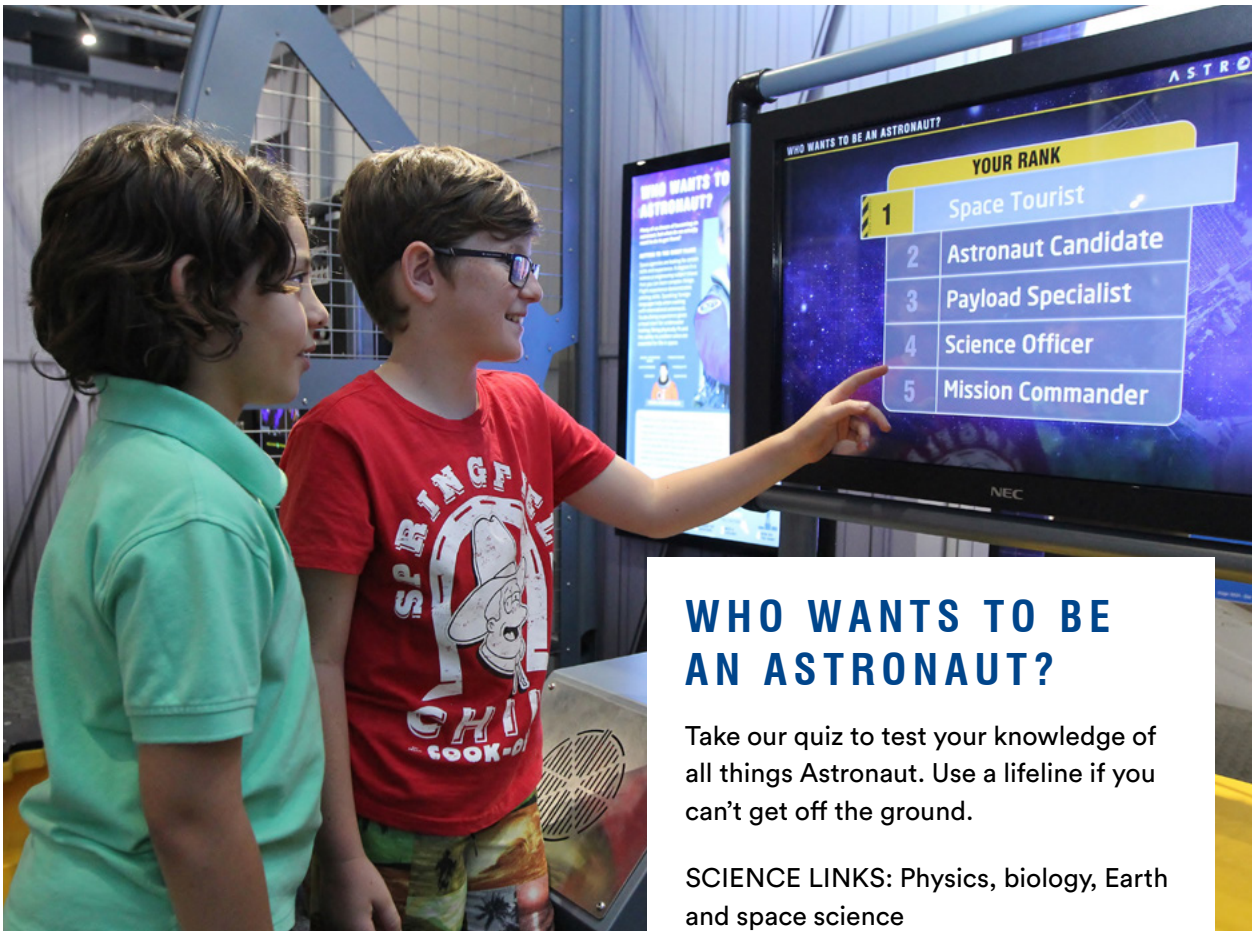
Astronauts and Mission Control must communicate to solve a series of problems. Clear and accurate two-way communication is vital to the success of a mission.

SCIENCE LINKS: Psychology, social science

TEAM ASTRONAUT

Astronauts need to work together. Each has an important role to play, but success comes through collaboration. This four player game needs quick thinkers, good communicators and fast reflexes.

SCIENCE LINKS: Psychology



WHO WANTS TO BE AN ASTRONAUT?

Take our quiz to test your knowledge of all things Astronaut. Use a lifeline if you can't get off the ground.

SCIENCE LINKS: Physics, biology, Earth and space science

HEAVY HANDS

Earth re-entry increases G-Forces, making arm movements difficult. Astronauts must train to overcome these forces in order to operate controls. Find out what it's like to manipulate switches and buttons under these difficult conditions.

SCIENCE LINKS:
Physics, human biology

SPACE CLOTHING

Don a flight suit and use your imagination to become an astronaut as you explore the exhibition. Astronaut also features a number of life size images featuring current and experimental space suits.

SCIENCE LINKS: Human biology, Earth and space science, materials science

PICK YOUR TEAM

Psychological analysis is an important factor in determining the right mix of personality types required to succeed on a mission. Choose your team and see if you've got what it takes to be a leader.

SCIENCE LINKS:
Social science, psychology

ROCKET LAUNCH

"5..4..ignition sequence commenced 2..1.. we have lift off". Taking off into space involves huge amounts of energy. Climb into our rocket, wait for the countdown and experience what it might be like to blast off into space.

SCIENCE LINKS: Physics, human biology, chemistry

PROJECTILE LANDER

Could you put a lander safely down on another planet? Launch a capsule and change variables to land it on the target.

SCIENCE LINKS: Physics, space science, mathematics

SPACE BAG

Sleeping in space is a very different experience. Wrap yourself into a sleeping bag and imagine yourself as a sleeping astronaut. Video of astronauts sleeping in space will help you understand how difficult this might be.

SCIENCE LINKS: Human biology, physics

SPACE GARDEN

Longer space missions will need astronauts to grow their own food. Experiments are needed to find out how plants grow in reduced gravity. Investigate our space garden and see what's growing.

SCIENCE LINKS: Plant biology

SPACE LIFE

Even everyday tasks like washing your hair and eating can be a challenge in space. Watch how astronauts overcome the trials of daily life in space.

SCIENCE LINKS: Physics, human biology

SPACE FOOD

Storage, nutrition, taste and enclosed spaces are all considerations for what to eat in space. Could you choose the right types of food? Select items from our on-screen vending machine and get feedback on each one.

SCIENCE LINKS: Chemistry, food science, physics

SPACE REACTION TIMER

Are your reflexes as good as they can be? Astronauts suffer from fatigue, shift work and disruption to circadian rhythms. They must perform regular self-tests to check their performance. Test your reflexes to stop the timer.

SCIENCE LINKS: Human biology, exercise science

SPACE TESTING

Collecting rock samples from other planets can provide important information about the structure, history and possible life on a planet. Examine and test rock samples for magnetism, and radioactivity using a mock Geiger counter, in an enclosed glove box.

SCIENCE LINKS: Geology, astrobiology

SPACE TOYS

Gravity and lack of gravity makes things behave differently. Play with toys in a gravity environment and watch the videos to see how they behave in space.

SCIENCE LINKS: Physics

SPACE TOILET

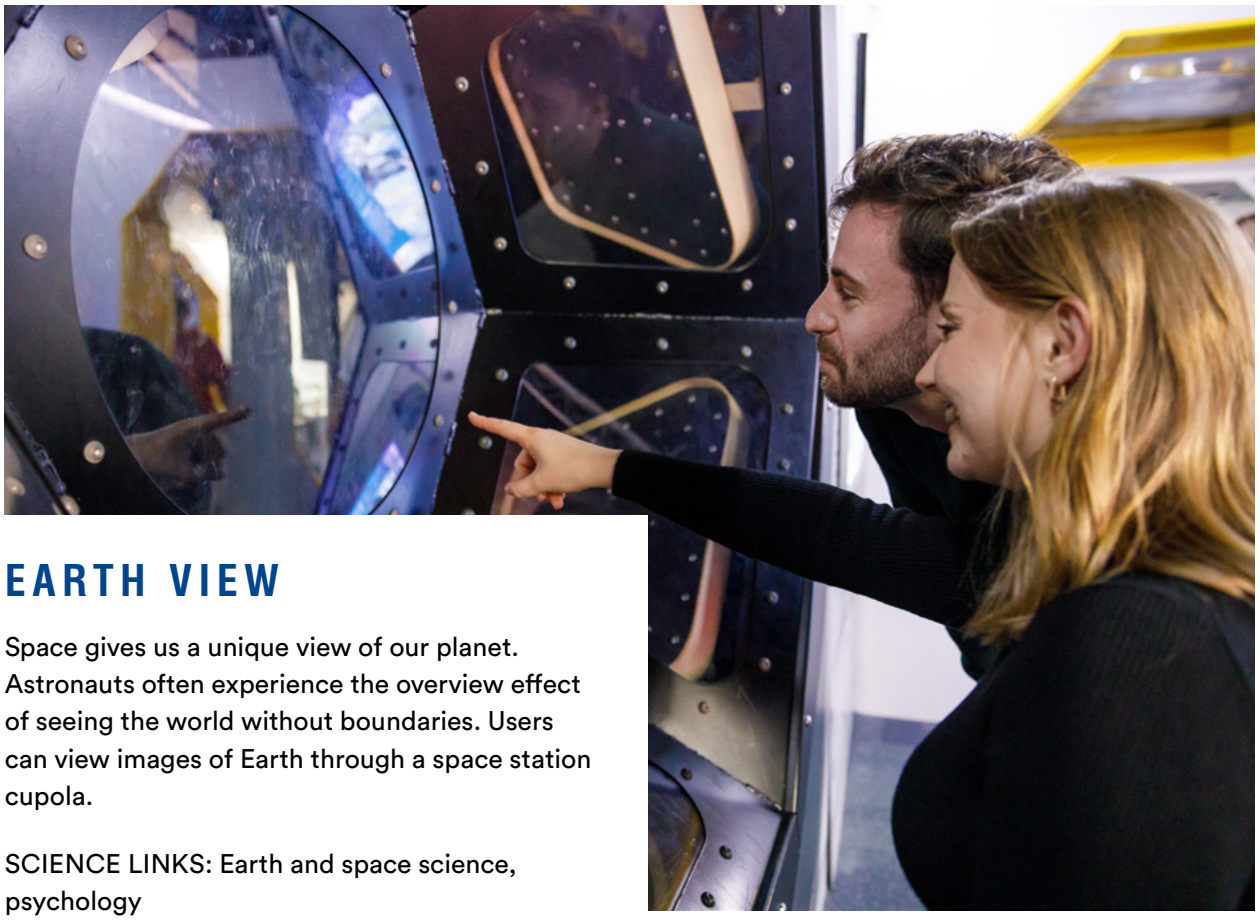
Perhaps the most commonly asked question of an astronaut is “How do you use the toilet in space?” This exhibit is a genuine replica of a space toilet. It contains on-screen interviews with astronauts.

SCIENCE LINKS: Human biology, physics

SPOT THE DAMAGE

Heat shielding is vital for the safe operation and return of spacecraft as any damage can be catastrophic. Manipulate an infrared camera to detect damage to the heat shield on the outside of our Space Lab.

SCIENCE LINKS: Physics, technology, Earth and space science, materials science



EARTH VIEW

Space gives us a unique view of our planet. Astronauts often experience the overview effect of seeing the world without boundaries. Users can view images of Earth through a space station cupola.

SCIENCE LINKS: Earth and space science, psychology

TRAINING AND MAINTENANCE

Astronaut is accompanied by a School and Visitor Guide to assist teachers and family groups visiting the exhibition.

The exhibition covers the following areas of science:

- Biological sciences
- Science as a Human Endeavour.

Scitech will provide each venue with a sample program to run with visiting schools. Venues are free to use and modify this material to suit the curriculum in their area or the target audience, providing due acknowledgment is made of Scitech as the designer and producer of the exhibition.

MARKETING

Astronaut has been designed specifically for children aged between 5 and 12 years old although the subject material and exhibit content will have broad appeal for both younger and older audiences.

Scitech will provide the following marketing materials to help each venue promote the exhibition:

- Exhibition photos and videos
- Exhibition logos
- Examples of advertising and promotional artwork
- Example of a media release.

Astronaut will tour to other venues free of any specific sponsorship agreements, enabling host venues to link with a wide range of sponsors in the local market.

TOURING ARRANGEMENTS

Astronaut consists of 26 interactive exhibits with accompanying inbuilt, durable graphic panels that outline instructions for the visitor and relate interesting science facts in everyday terms.

SPACE AND HEIGHT

- Fits an exhibition space of approximately 400 – 500 metres squared (4,300 – 5,300 square feet) in flexible configurations
- Minimum ceiling height requirement for the exhibition is 3 metres (10 feet), although 4 metres (13 feet) is optimal
- Minimum entry and exit points for installation is 2.7 metres squared (9 square feet)
- The exhibition will travel in two 40-foot sea containers, inclusive of spare parts and equipment.

POWER AND AIR

- Exhibits are powered by a standard 120v/240v electricity supply and are designed to accept power from the ceiling or the floor
- Some exhibits require 24 hour power to prevent damage to the projectors
- A licensed electrician will need to be supplied by the host venue to assist with the exhibition installation
- The exhibition is completely self-contained.

FEES

Negotiations with individual venues will be conducted to determine the appropriate fee structure for the exhibition period.

TRAINING AND MAINTENANCE

Scitech will provide the host venue's exhibition and visitor staff with a full briefing on exhibit operation and maintenance, as part of the exhibition installation. The exhibition does require some simple maintenance which needs to be carried out on a daily basis. A full list will be provided in the exhibition manual.

SCITECH WILL PROVIDE:

- The exhibition as outlined in the Contract
- Transit insurance
- An exhibition supervisor to coordinate the installation and dismantling of the exhibition
- Replacement parts through normal wear and tear
- Education and marketing material.

THE HOST VENUE WILL PROVIDE:

- A team to assist the installation and dismantling of the exhibition
- Replacement exhibit consumables as required
- 24 hour physical and/or electronic security of the exhibition
- Any special requirements (scaffolding, forklifts, trolleys etc.) specified in the Contract.

CONTACT DETAILS

Imagine Exhibitions
sales@imagineexhibitions.com
imagineexhibitions.com

Information contained in this guide was correct at the time of printing.

Designed by
scitech
Perth • Australia

produced by
imagine exhibitions


HEAVY HANDED


COMMANDER

scitech
Perth • Australia