

Reading

Cosmic Cleanliness

Read the text and match 1-6 to (A-H). There are 2 extra variants you don't need to use.

In the vast expanse of space, where every resource is precious and every atom counts, cleanliness takes on a whole new dimension.



1. _____ The Weightless Challenge

In space, where there is no gravity, cleaning becomes a whole new experience. Astronauts have to be careful while sweeping or wiping surfaces because objects float and can move unexpectedly. Every movement requires careful consideration, as even the slightest push can send objects spinning in unpredictable directions. Astronauts must adapt and develop new techniques to ensure cleanliness in their confined habitats. They use special tools, like brooms with Velcro-like bristles, to gather floating debris. Vacuum cleaners with low power are used to suck up the collected dust, preventing it from spreading around. In space, liquids behave differently due to the absence of gravity. To clean up spills, astronauts use sponges filled with a special gel. When the sponge touches the spilled liquid, the gel absorbs it and turns into a solid, making it easier to handle and dispose of.

2. _____ Dust: The Silent Enemy

Space may seem empty, but there is dust floating around. Microscopic particles from spacecraft materials, spacesuits, and human skin can cause problems. In the absence of gravity, they linger, creating potential hazards for sensitive equipment and astronauts' health. Cleaning becomes essential to maintain optimal conditions and prevent dust from clogging vital systems. For that, they use advanced air filtration systems. Surprisingly, space dust can create beautiful displays. Astronauts have seen "cosmic dust storms" inside their spacecraft. When sunlight or artificial light shines on the dust particles, they create shimmering colourful clouds that appear to dance and sparkle, creating a surreal visual experience.

3. _____ The Dance of Cleaning

Astronauts become graceful performers in the cosmic ballet of cleaning. They navigate through narrow corridors and compact modules, armed with specially designed tools. Soft brushes and suction devices, carefully made to capture floating debris, are used to delicately coax away dust particles and maintain pristine conditions. Astronauts use specially formulated cleaning solutions that evaporate quickly, minimizing the risk of leftover residue. They also utilize microfiber cloths that cling to surfaces, ensuring a thorough clean without the need for excessive wiping. In order to clean hard-to-reach areas, astronauts make use of tiny, remote-controlled robotic cleaners. These helpers provide an extra set of "hands" for astronauts and allow for cleaning tasks to be performed in tight areas or corners.

4. _____ The Hygiene of Life Support Systems

Maintaining the cleanliness of life support systems is crucial for astronauts' well-being. One common myth people might have about hygiene in space is that it's unnecessary because space is a sterile environment. However, this is far from the truth. Although space may seem clean and devoid of life, microorganisms are present everywhere, including inside spacecraft and on the astronauts themselves. These microorganisms can multiply and pose a risk to astronaut health if proper hygiene practices are not followed. Astronauts use antimicrobial wipes infused with silver ions. These wipes help prevent the growth of bacteria and fungi on surfaces, reducing the risk of infections and maintaining a hygienic environment. Also, filters that remove contaminants from the air must be regularly cleaned and replaced. Water purification systems utilize sophisticated technologies like ion exchange and microbial filtration to ensure a continuous supply of clean drinking water.

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5 _____. Waste Management: Recycling for Survival

In space, waste management goes beyond just throwing things away. Astronauts have recycling systems to transform waste into useful resources. They repurpose materials such as packaging, broken equipment, or scraps into unique sculptures, paintings, and other artworks. This not only reduces waste but also provides an outlet for creativity and self-expression during long-duration space missions. And as water is such a valuable resource in space, astronauts even recycle their sweat and tears! Sweat is collected, purified, and filtered to extract the water content, which is then reused. Tears shed by astronauts are also captured and recycled. Tear collection devices are designed to carefully collect tears that would otherwise float freely in the microgravity environment. Recycled sweat and tears are used for hygiene and cleaning, irrigation and even for drinking.

6 _____. The Psychological Impact

In the vast isolation of space, maintaining a clean and organized environment becomes essential for the mental well-being of astronauts. A tidy living space fosters a sense of order and control, reducing stress and enhancing focus. Creating a home away from home through cleanliness and organization becomes a way to anchor themselves amidst the vastness of space. A clean and organized living space in space reduces cognitive load for astronauts. In an environment where they must perform complex tasks and make critical decisions, an uncluttered and tidy living space minimizes distractions and allows them to focus better on their work. This enhances their cognitive abilities, problem-solving skills, and overall performance.

Which paragraph mentions ...:

- A something that can create risks for machinery and astronauts' well-being;
- B robotic hands used by astronauts for cleaning closed spaces;
- C neglecting hygiene measures can result in creating health hazards;
- D that every step or action needs to be thought through;
- E well-organized environment boosting concentration;
- F astronauts creating beautiful displays using dust;
- G that perspiration is collected to separate the water component;
- H technology that enables cleaning in confined spaces.

