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Astronaut pee could help build moon bases – 1st April, 2020

Level 0

A new kind of concrete could help build things on the Moon. It is a mix of moon dust and urine from astronauts. A chemical in urine helps things stick together. Scientists could use 3D printers to make the new material. NASA and other space agencies want to build research stations on the Moon.

The new concrete could save money. It costs \$10,000 to take 0.45kg of materials to the Moon. The urine and moon dust would be cheaper. A scientist said: "The actual water in the urine could be used for the mixture." Scientists say they need to do more tests to find the best building material.

Level 1

Scientists say a new kind of concrete could be used on the Moon. It is from moon dust and urine from astronauts. A chemical in human urine helps things stick together. Scientists could use 3D printers to make the material. Space agencies could start using this material to make buildings for a moon base. NASA, the European Space Agency (ESA) and the China National Space Administration are all interested in building research stations on the Moon.

Astronaut pee and moon dust could save money. It costs \$10,000 to take 0.45kg of materials to the Moon. The urine and moon dust would be cheaper. A scientist said the urine of the people living on moon bases could be used. She added: "The actual water in the urine could be used for the mixture, together with [water] that can be obtained on the Moon." Scientists say they need to do more tests to find the best building material.

Level 2

New materials could make buildings on the Moon. Scientists in Europe say a new kind of concrete could be made with moon dust and urine from astronauts. There is a chemical in human urine called urea. This helps things stick together and could help to make concrete. Scientists could use 3D printers to make the material. Space agencies could start using this material to make buildings for a permanent moon base. NASA, the European Space Agency (ESA) and the China National Space Administration are all interested in building research stations on the Moon.

Astronaut pee and moon dust could save a lot of money. It costs about \$10,000 to take 0.45kg of materials to the Moon. The urine and moon dust would be a cheaper way of building things. A scientist said: "A waste product, such as the urine of the personnel who occupy the moon bases, could be used." She added: "The actual water in the urine could be used for the mixture, together with [water] that can be obtained on the Moon." Scientists say there is ice on the Moon. The scientists say they need to do more tests to find the best building material.

Level 3

New materials could be used to make buildings on the Moon. Scientists from Holland, Italy, Norway and Spain say a new kind of concrete could be made with moon dust and the urine passed by astronauts. The scientists said there is a chemical compound in human urine called urea. This could help things stick together to make a kind of concrete. Scientists would use 3D printers to create the construction material. Three of the world's main space agencies could start using this technique to make buildings for a permanent moon base. NASA, the European Space Agency (ESA) and the China National Space Administration are all interested in colonizing the Moon with research stations.

Using astronaut pee and moon dust could save scientists a lot of money. It costs about \$10,000 to transport 0.45kg of materials from Earth to the Moon. The urine and moon dust alternative would be a much cheaper way of constructing things. A scientist said: "We have seen that a waste product, such as the urine of the personnel who occupy the moon bases, could be used." She added: "The actual water in the urine could be used for the mixture, together with [water] that can be obtained on the Moon, or a combination of both." Scientists say another source of water on the Moon is in the ice that exists in some areas. The scientists say they need to do more tests to find the best building material.