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00:00:00,240 --> 00:00:04,490

Hey everyone, Amy Shira Teitel here at the Mars Yard at NASA's Jet Propulsion Laboratory

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00:00:04,490 --> 00:00:09,360

in California and behind me is the duplicate rover of the one currently on Mars, the Curiosity

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00:00:09,360 --> 00:00:10,360

Rover.

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00:00:10,360 --> 00:00:16,059

And I'm so excited to talk to the Mars Science Laboratory Project Scientist Ashwin Vasavada

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00:00:16,059 --> 00:00:18,550

and he is going to walk me through this amazing machine.

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00:00:18,550 --> 00:00:23,689

Our test bed of the Curiosity Rover, it's the same size and has a lot of the same equipment

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00:00:23,689 --> 00:00:24,850

as what's on Mars right now.

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00:00:24,850 --> 00:00:28,769

One of the things that I was really excited about was the tools we're currently using

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00:00:28,769 --> 00:00:30,000

to explore Mars.

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00:00:30,000 --> 00:00:33,620

The first thing we do everyday is look at the pictures that have come down and those

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00:00:33,620 --> 00:00:36,660

pictures are taken by these instruments up

here on the mast.

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00:00:36,660 --> 00:00:42,780
You can see two pairs of navigation cameras,
inside of those are our science cameras which

13
00:00:42,780 --> 00:00:48,100
take those gorgeous color panoramas and the
single eye on top shoots out a laser.

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00:00:48,100 --> 00:00:53,040
The laser can fire up to twenty feet away
create little sparks and by measuring the

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00:00:53,040 --> 00:00:57,870
color of those sparks we can see rocks and
soils are made of, that helps us choose targets

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00:00:57,870 --> 00:01:02,070
to drive up to the next thing we do is extend
this robotic arm, It's about seven feet

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00:01:02,070 --> 00:01:06,590
long, on the end of the arm we have a hole
bunch of instruments, other sensors we place

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00:01:06,590 --> 00:01:11,740
up against the rock, microscope we place up
against the rocks and soil and then the real

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00:01:11,740 --> 00:01:13,659
core of everything out drill.

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00:01:13,659 --> 00:01:16,749
We can chisel into rocks with the drill.

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00:01:16,749 --> 00:01:21,579
Gather the powder and deliver those samples
into the laboratories that are actually inside

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00:01:21,579 --> 00:01:23,310

the front of the rover.

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00:01:23,310 --> 00:01:28,899

NASA took a big step towards setting humans down on Mars by building a rover like this,

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00:01:28,899 --> 00:01:34,530

that weighed five times as the previous ones, and those in 2004 weighed more than the first

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00:01:34,530 --> 00:01:39,899

rover which was about that big, so every time that we learn how to land bigger payloads

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00:01:39,899 --> 00:01:42,229

on Mars we get that much closer to being able to land humans and all their supplies.

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00:01:42,229 --> 00:01:50,369

You have worked on MSL for eleven years, does it still excite you and do you still look

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00:01:50,369 --> 00:01:51,590

at this and know that you have one of these on Mars?

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00:01:51,590 --> 00:01:55,810

It is unreal that we're driving this vehicle around on Mars everyday.

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00:01:55,810 --> 00:02:01,719

Driving it around in these beautiful desert like terrain, what excites me everyday is