# TW@N

## THIS WEEK @ NASA

1
00:00:00,080 --> 00:00:03,200
Our Perseverance rover\h
takes up residence on Mars …

2
00:00:03,200 --> 00:00:06,240
The space station’s next\h
commercial resupply mission …

3
00:00:06,240 --> 00:00:09,600
And a new date for a commercial\h
crew test flight … a few of the\h\h

4
00:00:09,600 --> 00:00:11,920
stories to tell you about – This Week at NASA!

5
00:00:14,080 --> 00:00:17,440
“(Applause) Navigation has confirmed\h
that the parachute has deployed and\h\h

6
00:00:17,440 --> 00:00:20,160
we are seeing significant deceleration ...”

7
00:00:20,160 --> 00:00:26,000
On Feb. 18, our Mars 2020 Perseverance\h
rover mission safely touched down on Mars.

8
00:00:26,000 --> 00:00:29,200
“Touchdown confirmed! Perseverance is safely\h\h

9
00:00:29,200 --> 00:00:35,120
on the surface of Mars, ready to begin\h
seeking the signs of past life! (applause)”

10
00:00:35,120 --> 00:00:40,560
The rover landed in Jezero Crater, a region\h
targeted for the excellent opportunity it presents\h\h

11
00:00:40,560 --> 00:00:45,360
to accomplish the rover’s primary goal\h

of finding signs of past microbial life.\h\h

12
00:00:45,360 --> 00:00:48,720
Within minutes the rover's first\h
images from Mars reached Earth,\h\h

13
00:00:48,720 --> 00:00:54,720
confirming Perseverance was A-okay. And even\h
more images followed, including amazing views\h\h

14
00:00:54,720 --> 00:00:59,360
of the rover's descent captured by our Mars\h
Reconnaissance Orbiter, and stunning views\h\h

15
00:00:59,360 --> 00:01:04,080
from onboard the lander showing how descent\h
appeared from the rover's point-of-view.

16
00:01:04,080 --> 00:01:09,520
"You have to somehow believe that you can\h
do it, or else you'd never try to put a car\h\h

17
00:01:10,160 --> 00:01:15,280
on the surface of Mars, right? It's crazy.\h
But there really is no good way to describe\h\h

18
00:01:15,280 --> 00:01:20,640
that moment when it's over and you hear\h
those words, 'touchdown confirmed'."

19
00:01:20,640 --> 00:01:26,240
This is the most advanced NASA rover to make\h
the nearly 300 million mile trip to Mars. It's\h\h

20
00:01:26,240 --> 00:01:30,720
loaded with groundbreaking technology to help\h
pave the way for future human exploration of\h\h

21
00:01:30,720 --> 00:01:35,840
the Red Planet. This includes the ability to\h

collect and leave cached samples of Martian\h\h

22
00:01:35,840 --> 00:01:41,200
rock and regolith that a future mission, being\h
planned by NASA and the European Space Agency,\h\h

23
00:01:41,200 --> 00:01:43,600
could retrieve and bring back to Earth for study.

24
00:01:44,240 --> 00:01:49,360
“This mission is amazing on its own.\h
Science, technology, and caching samples\h\h

25
00:01:49,360 --> 00:01:53,840
to bring back to Earth, but it’s also part\h
of our bigger exploration plans, right?\h\h

26
00:01:54,400 --> 00:01:59,120
Which involve preparing for\h
eventual human missions to Mars.”

27
00:01:59,120 --> 00:02:04,080
While Perseverance works to characterize the\h
region’s geology and past climate, there are also\h\h

28
00:02:04,080 --> 00:02:09,520
plans for the Ingenuity experimental helicopter\h
to make the first controlled flight on another\h\h

29
00:02:09,520 --> 00:02:15,440
planet. Having a flying robotic explorer could\h
be a huge benefit for a human mission on Mars.

30
00:02:15,440 --> 00:02:21,040
“Being able to fly will enable us to\h
get to places that we cannot get to with\h\h

31
00:02:21,040 --> 00:02:25,360
rovers and astronauts, like sides of\h
steep cliffs, deep inside crevices;\h\h

32
00:02:25,360 --> 00:02:29,440
areas of high scientific interest.\h
It will be game-changing!”

33
00:02:29,440 --> 00:02:32,160
Perseverance will undergo several weeks of testing\h\h

34
00:02:32,160 --> 00:02:35,840
before it begins its two-year\h
science investigation of Mars.

35
00:02:38,640 --> 00:02:44,480
The Feb. 20 liftoff of Northrop Grumman’s Antares\h
rocket and Cygnus spacecraft from our Wallops\h\h

36
00:02:44,480 --> 00:02:49,760
Flight Facility marked the start of the company’s\h
15th resupply mission to the International Space\h\h

37
00:02:49,760 --> 00:02:55,360
Station for NASA. The Cygnus, named after\h
late NASA mathematician, Katherine Johnson,\h\h

38
00:02:55,360 --> 00:02:58,880
is loaded with about 8,000\h
pounds of scientific research,\h\h

39
00:02:58,880 --> 00:03:01,520
crew supplies, and hardware\h
for the station crew.

40
00:03:03,600 --> 00:03:07,840
An uncrewed Russian Progress supply ship arrived\h
at the space station early Wednesday after\h\h

41
00:03:07,840 --> 00:03:13,920
launching from Kazakhstan on Feb. 14 with just\h
over a ton of nitrogen, water and propellant.\h\h

42
00:03:13,920 --> 00:03:18,240
The Progress will be used to detach a\h
Russian docking module later this year\h\h

43
00:03:18,240 --> 00:03:21,600
to prepare for the arrival of a new\h
multipurpose laboratory module.

44
00:03:22,800 --> 00:03:26,960
NASA and Boeing are now targeting\h
no earlier than Friday, April 2,\h\h

45
00:03:26,960 --> 00:03:30,560
for the launch of Orbital Flight Test-2, or OFT-2,\h\h

46
00:03:30,560 --> 00:03:36,560
the company’s second uncrewed flight test of the\h
CST-100 Starliner spacecraft to the International\h\h

47
00:03:36,560 --> 00:03:42,640
Space Station. OFT-2 is an end-to-end test to\h
prove the Starliner system is ready to begin\h\h

48
00:03:42,640 --> 00:03:48,080
flying astronauts to and from the space station\h
as part of NASA’s Commercial Crew Program.

49
00:03:49,280 --> 00:03:54,080
A lightweight robotic crane first designed,\h
built, and tested at our Langley Research\h\h

50
00:03:54,080 --> 00:04:00,000
Center more than a decade ago, is being upgraded\h
with a suite of quick-interchange tools – giving\h\h

51
00:04:00,000 --> 00:04:05,200
it Swiss Army knife-like capabilities that could\h
prove quite useful on future missions to the Moon.\h\h

52

00:04:05,760 --> 00:04:10,640
It can be used as a hoist or forklift to lift\h
payloads weighing as much as an elephant,\h\h

53
00:04:10,640 --> 00:04:14,960
or for jobs requiring a bit more\h
dexterity – such as scooping regolith,\h\h

54
00:04:14,960 --> 00:04:21,280
or welding. The technology is also scalable to fit\h
any sized lander, vehicle, or surface application.