1
00:00:11,680 --> 00:00:15,920
We’re here outside the Launch Control Center at\h
NASA’s Kennedy Space Center. Behind those giant\h\h

2
00:00:15,920 --> 00:00:21,440
glass walls are our Firing Rooms. That’s where\h
we launch rockets from. I’m Joshua Santora,\h\h

3
00:00:21,440 --> 00:00:26,640
and today I’ll be taking you behind the scenes\h
inside Firing Room 1 and out to Launch Complex\h\h

4
00:00:26,640 --> 00:00:31,120
39b where I’m going to give you a one of\h
a kind perspective on a water deluge test.\h\h

5
00:00:31,760 --> 00:00:37,680
Both of these facilities are major parts of the\h
Artemis program. Artemis has three main elements,\h\h

6
00:00:37,680 --> 00:00:43,760
the Space Launch System, or SLS, the Orion\h
crew capsule and Exploration Ground Systems.\h\h

7
00:00:43,760 --> 00:00:46,560
They’re responsible for all of the\h
infrastructure to actually launch.\h\h

8
00:00:47,360 --> 00:00:50,480
Be sure to enjoy the view as we go,\h
look all around - let’s get moving.

9
00:00:51,360 --> 00:00:56,560
We are now in Firing Room 1 of the Launch Control\h
Center. What you’re seeing is one of many launch\h\h

10
00:00:56,560 --> 00:01:02,320
simulations used to certify the launch team and\h
the software to fly the Space Launch System.

11
00:01:02,320 --> 00:01:07,600
Software is probably the most underrated part\h
of technology today. For you to simply watch\h\h

12
00:01:07,600 --> 00:01:12,720
this video right now on a phone, a computer,\h
a virtual reality headset… it takes thousands,\h\h

13
00:01:12,720 --> 00:01:15,840
if not millions, of lines\h
of code to make that happen.

14
00:01:15,840 --> 00:01:19,920
Today’s smartphone is impressive and\h
powerful, and software makes it work.\h\h

15
00:01:19,920 --> 00:01:24,320
Now, think about how complex your phone is\h
compared to the complexity of a rocket that\h\h

16
00:01:24,320 --> 00:01:33,280
stands 322 feet tall, weighs 5.75 million pounds,\h
can carry upwards of 26 tons of cargo to the Moon,\h\h

17
00:01:33,280 --> 00:01:38,880
and is the most powerful rocket ever built.\h
Imagine the amount of coding, or software,\h\h

18
00:01:38,880 --> 00:01:43,920
that it takes to make all of that operate.\h
That software development pays off right here\h\h

19
00:01:43,920 --> 00:01:49,360
at Launch Complex 39b, where the Space\h
Launch System, or SLS, will launch from.

20
00:01:49,360 --> 00:01:52,320
This pad was originally\h
built for the Apollo Program,\h\h

21
00:01:52,320 --> 00:01:56,640
so it is fitting that we are returning to\h
the Moon from this pad. You may be surprised\h\h

22
00:01:56,640 --> 00:02:01,600
to learn that at this range, less than 800\h
feet from the launch pad, the sound waves can\h\h

23
00:02:01,600 --> 00:02:07,840
kill you. The closest spectators have to be at\h
least three miles away to ensure they are safe.

24
00:02:07,840 --> 00:02:10,880
Beginning around 2011, we were redesigning and\h\h

25
00:02:10,880 --> 00:02:15,600
modifying the pad to accommodate not only\h
NASA rockets, but also commercial rockets.\h

26
00:02:15,600 --> 00:02:18,400
The Kennedy Space Center is a\h
spaceport and we’re open for business.

27
00:02:21,760 --> 00:02:27,600
What you’re about to watch is 450,000 gallons\h
of water flooding this pad in about 30 seconds.\h\h

28
00:02:28,240 --> 00:02:31,680
The water will not only help to cool the\h
intense heat that occurs during launch,\h\h

29
00:02:31,680 --> 00:02:35,600
but will also help to suppress the\h
forceful sound waves that occur at liftoff.

30
00:02:36,560 --> 00:02:41,920
Whether it’s human-sized-valves on water pipes,\h
solid rocket motors functioning as intended,\h\h

31

00:02:42,480 --> 00:02:46,240
a flight controller and the Launch\h
Control Center monitoring fuel levels,\h\h

32
00:02:46,240 --> 00:02:49,920
or the thousands of other things\h
that happen on launch day -- it’s\h\h

33
00:02:49,920 --> 00:02:54,800
all made possible by those billions of\h
lines of code, typed out one by one.

34
00:02:59,120 --> 00:03:02,640
We hope that you will continue to track our\h
progress as we work towards the first woman\h\h

35
00:03:02,640 --> 00:03:07,360
and next man to walk on the moon. From NASA’s\h
Kennedy Space center, for Exploration Ground\h\h

36
00:03:07,360 --> 00:03:11,440
Systems, that’s all we have time for today.\h
We build, launch and recover for the next\h\h