1
00:00:02,009 --> 00:00:06,630
[Music]

2
00:00:10,070 --> 00:00:08,790
i'm ashwin vasavada deputy project

3
00:00:12,230 --> 00:00:10,080
scientist for the mars science

4
00:00:14,390 --> 00:00:12,240
laboratory mission and this is your

5
00:00:16,630 --> 00:00:14,400
curiosity rover report

6
00:00:18,230 --> 00:00:16,640
it's been a fantastic 300 solves

7
00:00:19,590 --> 00:00:18,240
actually the discoveries began even

8
00:00:21,830 --> 00:00:19,600
before landing

9
00:00:23,830 --> 00:00:21,840
on the way to mars curiosity's radiation

10
00:00:25,589 --> 00:00:23,840
assessment detector or rad

11
00:00:26,870 --> 00:00:25,599
measured the high energy radiation from

12
00:00:27,990 --> 00:00:26,880
within the capsule that enclosed the

13
00:00:29,349 --> 00:00:28,000

rover

14
00:00:31,029 --> 00:00:29,359
these measurements will help nasa

15
00:00:33,110 --> 00:00:31,039
protect astronauts when they fly within

16
00:00:34,549 --> 00:00:33,120
spacecraft and are exposed to deep space

17
00:00:35,830 --> 00:00:34,559
radiation

18
00:00:37,990 --> 00:00:35,840
turns out that it's equivalent to

19
00:00:39,510 --> 00:00:38,000
getting a full body ct scan every five

20
00:00:41,590 --> 00:00:39,520
or six days

21
00:00:43,190 --> 00:00:41,600
by using curiosity's data nasa will

22
00:00:45,350 --> 00:00:43,200
learn how much shielding is needed to

23
00:00:47,270 --> 00:00:45,360
reduce the risk to astronauts

24
00:00:48,869 --> 00:00:47,280
after touching down on mars curiosity

25
00:00:51,029 --> 00:00:48,879
drove away from bradbury landing toward

26
00:00:52,950 --> 00:00:51,039
a region called glenelg where three

27
00:00:54,389 --> 00:00:52,960
types of terrain come together we were

28
00:00:56,150 --> 00:00:54,399
hoping that one of these terrains

29
00:00:58,150 --> 00:00:56,160
consisting of light toned and fractured

30
00:01:00,069 --> 00:00:58,160
bedrock might teach us something about

31
00:01:01,189 --> 00:01:00,079
an ancient dry riverbed that we spotted

32
00:01:03,029 --> 00:01:01,199
from orbit

33
00:01:04,710 --> 00:01:03,039
this river appeared to have started high

34
00:01:06,870 --> 00:01:04,720
on the rim of gale crater and flowed

35
00:01:08,710 --> 00:01:06,880
toward the site where curiosity landed

36
00:01:10,070 --> 00:01:08,720
spreading sediment in a fan across the

37
00:01:12,149 --> 00:01:10,080
crater floor

38
00:01:13,590 --> 00:01:12,159

even before we got to glenelg we began

39
00:01:15,109 --> 00:01:13,600
to see slabs of a rock called a

40
00:01:16,710 --> 00:01:15,119
conglomerate

41
00:01:18,550 --> 00:01:16,720
by studying the size of the pebbles

42
00:01:20,310 --> 00:01:18,560
within the conglomerate and by noting

43
00:01:21,830 --> 00:01:20,320
how rounded they'd become

44
00:01:23,830 --> 00:01:21,840
the team was able to conclude that they

45
00:01:24,630 --> 00:01:23,840
were carried by water ankle deep to hip

46
00:01:26,390 --> 00:01:24,640
deep

47
00:01:28,789 --> 00:01:26,400
flowing at about walking speed and

48
00:01:31,030 --> 00:01:28,799
extending for at least a few miles

49
00:01:32,789 --> 00:01:31,040
curiosity actually set her wheels within

50
00:01:35,030 --> 00:01:32,799
an ancient stream bed

51
00:01:36,550 --> 00:01:35,040
getting back to the present curiosity

52
00:01:38,630 --> 00:01:36,560
just finished drilling her second rock

53
00:01:40,550 --> 00:01:38,640
in yellowknife bay in order to confirm

54
00:01:42,630 --> 00:01:40,560
the remarkable discovery of an ancient

55
00:01:44,389 --> 00:01:42,640
habitable environment and to see if

56
00:01:46,550 --> 00:01:44,399
there's any variation among the rocks

57
00:01:48,149 --> 00:01:46,560
within the yellowknife bay

58
00:01:50,789 --> 00:01:48,159
we're now headed in the direction of our

59
00:01:52,870 --> 00:01:50,799
ultimate destination mount sharp five

60
00:01:54,630 --> 00:01:52,880
miles and several months away

61
00:01:56,550 --> 00:01:54,640
along the journey the science team will

62
00:01:59,350 --> 00:01:56,560
continue to explore for evidence related

63
00:02:01,109 --> 00:01:59,360

to the habitability of ancient mars

64
00:02:02,069 --> 00:02:01,119
this has been your curiosity rover