



1
00:00:11,990 --> 00:00:09,910
nasa's planetary lake lander is

2
00:00:13,830 --> 00:00:12,000
developing robotic systems capable of

3
00:00:15,430 --> 00:00:13,840
identifying the signs of life in our

4
00:00:17,910 --> 00:00:15,440
solar system

5
00:00:19,590 --> 00:00:17,920
microbial ecologist dr eric fleming

6
00:00:21,830 --> 00:00:19,600
studies how life adapts to harsh

7
00:00:23,429 --> 00:00:21,840
environments research useful in refining

8
00:00:26,230 --> 00:00:23,439
the techniques needed for future

9
00:00:28,710 --> 00:00:26,240
exploration so on this expedition we've

10
00:00:30,790 --> 00:00:28,720
deployed a sensor package

11
00:00:32,790 --> 00:00:30,800
comprised of a buoy that will float on

12
00:00:35,590 --> 00:00:32,800
the surface of the lake and then it has

13
00:00:39,830 --> 00:00:35,600

a collection of sensors that hangs below

14

00:00:41,750 --> 00:00:39,840

it so it allows us to monitor various

15

00:00:44,150 --> 00:00:41,760

parameters in the lake various aspects

16

00:00:45,190 --> 00:00:44,160

of lake chemistry or like things like

17

00:00:46,549 --> 00:00:45,200

temperature

18

00:00:49,430 --> 00:00:46,559

like turbidity

19

00:00:50,229 --> 00:00:49,440

to see changes that may occur in the

20

00:00:51,830 --> 00:00:50,239

lake

21

00:00:53,510 --> 00:00:51,840

over a period of time you're going to

22

00:00:55,830 --> 00:00:53,520

see patterns

23

00:00:58,389 --> 00:00:55,840

so say we go to titan titan contains an

24

00:01:00,229 --> 00:00:58,399

environment that's so alien to us that

25

00:01:03,029 --> 00:01:00,239

it's hard for us to imagine any form of

26

00:01:05,270 --> 00:01:03,039

life but the one critical thing that we

27

00:01:07,990 --> 00:01:05,280

know that all life does is it forms

28

00:01:10,630 --> 00:01:08,000

gradients it changes the environment

29

00:01:12,950 --> 00:01:10,640

that it's in and thus creates a gradient

30

00:01:13,990 --> 00:01:12,960

within it that's what life does so if we

31

00:01:15,990 --> 00:01:14,000

go to

32

00:01:17,830 --> 00:01:16,000

a place like titan that's probably the

33

00:01:19,190 --> 00:01:17,840

best thing that we can look for is to

34

00:01:22,710 --> 00:01:19,200

look for gradients within the

35

00:01:26,469 --> 00:01:24,630

for more information on these topics go