

A photograph of the Mars Phoenix Lander on the surface of Mars. The lander is a six-wheeled rover with a central body and a solar panel extended to the left. It is positioned in the center-left of the frame. The background shows a vast, flat, reddish-brown landscape under a hazy, orange sky. A bright sun is visible in the upper right quadrant, creating a lens flare effect. The overall scene is captured in a warm, orange-red color palette.

Mars Phoenix Lander: 2008

1
00:00:27,099 --> 00:00:24,279
we're not looking for aliens we're not

2
00:00:29,740 --> 00:00:27,109
even looking for fossils we'll be

3
00:00:31,630 --> 00:00:29,750
looking for bacteria or signs of

4
00:00:33,670 --> 00:00:31,640
bacteria and the reason for that is

5
00:00:35,680 --> 00:00:33,680
because for most of the Earth's history

6
00:00:38,619 --> 00:00:35,690
they have been the predominant form of

7
00:00:40,569 --> 00:00:38,629
life the chances are it may be different

8
00:00:43,329 --> 00:00:40,579
from life on Earth and therefore what we

9
00:00:48,250 --> 00:00:43,339
have to look for is is it doing the same

10
00:00:49,780 --> 00:00:48,260
things that life does on earth water is

11
00:00:52,090 --> 00:00:49,790
a necessary component for life as we

12
00:00:53,740 --> 00:00:52,100
know it so when we think about trying to

13
00:00:55,450 --> 00:00:53,750

understand life on other planets one of

14

00:00:58,779 --> 00:00:55,460

our strategies is to understand the

15

00:01:01,660 --> 00:00:58,789

water we're focusing on Mars because

16

00:01:03,939 --> 00:01:01,670

Mars in its early history may have been

17

00:01:06,609 --> 00:01:03,949

a lot warmer and wetter than it is now

18

00:01:08,859 --> 00:01:06,619

it looks like there used to be flowing

19

00:01:10,810 --> 00:01:08,869

liquid water on the surface of Mars but

20

00:01:13,419 --> 00:01:10,820

today there isn't any liquid water that

21

00:01:20,800 --> 00:01:13,429

we can find or if there is any it's very

22

00:01:22,660 --> 00:01:20,810

infrequent we want to detect organics

23

00:01:26,260 --> 00:01:22,670

because organics are the building blocks

24

00:01:27,639 --> 00:01:26,270

for life organics are molecules that

25

00:01:29,380 --> 00:01:27,649

contain carbon and we know that carbon

26

00:01:32,770 --> 00:01:29,390

is central element that makes up our

27

00:01:34,539 --> 00:01:32,780

bodies and makes up life so both Phoenix

28

00:01:42,090 --> 00:01:34,549

and the Mars Science Laboratory will

29

00:01:47,380 --> 00:01:44,800

Phoenix is the next Mars Lander mission

30

00:01:49,240 --> 00:01:47,390

when we land on in on Mars we're going

31

00:01:52,060 --> 00:01:49,250

to land in the north polar region that's

32

00:01:54,430 --> 00:01:52,070

about equivalent to Alaska latitudes on

33

00:01:56,650 --> 00:01:54,440

the earth or mid Greenland and our job

34

00:01:59,020 --> 00:01:56,660

is to land and dig down and sample the

35

00:02:03,490 --> 00:01:59,030

soils and ice that will encounter in

36

00:02:05,050 --> 00:02:03,500

that region of Mars Mars Science

37

00:02:06,550 --> 00:02:05,060

Laboratory will have sophisticated

38

00:02:08,380 --> 00:02:06,560

instruments which will be able to look

39

00:02:11,170 --> 00:02:08,390

at the mineralogy in much more detail

40

00:02:14,500 --> 00:02:11,180

but also looking at minerals which

41

00:02:18,460 --> 00:02:14,510

either were formed by organisms living

42

00:02:21,190 --> 00:02:18,470

organisms or show signs that living

43

00:02:24,610 --> 00:02:21,200

organisms were around when they were

44

00:02:27,340 --> 00:02:24,620

formed but we're not only focusing on

45

00:02:43,560 --> 00:02:27,350

Mars there are other places in the solar

46

00:02:49,150 --> 00:02:46,510

beyond the solar system there are people

47

00:02:51,310 --> 00:02:49,160

who are looking at the planets which go

48

00:02:55,150 --> 00:02:51,320

around distant stars trying to analyze

49

00:02:57,730 --> 00:02:55,160

their atmospheres there's no silver

50

00:02:59,320 --> 00:02:57,740

bullet we've got to take all the

51
00:03:01,030 --> 00:02:59,330
possible approaches or at least a large

52
00:03:04,210 --> 00:03:01,040
number of them and put all the bits

53
00:03:08,650 --> 00:03:04,220
together see where to look and what to

54
00:03:10,960 --> 00:03:08,660
find looking for life outside the earth