
SPACEX
DRAGON

1
00:00:17,540 --> 00:00:15,770
for all the unique amazing achievements

2
00:00:19,700 --> 00:00:17,550
of the space shuttle there are things

3
00:00:21,200 --> 00:00:19,710
the shuttle can never do the shuttle has

4
00:00:22,790 --> 00:00:21,210
been a fantastic vehicle for us it's

5
00:00:25,580 --> 00:00:22,800
done things that no other vehicle can do

6
00:00:26,660 --> 00:00:25,590
like carry aloft huge telescopes and

7
00:00:29,089 --> 00:00:26,670
pieces of the International Space

8
00:00:31,580 --> 00:00:29,099
Station but with its wings and its

9
00:00:33,740 --> 00:00:31,590
reusability and its tail and so on it

10
00:00:35,840 --> 00:00:33,750
can't leave low-earth orbit the shuttle

11
00:00:37,970 --> 00:00:35,850
cannot reenter Earth's atmosphere at the

12
00:00:40,850 --> 00:00:37,980
speeds required for a return from deep

13
00:00:43,660 --> 00:00:40,860

space and it cannot remain in space for

14
00:00:46,880 --> 00:00:43,670
much longer than two weeks at a time

15
00:00:49,340 --> 00:00:46,890
NASA's next spacecraft already being

16
00:00:52,299 --> 00:00:49,350
built and tested across America will do

17
00:00:55,010 --> 00:00:52,309
those things and more this is the

18
00:00:57,979 --> 00:00:55,020
spacecraft that's going to take humans

19
00:01:00,200 --> 00:00:57,989
to explore the solar system it's the

20
00:01:02,360 --> 00:01:00,210
next big step for NASA and exploration

21
00:01:05,719 --> 00:01:02,370
called the Orion multi-purpose crew

22
00:01:08,090 --> 00:01:05,729
vehicle or MPCV this next generation

23
00:01:10,460 --> 00:01:08,100
spacecraft will enable America to

24
00:01:13,910 --> 00:01:10,470
explore beyond low-earth orbit for the

25
00:01:15,950 --> 00:01:13,920
first time in more than 40 years these

26
00:01:18,980 --> 00:01:15,960
missions will take humans far away from

27
00:01:21,410 --> 00:01:18,990
Earth to explore distant asteroids the

28
00:01:23,600 --> 00:01:21,420
moons of Mars and other places in our

29
00:01:27,140 --> 00:01:23,610
solar system beginning a new era of

30
00:01:29,719 --> 00:01:27,150
space exploration manufacturing a

31
00:01:31,789 --> 00:01:29,729
testing of the MPCV is well underway at

32
00:01:34,730 --> 00:01:31,799
facilities across the United States and

33
00:01:36,530 --> 00:01:34,740
the spacecraft systems ground support

34
00:01:41,090 --> 00:01:36,540
equipment and launch facilities are

35
00:01:42,230 --> 00:01:41,100
already being developed as NASA focuses

36
00:01:44,810 --> 00:01:42,240
on the construction of this new

37
00:01:47,810 --> 00:01:44,820
spacecraft and plans voyages into the

38
00:01:50,270 --> 00:01:47,820

solar system NASA's commercial partners

39
00:01:52,760 --> 00:01:50,280
are developing private spacecraft to

40
00:01:54,350 --> 00:01:52,770
transport equipment supplies and crew

41
00:01:59,510 --> 00:01:54,360
members to the international space

42
00:02:05,840 --> 00:02:03,090
Orion is a capsule it's a more

43
00:02:08,490 --> 00:02:05,850
traditional kind of spacecraft designed

44
00:02:11,490 --> 00:02:08,500
in the same way that Apollo is designed

45
00:02:13,860 --> 00:02:11,500
to do things beyond low-earth orbit the

46
00:02:16,020 --> 00:02:13,870
Orion multi-purpose crew vehicle will

47
00:02:17,880 --> 00:02:16,030
sustain a crew of four astronauts on

48
00:02:21,060 --> 00:02:17,890
missions that could last from six days

49
00:02:23,760 --> 00:02:21,070
for a lunar flyby mission to up to 900

50
00:02:25,740 --> 00:02:23,770
days for deep-space missions these

51
00:02:27,750 --> 00:02:25,750
long-duration missions will require

52
00:02:29,790 --> 00:02:27,760
sophisticated life-support and power

53
00:02:32,250 --> 00:02:29,800
systems that can endure the harsh

54
00:02:35,760 --> 00:02:32,260
environments of deep space and return

55
00:02:38,250 --> 00:02:35,770
the crew safely to earth the spacecraft

56
00:02:41,070 --> 00:02:38,260
includes both crew and service modules a

57
00:02:42,720 --> 00:02:41,080
spacecraft adapter and a revolutionary

58
00:02:46,110 --> 00:02:42,730
launch abort system that will

59
00:02:48,120 --> 00:02:46,120
significantly increase its safety based

60
00:02:50,970 --> 00:02:48,130
on lessons learned from 40 years of

61
00:02:53,600 --> 00:02:50,980
space shuttle operations the NP Seavey's

62
00:02:55,620 --> 00:02:53,610
flexible design allows for upgrades as

63
00:02:59,070 --> 00:02:55,630

improvements in technology become

64
00:03:01,080 --> 00:02:59,080
available this flexibility as well as

65
00:03:03,990 --> 00:03:01,090
the unique life support propulsion

66
00:03:05,820 --> 00:03:04,000
thermal protection and avionics systems

67
00:03:08,190 --> 00:03:05,830
will enable continued innovation

68
00:03:13,539 --> 00:03:08,200
throughout the spacecraft's operational

69
00:03:19,610 --> 00:03:17,000
the Orion MPCV is the most advanced

70
00:03:21,619 --> 00:03:19,620
space vehicle ever built incorporating

71
00:03:24,229 --> 00:03:21,629
technological advancements in electrical

72
00:03:26,750 --> 00:03:24,239
power rocket engines navigation and

73
00:03:30,319 --> 00:03:26,760
flight control communications and life

74
00:03:31,910 --> 00:03:30,329
support the spacecraft's new launch

75
00:03:34,099 --> 00:03:31,920
abort system has already flown

76
00:03:36,429 --> 00:03:34,109
performing flawlessly during a flight

77
00:03:39,589 --> 00:03:36,439
test high above the New Mexico desert

78
00:03:41,629 --> 00:03:39,599
this all-new escape system would be used

79
00:03:45,589 --> 00:03:41,639
to pull the crew safely away from an

80
00:03:47,509 --> 00:03:45,599
accident during launch because of the

81
00:03:50,360 --> 00:03:47,519
extreme distances that will be traveled

82
00:03:52,339 --> 00:03:50,370
during a long-duration mission the MPCV

83
00:03:54,170 --> 00:03:52,349
has an advanced communications and

84
00:03:58,220 --> 00:03:54,180
tracking system so that it can remain in

85
00:04:00,830 --> 00:03:58,230
communication with earth a return from

86
00:04:02,959 --> 00:04:00,840
deep space means that the MPCV will

87
00:04:04,909 --> 00:04:02,969
enter the atmosphere at higher speeds

88
00:04:07,459 --> 00:04:04,919

than a spacecraft returning from Earth

89
00:04:11,059 --> 00:04:07,469
orbit exposing the vehicle to much

90
00:04:13,879 --> 00:04:11,069
higher temperatures as the Orion MPCV

91
00:04:15,920 --> 00:04:13,889
and its crew return to Earth the vehicle

92
00:04:19,210 --> 00:04:15,930
will be protected by the largest and

93
00:04:21,439 --> 00:04:19,220
most advanced heat shield ever developed

94
00:04:23,719 --> 00:04:21,449
components of a sophisticated new

95
00:04:25,760 --> 00:04:23,729
automated rendezvous and docking system

96
00:04:28,850 --> 00:04:25,770
for the next spacecraft have already

97
00:04:31,100 --> 00:04:28,860
been tested in space the system was

98
00:04:32,659 --> 00:04:31,110
tried out with a special test rendezvous

99
00:04:34,100 --> 00:04:32,669
with the space station on the

100
00:04:36,200 --> 00:04:34,110
next-to-last flight of the space shuttle

101
00:04:41,210 --> 00:04:36,210
during the flight of Endeavour near the

102
00:04:42,800 --> 00:04:41,220
end of the sts-134 mission experience

103
00:04:45,439 --> 00:04:42,810
gained during flights of the shuttle and

104
00:04:47,330 --> 00:04:45,449
other NASA spacecraft also have led to

105
00:04:56,420 --> 00:04:47,340
innovations and advancements in the

106
00:05:01,560 --> 00:04:59,070
working alongside commercial companies

107
00:05:03,230 --> 00:05:01,570
to develop complementary systems allows

108
00:05:05,910 --> 00:05:03,240
NASA to focus on space exploration

109
00:05:08,360 --> 00:05:05,920
beyond low Earth orbit so the

110
00:05:11,970 --> 00:05:08,370
complementary in it as the commercial

111
00:05:14,130 --> 00:05:11,980
plan works and and relieves our costs

112
00:05:15,990 --> 00:05:14,140
need for supporting ISS it gives more

113
00:05:18,240 --> 00:05:16,000

money for exploration an exploration

114
00:05:20,840 --> 00:05:18,250
allows us to take the lessons we learn

115
00:05:23,580 --> 00:05:20,850
from the ISS support and apply it to

116
00:05:25,890 --> 00:05:23,590
long-term and exploration of the solar

117
00:05:27,660 --> 00:05:25,900
system the difference in missions means

118
00:05:30,300 --> 00:05:27,670
the spacecraft must have different

119
00:05:32,820 --> 00:05:30,310
designs for Orion's long-duration

120
00:05:34,440 --> 00:05:32,830
missions the crew must have more living

121
00:05:36,540 --> 00:05:34,450
space than the amount needed for a

122
00:05:38,550 --> 00:05:36,550
commercial spacecraft short duration

123
00:05:41,220 --> 00:05:38,560
mission as a result

124
00:05:43,140 --> 00:05:41,230
Orion's interior space is almost 40

125
00:05:44,550 --> 00:05:43,150
percent larger than most commercial

126
00:05:46,760 --> 00:05:44,560
spacecraft designs that are in

127
00:05:51,750 --> 00:05:49,470
Orion also will have the capability to

128
00:05:53,430 --> 00:05:51,760
act as a backup for transporting cargo

129
00:05:58,260 --> 00:05:53,440
and crew to the space station in the

130
00:06:01,500 --> 00:05:58,270
unlikely event it is needed with the

131
00:06:03,330 --> 00:06:01,510
Orion MPCV NASA will extend human

132
00:06:06,150 --> 00:06:03,340
presence in the B solar system as

133
00:06:07,950 --> 00:06:06,160
America once again voyages beyond the

134
00:06:09,780 --> 00:06:07,960
pull of Earth's gravity it's part of

135
00:06:12,900 --> 00:06:09,790
what we are it's part of being human I

136
00:06:14,730 --> 00:06:12,910
think to go beyond what we understand to

137
00:06:16,950 --> 00:06:14,740
push the boundaries so it's another

138
00:06:19,980 --> 00:06:16,960

great step every day that we design

139
00:06:22,920 --> 00:06:19,990
Orion we get closer to going out to

140
00:06:24,840 --> 00:06:22,930
places like the Moon Mars asteroids or

141
00:06:27,690 --> 00:06:24,850
perhaps even the moons of other planets

142
00:06:29,850 --> 00:06:27,700
as commercial partners design and build

143
00:06:32,490 --> 00:06:29,860
vehicles for transportation to low-earth

144
00:06:34,620 --> 00:06:32,500
orbit NASA is now focusing on the

145
00:06:37,220 --> 00:06:34,630
vehicles and systems needed for the next

146
00:06:40,050 --> 00:06:37,230
generation of human space exploration in

147
00:06:42,420 --> 00:06:40,060
factories and plants in cities and towns

148
00:06:44,250 --> 00:06:42,430
across America men and women are

149
00:06:46,620 --> 00:06:44,260
building the spacecraft that will allow

150
00:06:48,660 --> 00:06:46,630
humans to leave earth and expand our

151
00:06:51,660 --> 00:06:48,670
knowledge of planets and moons and

152
00:06:54,030 --> 00:06:51,670
asteroids for the first time in a

153
00:06:56,640 --> 00:06:54,040
generation we will explore beyond Earth

154
00:06:59,430 --> 00:06:56,650
orbit we will go places humans have