

An astronaut in a white space suit is working on the exterior of the International Space Station (ISS). The astronaut is positioned in the center of the frame, with their legs and arms extended. The background shows the Earth's blue and white horizon against the blackness of space. Various components of the ISS, including railings and equipment, are visible in the foreground and background.

#AskNASA AT HOME

**HOW DO WE LAUNCH ASTRONAUTS
FROM THE UNITED STATES
TO THE SPACE STATION?**

1
00:00:00,367 --> 00:00:01,801
>> Hi, I'm Carol Scott

2
00:00:01,801 --> 00:00:03,036
and I help astronauts get to

3
00:00:03,036 --> 00:00:04,804
the International Space Station.

4
00:00:04,804 --> 00:00:06,773
And this is "#AskNASA."

5
00:00:13,113 --> 00:00:14,881
>> Liftoff as the Falcon 9

6
00:00:14,881 --> 00:00:16,182
and Crew Dragon,

7
00:00:16,182 --> 00:00:18,284
go NASA! Go SpaceX!

8
00:00:18,284 --> 00:00:20,487
Godspeed, Bob and Doug!

9
00:00:20,487 --> 00:00:21,488
>> So Launch America

10
00:00:21,488 --> 00:00:23,690
is all about utilizing

11
00:00:23,690 --> 00:00:25,625
our commercial companies to be

12
00:00:25,625 --> 00:00:27,861
able to launch astronauts to

13
00:00:27,861 --> 00:00:29,129

the International Space Station

14

00:00:29,129 --> 00:00:30,563
from America's soil

15

00:00:30,563 --> 00:00:32,766
on American made rockets.

16

00:00:32,766 --> 00:00:34,434
So this is a unique partnership

17

00:00:34,434 --> 00:00:35,802
that the government has formed

18

00:00:35,802 --> 00:00:37,737
with the commercial partners.

19

00:00:37,737 --> 00:00:39,773
We are leading and guiding them,

20

00:00:39,773 --> 00:00:40,740
we have provided

21

00:00:40,740 --> 00:00:42,008
SpaceX and Boeing--

22

00:00:42,008 --> 00:00:44,377
we have given them some, um,

23

00:00:44,377 --> 00:00:45,779
requirements in--

24

00:00:45,779 --> 00:00:46,746
including where they've

25

00:00:46,746 --> 00:00:47,580
gotta meet design

26
00:00:47,580 --> 00:00:48,882
and construction standards.

27
00:00:48,882 --> 00:00:49,883
Oh, and there's tons

28
00:00:49,883 --> 00:00:50,750
and tons and tons

29
00:00:50,750 --> 00:00:52,152
of innovation going on.

30
00:00:52,152 --> 00:00:53,019
And the way that

31
00:00:53,019 --> 00:00:53,920
we're doing this allows

32
00:00:53,920 --> 00:00:54,954
the partners to be able

33
00:00:54,954 --> 00:00:56,556
to innovate even more.

34
00:00:56,556 --> 00:00:57,457
They're able to get

35
00:00:57,457 --> 00:00:58,425
that performance from

36
00:00:58,425 --> 00:00:59,492
some new technologies

37
00:00:59,492 --> 00:01:00,727
that they have on board.

38
00:01:00,727 --> 00:01:02,862

All of those degrees of freedom

39

00:01:02,862 --> 00:01:03,696

are part of

40

00:01:03,696 --> 00:01:05,064

this commercial partnership

41

00:01:05,064 --> 00:01:06,199

and it's awesome.

42

00:01:06,199 --> 00:01:07,967

So this is a historic launch

43

00:01:07,967 --> 00:01:09,035

because it's the first time

44

00:01:09,035 --> 00:01:10,637

that we've ever launched,

45

00:01:10,637 --> 00:01:11,738

uh, utilizing

46

00:01:11,738 --> 00:01:12,772

the commercial partners.

47

00:01:12,772 --> 00:01:14,073

We're buying a seat

48

00:01:14,073 --> 00:01:15,241

for astronauts

49

00:01:15,241 --> 00:01:16,609

and so this is new.

50

00:01:16,609 --> 00:01:17,644

That's like if you were trying

51
00:01:17,644 --> 00:01:19,679
to buy a seat on an airline.

52
00:01:19,679 --> 00:01:20,780
This is gonna allow

53
00:01:20,780 --> 00:01:23,550
for a lot more access to space

54
00:01:23,550 --> 00:01:25,351
from other commercial partners,

55
00:01:25,351 --> 00:01:26,553
from other, maybe,

56
00:01:26,553 --> 00:01:28,054
potential tourism,

57
00:01:28,054 --> 00:01:29,556
and then in future generations

58
00:01:29,556 --> 00:01:30,523
it'll be available

59
00:01:30,523 --> 00:01:32,091
to a lot more folks.

60
00:01:32,100 --> 00:01:33,420
Just like you and I.

61
00:01:34,160 --> 00:01:38,620
My name is Benjamin and I am going to be a fifth grader next year.

62
00:01:39,380 --> 00:01:43,760
So, what can my generation expect from #Launch America?

63
00:01:44,120 --> 00:01:46,520

So, Ben, back in the 1920s

64

00:01:46,520 --> 00:01:47,300
and the 1930s,

65

00:01:47,300 --> 00:01:48,140
the government transferred

66

00:01:48,140 --> 00:01:49,720
how we move mail.

67

00:01:49,720 --> 00:01:52,880
And that's how we got the airline industry started.

68

00:01:52,880 --> 00:01:54,680
And so this'll be a, um,

69

00:01:54,680 --> 00:01:55,760
a very similar path

70

00:01:55,760 --> 00:01:57,160
with commercial space.

71

00:01:57,200 --> 00:01:58,820
You're gonna see a huge economic

72

00:01:58,820 --> 00:02:00,280
boom by NASA being able

73

00:02:00,280 --> 00:02:01,380
to transfer all those

74

00:02:01,380 --> 00:02:03,880
information to the commercial partners

75

00:02:03,880 --> 00:02:05,320
and letting them innovate

76

00:02:05,320 --> 00:02:06,640

to meet their business needs.

77

00:02:06,640 --> 00:02:08,120

And eventually, they're going

78

00:02:08,120 --> 00:02:09,220

to take additional passengers

79

00:02:09,220 --> 00:02:10,540

just like the airlines

80

00:02:10,540 --> 00:02:11,600

did back then,

81

00:02:11,640 --> 00:02:12,760

additional passengers,

82

00:02:12,760 --> 00:02:13,660

and you will be able

83

00:02:13,660 --> 00:02:14,800

to go to space.

84

00:02:15,200 --> 00:02:16,200

You are going to see

85

00:02:16,200 --> 00:02:17,580

human launches, um,

86

00:02:17,600 --> 00:02:18,620

happening quite a bit here

87

00:02:18,620 --> 00:02:19,880

on the space coast.

88

00:02:19,880 --> 00:02:20,880

We want to rotate

89

00:02:20,880 --> 00:02:22,080
every six months,

90

00:02:22,120 --> 00:02:23,780
having Astronauts crews

91

00:02:23,780 --> 00:02:24,640
going up to

92

00:02:24,640 --> 00:02:26,000
the International Space Station.

93

00:02:26,000 --> 00:02:27,240
NASA still has a team

94

00:02:27,240 --> 00:02:28,920
of astronauts, but we have

95

00:02:28,920 --> 00:02:29,880
the capability to have

96

00:02:29,880 --> 00:02:32,040
commercial astronauts on board.

97

00:02:32,040 --> 00:02:33,260
So if, for instance,

98

00:02:33,260 --> 00:02:34,020
you looked at Boeing,

99

00:02:34,020 --> 00:02:35,940
Boeing has Chris Ferguson,

100

00:02:35,940 --> 00:02:36,720
who was the last

101
00:02:36,840 --> 00:02:37,760
shuttle commander,

102
00:02:37,760 --> 00:02:39,280
he is one of their astronauts

103
00:02:39,280 --> 00:02:41,360
who will be taking a crew up

104
00:02:41,360 --> 00:02:42,940
on their CST-100

105
00:02:42,940 --> 00:02:44,120
to the space station.

106
00:02:44,140 --> 00:02:45,180
So we can accommodate

107
00:02:45,180 --> 00:02:47,200
both NASA astronauts

108
00:02:47,200 --> 00:02:48,800
and commercial astronauts.

109
00:02:48,920 --> 00:02:50,120
And I believe you'll see

110
00:02:50,120 --> 00:02:51,220
a growing field of commercial

111
00:02:51,220 --> 00:02:53,040
astronauts very soon.

112
00:02:53,160 --> 00:02:54,120
Future missions are going

113
00:02:54,240 --> 00:02:55,240

to be revolutionized

114

00:02:55,240 --> 00:02:56,520

by this process here.

115

00:02:56,720 --> 00:02:57,880

We're gonna be able to get more

116

00:02:57,880 --> 00:02:59,280

people up on space station.

117

00:02:59,280 --> 00:03:00,320

We're gonna get it

118

00:03:00,320 --> 00:03:01,840

to full capacity of personnel

119

00:03:01,840 --> 00:03:03,320

and this will allow us

120

00:03:03,320 --> 00:03:04,540

to get more research done

121

00:03:04,540 --> 00:03:06,500

on the space station,

122

00:03:06,500 --> 00:03:07,200

getting more science which

123

00:03:07,200 --> 00:03:09,280

will also help us here on Earth.

124

00:03:09,280 --> 00:03:10,480

With industry helping us

125

00:03:10,480 --> 00:03:11,760

get our astronauts to

126

00:03:11,760 --> 00:03:13,360
the International Space Station,

127

00:03:13,400 --> 00:03:14,980
NASA can focus on

128

00:03:14,980 --> 00:03:16,680
getting our first woman

129

00:03:16,680 --> 00:03:18,000
and the next man to the moon.

130

00:03:18,280 --> 00:03:19,360
We are absolutely using

131

00:03:19,360 --> 00:03:20,740
the commercial partners

132

00:03:20,740 --> 00:03:21,240
to be able to help us

133

00:03:21,240 --> 00:03:22,440
reach the moon.

134

00:03:22,440 --> 00:03:23,480
So they're gonna be helping us

135

00:03:23,480 --> 00:03:24,900
with our human lander systems

136

00:03:24,900 --> 00:03:26,360
and being able to take

137

00:03:26,360 --> 00:03:27,100
cargo and supplies

138

00:03:27,100 --> 00:03:28,320

to the moon's surface,

139

00:03:28,320 --> 00:03:29,760

and then be ready for

140

00:03:29,820 --> 00:03:31,600

our crews to be able to use.

141

00:03:32,960 --> 00:03:34,720

So the hardest part

142

00:03:34,720 --> 00:03:36,360

of going to space--

143

00:03:36,360 --> 00:03:37,440

um, you know there's several

144

00:03:37,440 --> 00:03:38,040

different sections of it.

145

00:03:38,040 --> 00:03:39,720

If you work ground systems,

146

00:03:39,720 --> 00:03:40,280

you know, it's all

147

00:03:40,320 --> 00:03:41,720

about launching, right?

148

00:03:41,840 --> 00:03:42,900

But then you've got to

149

00:03:42,900 --> 00:03:43,720

be able to go through

150

00:03:43,720 --> 00:03:45,320

all the dynamic environments

151
00:03:45,320 --> 00:03:46,040
and being able to

152
00:03:46,040 --> 00:03:47,640
actually get into orbit.

153
00:03:47,640 --> 00:03:48,800
And then, actually

154
00:03:48,800 --> 00:03:49,680
you've got to go make it

155
00:03:49,680 --> 00:03:50,880
to your destination.

156
00:03:50,960 --> 00:03:52,040
So you've gotta have

157
00:03:52,040 --> 00:03:53,440
all your guidance systems

158
00:03:53,440 --> 00:03:54,520
ready to take you

159
00:03:54,520 --> 00:03:55,840
where you want to go.

160
00:03:55,920 --> 00:03:56,800
And then you've got

161
00:03:56,800 --> 00:03:57,800
to live in space, right?

162
00:03:57,800 --> 00:03:58,680
But then you've got to be

163
00:03:58,680 --> 00:04:00,280

able to return them safely,

164

00:04:00,360 --> 00:04:01,440

um, you know,

165

00:04:01,440 --> 00:04:02,320

when they're ready to come back

166

00:04:02,320 --> 00:04:04,120

from being on station.

167

00:04:08,280 --> 00:04:09,400

>> Do you have a question

168

00:04:09,400 --> 00:04:10,440

for NASA?

169

00:04:10,440 --> 00:04:11,240

Send your questions