1
00:00:14,250 --> 00:00:11,820
we explore to gain knowledge to push the

2
00:00:17,370 --> 00:00:14,260
boundaries of possibility and to reveal

3
00:00:20,910 --> 00:00:17,380
the unknown we seek to discover to find

4
00:00:22,890 --> 00:00:20,920
answers here on earth and in space was

5
00:00:25,800 --> 00:00:22,900
Mars once an earth-like planet with

6
00:00:28,560 --> 00:00:25,810
water and an atmosphere what happened

7
00:00:31,439 --> 00:00:28,570
can the same thing happen here on earth

8
00:00:33,509 --> 00:00:31,449
what about asteroids is there something

9
00:00:35,819 --> 00:00:33,519
we can do to prevent a big one from

10
00:00:37,680 --> 00:00:35,829
colliding with earth we can go to Mars

11
00:00:39,660 --> 00:00:37,690
in our lifetime and answer some of

12
00:00:42,869 --> 00:00:39,670
humanity's fundamental questions about

13
00:00:44,639 --> 00:00:42,879

life beyond Earth robots are doing great

14
00:00:46,799 --> 00:00:44,649
work exploring our solar system but

15
00:00:56,759 --> 00:00:46,809
eventually we want to be able to put a

16
00:00:58,769 --> 00:00:56,769
person on the ground now sending people

17
00:01:02,609 --> 00:00:58,779
to deep space destinations requires a

18
00:01:05,490 --> 00:01:02,619
lot of stuff food and water shelter fuel

19
00:01:08,940 --> 00:01:05,500
spare parts tools and supplies it's like

20
00:01:11,039 --> 00:01:08,950
a spacefaring RV the farther you go and

21
00:01:14,730 --> 00:01:11,049
the longer the trip the more you need

22
00:01:16,139 --> 00:01:14,740
and that means moving a lot of math so

23
00:01:17,849 --> 00:01:16,149
when you talk about getting past the

24
00:01:28,300 --> 00:01:17,859
pull of Earth's gravity you need a

25
00:01:32,590 --> 00:01:30,700
a Space Launch System is an all new

26
00:01:34,359 --> 00:01:32,600
heavy-lift rocket that uses a

27
00:01:38,620 --> 00:01:34,369
combination of proven hardware and

28
00:01:40,480 --> 00:01:38,630
technology to make it more affordable we

29
00:01:42,670 --> 00:01:40,490
could take the best all we've learned

30
00:01:43,990 --> 00:01:42,680
from building rockets and combine that

31
00:01:46,300 --> 00:01:44,000
with cutting-edge tooling and

32
00:01:51,220 --> 00:01:46,310
manufacturing technology to build the

33
00:01:55,220 --> 00:01:53,840
you can fly to really high orbit around

34
00:01:57,800 --> 00:01:55,230
the moon with this rocket without

35
00:01:59,720 --> 00:01:57,810
requiring any other assistance but when

36
00:02:03,870 --> 00:01:59,730
we add an upper stage we'll have an even

37
00:02:08,609 --> 00:02:06,390
the larger evolved version of SLS can

38
00:02:10,980 --> 00:02:08,619

carry a habitat larger solar arrays

39
00:02:25,860 --> 00:02:10,990
additional propulsion you name it this

40
00:02:31,770 --> 00:02:28,330
to get the astronauts beyond low Earth

41
00:02:34,360 --> 00:02:31,780
orbit we need a new crew vehicle Orion

42
00:02:37,450 --> 00:02:34,370
the Orion's spacecraft is a conical

43
00:02:39,520 --> 00:02:37,460
shape like Apollo was but it's actually

44
00:02:41,020 --> 00:02:39,530
larger than Apollo and is capable of

45
00:02:44,800 --> 00:02:41,030
taking people farther into space than

46
00:02:47,350 --> 00:02:44,810
ever before it can protect a crew of

47
00:02:50,500 --> 00:02:47,360
four for up to 21 days and carry food

48
00:02:53,470 --> 00:02:50,510
air water supplies all the things the

49
00:02:55,240 --> 00:02:53,480
crew will need a Ryan is the most

50
00:02:57,670 --> 00:02:55,250
advanced and versatile spacecraft ever

51
00:03:00,700 --> 00:02:57,680
made it uses state-of-the-art technology

52
00:03:02,560 --> 00:03:00,710
materials and design processes based on

53
00:03:07,570 --> 00:03:02,570
more than 50 years of research and

54
00:03:09,250 --> 00:03:07,580
technology development the first crewed

55
00:03:11,470 --> 00:03:09,260
flight of Orion and the Space Launch

56
00:03:14,560 --> 00:03:11,480
System will be a flight around the moon

57
00:03:16,900 --> 00:03:14,570
during exploration mission to a crew of

58
00:03:18,940 --> 00:03:16,910
astronauts will launch on SLS fly

59
00:03:20,710 --> 00:03:18,950
several orbits around the earth then

60
00:03:22,120 --> 00:03:20,720
perform a translunar injection which

61
00:03:29,300 --> 00:03:22,130
will send them on a path from Earth

62
00:03:33,500 --> 00:03:31,610
once the crew gets near the moon Orion

63
00:03:34,580 --> 00:03:33,510

will pass within 60 miles of the surface

64
00:03:36,620 --> 00:03:34,590
and from there

65
00:03:50,229 --> 00:03:36,630
Orion can insert into a high lunar orbit

66
00:03:53,839 --> 00:03:52,640
the tools the knowledge and the

67
00:03:56,360 --> 00:03:53,849
experience that we have at our disposal

68
00:03:58,640 --> 00:03:56,370
today come from nearly 50 years of space

69
00:04:02,809 --> 00:03:58,650
exploration and ultimately benefit lives

70
00:04:04,160 --> 00:04:02,819
here on earth who knows what will come

71
00:04:06,800 --> 00:04:04,170
out of the scientific knowledge

72
00:04:09,339 --> 00:04:06,810
discovery and economic opportunities

73
00:04:11,870 --> 00:04:09,349
that result from deep-space exploration

74
00:04:14,540 --> 00:04:11,880
we just hit the tip of the iceberg in

75
00:04:17,030 --> 00:04:14,550
terms of human exploration now we need

76
00:04:19,370 --> 00:04:17,040
to explore deep space to me that's the

77
00:04:22,850 --> 00:04:19,380
goal to expand humanity's presence

78
00:04:25,370 --> 00:04:22,860
beyond the earth explore beyond has a

79
00:04:27,200 --> 00:04:25,380
deeper purpose and it is a bolder

80
00:04:30,080 --> 00:04:27,210
mission than anything we've ever done

81
00:04:31,940 --> 00:04:30,090
before I believe that people still look

82
00:04:34,520 --> 00:04:31,950
to NASA and the United States for

83
00:04:37,490 --> 00:04:34,530
leadership in space it takes courage and

84
00:04:39,710 --> 00:04:37,500
resolve and commitment and when we leave

85
00:04:41,480 --> 00:04:39,720
Earth to explore our solar system it

86
00:04:43,940 --> 00:04:41,490
will not be as any one nation or culture