1
00:00:04,150 --> 00:00:01,510
this is cheryl hardy with the nfa

2
00:00:06,869 --> 00:00:04,160
production studios station this is the

3
00:00:11,910 --> 00:00:06,879
central florida aerospace academy how do

4
00:00:29,669 --> 00:00:13,749
we have you loud and clear welcome

5
00:00:36,950 --> 00:00:31,669
welcome to the central florida aerospace

6
00:00:43,990 --> 00:00:38,790
well thank you very much it's uh great

7
00:00:50,790 --> 00:00:45,430
like to go ahead and start with the

8
00:00:55,350 --> 00:00:53,430
we're ready

9
00:01:03,910 --> 00:00:55,360
okay i'd like to call conor eisley

10
00:01:11,030 --> 00:01:05,509
hello commander kelly this is connor

11
00:01:11,040 --> 00:01:14,630
how are you connor

12
00:01:17,429 --> 00:01:15,590
pretty good

13
00:01:19,990 --> 00:01:17,439

at what age did you become interested

14
00:01:25,350 --> 00:01:20,000
and involved in aerospace and what was

15
00:01:29,030 --> 00:01:26,870
you know when i was uh when i was a

16
00:01:30,789 --> 00:01:29,040
little kid i was certainly interested in

17
00:01:33,190 --> 00:01:30,799
being an astronaut but kind of like a

18
00:01:34,870 --> 00:01:33,200
lot of kids are it's um

19
00:01:37,670 --> 00:01:34,880
you know a lofty dream which i think is

20
00:01:39,510 --> 00:01:37,680
very important to have and it was it was

21
00:01:41,350 --> 00:01:39,520
one of many things i was interested in

22
00:01:44,870 --> 00:01:41,360
like many kids

23
00:01:49,190 --> 00:01:47,109
to high school and

24
00:01:50,710 --> 00:01:49,200
you know in college that i decided i

25
00:01:53,510 --> 00:01:50,720
wanted to

26
00:01:54,710 --> 00:01:53,520
be a military pilot

27
00:01:56,870 --> 00:01:54,720
and uh

28
00:01:58,950 --> 00:01:56,880
you know my inspiration was you know

29
00:01:59,830 --> 00:01:58,960
generally came from uh reading books

30
00:02:02,469 --> 00:01:59,840
about

31
00:02:03,590 --> 00:02:02,479
aviation and uh

32
00:02:05,830 --> 00:02:03,600
i was

33
00:02:07,990 --> 00:02:05,840
really interested in in uh flying

34
00:02:09,510 --> 00:02:08,000
airplanes off of aircraft carriers so

35
00:02:17,030 --> 00:02:09,520
i'd say that was my

36
00:02:17,040 --> 00:02:20,550
thank you sir

37
00:02:25,270 --> 00:02:23,589
okay the next person uh dr coleman this

38
00:02:29,589 --> 00:02:25,280

will be your question i'd like to

39
00:02:34,309 --> 00:02:32,070
hello i'm chad rickerson um i'm in the

40
00:02:35,350 --> 00:02:34,319
12th grade

41
00:02:37,589 --> 00:02:35,360
and uh

42
00:02:39,910 --> 00:02:37,599
i'm a second lieutenant in the air force

43
00:02:41,430 --> 00:02:39,920
jrotc program this question is for dr

44
00:02:43,830 --> 00:02:41,440
coleman

45
00:02:45,670 --> 00:02:43,840
um doctor what is the future of the iss

46
00:02:50,949 --> 00:02:45,680
program now that the space shuttle is

47
00:02:54,630 --> 00:02:52,790
i'm proud to be talking to a fellow air

48
00:02:55,589 --> 00:02:54,640
force person good luck with your career

49
00:02:58,149 --> 00:02:55,599
there

50
00:03:00,470 --> 00:02:58,159
uh i think the future of the iss is is

51
00:03:03,030 --> 00:03:00,480
very bright it is a vital step in our

52
00:03:05,110 --> 00:03:03,040
future exploration right now we're doing

53
00:03:07,190 --> 00:03:05,120
experiments actually every day on

54
00:03:10,390 --> 00:03:07,200
understanding what it's like for people

55
00:03:12,229 --> 00:03:10,400
in the human body as we uh spend time up

56
00:03:13,110 --> 00:03:12,239
in space here there's changes that take

57
00:03:16,550 --> 00:03:13,120
place

58
00:03:18,550 --> 00:03:16,560
we're looking at different materials for

59
00:03:20,710 --> 00:03:18,560
making spaceships out of looking for

60
00:03:22,869 --> 00:03:20,720
different ways that fluids behave so we

61
00:03:24,390 --> 00:03:22,879
understand how to fuel ships lots of

62
00:03:26,630 --> 00:03:24,400
different things that we can use the

63
00:03:28,550 --> 00:03:26,640

space station as a laboratory to

64
00:03:32,630 --> 00:03:28,560
understand how to get further out into

65
00:03:32,640 --> 00:03:35,990
thank you

66
00:03:43,430 --> 00:03:37,750
hopefully the next question will be for

67
00:03:52,149 --> 00:03:45,190
hello major nestle my name is joe

68
00:03:56,949 --> 00:03:54,789
is um how do you think commercialization

69
00:04:01,030 --> 00:03:56,959
will affect future will affect future

70
00:04:07,270 --> 00:04:01,040
space exploration including countries

71
00:04:10,229 --> 00:04:08,789
joe thank you for the question there

72
00:04:12,710 --> 00:04:10,239
well i think

73
00:04:14,550 --> 00:04:12,720
there is no way out we are going to go

74
00:04:16,949 --> 00:04:14,560
into commercialization in the future and

75
00:04:18,069 --> 00:04:16,959
this will be i think a good things for

76
00:04:20,150 --> 00:04:18,079
for us

77
00:04:21,270 --> 00:04:20,160
um because uh

78
00:04:27,110 --> 00:04:21,280
the more

79
00:04:30,070 --> 00:04:27,120
get better we will be able to

80
00:04:31,749 --> 00:04:30,080
exploit user space in a better way and

81
00:04:34,390 --> 00:04:31,759
the cost will be

82
00:04:36,710 --> 00:04:34,400
reduced on top of that

83
00:04:38,469 --> 00:04:36,720
people that are not professional will be

84
00:04:41,030 --> 00:04:38,479
able to go in space i'm looking forward

85
00:04:44,070 --> 00:04:41,040
to the possibility that everybody can go

86
00:04:46,310 --> 00:04:44,080
in space think about a hotel

87
00:04:48,230 --> 00:04:46,320
being able to go in vacation around the

88
00:04:54,469 --> 00:04:48,240

earth and see this beautiful planet i'm

89
00:05:00,790 --> 00:04:57,350
commander kelly the next question is for

90
00:05:02,390 --> 00:05:00,800
you by dustin johnson dustin

91
00:05:03,430 --> 00:05:02,400
please speak up just so they can hear

92
00:05:05,909 --> 00:05:03,440
please

93
00:05:06,790 --> 00:05:05,919
hello i'm dustin johnson and i'm in 10th

94
00:05:09,510 --> 00:05:06,800
grade

95
00:05:12,629 --> 00:05:09,520
uh this question is for you commander

96
00:05:14,950 --> 00:05:12,639
do you find it difficult to eat in space

97
00:05:20,310 --> 00:05:14,960
and how different is the food from here

98
00:05:24,310 --> 00:05:21,590
well it's not

99
00:05:26,230 --> 00:05:24,320
not too difficult to eat although

100
00:05:28,790 --> 00:05:26,240
sometimes if you're not careful the food

101
00:05:30,710 --> 00:05:28,800
gets away from you a little bit then

102
00:05:32,390 --> 00:05:30,720
you might wind up finding it somewhere a

103
00:05:33,670 --> 00:05:32,400
couple of days later which isn't too

104
00:05:35,830 --> 00:05:33,680
much fun

105
00:05:37,110 --> 00:05:35,840
but

106
00:05:39,670 --> 00:05:37,120
the way it

107
00:05:43,189 --> 00:05:39,680
differs the most is that it's not fresh

108
00:05:44,950 --> 00:05:43,199
food and it's you know mostly camping

109
00:05:47,270 --> 00:05:44,960
style food that you

110
00:05:48,390 --> 00:05:47,280
rehydrate or add water to

111
00:05:51,590 --> 00:05:48,400
or

112
00:05:53,830 --> 00:05:51,600
food in pouches and cans so you know the

113
00:05:56,230 --> 00:05:53,840

biggest the biggest way it differs is

114
00:05:58,469 --> 00:05:56,240
it's not uh you know fresh

115
00:06:03,189 --> 00:05:58,479
and that's something that you you really

116
00:06:03,199 --> 00:06:13,749
very much

117
00:06:16,150 --> 00:06:14,870
um

118
00:06:18,950 --> 00:06:16,160
good morning

119
00:06:20,390 --> 00:06:18,960
my name is ash sooner and this is my

120
00:06:22,550 --> 00:06:20,400
question

121
00:06:23,909 --> 00:06:22,560
what is your best piece of advice for

122
00:06:25,990 --> 00:06:23,919
someone who would like to be an

123
00:06:33,990 --> 00:06:26,000
aerospace engineer

124
00:06:38,790 --> 00:06:36,469
well i i recommend that you

125
00:06:40,790 --> 00:06:38,800
don't narrow your options too soon i

126
00:06:42,469 --> 00:06:40,800
think to be a good aerospace engineer

127
00:06:44,150 --> 00:06:42,479
means means that you need a good basic

128
00:06:46,469 --> 00:06:44,160
education in

129
00:06:47,749 --> 00:06:46,479
math engineering the sciences all those

130
00:06:49,830 --> 00:06:47,759
things and

131
00:06:51,510 --> 00:06:49,840
and they all have a lot in common and so

132
00:06:54,390 --> 00:06:51,520
as you go along i would just collect as

133
00:06:57,510 --> 00:06:54,400
many tools as you can as many skills as

134
00:06:59,430 --> 00:06:57,520
many experiences i'd talk to everybody

135
00:07:01,510 --> 00:06:59,440
you meet who is in the aerospace

136
00:07:02,390 --> 00:07:01,520
industry and ask them any question that

137
00:07:04,469 --> 00:07:02,400
you have

138
00:07:06,150 --> 00:07:04,479

and then use their knowledge to help you

139
00:07:08,629 --> 00:07:06,160
understand you know what what role that

140
00:07:10,629 --> 00:07:08,639
you'd like to play in that industry or

141
00:07:13,029 --> 00:07:10,639
at nasa it's a place where we need

142
00:07:14,790 --> 00:07:13,039
people that like to learn new things and

143
00:07:18,550 --> 00:07:14,800
that uh make sure that they're ready to

144
00:07:23,189 --> 00:07:20,790
yeah thank you thank you

145
00:07:25,830 --> 00:07:23,199
the next question is for major nestle

146
00:07:28,230 --> 00:07:25,840
daniel roberts

147
00:07:32,629 --> 00:07:28,240
daniel just be sure to speak up okay

148
00:07:32,639 --> 00:07:37,430
my question is for major nestle

149
00:07:41,189 --> 00:07:39,670
what is the most spectacular thing you

150
00:07:46,469 --> 00:07:41,199
have ever seen while looking down on

151
00:07:50,309 --> 00:07:47,909
hey daniel

152
00:07:52,550 --> 00:07:50,319
it's actually very difficult uh to

153
00:07:54,469 --> 00:07:52,560
answer to this question i flew already

154
00:07:56,629 --> 00:07:54,479
once on the shuttle and and when i came

155
00:07:59,350 --> 00:07:56,639
back i would say the most beautiful

156
00:08:01,990 --> 00:07:59,360
thing i've seen is the sun going down

157
00:08:04,309 --> 00:08:02,000
sunset or sun rises because i see the

158
00:08:06,390 --> 00:08:04,319
the sun going down in this little sliver

159
00:08:08,710 --> 00:08:06,400
atmosphere with all these colors

160
00:08:10,710 --> 00:08:08,720
absolutely beautiful but then i came up

161
00:08:12,150 --> 00:08:10,720
here a month ago in this long duration

162
00:08:13,830 --> 00:08:12,160
mission and i have the chance to look

163
00:08:15,670 --> 00:08:13,840

outside the cupola which we did not have

164
00:08:18,950 --> 00:08:15,680
on the shuttle and look down a little

165
00:08:21,189 --> 00:08:18,960
bit more and and and i i'm getting used

166
00:08:24,150 --> 00:08:21,199
to recognize things and you know it's

167
00:08:26,950 --> 00:08:24,160
very beautiful to to see uh the cities

168
00:08:30,150 --> 00:08:26,960
at night they lit up like a christmas

169
00:08:32,149 --> 00:08:30,160
tree uh i mean it's just astonishing and

170
00:08:34,469 --> 00:08:32,159
then just this morning i was looking

171
00:08:36,389 --> 00:08:34,479
down we were flying over africa and i

172
00:08:39,110 --> 00:08:36,399
started seeing volcanoes and other

173
00:08:40,949 --> 00:08:39,120
things so it's it's it's very i mean i

174
00:08:43,589 --> 00:08:40,959
would say the earth is astonishing and

175
00:08:48,790 --> 00:08:43,599
every day i'm discovering something new

176
00:08:52,630 --> 00:08:50,949
thank you

177
00:08:57,110 --> 00:08:52,640
the next question again is for you

178
00:09:01,990 --> 00:08:59,910
sure to speak up on

179
00:09:03,590 --> 00:09:02,000
uh good morning commander uh my name is

180
00:09:06,470 --> 00:09:03,600
alejandra varmoda i'm an aspiring

181
00:09:08,870 --> 00:09:06,480
aeronautical engineer and c-17 pilot for

182
00:09:09,990 --> 00:09:08,880
the united states air force my question

183
00:09:11,910 --> 00:09:10,000
for you is

184
00:09:13,670 --> 00:09:11,920
what makes training for long duration

185
00:09:18,070 --> 00:09:13,680
missions different from a short duration

186
00:09:22,949 --> 00:09:20,470
that's a good question because they are

187
00:09:25,430 --> 00:09:22,959
significantly different the um

188
00:09:27,750 --> 00:09:25,440

the short duration mission on a on a

189
00:09:29,990 --> 00:09:27,760
space shuttle or in a future maybe a

190
00:09:30,870 --> 00:09:30,000
another vehicle we might build

191
00:09:34,389 --> 00:09:30,880
uh

192
00:09:35,430 --> 00:09:34,399
for

193
00:09:37,350 --> 00:09:35,440
a uh

194
00:09:39,829 --> 00:09:37,360
you know a period of time on the

195
00:09:41,110 --> 00:09:39,839
international space station

196
00:09:42,949 --> 00:09:41,120
is uh

197
00:09:45,110 --> 00:09:42,959
normally or in the case of the shuttle

198
00:09:46,550 --> 00:09:45,120
is centrally located for the most part

199
00:09:48,630 --> 00:09:46,560
in houston

200
00:09:51,269 --> 00:09:48,640
whereas if you're training for a space

201
00:09:53,509 --> 00:09:51,279
station mission it uh involves training

202
00:09:57,190 --> 00:09:53,519
in all different parts of the world

203
00:10:00,150 --> 00:09:57,200
canada germany japan and uh you know and

204
00:10:01,829 --> 00:10:00,160
russia as well as the united states

205
00:10:04,310 --> 00:10:01,839
um

206
00:10:06,870 --> 00:10:04,320
also you know on a shorter mission you

207
00:10:09,829 --> 00:10:06,880
can train for um

208
00:10:12,710 --> 00:10:09,839
basically every minute of the mission

209
00:10:15,190 --> 00:10:12,720
you can you know be prepared to do

210
00:10:16,949 --> 00:10:15,200
that task and and practice it multiple

211
00:10:18,949 --> 00:10:16,959
times where that would be impossible for

212
00:10:21,269 --> 00:10:18,959
a long-duration flight so our her

213
00:10:22,550 --> 00:10:21,279

training is somewhat more more generic

214
00:10:25,190 --> 00:10:22,560
whereas

215
00:10:29,110 --> 00:10:25,200
the uh the the shorter mission is more

216
00:10:33,750 --> 00:10:31,590
thank you commander

217
00:10:38,150 --> 00:10:33,760
the next question will be for dr coleman

218
00:10:41,829 --> 00:10:39,670
good morning doctor

219
00:10:43,990 --> 00:10:41,839
my name is eric mosher and i would like

220
00:10:46,230 --> 00:10:44,000
to ask you

221
00:10:47,990 --> 00:10:46,240
what role will the iss play in future

222
00:10:53,509 --> 00:10:48,000
exploration including visiting other

223
00:10:57,190 --> 00:10:55,430
there's a lot that we need to learn

224
00:10:59,110 --> 00:10:57,200
before we go and take

225
00:11:01,269 --> 00:10:59,120
long journeys you know we know a little

226
00:11:03,350 --> 00:11:01,279
bit about life in low earth orbit for

227
00:11:05,829 --> 00:11:03,360
spending you know six months on the way

228
00:11:07,030 --> 00:11:05,839
to mars understanding the effects of

229
00:11:09,269 --> 00:11:07,040
radiation

230
00:11:11,030 --> 00:11:09,279
um the the effects of the journey on a

231
00:11:12,870 --> 00:11:11,040
human person we need to know a lot more

232
00:11:15,190 --> 00:11:12,880
about that before we start sending

233
00:11:16,790 --> 00:11:15,200
people and so the iss is a really good

234
00:11:19,030 --> 00:11:16,800
place to study that one of the things

235
00:11:21,590 --> 00:11:19,040
that we look at quite a bit is um

236
00:11:23,190 --> 00:11:21,600
actually osteoporosis or the the

237
00:11:25,670 --> 00:11:23,200
weakening of your bones dissolving of

238
00:11:27,110 --> 00:11:25,680

your bones up here and we use exercise

239
00:11:28,710 --> 00:11:27,120
as a countermeasure to help that and

240
00:11:30,550 --> 00:11:28,720
also looking at some different drugs to

241
00:11:32,790 --> 00:11:30,560
help that as well so these are some of

242
00:11:35,110 --> 00:11:32,800
the kinds of answers we need before we

243
00:11:37,670 --> 00:11:35,120
venture further and also a lot of things

244
00:11:39,670 --> 00:11:37,680
about spacecraft design materials design

245
00:11:41,350 --> 00:11:39,680
we have a lot of materials hanging

246
00:11:43,190 --> 00:11:41,360
literally outside our space station and

247
00:11:46,150 --> 00:11:43,200
our space station itself is a giant

248
00:11:48,150 --> 00:11:46,160
experiment seeing how it does in space

249
00:11:51,750 --> 00:11:48,160
so that we understand how to build

250
00:11:56,069 --> 00:11:53,990
thank you very much

251
00:11:58,790 --> 00:11:56,079
the next question is for major nestle

252
00:12:00,550 --> 00:11:58,800
savannah edford

253
00:12:02,710 --> 00:12:00,560
hello my name is savannah at forest i'm

254
00:12:04,470 --> 00:12:02,720
in ninth grade and my question is

255
00:12:06,310 --> 00:12:04,480
given that the crew is international and

256
00:12:07,910 --> 00:12:06,320
comes from vast cultural backgrounds

257
00:12:10,230 --> 00:12:07,920
what is the common language spoken and

258
00:12:16,150 --> 00:12:10,240
how do you cooperate to fulfill duties

259
00:12:19,990 --> 00:12:18,710
savannah we we usually speak english or

260
00:12:23,430 --> 00:12:20,000
at least

261
00:12:25,829 --> 00:12:23,440
i try and everybody tries here

262
00:12:27,030 --> 00:12:25,839
but we usually speak english

263
00:12:28,870 --> 00:12:27,040

of course

264
00:12:30,870 --> 00:12:28,880
part of the station is

265
00:12:33,110 --> 00:12:30,880
controlled under the control center of

266
00:12:35,590 --> 00:12:33,120
uh in moscow russia and puerto rico

267
00:12:37,030 --> 00:12:35,600
members are russians so when there are

268
00:12:38,870 --> 00:12:37,040
dedicated

269
00:12:43,350 --> 00:12:38,880
talks about that part they actually

270
00:12:47,030 --> 00:12:43,360
speaking russia russian also uh we fly

271
00:12:49,030 --> 00:12:47,040
up here with the soyuz spacecraft which

272
00:12:51,350 --> 00:12:49,040
is a russian spacecraft and when we are

273
00:12:52,870 --> 00:12:51,360
in that spacecraft the primary language

274
00:12:56,069 --> 00:12:52,880
is actually russian so all the

275
00:12:56,870 --> 00:12:56,079
documentation is in russian the the

276
00:12:58,790 --> 00:12:56,880
uh

277
00:13:01,430 --> 00:12:58,800
we talked to mission control in moscow

278
00:13:03,829 --> 00:13:01,440
and russian so we need to actually

279
00:13:07,829 --> 00:13:03,839
learn russian at a certain level before

280
00:13:12,550 --> 00:13:10,310
thank you

281
00:13:15,430 --> 00:13:12,560
the next question is for commander kelly

282
00:13:19,110 --> 00:13:17,269
good morning my name is michelle ray and

283
00:13:25,269 --> 00:13:19,120
this is for you commander

284
00:13:29,590 --> 00:13:27,110
yeah that's a good question exercise is

285
00:13:32,069 --> 00:13:29,600
really important up here because of the

286
00:13:34,470 --> 00:13:32,079
microgravity environment

287
00:13:37,269 --> 00:13:34,480
if we don't exercise we'll lose uh bone

288
00:13:38,949 --> 00:13:37,279

and muscle mass and have other you know

289
00:13:40,629 --> 00:13:38,959
effects like you do on earth from not

290
00:13:42,389 --> 00:13:40,639
exercising actually but we don't get a

291
00:13:43,670 --> 00:13:42,399
whole lot of exercise just in our normal

292
00:13:46,790 --> 00:13:43,680
moving around

293
00:13:49,750 --> 00:13:46,800
so exercise is very important and

294
00:13:51,590 --> 00:13:49,760
we have uh on the u.s segment three

295
00:13:54,710 --> 00:13:51,600
primary ways we have a treadmill and

296
00:13:57,350 --> 00:13:54,720
we're held down uh with bungee cords to

297
00:13:59,269 --> 00:13:57,360
the treadmill so we can walk or run

298
00:14:01,670 --> 00:13:59,279
and then we have a weight lifting

299
00:14:05,350 --> 00:14:01,680
machine and you know nothing really has

300
00:14:07,509 --> 00:14:05,360
weight in uh microgravity so it's really

301
00:14:09,110 --> 00:14:07,519
called a resistive exercise device and

302
00:14:11,910 --> 00:14:09,120
it's uh

303
00:14:13,990 --> 00:14:11,920
mimics weights by uh air pressure and

304
00:14:15,430 --> 00:14:14,000
cylinders and it works very very well it

305
00:14:17,750 --> 00:14:15,440
actually feels like you're you're

306
00:14:19,350 --> 00:14:17,760
lifting real weight and then we have a

307
00:14:21,189 --> 00:14:19,360
stationary bicycle

308
00:14:23,430 --> 00:14:21,199
and so we use the treadmill and the

309
00:14:28,150 --> 00:14:23,440
stationary bicycle for aerobic exercise

310
00:14:32,310 --> 00:14:30,710
weight lifting and we do both of those

311
00:14:35,670 --> 00:14:32,320
uh

312
00:14:36,870 --> 00:14:35,680
types of exercise at least once a day on

313
00:14:38,790 --> 00:14:36,880

most days

314
00:14:41,110 --> 00:14:38,800
and on the russian segment they have a

315
00:14:44,389 --> 00:14:41,120
treadmill and they also have a

316
00:14:46,710 --> 00:14:44,399
a stationary bicycle kind of device that

317
00:14:49,430 --> 00:14:46,720
they can ride as a bike but also use for

318
00:14:51,910 --> 00:14:49,440
their arms and it's also

319
00:14:56,310 --> 00:14:51,920
very effective to counter the effects of

320
00:15:00,629 --> 00:14:58,389
thank you

321
00:15:03,670 --> 00:15:00,639
okay the next question is for uh dr

322
00:15:06,790 --> 00:15:03,680
coleman patrick mcmillan

323
00:15:07,990 --> 00:15:06,800
hello dr coleman i'm patrick matt mellon

324
00:15:08,949 --> 00:15:08,000
with the completion of the shuttle

325
00:15:11,110 --> 00:15:08,959
program

326
00:15:16,790 --> 00:15:11,120
nearing how will the iss be maintained

327
00:15:22,150 --> 00:15:20,069
we have a series of supply ships uh some

328
00:15:25,910 --> 00:15:22,160
of them have been coming for years the

329
00:15:27,509 --> 00:15:25,920
the russian progress supply ships and

330
00:15:29,509 --> 00:15:27,519
and those continue to come and resupply

331
00:15:31,910 --> 00:15:29,519
the station from all the countries that

332
00:15:33,509 --> 00:15:31,920
participate in the station program and

333
00:15:35,670 --> 00:15:33,519
we also have

334
00:15:38,389 --> 00:15:35,680
a japanese supply ship that arrives

335
00:15:39,990 --> 00:15:38,399
later on this uh later on this month and

336
00:15:42,550 --> 00:15:40,000
when it arrives it actually hovers

337
00:15:44,230 --> 00:15:42,560
outside the station and then paulo and i

338
00:15:46,470 --> 00:15:44,240

with the robotic arm will reach out and

339
00:15:48,389 --> 00:15:46,480
capture that supply ship and then um

340
00:15:49,990 --> 00:15:48,399
birth it to the station whereas the

341
00:15:52,470 --> 00:15:50,000
progress the russian vehicle actually

342
00:15:55,110 --> 00:15:52,480
comes and autumn and docks to the

343
00:15:57,749 --> 00:15:55,120
station and then we have one more which

344
00:15:59,509 --> 00:15:57,759
is the european supply ship uh the

345
00:16:02,470 --> 00:15:59,519
automated transfer vehicle and that one

346
00:16:04,790 --> 00:16:02,480
comes in february and and that actually

347
00:16:06,710 --> 00:16:04,800
docks to the aft end of the space

348
00:16:08,230 --> 00:16:06,720
station plus we have the space shuttle

349
00:16:11,829 --> 00:16:08,240
still so a lot of different ways to get

350
00:16:16,790 --> 00:16:14,150
thank you very much

351
00:16:20,790 --> 00:16:16,800
the next question is for major nestle

352
00:16:27,910 --> 00:16:23,910
hello major uh

353
00:16:30,710 --> 00:16:27,920
this is master sergeant harrington um

354
00:16:32,949 --> 00:16:30,720
with robonaut 2 set to launch for uh to

355
00:16:34,870 --> 00:16:32,959
the iss do you feel this advantage that

356
00:16:37,829 --> 00:16:34,880
technology will ever take a person's

357
00:16:40,230 --> 00:16:37,839
place in space and will it enhance our

358
00:16:45,509 --> 00:16:40,240
chances to send humans further out in to

359
00:16:48,870 --> 00:16:47,030
well i wish they would be able to build

360
00:16:50,710 --> 00:16:48,880
a robot that would be able to be like a

361
00:16:51,829 --> 00:16:50,720
human so i'll send him to work and i go

362
00:16:53,829 --> 00:16:51,839
on vacation

363
00:16:54,949 --> 00:16:53,839

so that would be nice i think for

364
00:16:56,629 --> 00:16:54,959
everybody

365
00:16:58,069 --> 00:16:56,639
you'll probably send somebody a robot in

366
00:16:59,749 --> 00:16:58,079
school and you go also somewhere else

367
00:17:01,350 --> 00:16:59,759
anyhow

368
00:17:03,509 --> 00:17:01,360
i think i think in the future we will

369
00:17:05,829 --> 00:17:03,519
get there where robots will get

370
00:17:07,990 --> 00:17:05,839
more and more capable of doing complex

371
00:17:10,710 --> 00:17:08,000
things and for sure we would really like

372
00:17:12,789 --> 00:17:10,720
to have robots up here that will do uh

373
00:17:15,510 --> 00:17:12,799
simple tedious things

374
00:17:17,590 --> 00:17:15,520
that we we need to do every day and and

375
00:17:19,829 --> 00:17:17,600
and we do but sometimes we make mistakes

376
00:17:21,669 --> 00:17:19,839
we always don't pay attention or or

377
00:17:24,230 --> 00:17:21,679
they're just too repetitive and too

378
00:17:27,029 --> 00:17:24,240
boring so it will happen i think it will

379
00:17:29,190 --> 00:17:27,039
happen and it will really help us as it

380
00:17:31,590 --> 00:17:29,200
will help us on our daily life if we

381
00:17:34,630 --> 00:17:31,600
will be able to have help and support in

382
00:17:36,470 --> 00:17:34,640
our daily tasks and chores of course it

383
00:17:38,390 --> 00:17:36,480
would be bad if we would build everybody

384
00:17:40,630 --> 00:17:38,400
and set the robot in vacation and we

385
00:17:43,750 --> 00:17:40,640
could stay at work but we will work on

386
00:17:47,350 --> 00:17:44,830
thank you

387
00:17:49,990 --> 00:17:47,360
major unfortunately due to time this

388
00:17:52,470 --> 00:17:50,000

will be the last question commander this

389
00:17:55,270 --> 00:17:52,480
one is for you uh from ms from andrew

390
00:17:55,280 --> 00:17:58,950
hello um my name is

391
00:18:02,470 --> 00:18:00,870
uh andrew is the largest scale

392
00:18:07,750 --> 00:18:02,480
experiment your team is performing while

393
00:18:11,750 --> 00:18:09,110
that's a good question you know we have

394
00:18:13,590 --> 00:18:11,760
uh over 130 different science

395
00:18:15,110 --> 00:18:13,600
experiments

396
00:18:17,590 --> 00:18:15,120
being conducted onboard the space

397
00:18:19,750 --> 00:18:17,600
station during the time i'm here but i

398
00:18:21,590 --> 00:18:19,760
think the biggest experiment is just the

399
00:18:24,230 --> 00:18:21,600
space station itself

400
00:18:26,470 --> 00:18:24,240
having a facility that's operating in

401
00:18:30,310 --> 00:18:26,480
low earth orbit for 10 years now and

402
00:18:33,750 --> 00:18:30,320
another 10 years to come man by humans

403
00:18:36,630 --> 00:18:33,760
24 hours a day 7 days a week 365 days a

404
00:18:38,549 --> 00:18:36,640
year is a experiment you know this space

405
00:18:40,950 --> 00:18:38,559
station

406
00:18:42,789 --> 00:18:40,960
has life support systems that need to be

407
00:18:46,310 --> 00:18:42,799
operated for a really long time

408
00:18:47,270 --> 00:18:46,320
electrical power systems cooling systems

409
00:18:49,430 --> 00:18:47,280
and

410
00:18:51,750 --> 00:18:49,440
not to mention the human system

411
00:18:53,350 --> 00:18:51,760
which all of those combined is very very

412
00:18:57,110 --> 00:18:53,360
important if we are ever going to

413
00:18:59,510 --> 00:18:57,120

venture away from this planet so i think

414
00:19:01,510 --> 00:18:59,520
and it's often overlooked that you know

415
00:19:03,990 --> 00:19:01,520
the biggest experiment is just this

416
00:19:05,669 --> 00:19:04,000
whole facility and the

417
00:19:09,270 --> 00:19:05,679
you know the space station program

418
00:19:14,230 --> 00:19:11,190
thank you commander

419
00:19:19,029 --> 00:19:16,710
dr coleman and major nestle on behalf of

420
00:19:20,630 --> 00:19:19,039
the central florida aerospace academy as

421
00:19:22,789 --> 00:19:20,640
well of all of the polk county schools

422
00:19:24,710 --> 00:19:22,799
we want to say thank you to you thank

423
00:19:27,029 --> 00:19:24,720
you for their your time is there any

424
00:19:28,390 --> 00:19:27,039
last words that you would like to say to

425
00:19:33,190 --> 00:19:28,400
the students

426
00:19:37,350 --> 00:19:35,110
yeah well i'd like to encourage you guys

427
00:19:39,350 --> 00:19:37,360
to uh you know work hard on your

428
00:19:41,510 --> 00:19:39,360
education because that's really what is

429
00:19:43,510 --> 00:19:41,520
going to pay dividends uh for your

430
00:19:45,510 --> 00:19:43,520
future and you never want to you never

431
00:19:47,270 --> 00:19:45,520
want to limit yourself and the better

432
00:19:49,750 --> 00:19:47,280
you do in school the more options you're

433
00:19:51,110 --> 00:19:49,760
going to have as as you get along later

434
00:19:53,510 --> 00:19:51,120
in life and those options are going to

435
00:19:55,590 --> 00:19:53,520
be very important to you someday so you

436
00:19:59,590 --> 00:19:55,600
know keep up the hard work and it's

437
00:20:03,830 --> 00:20:01,830
commander kelly uh thank you very much

438
00:20:05,430 --> 00:20:03,840

to you and your crew and also we just

439
00:20:11,590 --> 00:20:05,440
want to say thank you for making our

440
00:20:11,600 --> 00:20:20,630
you're welcome have a great day