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GALACTIC SUMMER CAMP PROGRAM ACTIVITY EXPLANATION

SIMULATORS

Space Station Mobility Trainer: Simulates exercise in space. Exercising in space is needed to prevent calcium loss and loss of muscle tone. The astronauts on Skylab lived and worked in space for periods of one to three months. While living on Skylab astronauts would run around the inner surface of Skylab.

Zero-G Wall: Simulates neutral buoyancy. Specially designed chairs are attached to a counter-weight system which allows the chairs to move up and down effortlessly. This effortless movement allows campers to experience a feeling of weightlessness.

5 Degrees of Freedom (5DF) Chair: Simulates the frictionless environment of space and demonstrates Newton's Third Law of Motion (For every action, there is an equal and opposite reaction.)

1/6th Gravity Chair: Designed to explain to the campers what it is like to walk on the Moon in a virtual reality environment using the VR headset. The chair is called the 1/6 chair because it is designed to simulate the Moon's gravitational pull, which is 1/6 that of Earth's.

Manned Maneuvering Unit (MMU): Allows for the experience of working in space unattached to the spacecraft which gives astronauts more freedom and mobility to perform activities in space.

Multi-Axis Trainer: Simulates the disorientation one would feel in a tumble spin during re-entry into Earth's atmosphere. Because the camper's stomach will stay centered, the camper shouldn't feel nauseated. Also, it shouldn't spin more than twice in a row in the same direction, so the camper's inner ear fluid won't shift, and he/she shouldn't feel dizzy.

T-Chair: Trajectory chair is used to demonstrate how we launch objects from the Earth to their intended target in space.

Hurricane 360 VR Simulator: Fully interactive and intensely fun experience with a space adventure using virtual reality. Utilizing state-of-the-art motion control and high-performance virtual reality and can roll 360-degrees, making each action-packed mission a blast!

RIOT 3D Simulator: RIOT 3D Simulator, which has a high G-Force speed and movement angle that provides 6 Degree of Movement freedom, experience a space adventure with 3D glasses.

P.S. Campers must be at least 4 feet (120 cm) tall and weigh no more than 210 pounds (95 kg) to ride the simulators.

MISSION RELATED ACTIVITIES

Mission Orientation: Introduces campers to the overall structure and flow of the mission, ensuring understanding of the sequence of events and expectations.

Mission Positions: Campers express their preferred roles within the mission by completing a form that outlines their choices and reasons. Team leaders use this information to assign roles, placing each camper in a position that aligns with their interests and strengths.

Mission Training: Campers learn the responsibilities and tasks associated with their assigned roles, preparing them for their contributions during the mission.



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Script Practice: Enables campers to learn the specific vocabulary related to the mission, familiarize themselves with the mission scenario, and comprehend the significance of professionalism and teamwork.

Discovery Mission: Throughout the Discovery Shuttle mission, campers engage in a collaborative mission, from launch to ISS docking and landing, honing teamwork, problem-solving, and time management skills amidst the challenges of space travel and station integration.

Aurora Mission: Provide campers with a realistic experience of space travel. This activity not only simulates the thrill of commanding a spacecraft to distant celestial bodies but also includes hands-on tasks such as navigating through space and performing extravehicular activities. It is an activity that emphasizes critical thinking, teamwork, and problem-solving, allowing campers to understand the challenges of future space missions.

Mission Patch Design: Teams design a unique mission patch and submit it with a descriptive write-up, symbolizing their team identity and mission goals.

Can We Launch Today: Campers learn that weather conditions such as temperature, wind, and precipitation must meet the criteria for safe launching of a spacecraft before their missions in Space Camp Türkiye. They record the weather data obtained from the meteorology station on the Launch Weather Chart and they use it during the flight mission simulation.

SCIENCE / ASTRONOMY SUBJECTS

Stomp Rocket Construction / Launch: Campers learn about rocket history, rocket types, working principles of rockets, and basic aerodynamic principles of rocket flight with the presentation of Rocketry. They then build their own stomp rockets to make assumptions about which rocket will go higher and launch the rocket they designed. By detecting the height of their rockets in flight, they explore the cause-effect relationship and how rocket design affects flight performance.

Rocket Science and Engineering: Rocket Science and Engineering: Campers learn rocket working principles, fuel types, and engine systems. Campers understand mass and weight terminology. By observing the rocket engine test, they have information about the thrust of the engines.

Night Observation: Space Camp has a 10-foot rooftop observatory with a 12-inch telescope where campers will get a chance to observe planets, stars, and other objects in the night sky.

Solar Observation: Look through the Solarmax II 60 solar telescope to observe the sun.

Skymap: A lesson given to orient the campers about the night sky and how to identify various celestial objects.

Star Lab: Our digital planetarium that informs campers about the planets, our solar system, stars, and constellations.

Magic Planet: Explore the solar system with 360 degree viewing experience through Magic Planet located in Space Quest Museum.

Strange Science: Campers observe and learn several different experiments given by the counselor. They may use these experiments in the future, either at home or in a science fair.

Hydroponics Laboratory: Hydroponics is the science of growing plants without soil. Campers learn the importance of hydroponics in space.

SPACE RELATED ACTIVITIES

Space Adventures: A brief lesson about history of space flight



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Rediscovering Exploration: A power point presentation given on studies about space in the future.

The Voyage of H2O in the International Space Station: Campers discuss the importance of being able to use available resources to produce drinkable water in space. By doing the pH test, the campers have a chance to observe other important properties of water that make it suitable for consumption. Campers discuss how water is filtered on Earth and in the International Space Station and they use the results to create a filtration system.

Life in Space: Presentation provides campers with information about living and working in space.

Suit Me Up: Campers will learn the evolution of the space suit through each NASA program and the basics of the suits used today.

Mars Explorer Rover: Campers have a virtual journey on the surface of the Red Planet using our Mars Rover simulator.

Generation Mars Interactive Exhibit Tour: By displaying our Mars habitation modules and showing our video using 3D mapping technology, campers are introduced to the first generation of humans living and working on the Red Planet.

Microgravity and Bones: Campers learn about the factors that affect bone density, including the microgravity environment in which Space Station astronauts experienced. Through experiments, they understand what happens to bones exposed to microgravity conditions.

TEAM-BUILDING ACTIVITIES

Astronaut Challenge: Space Camp Türkiye's unique teambuilding outdoor course.

Mars Intro / Design / Presentation: Each team designs a sample Mars colony with Lego-like pieces. The teams present their colonies to each other and the reasons for their different designs.

Space Bowl! This jeopardy-style quiz game helps the trainees review all the material presented over the week.

Hot Air Balloon Construction 1-2 / Launch: Campers will have the opportunity to practice science, inquire, and develop their team building skills as they construct and launch a hot-air balloon.

Area 51 Team Building Activity: Space Camp Türkiye's unique indoor teambuilding course to have participants work together to solve problems presented to them.

Mission Impossible: Campers use teamwork and communication skills to accomplish a task within a certain amount of time.

Team Time Activities: Campers get to know each other and the members of the other teams. These activities either involve examining the space program in a unique way or teaching the campers the teamwork and communication skills they will need during the simulated mission.

OTHER CAMP ACTIVITIES

Movie Night: Campers watch space / robotics related movies (Robots, Wall-E, Transformers, Apollo 13, October Sky, Space Cowboys) at Space Camp Conference Hall.

Water Activities: At an outdoor swimming pool in nearby Gaziemir, campers will be able to participate in organized games and activities.

Special Events Night: Special presentations by the campers representing their country and its culture.



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Barbecue party: Go to Space Camp Park for a night of food, dancing, music, and fun. Campers can exchange small gifts from their home countries.

Registration: After the campers get their badges and t-shirts, they hand over the medicines they brought to the camp nurse and go to settle in the dormitories.

Program Orientation: Campers are given an orientation to the program and told the rules of Space Camp Türkiye.

Facility Tour: Campers are given a tour of the Space Camp Türkiye facility by their team leader and given their program supplies.

Ice breakers: Games to introduce one another and get to know each other more.

Evaluations: At the end of the week, campers will evaluate the program attended as well as the staff, service, and educational value.

Graduation Ceremony: Certificates are given to each camper for graduation.