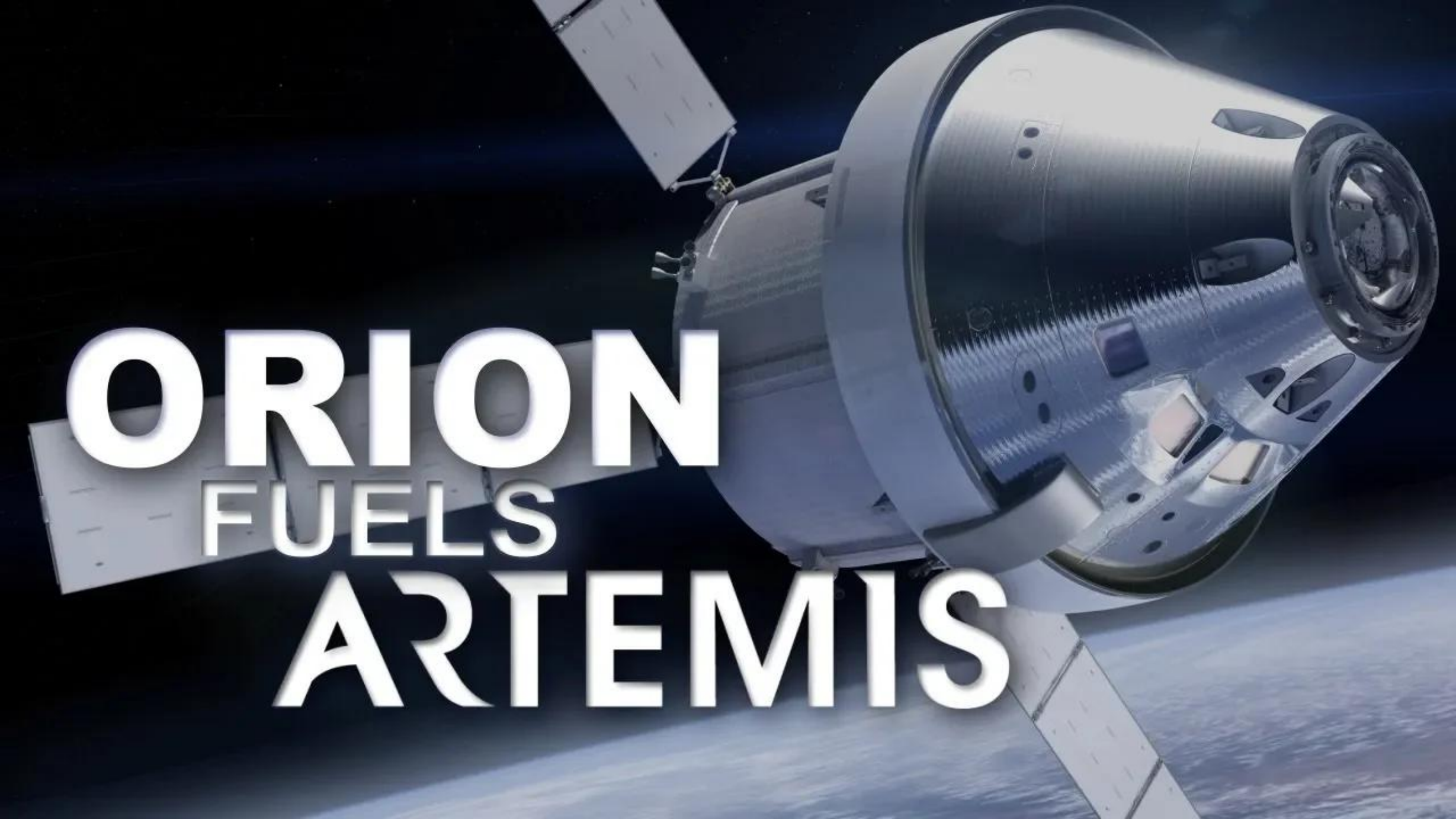
ORION
FUELS
ARTEMIS

1
00:00:03,440 --> 00:00:11,940
(music)

2
00:00:15,620 --> 00:00:19,460
Orion is the vehicle that's gonna take
and put the next man and the first woman

3
00:00:19,460 --> 00:00:21,480
on the moon by 2024.

4
00:00:32,340 --> 00:00:35,840
It's the vehicle that has to take us out
of Earth's atmosphere safely across the

5
00:00:35,840 --> 00:00:40,190
expanse of 250,000 miles to the Moon, put
us in a lunar orbit the Gateway Space

6
00:00:40,190 --> 00:00:43,790
Station, and then sit there and wait
while the astronauts go down to the

7
00:00:43,790 --> 00:00:46,700
lunar surface for the first time since
1972.

8
00:00:47,900 --> 00:00:53,280
(music)

9
00:01:09,780 --> 00:01:12,460
Then the astronauts going to come back
up to the Gateway, get on Orion, come

10
00:01:12,460 --> 00:01:14,799
back home,
re-enter Earth's atmosphere, and Orion’s going to the

11
00:01:14,799 --> 00:01:18,490
one that’s going to be get us back safely on the ground. We had to come back lunar

12
00:01:18,490 --> 00:01:23,170
return velocities, Mach 32, and dissipate all
that energy, so that's shape of the

13
00:01:23,170 --> 00:01:26,560
capsule you see behind us is pretty much
the same. We got a heat shield underneath

14
00:01:26,560 --> 00:01:30,460
that allows us to re-enter the atmosphere. The big thing is when you get

15
00:01:30,460 --> 00:01:36,100
inside, it's 30% larger. Orion can carry
four crew for 21 days where Apollo was

16
00:01:36,100 --> 00:01:39,819
three crew for 14 days. Now it's also
taking a lot advantage of technology

17
00:01:39,819 --> 00:01:44,770
developments, where now we've got glass cockpit,
we've got digital displays that control all

18
00:01:44,770 --> 00:01:47,709
the systems enable to give that to us in
a digital form, pull up our electronic

19
00:01:47,709 --> 00:01:52,450
procedures and emergency function. It
also has a lot of better computing power

20
00:01:52,450 --> 00:01:56,349
because, you know, while it's only 25
times faster than space station

21
00:01:56,349 --> 00:01:59,500
computers, you know, space station is flying
right now, but shuttle it's 400 times

22
00:01:59,500 --> 00:02:03,579
special that and comparison to Apollo
4,000 times faster than the Apollo

23
00:02:03,579 --> 00:02:06,849
computers, because Apollo computers had
less computing power than we have in our

24
00:02:06,849 --> 00:02:10,450
watches these days. A lot more safety
redundancies,

25
00:02:10,450 --> 00:02:14,290
it also has composite materials were
able to make it lighter. We're also able

26
00:02:14,290 --> 00:02:17,560
use 3D printing to make things that we
couldn't make before, so it's really

27
00:02:17,560 --> 00:02:21,730
really gonna be the next generation
vehicle, that does allow us to have that

28
00:02:21,730 --> 00:02:25,720
return to the Moon in 2024 and then keep
going back every year after that and

29
00:02:25,720 --> 00:02:29,410
make that sustained presence on that
south pole that’ll allow us to do all the