

IS
THERE
WATER
ON MARS ?

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00:00:02,401 --> 00:00:04,574
Is There Water on Mars?

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00:00:08,312 --> 00:00:09,901
We Asked a NASA Scientist.

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00:00:09,901 --> 00:00:15,867
The short answer is yes. Now, we have to think about, how do we actually define water?

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It's not quite like on Earth, but it's definitely there. Water is a molecule that has one

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oxygen atom and two hydrogen atoms. The ice on Mars is a little bit different than on Earth.

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On Earth, usually the ice is just, you know, water ice. But on Mars, it's actually water ice

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and CO₂ ice mixed with each other. On Mars, it's just so cold that it gets frozen, so you actually

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have those mixed together both at the poles and underneath the surface as well. We even have

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water in the atmosphere as a water vapor. It's a very small amount, but it's there.

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We also have water inside of rocks. So, you can think about rocks as sort of a stack of layers

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and sometimes there's water trapped in between those layers. We've actually measured this with

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a lot of the different missions from NASA and that's actually what I study. And the last state

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of potential state of water is, do we have liquid water on Mars? The answer is we haven't really

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observed it. We do see these dark streaks on some hillsides that we call recurring slope lineae.

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One idea is that these slope lineae could be formed by the flow of liquid water.

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But there's also other ideas where you actually don't need liquid water to explain the formation

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of these dark streaks. Maybe they could form through sand flow or that kind of thing.

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So, is there water on Mars? Not quite like the oceans we know on Earth, but it's definitely there.