



NASA'S JOURNEY TO
MARS



MY MARTIAN MOMENT
A QUICK LOOK AT NASA'S NEXT GIANT LEAP

#JOURNEYTOMARS

1
00:00:00,000 --> 00:00:01,850
Chris McKay: I'm Chris McKay.

2
00:00:01,850 --> 00:00:03,320
I'm a planetary scientist at

3
00:00:03,320 --> 00:00:05,120
NASA Ames Research Center.

4
00:00:05,120 --> 00:00:07,080
And this is my Martian Moment!

5
00:00:07,080 --> 00:00:17,590
(Music)

6
00:00:17,590 --> 00:00:18,830
Chris McKay : What I'm interested in

7
00:00:18,830 --> 00:00:20,510
is the dirt on Mars.

8
00:00:20,510 --> 00:00:22,470
Because when astronauts go to Mars, they're

9
00:00:22,470 --> 00:00:23,790
going to be walking through the dirt,

10
00:00:23,790 --> 00:00:25,000
driving through the dirt.

11
00:00:25,000 --> 00:00:26,500
It's going to get in the habitat, it's going

12
00:00:26,500 --> 00:00:28,220
to get in the water supply.

13
00:00:28,220 --> 00:00:29,480

They're going to want to grow crops

14

00:00:29,480 --> 00:00:30,570

in that dirt.

15

00:00:30,570 --> 00:00:32,590

So we need to understand the dirt.

16

00:00:32,590 --> 00:00:34,390

And Mars has already told us that there's

17

00:00:34,390 --> 00:00:36,680

some surprises in the dirt.

18

00:00:36,680 --> 00:00:38,650

The Phoenix mission to Mars discovered that

19

00:00:38,650 --> 00:00:40,980

the form of salt in the dirt on Mars,

20

00:00:40,980 --> 00:00:43,770

is a form called "perchlorate."

21

00:00:43,770 --> 00:00:45,400

That's toxic to humans.

22

00:00:45,400 --> 00:00:46,830

That means we're going to have to wash that

23

00:00:46,830 --> 00:00:48,880

perchlorate out of the soil before we use it

24

00:00:48,880 --> 00:00:50,170

to grow crops.

25

00:00:50,170 --> 00:00:51,740

We're going to have to have ways to remove

26

00:00:51,740 --> 00:00:53,880

perchlorate from the drinking supply and

27

00:00:53,880 --> 00:00:55,700

from the air inside the habitat.

28

00:00:55,700 --> 00:00:57,410

All for human safety.

29

00:00:57,410 --> 00:00:59,370

What other surprises are there in the dirt?

30

00:00:59,370 --> 00:01:00,690

We don't know yet.

31

00:01:00,690 --> 00:01:03,020

So we are working on missions and instruments

32

00:01:03,020 --> 00:01:04,680

that will analyze the dirt.

33

00:01:04,680 --> 00:01:06,710

Tell us what other chemicals are in it.

34

00:01:06,710 --> 00:01:08,570

Search for evidence of any life in it

35

00:01:08,570 --> 00:01:10,340

or past life in it.

36

00:01:10,340 --> 00:01:12,370

And that's the way we're preparing for human

37

00:01:12,370 --> 00:01:13,820

exploration to Mars.

38

00:01:13,820 --> 00:01:16,270

(Music)