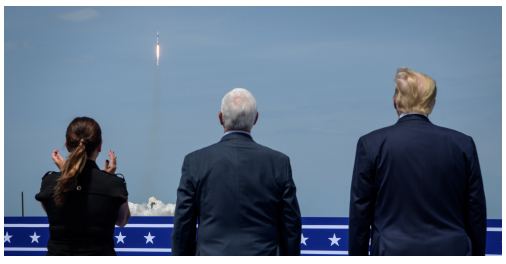
SPACE RESEARCH

15-6-2020

RECENT EXPLORATION IN SPACE

BLOOD FLOW AND HYGIENE



With the launch of new Spacex Crew Dragon it now seem possible that in future we can go to space by buying it.Spacex has provided the world technique of reusable rocket and now collabrating with NASA made Crew Dragon launch a record.For the first time in history, NASA astronauts have

launched from American soil in a commercially built and operated American crew spacecraft on its way to the International Space Station. The SpaceX Crew Dragon spacecraft carrying NASA astronauts Robert Behnken and Douglas Hurley lifted off at 3:22 p.m. EDT Saturday on the company's Falcon 9 rocket from Launch Complex 39A at NASA's Kennedy Space Center in Florida.

The heart and blood change in space, too. When we stand up on Earth, blood goes to our legs. The heart has to work extra hard against gravity to move the blood all around the body. In space, without the pull of gravity, the blood moves to the upper body and head. Water in the body also does the same thing. It makes the astronauts' faces look puffy. The blood and water are fluids in the body. These fluids move from the bottom of the body to the top. The brain thinks that there are too many fluids. It will tell the body to make less. When the astronauts come back to Earth, they do not have enough fluids in their systems. It takes their bodies a few days to make more blood and water. The astronauts have to rest so their bodies have time to make new blood and water. If they don't, they can feel very weak. They might even faint!

On Earth, people need to stay clean. In space, astronauts need to stay clean, too. Staying clean takes more work in space. In space, the astronauts do not have a bathroom as we have at home. But, they do have their own toothbrushes, toothpaste, combs, brushes, and shavers. These are kept in a Personal Hygiene Kit.Astronauts use

toothpaste and toothbrushes just like yours. There is no sink like yours on the Space Shuttle, though. Astronauts have to spit into a washcloth.People take baths a different way in space, too. Astronauts use special kinds of soap and shampoo. These soaps do not need water to rinse. Astronauts must use them carefully. They do not let the soap bubbles go all over the place. After washing, they use a towel to dry off. They do not rinse. These special soaps and shampoos were made for hospitals. Patients who cannot get in the water use these soaps.Astronauts must use a vacuum cleaner in space. The vacuum has a normal hose. It also has extra parts. These parts can clean areas that may be hard to reach. They also use it to keep dust out of the air filters. And sometimes things get loose. When things get loose, they float. Astronauts use the vacuum to "catch" floating objects that are out of their reach.

SPACESUIT

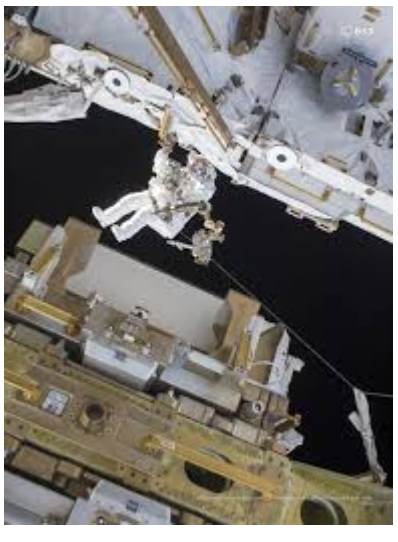
What Is a Spacesuit?Why Do Astronauts Need Spacesuits?A spacesuit is much more than a set of clothes astronauts wear on spacewalks. A fully equipped spacesuit is really a one-person spacecraft. The formal name for the spacesuit used on the space shuttle and International Space Station is the Extravehicular Mobility Unit, or EMU. "Extravehicular" means outside of the vehicle or spacecraft. "Mobility" means that the astronaut can move around in the suit. The

spacesuit protects the astronaut from the dangers of being outside in space.Spacesuits help astronauts in several ways. Spacewalking astronauts face a wide variety of temperatures. In Earth orbit, conditions can be as cold as minus 250 degrees Fahrenheit. In the sunlight, they can be as hot as 250 degrees. A spacesuit protects astronauts from those extreme temperatures.

What Are the Parts of a Spacesuit?A spacesuit is made up of many parts. One part covers the astronaut's chest. Another part covers the arms and connects to the gloves. The helmet protects the head. And the last part covers the astronaut's legs and feet. Some parts of the suit are made of many layers of material. Each layer does something different. Some keep oxygen in the suit while others protect astronauts from space dust.Under the suit, astronauts wear another piece of clothing. It covers their body except for the head, hands and feet. Tubes are woven into it. Water flows through the tubes to keep the astronaut cool.On the back of the spacesuit is a backpack. The backpack holds oxygen so astronauts can breathe. It also removes carbon dioxide that astronauts have breathed out. The backpack also supplies electricity for the suit. A fan moves the oxygen through the spacesuit. A water tank holds the cooling water.Connected to the back of the suit is a tool called SAFER. SAFER has several small thruster jets. If an astronaut floated away from the space station, he or she could use SAFER to fly back.

What Spacesuits Are Worn Today?In addition to the EMU, NASA astronauts wear other suits today. The Advanced Crew Escape Suit is the orange suit that astronauts wear during launch and landing of the space shuttle. This suit cannot be worn during spacewalks. Sometimes, NASA astronauts will wear the Russian Orlan spacesuit. This suit is the Russian version of the EMU and is used for spacewalks. Another Russian suit is the Sokol. Like the Advanced Crew Escape Suit, the Sokol is designed only to be used inside a spacecraft. It is used on the Russian Soyuz spacecraft.

WORKING IN SPACE



Astronauts perform many tasks as they orbit Earth. The space station is designed to be a permanent orbiting research facility. Its major purpose is to perform world-class science and research that only a microgravity environment can provide. The station crew spends their day working on science experiments that require their input, as well as monitoring those that are controlled from the ground. They also take part in medical experiments to determine how well their bodies are adjusting to living in microgravity for long periods of time.

Working on the space station also means ensuring the maintenance and health of the orbiting platform. Crew members are constantly checking support systems and cleaning filters, updating computer equipment: doing many of the things homeowners must do to ensure their largest investment stays in good shape. Similarly, the Mission Control Center constantly monitors the space station and sends messages each day through voice or email with new instructions or plans to assist the crew members in their daily routines.

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CITATION

video by Canadian Space Agency(youtube) link:https://www.youtube.com/watch?v=3bCoGC532p8 and to know more visit nasa.gov and canadian space agency

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