TW@N

THIS WEEK @ NASA

1
00:00:00,160 --> 00:00:02,160
Preparing for first flight on Mars …

2
00:00:02,160 --> 00:00:03,840
Making a splash with Orion …

3
00:00:03,840 --> 00:00:07,440
And the space station’s next crew\h
prepares for launch … a few of the\h\h

4
00:00:07,440 --> 00:00:09,520
stories to tell you about – This Week at NASA!

5
00:00:10,800 --> 00:00:16,080
Our Ingenuity Mars Helicopter was the focus\h
of a March 23 briefing at our Jet Propulsion\h\h

6
00:00:16,080 --> 00:00:22,080
Laboratory in Pasadena, California. The Ingenuity\h
team is targeting no earlier than April 8\h\h

7
00:00:22,080 --> 00:00:25,760
for this technology demonstration to\h
make the first attempt at powered,\h\h

8
00:00:25,760 --> 00:00:29,120
controlled flight of an\h
aircraft on another planet.

9
00:00:29,120 --> 00:00:36,160
“We use drones and helicopters here on Earth for\h
all sorts of things that they’re more suitable for\h\h

10
00:00:36,160 --> 00:00:40,240
than land-based vehicles, right? So you can\h
imagine being able to have that same capability\h\h

11
00:00:40,240 --> 00:00:46,240
on Mars, flying around on Mars. And that could\h

be for reconnaissance purposes, taking pictures\h\h

12
00:00:46,240 --> 00:00:52,320
to scout out areas, potential science targets\h
for future rovers, or even future astronauts.”

13
00:00:52,880 --> 00:00:57,520
Once deployed from the Perseverance rover,\h
Ingenuity will have 30 Martian days – equal\h\h

14
00:00:57,520 --> 00:01:01,360
to about one month here on Earth –\h
to conduct its test flight campaign.

15
00:01:02,880 --> 00:01:08,160
Engineers at our Langley Research Center are\h
using a test version of our Orion spacecraft for\h\h

16
00:01:08,160 --> 00:01:14,080
water impact testing. During the tests the crew\h
module is dropped into a large pool of water\h\h

17
00:01:14,080 --> 00:01:18,400
to learn more about what the spacecraft\h
and astronauts inside might experience\h\h

18
00:01:18,400 --> 00:01:21,840
while landing in the Pacific\h
Ocean after missions to the Moon.\h\h

19
00:01:21,840 --> 00:01:27,120
Data from the drop tests will be used for final\h
computer modeling for loads and structures\h\h

20
00:01:27,120 --> 00:01:31,600
prior to Artemis II, our first Artemis\h
mission to the Moon with astronauts.

21
00:01:32,640 --> 00:01:36,960
The International Space Station’s next\h

crew, including our Mark Vande Hei completed\h\h

22
00:01:36,960 --> 00:01:42,720
prelaunch qualification exams and participated\h
in various other activities in and around Moscow,\h\h

23
00:01:42,720 --> 00:01:48,800
Russia. Vande Hei, and Oleg Novitskiy and Pyotr\h
Dubrov, of the Russian Space Agency, Roscosmos\h\h

24
00:01:48,800 --> 00:01:53,120
will complete their preflight training\h
at the Baikonur Cosmodrome in Kazakhstan,\h\h

25
00:01:53,120 --> 00:01:56,480
ahead of their targeted April\h
9 launch to the space station.

26
00:01:57,520 --> 00:02:03,680
The Lockheed Martin team building our X-59 Quiet\h
SuperSonic Technology aircraft, recently merged\h\h

27
00:02:03,680 --> 00:02:08,960
its empennage to the wing. The empennage is the\h
section that supports the experimental plane's\h\h

28
00:02:08,960 --> 00:02:15,520
engine and tail. NASA is targeting 2022 for\h
the first demonstrations of the X-59's ability\h\h

29
00:02:15,520 --> 00:02:21,680
to create a soft thump during supersonic flight,\h
instead of the typically loud sonic boom. NASA\h\h

30
00:02:21,680 --> 00:02:26,400
has contracted California company, Crystal\h
Instruments, to deliver a state-of-the-art\h\h

31
00:02:26,400 --> 00:02:31,760
ground recording system capable of capturing\h

the acoustic data needed before test flights\h\h

32
00:02:31,760 --> 00:02:37,440
over communities around the U.S. can begin.\h
Those flights could start as early as 2024.

33
00:02:38,400 --> 00:02:43,440
Data from the NASA and U.S. Geological\h
Survey’s Landsat 8, and other satellites,\h\h

34
00:02:43,440 --> 00:02:48,160
are helping scientists identify\h
algal blooms in lakes or rivers.\h\h

35
00:02:48,160 --> 00:02:52,080
These naturally occurring blooms can\h
make these bodies of water harmful\h\h

36
00:02:52,080 --> 00:02:58,240
for recreational use. The Landsat 8 data is\h
used to create a product that can help local\h\h

37
00:02:58,240 --> 00:03:02,960
water or recreation managers identify\h
areas where a potential problem exists.\h\h

38
00:03:03,600 --> 00:03:10,320
According to a 2020 study published in the journal\h
GeoHealth, Landsat-based detection of a 2017 bloom\h\h

39
00:03:10,320 --> 00:03:17,840
in Lake Utah helped save an estimated $370,000\h
in healthcare and related costs for that area.