
ENERGY

1
00:00:04,070 --> 00:00:02,070
good morning everyone and thank you for

2
00:00:06,630 --> 00:00:04,080
joining us as we announce the winner of

3
00:00:08,870 --> 00:00:06,640
nasa's exploration design challenge

4
00:00:10,709 --> 00:00:08,880
i'm heather mckay a propulsion engineer

5
00:00:13,030 --> 00:00:10,719
with lockheed martin and i work on the

6
00:00:14,549 --> 00:00:13,040
orion spacecraft program

7
00:00:16,550 --> 00:00:14,559
looking at these bright young students

8
00:00:18,790 --> 00:00:16,560
here today it reminds me of the moment i

9
00:00:20,550 --> 00:00:18,800
was inspired to become an engineer

10
00:00:22,550 --> 00:00:20,560
my mom brought me to take your child to

11
00:00:24,710 --> 00:00:22,560
work day at lockheed martin and i met

12
00:00:26,470 --> 00:00:24,720
astronaut bruce mccandless

13
00:00:28,310 --> 00:00:26,480

listening to bruce talk about his career

14
00:00:29,349 --> 00:00:28,320
with nasa i knew this was what i wanted

15
00:00:31,429 --> 00:00:29,359
to do

16
00:00:33,830 --> 00:00:31,439
stem events like this festival in the

17
00:00:36,069 --> 00:00:33,840
exploration design challenge inspired me

18
00:00:37,910 --> 00:00:36,079
to pursue a career in engineering and i

19
00:00:40,069 --> 00:00:37,920
hope this experience has inspired all of

20
00:00:41,750 --> 00:00:40,079
you and students across the country to

21
00:00:43,670 --> 00:00:41,760
do the same

22
00:00:45,590 --> 00:00:43,680
we're fortunate to be joined today by

23
00:00:47,510 --> 00:00:45,600
some of the nation's top aerospace

24
00:00:49,270 --> 00:00:47,520
experts who have inspired many

25
00:00:51,510 --> 00:00:49,280
throughout their careers nasa

26
00:00:53,430 --> 00:00:51,520
administrator charles bolden

27
00:00:56,150 --> 00:00:53,440
marilyn hewson lockheed martin's

28
00:00:59,349 --> 00:00:56,160
president chairman and ceo

29
00:01:01,670 --> 00:00:59,359
mark guyer nasa's orion program manager

30
00:01:03,910 --> 00:01:01,680
and rex walheim nasa astronaut for the

31
00:01:05,830 --> 00:01:03,920
orion program

32
00:01:08,070 --> 00:01:05,840
these leaders are here to honor the five

33
00:01:10,310 --> 00:01:08,080
finalist teams in the exploration design

34
00:01:12,230 --> 00:01:10,320
challenge a nationwide science

35
00:01:13,510 --> 00:01:12,240
technology engineering and math

36
00:01:15,670 --> 00:01:13,520
competition

37
00:01:17,429 --> 00:01:15,680
these talented creative students have

38
00:01:19,350 --> 00:01:17,439

worked hard to develop a design for

39
00:01:21,429 --> 00:01:19,360
keeping astronauts safe from the dangers

40
00:01:24,070 --> 00:01:21,439
of deep space radiation

41
00:01:26,070 --> 00:01:24,080
over the last several weeks nasa has put

42
00:01:28,149 --> 00:01:26,080
each of these designs to the test

43
00:01:30,550 --> 00:01:28,159
measuring how well each one performs in

44
00:01:32,310 --> 00:01:30,560
shielding against radiation

45
00:01:34,390 --> 00:01:32,320
today we'll unveil the winning team

46
00:01:36,310 --> 00:01:34,400
whose design will fly and launch into

47
00:01:37,749 --> 00:01:36,320
space on orion's first test flight in

48
00:01:39,670 --> 00:01:37,759
december

49
00:01:42,870 --> 00:01:39,680
congratulations to all of our finalist

50
00:01:45,109 --> 00:01:42,880
teams and good luck to you in the future

51
00:01:47,030 --> 00:01:45,119
it's my honor to introduce four-time

52
00:01:55,190 --> 00:01:47,040
space flight veteran and nasa

53
00:01:58,709 --> 00:01:57,109
thanks very much heather and uh and

54
00:02:01,030 --> 00:01:58,719
marilyn thank you so much again for

55
00:02:03,590 --> 00:02:01,040
coming it's uh it's a pleasure for me to

56
00:02:05,990 --> 00:02:03,600
be here today and thanks to all of you

57
00:02:07,749 --> 00:02:06,000
who have chosen to join us um you know

58
00:02:09,669 --> 00:02:07,759
our partnership with lockheed martin and

59
00:02:11,830 --> 00:02:09,679
the national institute of aerospace on

60
00:02:14,150 --> 00:02:11,840
the exploration design challenge has

61
00:02:15,830 --> 00:02:14,160
been incredibly rewarding and the best

62
00:02:17,910 --> 00:02:15,840
part is yet to come

63
00:02:19,190 --> 00:02:17,920

marilyn and i were talking earlier that

64
00:02:21,350 --> 00:02:19,200
you know who would have believed that

65
00:02:23,110 --> 00:02:21,360
we'd be here today

66
00:02:26,070 --> 00:02:23,120
when we started all this stuff back in

67
00:02:28,949 --> 00:02:26,080
houston uh in front of the orion mock-up

68
00:02:31,030 --> 00:02:28,959
but but we are here and the next big

69
00:02:32,470 --> 00:02:31,040
deal is coming up in december so so

70
00:02:34,150 --> 00:02:32,480
we're all excited

71
00:02:36,229 --> 00:02:34,160
when we kicked this challenge off last

72
00:02:37,910 --> 00:02:36,239
spring i knew the excitement i

73
00:02:39,270 --> 00:02:37,920
personally felt at the johnson space

74
00:02:40,710 --> 00:02:39,280
center was real

75
00:02:43,030 --> 00:02:40,720
but i had no idea the depth and

76
00:02:44,949 --> 00:02:43,040
enthusiasm of the responses we'd receive

77
00:02:45,750 --> 00:02:44,959
and i think every time i checked in to

78
00:02:47,990 --> 00:02:45,760
see

79
00:02:51,110 --> 00:02:48,000
what was going on i was amazed at the

80
00:02:53,830 --> 00:02:51,120
number of students um who were beginning

81
00:02:57,030 --> 00:02:53,840
to to reply within weeks we had i think

82
00:02:59,430 --> 00:02:57,040
it was 35 000 students who had already

83
00:03:01,030 --> 00:02:59,440
come in and and that that so greatly

84
00:03:03,990 --> 00:03:01,040
exceeded any expectation that i

85
00:03:06,630 --> 00:03:04,000
personally had but it has been great in

86
00:03:08,790 --> 00:03:06,640
the end more than 127 000 students of

87
00:03:11,509 --> 00:03:08,800
all ages from 81 countries around the

88
00:03:13,990 --> 00:03:11,519

world have taken part in the challenge

89
00:03:15,430 --> 00:03:14,000
we received 46 formal entries from the

90
00:03:17,750 --> 00:03:15,440
most challenging portion of the

91
00:03:19,589 --> 00:03:17,760
competition the high school engineering

92
00:03:21,589 --> 00:03:19,599
and design competition

93
00:03:23,589 --> 00:03:21,599
that represents a lot of work by a lot

94
00:03:25,910 --> 00:03:23,599
of teams in a lot of different places

95
00:03:28,070 --> 00:03:25,920
around this country all focused on the

96
00:03:29,910 --> 00:03:28,080
future of human space flight that's

97
00:03:31,110 --> 00:03:29,920
amazing and to me it's it's really

98
00:03:33,270 --> 00:03:31,120
inspiring

99
00:03:35,190 --> 00:03:33,280
so to all of the five finalists i say

100
00:03:37,910 --> 00:03:35,200
congratulations it's been a pleasure to

101
00:03:39,430 --> 00:03:37,920
meet you all but really quickly so i

102
00:03:40,789 --> 00:03:39,440
hope that over the coming weeks we'll

103
00:03:43,030 --> 00:03:40,799
have an opportunity to get to see you

104
00:03:45,190 --> 00:03:43,040
more and more and we'll see all of you

105
00:03:46,949 --> 00:03:45,200
down at the launch in december because

106
00:03:48,789 --> 00:03:46,959
it's it's a big deal and it's going to

107
00:03:50,869 --> 00:03:48,799
be a lot of fun for everybody

108
00:03:53,030 --> 00:03:50,879
your hard work is really appreciated and

109
00:03:55,750 --> 00:03:53,040
i know you learned a lot doing it

110
00:03:58,070 --> 00:03:55,760
i hope that this um you know this just

111
00:04:01,270 --> 00:03:58,080
is just the start of your studies in

112
00:04:03,110 --> 00:04:01,280
science technology engineering and math

113
00:04:05,190 --> 00:04:03,120

you're all outstanding examples of the

114
00:04:07,750 --> 00:04:05,200
power of american innovation your

115
00:04:10,070 --> 00:04:07,760
passion for discovery and the create the

116
00:04:11,910 --> 00:04:10,080
creative ideas you've brought forward

117
00:04:13,270 --> 00:04:11,920
have made us think and have helped us

118
00:04:16,789 --> 00:04:13,280
take a fresh look at the very

119
00:04:19,670 --> 00:04:16,799
challenging problem on our path to mars

120
00:04:20,949 --> 00:04:19,680
it was interesting talking to a dad

121
00:04:22,629 --> 00:04:20,959
who's

122
00:04:25,350 --> 00:04:22,639
i don't know whether i'm trying to find

123
00:04:27,430 --> 00:04:25,360
him back there but he he he was almost

124
00:04:29,030 --> 00:04:27,440
as excited as his son and the other

125
00:04:31,270 --> 00:04:29,040
students in the challenge i see him back

126
00:04:33,350 --> 00:04:31,280
there and we have some on some of our

127
00:04:36,150 --> 00:04:33,360
own ideas so we may we may challenge

128
00:04:37,990 --> 00:04:36,160
some of you teams here as we go along

129
00:04:39,590 --> 00:04:38,000
um you know what's unique about this

130
00:04:41,670 --> 00:04:39,600
challenge

131
00:04:43,830 --> 00:04:41,680
is that the winning team's design will

132
00:04:46,150 --> 00:04:43,840
actually fly on orion's first flight

133
00:04:47,670 --> 00:04:46,160
test in december

134
00:04:49,670 --> 00:04:47,680
your work will be soaring through the

135
00:04:51,510 --> 00:04:49,680
van allen radiation belts on the first

136
00:04:54,390 --> 00:04:51,520
spacecraft built for humans to travel

137
00:04:56,550 --> 00:04:54,400
that far in more than 40 years

138
00:04:59,110 --> 00:04:56,560

nasa always learns from every single

139
00:05:01,189 --> 00:04:59,120
flight so we'll use the data we gather

140
00:05:03,670 --> 00:05:01,199
to move to the next stage of our work to

141
00:05:05,510 --> 00:05:03,680
send humans farther into space

142
00:05:08,710 --> 00:05:05,520
our finalists were announced in march

143
00:05:12,629 --> 00:05:08,720
and i'd like to recognize the final five

144
00:05:14,790 --> 00:05:12,639
uh now team titan shielding systems from

145
00:05:16,790 --> 00:05:14,800
illinois math and science academy in

146
00:05:19,270 --> 00:05:16,800
aurora illinois and you all can raise

147
00:05:26,310 --> 00:05:19,280
your hands or stand up or whatever the

148
00:05:29,749 --> 00:05:28,150
team aries from governor's school for

149
00:05:35,990 --> 00:05:29,759
science and technology in hampton

150
00:05:39,590 --> 00:05:37,270
and i'm going to get in trouble with

151
00:05:40,710 --> 00:05:39,600
this next team because i'm i'm sort of a

152
00:05:43,350 --> 00:05:40,720
naval

153
00:05:44,710 --> 00:05:43,360
person as a marine and i think you may

154
00:05:46,550 --> 00:05:44,720
pronounce it different you know we've

155
00:05:48,469 --> 00:05:46,560
got aegis cruisers but i think you

156
00:05:49,430 --> 00:05:48,479
pronounce your name is you pronounce it

157
00:05:51,590 --> 00:05:49,440
aegis

158
00:05:54,550 --> 00:05:51,600
see i knew i'd get it wrong

159
00:06:01,430 --> 00:05:54,560
so team aegis from harriman high school

160
00:06:05,749 --> 00:06:03,350
team ariane from erie high school in

161
00:06:10,469 --> 00:06:05,759
erie kansas

162
00:06:14,790 --> 00:06:13,110
and finally team lore from summit view

163
00:06:20,629 --> 00:06:14,800

high school in north hollywood

164
00:06:23,670 --> 00:06:22,309
and i don't know whether you stand up

165
00:06:26,550 --> 00:06:23,680
again and then turn around and tell me

166
00:06:27,909 --> 00:06:26,560
if you can see the the uh the you that's

167
00:06:29,430 --> 00:06:27,919
you're the one i understand i mean we

168
00:06:33,510 --> 00:06:29,440
turn around there

169
00:06:34,629 --> 00:06:33,520
this is the i love this tie

170
00:06:42,870 --> 00:06:34,639
mike

171
00:06:43,990 --> 00:06:42,880
from the from the chin down okay

172
00:06:46,950 --> 00:06:44,000
well

173
00:06:51,510 --> 00:06:49,830
i know our goal with edc is to ignite

174
00:06:54,150 --> 00:06:51,520
the imagination of students about the

175
00:06:56,790 --> 00:06:54,160
possibilities of space exploration this

176
00:06:59,110 --> 00:06:56,800
challenge was tough and so is exploring

177
00:07:01,749 --> 00:06:59,120
space but great achievements come from

178
00:07:03,510 --> 00:07:01,759
taking our taking on great challenges

179
00:07:05,430 --> 00:07:03,520
all of you students represent the next

180
00:07:07,990 --> 00:07:05,440
generation of scientists engineers and

181
00:07:09,990 --> 00:07:08,000
explorers nasa is committed to providing

182
00:07:12,390 --> 00:07:10,000
stem opportunities now that will help

183
00:07:14,309 --> 00:07:12,400
you to make valuable contributions to

184
00:07:16,469 --> 00:07:14,319
this nation in the future

185
00:07:18,870 --> 00:07:16,479
one of you could indeed serve as a

186
00:07:20,150 --> 00:07:18,880
mission to orion on a mission to orion

187
00:07:21,510 --> 00:07:20,160
yourself

188
00:07:24,230 --> 00:07:21,520

uh or

189
00:07:26,390 --> 00:07:24,240
in any of the many other paths our stem

190
00:07:29,589 --> 00:07:26,400
can take you that uncovers knowledge and

191
00:07:31,430 --> 00:07:29,599
helps us reach higher as i said nasa is

192
00:07:33,270 --> 00:07:31,440
on a path to mars that involves our

193
00:07:35,990 --> 00:07:33,280
commercial partners taking over access

194
00:07:36,950 --> 00:07:36,000
to low earth orbit for cargo in and soon

195
00:07:38,390 --> 00:07:36,960
crew

196
00:07:41,110 --> 00:07:38,400
extending the international space

197
00:07:42,790 --> 00:07:41,120
station until at least 2024 to help us

198
00:07:44,869 --> 00:07:42,800
learn more about living and working in

199
00:07:47,670 --> 00:07:44,879
space for the long term and

200
00:07:48,950 --> 00:07:47,680
demonstrating new technologies and

201
00:07:51,029 --> 00:07:48,960
providing

202
00:07:53,110 --> 00:07:51,039
and proving new technologies such as the

203
00:07:55,749 --> 00:07:53,120
radiation shielding we're talking about

204
00:07:57,749 --> 00:07:55,759
today in deep space as we capture an

205
00:08:00,230 --> 00:07:57,759
asteroid bring it closer to earth and

206
00:08:03,350 --> 00:08:00,240
then send astronauts to visit it and

207
00:08:05,749 --> 00:08:03,360
finally we head to mars in the 2030s

208
00:08:07,909 --> 00:08:05,759
all of you have helped us move down this

209
00:08:09,749 --> 00:08:07,919
path a little bit farther i hope you'll

210
00:08:12,150 --> 00:08:09,759
join us for the rest of the journey and

211
00:08:15,029 --> 00:08:12,160
i look forward to where we go from here

212
00:08:16,710 --> 00:08:15,039
congratulations again now it's my honor

213
00:08:19,029 --> 00:08:16,720

to welcome lockheed martin chairman

214
00:08:25,430 --> 00:08:19,039
president and ceo marilyn hewson to

215
00:08:28,950 --> 00:08:27,189
thank you administrator bolden and good

216
00:08:30,469 --> 00:08:28,960
morning everyone

217
00:08:32,469 --> 00:08:30,479
let me begin by offering my

218
00:08:33,589 --> 00:08:32,479
congratulations to all of the finalists

219
00:08:35,750 --> 00:08:33,599
teams

220
00:08:37,350 --> 00:08:35,760
each of you should be very proud of your

221
00:08:39,430 --> 00:08:37,360
achievement

222
00:08:42,389 --> 00:08:39,440
you've demonstrated your talent

223
00:08:44,470 --> 00:08:42,399
your hard work and your ingenuity all

224
00:08:46,470 --> 00:08:44,480
factors that are so important to the

225
00:08:48,949 --> 00:08:46,480
future of space exploration and

226
00:08:51,350 --> 00:08:48,959
scientific discovery

227
00:08:52,630 --> 00:08:51,360
someday we'll send astronauts beyond

228
00:08:54,550 --> 00:08:52,640
earth's orbit

229
00:08:58,710 --> 00:08:54,560
to explore asteroids

230
00:09:00,230 --> 00:08:58,720
and even plant an american flag on mars

231
00:09:01,350 --> 00:09:00,240
and you could be the ones to make it

232
00:09:03,670 --> 00:09:01,360
happen

233
00:09:05,750 --> 00:09:03,680
just think about that

234
00:09:08,470 --> 00:09:05,760
this nation has been shaped by moments

235
00:09:11,350 --> 00:09:08,480
of great technological achievement and

236
00:09:14,470 --> 00:09:11,360
each of you has an opportunity to help

237
00:09:16,790 --> 00:09:14,480
make that next achievement happen

238
00:09:19,350 --> 00:09:16,800

at lockheed martin we believe it's our

239
00:09:21,910 --> 00:09:19,360
job to make those moments possible and

240
00:09:24,790 --> 00:09:21,920
to inspire future innovators like

241
00:09:27,030 --> 00:09:24,800
yourselves to reach for the stars

242
00:09:29,269 --> 00:09:27,040
that starts by investing in science

243
00:09:32,470 --> 00:09:29,279
technology engineering and math

244
00:09:33,829 --> 00:09:32,480
education so students can pursue stem

245
00:09:36,630 --> 00:09:33,839
careers

246
00:09:38,790 --> 00:09:36,640
this nation is running dangerously short

247
00:09:40,389 --> 00:09:38,800
on engineering talent we need for

248
00:09:42,710 --> 00:09:40,399
tomorrow

249
00:09:45,350 --> 00:09:42,720
in fact studies show that we're facing a

250
00:09:48,150 --> 00:09:45,360
potential shortfall of one million stem

251
00:09:50,150 --> 00:09:48,160
professionals in the next decade

252
00:09:53,190 --> 00:09:50,160
if we want to lead tomorrow's moments of

253
00:09:55,829 --> 00:09:53,200
achievement we need to invest in the new

254
00:09:57,910 --> 00:09:55,839
pioneers today

255
00:10:00,070 --> 00:09:57,920
so that's why we're so proud to partner

256
00:10:01,670 --> 00:10:00,080
with nasa and the national institute of

257
00:10:04,310 --> 00:10:01,680
aerospace on programs like the

258
00:10:06,710 --> 00:10:04,320
exploration design challenge the

259
00:10:07,790 --> 00:10:06,720
exploration design challenge has already

260
00:10:11,269 --> 00:10:07,800
reached

261
00:10:13,430 --> 00:10:11,279
127 000 students worldwide

262
00:10:15,350 --> 00:10:13,440
engaging them in real world engineering

263
00:10:17,190 --> 00:10:15,360

challenges and igniting their

264
00:10:20,550 --> 00:10:17,200
imaginations about the endless

265
00:10:22,470 --> 00:10:20,560
possibilities of space discovery

266
00:10:24,630 --> 00:10:22,480
and what better place to announce the

267
00:10:26,710 --> 00:10:24,640
winner of the challenge than right here

268
00:10:28,630 --> 00:10:26,720
at the usa science and engineering

269
00:10:30,790 --> 00:10:28,640
festival

270
00:10:33,430 --> 00:10:30,800
among the bright minds that will join us

271
00:10:36,710 --> 00:10:33,440
here this weekend are the pioneers that

272
00:10:39,590 --> 00:10:36,720
will drive breakthroughs in clean energy

273
00:10:42,710 --> 00:10:39,600
revolutionize global communications and

274
00:10:44,710 --> 00:10:42,720
unlock the secrets of the universe

275
00:10:47,430 --> 00:10:44,720
if we can set those young people on the

276
00:10:48,949 --> 00:10:47,440
right course and inspire them to pursue

277
00:10:50,870 --> 00:10:48,959
careers in stem

278
00:10:52,870 --> 00:10:50,880
then we've made great progress in

279
00:10:54,630 --> 00:10:52,880
securing our nation's future and

280
00:10:57,030 --> 00:10:54,640
ensuring that the united states

281
00:10:58,630 --> 00:10:57,040
continues to lead in innovation and

282
00:11:01,670 --> 00:10:58,640
discovery

283
00:11:04,150 --> 00:11:01,680
again on behalf of the 113 000 men and

284
00:11:06,389 --> 00:11:04,160
women of lockheed martin congratulations

285
00:11:08,230 --> 00:11:06,399
to the finalist teams here today

286
00:11:11,030 --> 00:11:08,240
when orion launches for the first time

287
00:11:13,910 --> 00:11:11,040
later this year each of you can watch

288
00:11:15,110 --> 00:11:13,920

with pride and know that you played a

289
00:11:17,430 --> 00:11:15,120
role

290
00:11:19,990 --> 00:11:17,440
you've already achieved so much and i

291
00:11:22,069 --> 00:11:20,000
can't wait to see what you'll do next

292
00:11:24,790 --> 00:11:22,079
so now i'd like to welcome to the stage

293
00:11:26,790 --> 00:11:24,800
mark guyer nasa's orion program manager

294
00:11:29,190 --> 00:11:26,800
to the stage to to talk about orion's

295
00:11:31,670 --> 00:11:29,200
first flight and the role of the winning

296
00:11:37,750 --> 00:11:31,680
experience experiment will play

297
00:11:41,030 --> 00:11:39,670
thank you marilyn

298
00:11:42,710 --> 00:11:41,040
you know we do really have a really

299
00:11:44,710 --> 00:11:42,720
exciting year coming up with our first

300
00:11:46,710 --> 00:11:44,720
flight in december

301
00:11:48,230 --> 00:11:46,720
we're actually i think have demonstrable

302
00:11:50,150 --> 00:11:48,240
evidence that nasa is still in the

303
00:11:51,910 --> 00:11:50,160
exploration business

304
00:11:54,069 --> 00:11:51,920
i have two sons who are in high school

305
00:11:56,069 --> 00:11:54,079
same age as you guys and uh

306
00:11:58,389 --> 00:11:56,079
one day we were in the car and they were

307
00:12:00,790 --> 00:11:58,399
in the back seat talking about titanfall

308
00:12:01,750 --> 00:12:00,800
or skyrim or something pokemon or

309
00:12:04,629 --> 00:12:01,760
something

310
00:12:07,269 --> 00:12:04,639
and suddenly my son says dad do you ever

311
00:12:08,870 --> 00:12:07,279
stop and think about how cool it is

312
00:12:10,230 --> 00:12:08,880
that you are working on a spacecraft

313
00:12:11,829 --> 00:12:10,240

that's going to take people to other

314
00:12:13,750 --> 00:12:11,839
planets

315
00:12:15,670 --> 00:12:13,760
of course i know that

316
00:12:17,110 --> 00:12:15,680
in my head i know that but the way he

317
00:12:18,790 --> 00:12:17,120
got to the core point i think that's

318
00:12:20,710 --> 00:12:18,800
something that you young people do you

319
00:12:22,470 --> 00:12:20,720
really get to the main point of remind

320
00:12:24,710 --> 00:12:22,480
us that yes there's a lot of interesting

321
00:12:26,550 --> 00:12:24,720
stuff but fundamentally this is really

322
00:12:29,110 --> 00:12:26,560
really cool stuff

323
00:12:30,550 --> 00:12:29,120
the other thing i know from working with

324
00:12:33,030 --> 00:12:30,560
people your age is you have a lot of

325
00:12:34,790 --> 00:12:33,040
energy and you also question assumptions

326
00:12:36,870 --> 00:12:34,800
very well right why are we doing things

327
00:12:38,389 --> 00:12:36,880
the way we've done them in the past and

328
00:12:40,550 --> 00:12:38,399
both of those are very important for

329
00:12:43,030 --> 00:12:40,560
innovation and innovation is key to nasa

330
00:12:44,629 --> 00:12:43,040
succeeding as well as the country in

331
00:12:45,910 --> 00:12:44,639
general very very important

332
00:12:47,430 --> 00:12:45,920
qualities

333
00:12:49,190 --> 00:12:47,440
but what is really exciting about what

334
00:12:50,790 --> 00:12:49,200
you've done is you're not just come up

335
00:12:53,030 --> 00:12:50,800
with ideas

336
00:12:54,790 --> 00:12:53,040
but you've actually taken the time and

337
00:12:57,269 --> 00:12:54,800
taken your ideas and turned it into

338
00:12:58,870 --> 00:12:57,279

something turn it into a real experiment

339
00:13:00,629 --> 00:12:58,880
something we can actually fly on this

340
00:13:02,470 --> 00:13:00,639
mission and learn more about one of

341
00:13:04,710 --> 00:13:02,480
these key risks that we will have when

342
00:13:06,870 --> 00:13:04,720
we fly in space

343
00:13:10,550 --> 00:13:06,880
and i know high school students are busy

344
00:13:12,710 --> 00:13:10,560
homework other activities chores maybe

345
00:13:15,190 --> 00:13:12,720
uh maybe taking care of someone in your

346
00:13:16,949 --> 00:13:15,200
household uh maybe you have a job so

347
00:13:19,110 --> 00:13:16,959
it's a ton of things going on and in

348
00:13:20,550 --> 00:13:19,120
spite of all of that you spent the time

349
00:13:23,110 --> 00:13:20,560
to make that happen

350
00:13:26,870 --> 00:13:23,120
so i think the combination of ideas and

351
00:13:28,470 --> 00:13:26,880
also execution is a huge skill

352
00:13:29,829 --> 00:13:28,480
and it will lead you to great things so

353
00:13:31,750 --> 00:13:29,839
i want to thank you for all your great

354
00:13:32,870 --> 00:13:31,760
work and it's exciting to have you here

355
00:13:34,949 --> 00:13:32,880
today

356
00:13:36,949 --> 00:13:34,959
next i would like to welcome rex walheim

357
00:13:38,550 --> 00:13:36,959
he's of course rex is an astronaut so he

358
00:13:39,509 --> 00:13:38,560
gets to wear the suit

359
00:13:41,430 --> 00:13:39,519
um

360
00:13:43,509 --> 00:13:41,440
but he's also a great guy he's also the

361
00:13:44,870 --> 00:13:43,519
crew representative on orion so he's

362
00:13:46,550 --> 00:13:44,880
there when we make our big design

363
00:13:49,670 --> 00:13:46,560

decisions so he's weighing in on those

364
00:13:52,629 --> 00:13:49,680
every day he's logged over 566 hours in

365
00:13:59,189 --> 00:13:52,639
space and over 36 hours of space walk

366
00:14:02,790 --> 00:14:01,269
thank you mark and good morning everyone

367
00:14:04,310 --> 00:14:02,800
this was a very difficult challenge you

368
00:14:05,509 --> 00:14:04,320
guys were undertaking and all the teams

369
00:14:06,710 --> 00:14:05,519
should be very proud of your work i've

370
00:14:08,629 --> 00:14:06,720
had a chance to look at it and i'm

371
00:14:10,790 --> 00:14:08,639
really very impressed

372
00:14:12,230 --> 00:14:10,800
part of my job as the nasa astronaut is

373
00:14:13,910 --> 00:14:12,240
to represent the flight crew office as

374
00:14:15,670 --> 00:14:13,920
mark said to the orion program and help

375
00:14:17,350 --> 00:14:15,680
make sure that our systems are safe and

376
00:14:19,750 --> 00:14:17,360
reliable for flight

377
00:14:20,790 --> 00:14:19,760
and radiation exposure is a real threat

378
00:14:22,389 --> 00:14:20,800
it's something we have to deal with in

379
00:14:23,750 --> 00:14:22,399
human space flight and i've been so

380
00:14:25,189 --> 00:14:23,760
encouraged that you guys have taken such

381
00:14:27,590 --> 00:14:25,199
care and effort to come up with some

382
00:14:28,550 --> 00:14:27,600
designs to help protect our astronauts

383
00:14:30,389 --> 00:14:28,560
and now i want to tell you a little bit

384
00:14:32,550 --> 00:14:30,399
about the orion spacecraft and how each

385
00:14:34,470 --> 00:14:32,560
part is uh is designed to make sure that

386
00:14:35,350 --> 00:14:34,480
flight crews have a safe and successful

387
00:14:36,550 --> 00:14:35,360
mission

388
00:14:39,030 --> 00:14:36,560

you know orion is really made up of

389
00:14:41,110 --> 00:14:39,040
three parts the service module the

390
00:14:42,790 --> 00:14:41,120
crew module and the launch abort system

391
00:14:44,550 --> 00:14:42,800
the crew module is our living quarters

392
00:14:45,910 --> 00:14:44,560
it's about the size of a master bathroom

393
00:14:46,949 --> 00:14:45,920
and a house so it's not very big so you

394
00:14:48,230 --> 00:14:46,959
got to like your crewmates because

395
00:14:49,750 --> 00:14:48,240
you're going to be stuck with them in

396
00:14:51,430 --> 00:14:49,760
pretty close confinement for a couple of

397
00:14:53,430 --> 00:14:51,440
weeks maybe even months

398
00:14:55,110 --> 00:14:53,440
and the service module sits below the

399
00:14:56,949 --> 00:14:55,120
crew module and it has the propulsion

400
00:14:59,189 --> 00:14:56,959
the power and the life support systems

401
00:15:01,030 --> 00:14:59,199
uh of the vehicle now the launch abort

402
00:15:03,030 --> 00:15:01,040
system is a safety system it's a it sits

403
00:15:04,790 --> 00:15:03,040
on top of the orion crew module and its

404
00:15:06,550 --> 00:15:04,800
purpose is propel the crew module away

405
00:15:07,750 --> 00:15:06,560
from the vehicle and safely in case

406
00:15:09,430 --> 00:15:07,760
there's an event of an emergency on the

407
00:15:11,350 --> 00:15:09,440
launch pad or and they're during the

408
00:15:12,949 --> 00:15:11,360
initial ascent

409
00:15:14,389 --> 00:15:12,959
exploration flight test one is a very

410
00:15:15,670 --> 00:15:14,399
exciting mission we're all looking

411
00:15:17,030 --> 00:15:15,680
really looking forward to it it's

412
00:15:18,629 --> 00:15:17,040
important for nasa and we're honored to

413
00:15:20,470 --> 00:15:18,639

have all of you as part of our virtual

414
00:15:22,150 --> 00:15:20,480
crew on this flight test

415
00:15:23,990 --> 00:15:22,160
and now i think we're ready to have

416
00:15:34,550 --> 00:15:24,000
administrator bold and miss houston come

417
00:15:38,470 --> 00:15:36,629
okay let's see

418
00:15:40,150 --> 00:15:38,480
i got you

419
00:15:43,749 --> 00:15:40,160
we're reading the script here to make

420
00:15:45,990 --> 00:15:43,759
sure that we don't mess it up

421
00:15:47,670 --> 00:15:46,000
okay and now it's my honor to announce

422
00:15:50,069 --> 00:15:47,680
the winner of the nasa exploration

423
00:15:52,069 --> 00:15:50,079
design challenge and i just want to say

424
00:15:53,749 --> 00:15:52,079
that all of the teams should be very

425
00:15:56,310 --> 00:15:53,759
proud of your hard work and your

426
00:15:58,150 --> 00:15:56,320
creativity you've already achieved so

427
00:15:59,829 --> 00:15:58,160
much and we look forward to a bright

428
00:16:01,509 --> 00:15:59,839
future for all of you

429
00:16:03,350 --> 00:16:01,519
after a thorough set of tests by our

430
00:16:07,189 --> 00:16:03,360
engineers we've determined the design

431
00:16:10,310 --> 00:16:08,629
aha

432
00:16:12,389 --> 00:16:10,320
and now

433
00:16:14,790 --> 00:16:12,399
will be built to fly aboard orion's

434
00:16:17,350 --> 00:16:14,800
flight test in december and the winner

435
00:16:19,189 --> 00:16:17,360
is the winner is

436
00:16:21,350 --> 00:16:19,199
team aries from the governor's school

437
00:16:44,389 --> 00:16:21,360
for science and technology hampton

438
00:16:44,399 --> 00:16:51,509

okay sure i'll get on the other side

439
00:17:07,669 --> 00:16:54,550
can you can you make it

440
00:17:20,470 --> 00:17:09,909
congratulations again thank you very

441
00:17:23,990 --> 00:17:22,309
thank you all for attending today and