ARTEMIS ALL ACCESS

Nov. 18, 2022

1
00:00:30,370 --> 00:00:17,610
[Music]

2
00:00:48,410 --> 00:00:33,889
and liftoff of Artemis one we rise

3
00:00:48,420 --> 00:00:57,430
foreign

4
00:00:57,440 --> 00:01:17,690
[Music]

5
00:01:17,700 --> 00:01:28,910
foreign

6
00:01:49,069 --> 00:01:44,660
[Music]

7
00:01:50,569 --> 00:01:49,079
the first flight in the Artemis program

8
00:01:52,190 --> 00:01:50,579
I'm going to walk you through really

9
00:01:54,050 --> 00:01:52,200
quick what it's going to look like going

10
00:01:56,630 --> 00:01:54,060
around the moon and then coming home

11
00:01:59,330 --> 00:01:56,640
back to Earth at the end so at this

12
00:02:01,249 --> 00:01:59,340
point we've gone along our path we've

13
00:02:03,770 --> 00:02:01,259

made it to the moon and now we're about

14
00:02:05,810 --> 00:02:03,780
to dip in as close as we'll get for the

15
00:02:08,630 --> 00:02:05,820
entire mission on this outbound powered

16
00:02:10,190 --> 00:02:08,640
flyby now this burn it's largely going

17
00:02:11,809 --> 00:02:10,200
to be using that orbital maneuvering

18
00:02:14,390 --> 00:02:11,819
system engine that large one that we

19
00:02:15,830 --> 00:02:14,400
tested out on earlier Burns and it's

20
00:02:17,690 --> 00:02:15,840
also going to be using the auxiliary

21
00:02:19,190 --> 00:02:17,700
thrusters we've got some reaction

22
00:02:20,990 --> 00:02:19,200
control ones to help control our

23
00:02:23,330 --> 00:02:21,000
attitude but what this is really

24
00:02:25,550 --> 00:02:23,340
designed to do is to get us around the

25
00:02:28,610 --> 00:02:25,560
moon and start heading into distant

26
00:02:30,949 --> 00:02:28,620
retrograde orbit or Dro that's this

27
00:02:32,809 --> 00:02:30,959
dotted line that you can see up here

28
00:02:35,150 --> 00:02:32,819
this is really where we're going to

29
00:02:38,330 --> 00:02:35,160
learn about Orion while we fly around

30
00:02:40,729 --> 00:02:38,340
the Moon about 38 000 miles off the

31
00:02:42,850 --> 00:02:40,739
lunar surface we call it retrograde as

32
00:02:45,110 --> 00:02:42,860
the Moon is heading in that direction

33
00:02:47,750 --> 00:02:45,120
Orion will be heading in this one

34
00:02:50,210 --> 00:02:47,760
opposite retrograde

35
00:02:52,250 --> 00:02:50,220
now after we're done in that orbit it'll

36
00:02:55,309 --> 00:02:52,260
be time to come home we'll execute a

37
00:02:57,650 --> 00:02:55,319
maneuver to exit do another flyby close

38
00:02:59,690 --> 00:02:57,660

to the lunar surface that commits us to

39
00:03:01,670 --> 00:02:59,700
coming home and fine-tuning our path

40
00:03:04,070 --> 00:03:01,680
towards the atmosphere we'll make any

41
00:03:06,770 --> 00:03:04,080
correction burns on our way back as

42
00:03:08,809 --> 00:03:06,780
necessary before it's time to re-enter

43
00:03:10,130 --> 00:03:08,819
the atmosphere now before that can

44
00:03:12,589 --> 00:03:10,140
happen we'll have a spacecraft

45
00:03:14,809 --> 00:03:12,599
separation about the service module its

46
00:03:16,309 --> 00:03:14,819
job is done it breaks away ends up

47
00:03:19,130 --> 00:03:16,319
burning up in the atmosphere after

48
00:03:22,570 --> 00:03:19,140
carrying an Orion to the Moon and back

49
00:03:25,490 --> 00:03:22,580
what this does is reveal the heat shield

50
00:03:28,490 --> 00:03:25,500
the large structure on the base of Orion

51
00:03:30,949 --> 00:03:28,500
testing this is our number one goal for

52
00:03:32,869 --> 00:03:30,959
the Artemis one flight because when we

53
00:03:35,390 --> 00:03:32,879
come back from the Moon we're going to

54
00:03:37,729 --> 00:03:35,400
be moving at 25

55
00:03:39,470 --> 00:03:37,739
000 miles an hour that's 8 000 miles an

56
00:03:41,449 --> 00:03:39,480
hour faster than when you come home from

57
00:03:43,850 --> 00:03:41,459
the International Space Station and what

58
00:03:46,550 --> 00:03:43,860
that's going to cause is this to heat up

59
00:03:47,930 --> 00:03:46,560
to about 5000 degrees Fahrenheit that's

60
00:03:50,149 --> 00:03:47,940
half the temperature if you were

61
00:03:52,250 --> 00:03:50,159
standing on the surface of the Sun so

62
00:03:54,770 --> 00:03:52,260
things will be very hot but that heat

63
00:03:56,210 --> 00:03:54,780

shield does its job to protect the Orion

64
00:03:58,070 --> 00:03:56,220
capsule which will be bringing our

65
00:04:00,170 --> 00:03:58,080
astronauts home at the end of these

66
00:04:03,110 --> 00:04:00,180
future missions after we're through that

67
00:04:05,509 --> 00:04:03,120
fiery re-entry parachutes deploy Orion

68
00:04:08,570 --> 00:04:05,519
splashes down in the ocean we'll have a

69
00:04:11,089 --> 00:04:08,580
U.S Navy ship standing by with recovery

70
00:04:13,490 --> 00:04:11,099
Personnel to pick Orion up out of the

71
00:04:20,030 --> 00:04:13,500
water and bring it in to the first

72
00:04:29,629 --> 00:04:22,550
the Artemis 1 Mission continues with

73
00:04:36,090 --> 00:04:32,570
and tune in to NASA TV for the next live

74
00:04:36,100 --> 00:04:43,629
[Music]

75
00:04:48,290 --> 00:04:46,010
for more on the science of the mission

76
00:04:49,570 --> 00:04:48,300
and resources for students and Educators

77
00:04:53,330 --> 00:04:49,580
head to

78
00:04:55,370 --> 00:04:53,340
stem.nasa.gov Artemis

79
00:04:57,590 --> 00:04:55,380
follow the mission online on Facebook

80
00:04:59,270 --> 00:04:57,600
Instagram and Twitter

81
00:05:00,850 --> 00:04:59,280
and get the latest updates from the

82
00:05:19,689 --> 00:05:00,860
Artemis blog at