1
00:00:00,000 --> 00:00:06,639
[Music]

2
00:00:11,120 --> 00:00:08,930
hi this is Richard rainin and this is

3
00:00:12,740 --> 00:00:11,130
your building curiosity update I'm in

4
00:00:14,419 --> 00:00:12,750
the middle of the Mars yard at the Jet

5
00:00:16,430 --> 00:00:14,429
Propulsion lab where we're testing out

6
00:00:18,170 --> 00:00:16,440
an engineering model the Mars Science

7
00:00:21,320 --> 00:00:18,180
Laboratory Rover more commonly known as

8
00:00:23,720 --> 00:00:21,330
curiosity the Mars yard was created to

9
00:00:25,130 --> 00:00:23,730
try to simulate the types of different

10
00:00:27,349 --> 00:00:25,140
terrains that we might encounter on the

11
00:00:29,810 --> 00:00:27,359
surface of Mars we have everything on

12
00:00:32,959 --> 00:00:29,820
this Mars yard from rocks that are the

13
00:00:35,780 --> 00:00:32,969

size of about 25 to 30 inches in height

14
00:00:38,330 --> 00:00:35,790
to varying slopes in the slopes vary

15
00:00:39,950 --> 00:00:38,340
from about 5 degrees all the way up to

16
00:00:41,600 --> 00:00:39,960
about 20 degrees which is the driving

17
00:00:44,270 --> 00:00:41,610
capability of this particular vehicle

18
00:00:48,080 --> 00:00:44,280
we've put flagstone on the surface to

19
00:00:51,529 --> 00:00:48,090
simulate bedrock there's also loosely

20
00:00:54,049 --> 00:00:51,539
compacted soil and in addition to that

21
00:00:56,630 --> 00:00:54,059
we've over here created a sand pit with

22
00:00:59,450 --> 00:00:56,640
very non cohesive sand much like beach

23
00:01:00,770 --> 00:00:59,460
sand if you recall the Emmy our Rovers

24
00:01:03,080 --> 00:01:00,780
have had some difficulty when they've

25
00:01:04,939 --> 00:01:03,090
gotten into deep sand areas and actually

26
00:01:06,440 --> 00:01:04,949
have had gotten stuck so we're

27
00:01:08,840 --> 00:01:06,450
evaluating this Rover and see how it

28
00:01:10,969 --> 00:01:08,850
behaves in the sand media we're gonna be

29
00:01:13,490 --> 00:01:10,979
driving up the rover on both flat sand

30
00:01:15,620 --> 00:01:13,500
as well as slopes and and evaluating how

31
00:01:17,630 --> 00:01:15,630
the vehicle behaves how much slip

32
00:01:19,520 --> 00:01:17,640
whether it gets itself stuck things of

33
00:01:22,039 --> 00:01:19,530
that nature we'll also be looking at the

34
00:01:24,140 --> 00:01:22,049
visual odometry markers that we have on

35
00:01:26,030 --> 00:01:24,150
the wheels there are asymmetric patterns

36
00:01:27,920 --> 00:01:26,040
actually holes inside the wheels of the

37
00:01:29,990 --> 00:01:27,930
rover that will leave an imprint on the

38
00:01:32,300 --> 00:01:30,000

surface of Mars it's going to be looking

39
00:01:33,649 --> 00:01:32,310
at these imprints and verifying that it

40
00:01:35,510 --> 00:01:33,659
has traversed the distance that it

41
00:01:37,069 --> 00:01:35,520
expects to have traversed if it looks

42
00:01:38,630 --> 00:01:37,079
like it's not traversing even though the

43
00:01:40,730 --> 00:01:38,640
wheels are going that is an indication

44
00:01:43,300 --> 00:01:40,740
to the vehicle that it is getting stuck

45
00:01:45,440 --> 00:01:43,310
and it will stop and call back home

46
00:01:47,389 --> 00:01:45,450
testing where the vehicle has gone very

47
00:01:49,429 --> 00:01:47,399
well to date the vehicle has matched our

48
00:01:51,230 --> 00:01:49,439
computer predictions in almost every way

49
00:01:52,760 --> 00:01:51,240
from this point forward it goes down

50
00:01:54,560 --> 00:01:52,770
into the test bed for avionics

51
00:01:55,219 --> 00:01:54,570
integration and further electrical

52
00:01:56,929 --> 00:01:55,229
checkouts