



1
00:00:00,506 --> 00:00:06,266
[Music]

2
00:00:06,766 --> 00:00:09,696
We're trying to get the water
out of the soil in Mars,

3
00:00:10,076 --> 00:00:11,696
because we don't want to have

4
00:00:11,726 --> 00:00:13,466
to take all the water
with us from earth.

5
00:00:13,676 --> 00:00:16,216
There's a lot of reasons
we need water on Mars.

6
00:00:16,216 --> 00:00:18,146
The first basic one
is for life support,

7
00:00:18,236 --> 00:00:19,196
people want to drink water.

8
00:00:19,556 --> 00:00:23,816
The second thing we can use
the water for is you can mix it

9
00:00:23,816 --> 00:00:26,586
with the carbon dioxide in the
atmosphere, and you can turn it

10
00:00:26,586 --> 00:00:30,316
into oxygen and fuel,
in the form of methane.

11
00:00:30,316 --> 00:00:32,196
You can put that in

your ascent vehicle,

12

00:00:32,196 --> 00:00:34,676

and that lets you lift
the people off of Mars

13

00:00:35,026 --> 00:00:35,976

so they can get back home.

14

00:00:36,656 --> 00:00:40,376

Once we prove basic proof of
concept, then we would figure

15

00:00:40,376 --> 00:00:43,446

out how to design this so it
would go underneath the rover,

16

00:00:43,826 --> 00:00:46,206

and the idea here is that
as the rover is moving

17

00:00:46,206 --> 00:00:49,146

around the planet, it would
be churning up the dirt

18

00:00:49,496 --> 00:00:51,916

and processing the
soil as it moved.

19

00:00:52,906 --> 00:00:55,406

So, when I was in high school,
I wanted to be a lawyer.

20

00:00:55,676 --> 00:00:57,846

I thought that would be a lot
of fun, trying to talk people

21

00:00:57,846 --> 00:00:59,046

into seeing things my way,

22

00:00:59,226 --> 00:01:01,756

but I had a high school physics
teacher and calculus teacher

23

00:01:01,846 --> 00:01:05,206

who looked at me and said,
wow, you're really good at math

24

00:01:05,206 --> 00:01:06,766

and science, you
should try engineering.