
STATE

1
00:00:06,230 --> 00:00:03,429
state university of new york this is

2
00:00:08,549 --> 00:00:06,240
houston please call station for a voice

3
00:00:09,910 --> 00:00:08,559
check please close new york how do you

4
00:00:14,150 --> 00:00:09,920
hear me

5
00:00:17,510 --> 00:00:15,749
state university of new york at oneonta

6
00:00:28,310 --> 00:00:17,520
i hear you loud and clear do you guys

7
00:00:32,389 --> 00:00:30,230
colonel darren we are delighted for you

8
00:00:34,950 --> 00:00:32,399
to be with us this morning i have with

9
00:00:36,950 --> 00:00:34,960
me uh several hundred students uh

10
00:00:39,430 --> 00:00:36,960
eagerly awaiting their conversation with

11
00:00:41,190 --> 00:00:39,440
you excited to ask you some questions if

12
00:00:45,110 --> 00:00:41,200
you are ready to tackle them we will

13
00:00:57,430 --> 00:00:48,709

all right we're ready

14
00:01:05,910 --> 00:01:00,709
hi my name is anthony and uh what is

15
00:01:09,750 --> 00:01:07,990
well hi anthony um

16
00:01:11,590 --> 00:01:09,760
my job on the space station that's a

17
00:01:14,390 --> 00:01:11,600
good question we have uh we wear a lot

18
00:01:17,510 --> 00:01:14,400
of hats on the space station we are

19
00:01:19,590 --> 00:01:17,520
we're lab assistants we're

20
00:01:20,789 --> 00:01:19,600
plumbers we're electricians we're

21
00:01:23,190 --> 00:01:20,799
handymen

22
00:01:25,270 --> 00:01:23,200
we do a lot of things on board

23
00:01:27,830 --> 00:01:25,280
a lot of what we do is help researchers

24
00:01:29,270 --> 00:01:27,840
on the ground with their experiments

25
00:01:30,630 --> 00:01:29,280
but in addition to that there's a lot

26
00:01:32,390 --> 00:01:30,640
that we have to do just to keep the

27
00:01:34,310 --> 00:01:32,400
space station going there's uh there's

28
00:01:35,830 --> 00:01:34,320
things that obviously break it at times

29
00:01:37,910 --> 00:01:35,840
that we have to fix

30
00:01:39,590 --> 00:01:37,920
but we have a tremendous

31
00:01:42,389 --> 00:01:39,600
space station here it's very large it's

32
00:01:44,469 --> 00:01:42,399
got a lot of equipment a lot of

33
00:01:47,030 --> 00:01:44,479
functioning parts and it's all you know

34
00:01:49,590 --> 00:01:47,040
high-tech state-of-the-art uh equipment

35
00:01:51,270 --> 00:01:49,600
that's designed to help humans go

36
00:01:52,310 --> 00:01:51,280
further and further in space so it's

37
00:01:53,270 --> 00:01:52,320
it's uh

38
00:01:54,950 --> 00:01:53,280

some of it

39
00:01:56,950 --> 00:01:54,960
is being tested for the first time on

40
00:01:58,550 --> 00:01:56,960
orbit and so there's things that we have

41
00:02:00,789 --> 00:01:58,560
to do to maintain those and make sure

42
00:02:02,789 --> 00:02:00,799
they're working properly so there's

43
00:02:04,389 --> 00:02:02,799
quite a bit quite a bit of different

44
00:02:16,070 --> 00:02:04,399
roles that we have onboard the space

45
00:02:25,270 --> 00:02:19,270
hi my name is robin and um what is

46
00:02:29,510 --> 00:02:27,270
well the puffiness in our face is

47
00:02:31,110 --> 00:02:29,520
because um on earth

48
00:02:33,430 --> 00:02:31,120
all the fluids in your body because of

49
00:02:36,710 --> 00:02:33,440
gravity get way down from your head to

50
00:02:38,630 --> 00:02:36,720
your toes and so when you're in space uh

51
00:02:40,790 --> 00:02:38,640
you don't have that and so the fluid

52
00:02:42,790 --> 00:02:40,800
tends to shift from the lower part of

53
00:02:44,869 --> 00:02:42,800
your body to the upper part of your body

54
00:02:46,790 --> 00:02:44,879
and um that's one of the many things

55
00:02:48,229 --> 00:02:46,800
that we have to deal with in space uh

56
00:02:50,869 --> 00:02:48,239
one of the many things that that your

57
00:02:59,350 --> 00:02:50,879
body has to adapt to once you arrive in

58
00:03:07,190 --> 00:03:01,509
my name is tom and my question is do you

59
00:03:11,430 --> 00:03:09,589
well tom we do occasionally get to leave

60
00:03:13,030 --> 00:03:11,440
the space station if we have maintenance

61
00:03:15,030 --> 00:03:13,040
to perform outside or scientific

62
00:03:16,869 --> 00:03:15,040
experiments that need to be maintained

63
00:03:18,470 --> 00:03:16,879

outside

64
00:03:20,630 --> 00:03:18,480
one of my crewmates that i'm on board

65
00:03:23,750 --> 00:03:20,640
with right now mike fossum and i uh

66
00:03:25,830 --> 00:03:23,760
three years ago on the sts-124 mission

67
00:03:28,550 --> 00:03:25,840
had three spacewalks each of them about

68
00:03:31,430 --> 00:03:28,560
six or seven hours long a piece and the

69
00:03:34,470 --> 00:03:31,440
two of us in about three or four weeks

70
00:03:36,949 --> 00:03:34,480
we'll be going outside again uh for our

71
00:03:39,270 --> 00:03:36,959
fourth space walk together to do some

72
00:03:40,550 --> 00:03:39,280
more maintenance during the sts-135

73
00:03:42,869 --> 00:03:40,560
mission when they arrive and that's the

74
00:03:54,630 --> 00:03:42,879
the last uh space shuttle mission to the

75
00:04:00,630 --> 00:03:58,869
hi my name is dylan and my question is

76
00:04:05,589 --> 00:04:00,640
how long do you train before you go in

77
00:04:08,630 --> 00:04:06,710
well dylan

78
00:04:11,830 --> 00:04:08,640
before my first flight into space i

79
00:04:14,630 --> 00:04:11,840
think i trained about seven years

80
00:04:16,150 --> 00:04:14,640
but generally uh when astronauts start

81
00:04:18,390 --> 00:04:16,160
they spend about a year and a half to

82
00:04:20,310 --> 00:04:18,400
two years just learning the basics of

83
00:04:21,189 --> 00:04:20,320
how to be an astronaut and how to fly in

84
00:04:23,110 --> 00:04:21,199
space

85
00:04:25,270 --> 00:04:23,120
and then after that once you're assigned

86
00:04:27,749 --> 00:04:25,280
to uh for in this case a space station

87
00:04:29,990 --> 00:04:27,759
mission we had two and a half years of

88
00:04:31,590 --> 00:04:30,000

training specifically for this mission

89
00:04:33,990 --> 00:04:31,600
and that two and a half years was spread

90
00:04:36,469 --> 00:04:34,000
out over many different places um

91
00:04:38,390 --> 00:04:36,479
obviously houston and

92
00:04:39,430 --> 00:04:38,400
russia japan

93
00:04:40,550 --> 00:04:39,440
canada

94
00:04:41,749 --> 00:04:40,560
europe

95
00:04:43,110 --> 00:04:41,759
so there's a lot of different places

96
00:04:44,710 --> 00:04:43,120
where this is the international space

97
00:04:47,350 --> 00:04:44,720
station and so there's

98
00:04:49,110 --> 00:04:47,360
areas all around the world that uh

99
00:04:50,469 --> 00:04:49,120
not only do we train at but we have

100
00:04:52,550 --> 00:04:50,479
control centers in different parts of

101
00:04:54,230 --> 00:04:52,560
the world and we speak to uh on a daily

102
00:04:55,830 --> 00:04:54,240
basis to the to these different centers

103
00:04:57,510 --> 00:04:55,840
throughout the world so

104
00:04:59,990 --> 00:04:57,520
a lot of training goes into a lot of

105
00:05:08,070 --> 00:05:00,000
preparation goes into one of these space

106
00:05:12,390 --> 00:05:10,390
hi my name is zachary and what have you

107
00:05:17,510 --> 00:05:12,400
been researching lately and what type of

108
00:05:21,110 --> 00:05:19,510
well zachary um we've got a number of

109
00:05:22,469 --> 00:05:21,120
laboratories onboard the international

110
00:05:24,550 --> 00:05:22,479
space station i'm in the japanese

111
00:05:27,110 --> 00:05:24,560
laboratory right now and you can see

112
00:05:28,629 --> 00:05:27,120
behind me uh this airlock where we can

113
00:05:31,029 --> 00:05:28,639

put equipment in to

114
00:05:33,749 --> 00:05:31,039
put outside with a robotic arm that we

115
00:05:35,189 --> 00:05:33,759
can take it out from the airlock with

116
00:05:36,629 --> 00:05:35,199
but across from me you can't see it but

117
00:05:38,950 --> 00:05:36,639
across from me is the european

118
00:05:40,469 --> 00:05:38,960
laboratory we have the u.s laboratory we

119
00:05:42,469 --> 00:05:40,479
have a lot of laboratory facilities in

120
00:05:44,950 --> 00:05:42,479
the in the russian modules of the space

121
00:05:47,029 --> 00:05:44,960
station and there's a lot of different

122
00:05:48,710 --> 00:05:47,039
type of research that's being conducted

123
00:05:50,790 --> 00:05:48,720
on board there's material science to

124
00:05:54,310 --> 00:05:50,800
look at the new materials

125
00:05:57,189 --> 00:05:54,320
there's um we have a a camera called the

126
00:05:58,790 --> 00:05:57,199
iss agricultural camera which looks at

127
00:06:01,670 --> 00:05:58,800
parts of the world where we're growing

128
00:06:03,909 --> 00:06:01,680
uh crops and looks at ways to or is

129
00:06:05,909 --> 00:06:03,919
hoping to discover ways to grow crops

130
00:06:08,070 --> 00:06:05,919
more efficiently so we could feed you

131
00:06:09,749 --> 00:06:08,080
know our increasing population

132
00:06:11,270 --> 00:06:09,759
there's a lot of medical research that

133
00:06:13,270 --> 00:06:11,280
goes on board

134
00:06:16,070 --> 00:06:13,280
so there's quite a bit of activity quite

135
00:06:17,029 --> 00:06:16,080
a bit of research that goes on that goes

136
00:06:26,469 --> 00:06:17,039
on

137
00:06:37,510 --> 00:06:27,830
my name is

138
00:06:42,070 --> 00:06:39,430

well hope actually throughout the day

139
00:06:43,670 --> 00:06:42,080
there are times um where we don't have

140
00:06:46,070 --> 00:06:43,680
communications coverage and we we do

141
00:06:47,909 --> 00:06:46,080
lose contact with the earth

142
00:06:49,110 --> 00:06:47,919
but if it if it happens through a

143
00:06:51,189 --> 00:06:49,120
malfunction

144
00:06:53,430 --> 00:06:51,199
uh then we have procedures to get that

145
00:06:55,909 --> 00:06:53,440
communication back and and how we talk

146
00:06:59,029 --> 00:06:55,919
to the ground is we have satellites that

147
00:07:00,390 --> 00:06:59,039
orbit the earth and we are in uh contact

148
00:07:02,790 --> 00:07:00,400
with the satellites that relay our

149
00:07:04,150 --> 00:07:02,800
message down to the ground and if

150
00:07:06,710 --> 00:07:04,160
something were to happen with that

151
00:07:08,710 --> 00:07:06,720
communication path then like i said we

152
00:07:10,870 --> 00:07:08,720
have ways to get that communication back

153
00:07:12,150 --> 00:07:10,880
but the station is a is a kind of an

154
00:07:14,230 --> 00:07:12,160
autonomous

155
00:07:16,550 --> 00:07:14,240
self-sufficient

156
00:07:18,870 --> 00:07:16,560
space station in that it can function on

157
00:07:21,029 --> 00:07:18,880
its own it has its own computers uh on

158
00:07:22,469 --> 00:07:21,039
board that are running the systems so

159
00:07:25,589 --> 00:07:22,479
you know for a limited amount of time

160
00:07:27,110 --> 00:07:25,599
the state space station is perfectly um

161
00:07:28,950 --> 00:07:27,120
okay without communications with the

162
00:07:30,870 --> 00:07:28,960
ground for extended periods of time

163
00:07:32,469 --> 00:07:30,880

however we need to get in contact with

164
00:07:33,990 --> 00:07:32,479
the ground and so that's why we have

165
00:07:35,589 --> 00:07:34,000
those procedures to get that

166
00:07:44,950 --> 00:07:35,599
communication back in the case that we

167
00:07:53,510 --> 00:07:48,230
hello my name is andrew uh do you

168
00:08:00,070 --> 00:07:56,150
andrew yes the answer to that is yes

169
00:08:02,710 --> 00:08:00,080
it is a lot of fun uh to to during meals

170
00:08:03,990 --> 00:08:02,720
um you know if you let me just show you

171
00:08:06,869 --> 00:08:04,000
i've got

172
00:08:08,790 --> 00:08:06,879
a food pack here so this is a food pack

173
00:08:10,150 --> 00:08:08,800
and um this is one of the types of the

174
00:08:12,469 --> 00:08:10,160
food packs that we have and you just

175
00:08:13,749 --> 00:08:12,479
take a scissor and cut it open this

176
00:08:15,510 --> 00:08:13,759
happens to be chocolate pudding probably

177
00:08:17,990 --> 00:08:15,520
not a good example but this is this is

178
00:08:19,749 --> 00:08:18,000
the one that we have here and so if you

179
00:08:21,189 --> 00:08:19,759
if you get busy and you want to you know

180
00:08:22,710 --> 00:08:21,199
open up a package or something or get a

181
00:08:24,469 --> 00:08:22,720
drink you just leave your food right

182
00:08:26,150 --> 00:08:24,479
there floating and it doesn't really go

183
00:08:29,029 --> 00:08:26,160
anywhere and the same thing with drinks

184
00:08:29,909 --> 00:08:29,039
too if uh even a you know an open uh

185
00:08:31,830 --> 00:08:29,919
drink

186
00:08:32,870 --> 00:08:31,840
it will basically pretty much stay stay

187
00:08:34,709 --> 00:08:32,880
right there

188
00:08:36,790 --> 00:08:34,719

um so you know like an open container of

189
00:08:38,709 --> 00:08:36,800
soup or something like that so it's a it

190
00:08:40,389 --> 00:08:38,719
is a lot of fun and then of course if

191
00:08:42,389 --> 00:08:40,399
you have uh you know small

192
00:08:45,030 --> 00:08:42,399
bite-sized things like little pieces of

193
00:08:46,389 --> 00:08:45,040
candy or or pieces of fruit or whatever

194
00:08:48,070 --> 00:08:46,399
it's always fun to eat those like a

195
00:08:48,710 --> 00:08:48,080
goldfish and just gobble them up that

196
00:08:49,750 --> 00:08:48,720
are

197
00:08:51,269 --> 00:08:49,760
you know while they're floating right in

198
00:08:53,750 --> 00:08:51,279
front of you so it's so it's always fun

199
00:08:55,110 --> 00:08:53,760
to uh to you know in space you're

200
00:08:56,470 --> 00:08:55,120
allowed to play with your food you're

201
00:08:58,550 --> 00:08:56,480
not supposed to do that on the ground i

202
00:09:05,829 --> 00:08:58,560
guess but in space it's perfectly okay

203
00:09:11,030 --> 00:09:08,710
hi my name is audrey have there been any

204
00:09:13,670 --> 00:09:11,040
important discoveries made in space that

205
00:09:16,949 --> 00:09:13,680
may help us with everyday life that may

206
00:09:18,949 --> 00:09:16,959
help us with everyday life

207
00:09:20,470 --> 00:09:18,959
well audrey that you know

208
00:09:22,150 --> 00:09:20,480
the the space

209
00:09:24,310 --> 00:09:22,160
program helps us in a lot of different

210
00:09:25,750 --> 00:09:24,320
ways i guess the most fundamental way is

211
00:09:27,750 --> 00:09:25,760
you know we are

212
00:09:29,670 --> 00:09:27,760
as humans you know going farther and

213
00:09:31,670 --> 00:09:29,680

farther from from our home planet and

214
00:09:33,829 --> 00:09:31,680
we're learning more and more about space

215
00:09:35,590 --> 00:09:33,839
but in the process of space exploration

216
00:09:37,829 --> 00:09:35,600
you know we learn a lot about ourselves

217
00:09:40,470 --> 00:09:37,839
uh we learn our about ourselves as

218
00:09:41,910 --> 00:09:40,480
humans uh we learn a lot about the the

219
00:09:43,509 --> 00:09:41,920
planet um

220
00:09:45,670 --> 00:09:43,519
just just by the fact that we're in

221
00:09:47,670 --> 00:09:45,680
space um we're in a totally different

222
00:09:50,310 --> 00:09:47,680
environment how the body adapts to that

223
00:09:52,630 --> 00:09:50,320
environment has a lot of applications to

224
00:09:54,389 --> 00:09:52,640
some illnesses on on the earth

225
00:09:55,590 --> 00:09:54,399
as far as breakthroughs and discoveries

226
00:09:58,070 --> 00:09:55,600
on the space station you know there's

227
00:09:59,750 --> 00:09:58,080
been there's been quite a bit of of

228
00:10:02,150 --> 00:09:59,760
knowledge gained you know we've had some

229
00:10:04,310 --> 00:10:02,160
potential uh vaccines for things like

230
00:10:05,990 --> 00:10:04,320
salmonella

231
00:10:08,150 --> 00:10:06,000
there's been discoveries from basic

232
00:10:10,630 --> 00:10:08,160
things like you know how you have bone

233
00:10:12,949 --> 00:10:10,640
loss in space and how that applies to

234
00:10:14,790 --> 00:10:12,959
osteo things like osteoporosis and bone

235
00:10:17,350 --> 00:10:14,800
loss on the earth

236
00:10:20,310 --> 00:10:17,360
there's been discoveries in fluid

237
00:10:22,230 --> 00:10:20,320
sciences and how fluids behave

238
00:10:24,150 --> 00:10:22,240

in a microgravity environment or and

239
00:10:26,949 --> 00:10:24,160
what is commonly known as a weightless

240
00:10:29,990 --> 00:10:26,959
environment so there's been quite a bit

241
00:10:31,829 --> 00:10:30,000
of knowledge gained through the space

242
00:10:33,590 --> 00:10:31,839
program generally and specifically

243
00:10:35,829 --> 00:10:33,600
onboard the international space station

244
00:10:38,230 --> 00:10:35,839
and uh we're just getting started really

245
00:10:39,509 --> 00:10:38,240
we uh you know we just finished the

246
00:10:41,350 --> 00:10:39,519
construction of the international space

247
00:10:43,829 --> 00:10:41,360
station and we're gearing up for full

248
00:10:45,829 --> 00:10:43,839
utilization so full use of the of this

249
00:10:48,150 --> 00:10:45,839
you know wonderful orbiting uh research

250
00:10:49,829 --> 00:10:48,160
facility and you know

251
00:10:51,750 --> 00:10:49,839
for a long time we only had a crew of

252
00:10:53,269 --> 00:10:51,760
three on board so we were very limited

253
00:10:55,829 --> 00:10:53,279
in how much research we can do we have a

254
00:10:57,910 --> 00:10:55,839
crew of six now so we have a lot more

255
00:10:59,350 --> 00:10:57,920
time to to devote to science and to

256
00:11:00,949 --> 00:10:59,360
research

257
00:11:08,790 --> 00:11:00,959
so i'm we're expecting a lot more

258
00:11:12,230 --> 00:11:10,310
hi i'm michelle

259
00:11:16,310 --> 00:11:12,240
what happens if one of the solar panels

260
00:11:19,350 --> 00:11:17,670
well if one of the solar panels breaks

261
00:11:21,910 --> 00:11:19,360
well actually one of the solar panels

262
00:11:24,069 --> 00:11:21,920
have already broken so we uh what we did

263
00:11:26,710 --> 00:11:24,079

the when it broke and then there was a

264
00:11:28,790 --> 00:11:26,720
tear in in one of them uh solar rays

265
00:11:31,110 --> 00:11:28,800
when it was being deployed is we had

266
00:11:34,069 --> 00:11:31,120
space walkers go out and and repair it

267
00:11:35,990 --> 00:11:34,079
and the the solar arrays are a long way

268
00:11:37,509 --> 00:11:36,000
away i wish right now we're not allowed

269
00:11:39,190 --> 00:11:37,519
to open the windows because of the orbit

270
00:11:41,590 --> 00:11:39,200
that we're in right now the shutters to

271
00:11:43,030 --> 00:11:41,600
the windows so you can't see outside but

272
00:11:44,870 --> 00:11:43,040
but right outside that window right

273
00:11:47,030 --> 00:11:44,880
there you'd see the big massive solar

274
00:11:49,190 --> 00:11:47,040
arrays that are on either end of the big

275
00:11:50,710 --> 00:11:49,200
truss on the space station and so if one

276
00:11:52,870 --> 00:11:50,720
of them were to break

277
00:11:54,230 --> 00:11:52,880
um you know the energy that we need from

278
00:11:56,150 --> 00:11:54,240
them hopefully we would get from the

279
00:11:58,629 --> 00:11:56,160
other solar arrays that weren't broken

280
00:12:00,470 --> 00:11:58,639
uh but if we if we you know it was very

281
00:12:02,069 --> 00:12:00,480
critical and we needed that energy from

282
00:12:04,230 --> 00:12:02,079
that solar array we'd have to put our

283
00:12:06,870 --> 00:12:04,240
space suits on and get ready and go out

284
00:12:08,310 --> 00:12:06,880
for a spacewalk and repair it just like

285
00:12:14,629 --> 00:12:08,320
has already been done

286
00:12:23,110 --> 00:12:17,030
hi my name is amelia and what is your

287
00:12:27,990 --> 00:12:26,069
my first thought during launch uh

288
00:12:29,670 --> 00:12:28,000

boy i'd have to think about that uh you

289
00:12:31,910 --> 00:12:29,680
know i've had two launches i had one on

290
00:12:34,230 --> 00:12:31,920
a space shuttle about three years ago

291
00:12:36,949 --> 00:12:34,240
and about two and a half months ago on a

292
00:12:39,430 --> 00:12:36,959
russian soyuz space spacecraft

293
00:12:40,949 --> 00:12:39,440
i think in both cases before

294
00:12:42,629 --> 00:12:40,959
the launch i thought about all those

295
00:12:44,550 --> 00:12:42,639
people that were watching all my friends

296
00:12:47,269 --> 00:12:44,560
and family especially the ones that had

297
00:12:48,710 --> 00:12:47,279
traveled to the to the launch site uh i

298
00:12:50,150 --> 00:12:48,720
was hoping that we would launch you know

299
00:12:52,230 --> 00:12:50,160
sometimes they don't launch i didn't

300
00:12:54,389 --> 00:12:52,240
want everybody to be disappointed but

301
00:12:56,230 --> 00:12:54,399
just a lot of excitement um

302
00:12:57,990 --> 00:12:56,240
the uh you know the last launch i had on

303
00:13:01,190 --> 00:12:58,000
the soyuz was a lot of fun it was it was

304
00:13:03,110 --> 00:13:01,200
a great ride um so it was really nice to

305
00:13:04,790 --> 00:13:03,120
to be there you know i

306
00:13:07,590 --> 00:13:04,800
i equate the difference between you know

307
00:13:09,750 --> 00:13:07,600
a shuttle launch is you know this big

308
00:13:12,870 --> 00:13:09,760
powerful massive vehicle that you that

309
00:13:14,470 --> 00:13:12,880
you ride in and a soyuz is more of a

310
00:13:15,990 --> 00:13:14,480
more of a spacecraft that you wear

311
00:13:17,990 --> 00:13:16,000
you're strapped in so tight to this

312
00:13:19,590 --> 00:13:18,000
thing and i really got that sensation as

313
00:13:21,430 --> 00:13:19,600

we lifted off the pad that you know we

314
00:13:23,190 --> 00:13:21,440
were kind of wearing this this rocket

315
00:13:25,350 --> 00:13:23,200
and we were you know the three of us

316
00:13:27,350 --> 00:13:25,360
were getting you know hurled into space

317
00:13:30,389 --> 00:13:27,360
and so it was a it was really a very

318
00:13:32,949 --> 00:13:30,399
exciting very fun uh ride into space uh

319
00:13:34,949 --> 00:13:32,959
on both on both times but uh the you

320
00:13:36,230 --> 00:13:34,959
know the closest memory i have is is two

321
00:13:38,389 --> 00:13:36,240
and a half months ago and that was uh

322
00:13:39,829 --> 00:13:38,399
that was a lot of fun so like i said you

323
00:13:41,829 --> 00:13:39,839
know thinking about all your friends and

324
00:13:43,430 --> 00:13:41,839
family that uh that are watching and and

325
00:13:45,269 --> 00:13:43,440
really you know excited about the

326
00:13:47,030 --> 00:13:45,279
mission to come and and of course the

327
00:13:48,550 --> 00:13:47,040
the immediate future being the eight and

328
00:13:56,710 --> 00:13:48,560
a half minutes to space is always

329
00:14:06,629 --> 00:13:59,990
hi my name is peter you sometimes get

330
00:14:10,629 --> 00:14:09,030
well peter i i haven't gotten

331
00:14:12,230 --> 00:14:10,639
claustrophobic

332
00:14:14,629 --> 00:14:12,240
i think if i would have i would have on

333
00:14:16,790 --> 00:14:14,639
my my soyuz right it's a very very small

334
00:14:18,150 --> 00:14:16,800
vehicle in comparison to the shuttle and

335
00:14:19,110 --> 00:14:18,160
certainly in comparison to the space

336
00:14:20,550 --> 00:14:19,120
station

337
00:14:22,389 --> 00:14:20,560
uh i don't think you could get

338
00:14:24,710 --> 00:14:22,399

claustrophobic on the space station it's

339
00:14:26,870 --> 00:14:24,720
huge it's uh basically the whole space

340
00:14:28,790 --> 00:14:26,880
station is bigger than a football field

341
00:14:30,550 --> 00:14:28,800
and the internal part of the space

342
00:14:33,350 --> 00:14:30,560
station where we live

343
00:14:34,949 --> 00:14:33,360
uh is pretty big too and and you know it

344
00:14:37,750 --> 00:14:34,959
takes you a while to get from one part

345
00:14:38,710 --> 00:14:37,760
of the space station to another um and

346
00:14:40,629 --> 00:14:38,720
you know just

347
00:14:42,069 --> 00:14:40,639
you know while i'm talking about it

348
00:14:44,470 --> 00:14:42,079
you know how we get from one part of the

349
00:14:46,230 --> 00:14:44,480
space station to from one part to the

350
00:14:48,629 --> 00:14:46,240
other is we basically fly and so that's

351
00:14:50,790 --> 00:14:48,639
that's a lot of fun so i think that that

352
00:14:53,030 --> 00:14:50,800
helps you not to get claustrophobic you

353
00:14:54,629 --> 00:14:53,040
know that we have these big wide open

354
00:14:56,790 --> 00:14:54,639
spaces uh

355
00:14:58,389 --> 00:14:56,800
and uh you know we always have windows

356
00:15:00,389 --> 00:14:58,399
that we can look at on the earth too so

357
00:15:02,069 --> 00:15:00,399
you don't feel like you're locked inside

358
00:15:09,990 --> 00:15:02,079
something so

359
00:15:14,629 --> 00:15:12,470
hi my name is anna what happens during

360
00:15:19,430 --> 00:15:14,639
the during an emergency on the space

361
00:15:23,750 --> 00:15:21,269
well anna it depends what type of

362
00:15:26,389 --> 00:15:23,760
emergency that would be we train and and

363
00:15:28,790 --> 00:15:26,399

we practice quite frequently for

364
00:15:30,710 --> 00:15:28,800
things like a fire or um a

365
00:15:32,230 --> 00:15:30,720
depressurization if there were to be a

366
00:15:34,870 --> 00:15:32,240
leak on the space station and our air is

367
00:15:36,870 --> 00:15:34,880
leaking out so you know things like that

368
00:15:38,870 --> 00:15:36,880
which we have to uh react to very

369
00:15:40,870 --> 00:15:38,880
quickly we practice over and over again

370
00:15:43,030 --> 00:15:40,880
so they're they're you know second

371
00:15:44,710 --> 00:15:43,040
nature to us

372
00:15:47,189 --> 00:15:44,720
other types of emergencies were you know

373
00:15:49,670 --> 00:15:47,199
critical equipment breakdown

374
00:15:52,069 --> 00:15:49,680
again we practice that quite a bit as

375
00:15:53,749 --> 00:15:52,079
well but you know we have a uh the team

376
00:15:55,990 --> 00:15:53,759
on board the six crew members but we

377
00:15:57,670 --> 00:15:56,000
also have this whole team of people on

378
00:15:59,030 --> 00:15:57,680
the ground that are supporting us as

379
00:16:01,269 --> 00:15:59,040
well and they're watching over us and

380
00:16:03,509 --> 00:16:01,279
they're watching all the systems and

381
00:16:05,030 --> 00:16:03,519
they have plans and procedures that they

382
00:16:07,829 --> 00:16:05,040
practice over and over to make sure that

383
00:16:09,990 --> 00:16:07,839
they're ready for it too so as a whole

384
00:16:11,990 --> 00:16:10,000
team us you know the six of us up on the

385
00:16:13,749 --> 00:16:12,000
space station and the many many people

386
00:16:15,430 --> 00:16:13,759
on the ground who are watching this you

387
00:16:19,590 --> 00:16:15,440
know just practice over and over again

388
00:16:28,790 --> 00:16:23,350

hey ron on two we lost ku please use hhm

389
00:16:34,829 --> 00:16:31,590
okay copy uh the loss of ku and i'm not

390
00:16:38,550 --> 00:16:34,839
sure how much of the answer was

391
00:16:40,550 --> 00:16:38,560
clipped uh basically you know we

392
00:16:43,430 --> 00:16:40,560
have many many different types of

393
00:16:44,949 --> 00:16:43,440
emergencies that we can think of and we

394
00:16:47,110 --> 00:16:44,959
practice

395
00:16:58,790 --> 00:16:47,120
them quite frequently with the team on

396
00:16:58,800 --> 00:17:04,309
hi my

397
00:17:08,630 --> 00:17:06,549
my name is dylan does eating more

398
00:17:13,669 --> 00:17:08,640
calcium on earth help with your bones

399
00:17:17,350 --> 00:17:15,590
um that's a that's a really good

400
00:17:19,189 --> 00:17:17,360
question and it's one of the things that

401
00:17:21,829 --> 00:17:19,199
we're looking at very closely

402
00:17:25,750 --> 00:17:21,839
is uh bone loss so basically the the

403
00:17:27,669 --> 00:17:25,760
human body is a amazing thing and

404
00:17:29,350 --> 00:17:27,679
the human body adapts very quickly to

405
00:17:30,710 --> 00:17:29,360
any environment that it's in and

406
00:17:31,510 --> 00:17:30,720
sometimes

407
00:17:36,789 --> 00:17:31,520
that

408
00:17:39,029 --> 00:17:36,799
when we get to space the body realizes

409
00:17:40,630 --> 00:17:39,039
it doesn't need as much muscle anymore

410
00:17:42,710 --> 00:17:40,640
uh it doesn't really need a skeleton

411
00:17:45,750 --> 00:17:42,720
anymore uh because it's not holding up

412
00:17:46,789 --> 00:17:45,760
the weight of your body and so you start

413
00:17:52,310 --> 00:17:46,799

losing

414
00:17:54,549 --> 00:17:52,320
density of your bones and so um we are

415
00:17:56,150 --> 00:17:54,559
studying you know the effects of calcium

416
00:17:58,070 --> 00:17:56,160
the effects of other

417
00:18:00,230 --> 00:17:58,080
nutrients

418
00:18:02,470 --> 00:18:00,240
and trying to learn what the process is

419
00:18:05,430 --> 00:18:02,480
for that bone loss because we have a

420
00:18:08,310 --> 00:18:05,440
very similar bone loss uh on earth and

421
00:18:10,070 --> 00:18:08,320
so if we can figure out how to stop that

422
00:18:11,669 --> 00:18:10,080
process in space

423
00:18:20,789 --> 00:18:11,679
it could have very important

424
00:18:30,549 --> 00:18:23,190
hi my name is victoria and have you ever

425
00:18:34,630 --> 00:18:32,470
i'm looking at one right now

426
00:18:37,750 --> 00:18:34,640
one of my crewmates across the module

427
00:18:39,909 --> 00:18:37,760
who i'm just kidding uh

428
00:18:42,230 --> 00:18:39,919
yeah i i've seen i don't i wouldn't say

429
00:18:44,470 --> 00:18:42,240
strange i would say amazing um just

430
00:18:47,190 --> 00:18:44,480
yesterday we were looking at these uh

431
00:18:48,230 --> 00:18:47,200
these uh high very very high altitude

432
00:18:49,190 --> 00:18:48,240
clouds

433
00:18:50,630 --> 00:18:49,200
um

434
00:18:53,350 --> 00:18:50,640
and you know there's

435
00:18:55,350 --> 00:18:53,360
auroras and and you know shooting stars

436
00:18:57,990 --> 00:18:55,360
meteorites you know we see those below

437
00:19:00,789 --> 00:18:58,000
us um lightning storms on the earth from

438
00:19:03,750 --> 00:19:00,799

space are absolutely spectacular because

439
00:19:05,909 --> 00:19:03,760
we see a very wide area all at once and

440
00:19:08,630 --> 00:19:05,919
so it looks like you know strobe lights

441
00:19:11,029 --> 00:19:08,640
or or you know flashes of light bulbs

442
00:19:13,830 --> 00:19:11,039
you know an oscar's knife of paparazzi i

443
00:19:15,669 --> 00:19:13,840
mean it's really uh you know there's a

444
00:19:17,750 --> 00:19:15,679
lot of amazing things i think one of the

445
00:19:20,310 --> 00:19:17,760
most amazing things is looking at

446
00:19:22,310 --> 00:19:20,320
sunsets and sunrises because you know we

447
00:19:24,230 --> 00:19:22,320
look down at the earth at them so we see

448
00:19:26,630 --> 00:19:24,240
on one side you know the dark earth

449
00:19:29,190 --> 00:19:26,640
where everybody's sleeping and then

450
00:19:32,230 --> 00:19:29,200
in the same view we see

451
00:19:34,390 --> 00:19:32,240
you know the daytime and everybody off

452
00:19:36,150 --> 00:19:34,400
at work or school or um

453
00:19:37,909 --> 00:19:36,160
going about their business and to see

454
00:19:39,750 --> 00:19:37,919
that transition out in front of you on

455
00:19:40,630 --> 00:19:39,760
the ground is is really beautiful

456
00:19:44,070 --> 00:19:40,640
because there's a lot of different

457
00:19:44,789 --> 00:19:44,080
colors associated with that and and um

458
00:19:45,669 --> 00:19:44,799
so

459
00:19:47,350 --> 00:19:45,679
uh

460
00:19:49,029 --> 00:19:47,360
you know strange things i i don't know

461
00:19:50,950 --> 00:19:49,039
if i call them strange i'd say amazing

462
00:20:00,789 --> 00:19:50,960
and we see those every day it's a it's

463
00:20:04,470 --> 00:20:02,950

well we understand colonel garin that

464
00:20:06,470 --> 00:20:04,480
our time with you this morning has

465
00:20:07,669 --> 00:20:06,480
expired i want to say i'm sorry to the

466
00:20:09,029 --> 00:20:07,679
students standing in front of me who

467
00:20:11,029 --> 00:20:09,039
didn't get a chance to answer their

468
00:20:13,750 --> 00:20:11,039
questions but we've certainly enjoyed

469
00:20:18,950 --> 00:20:13,760
our time with you it's fantastic to talk

470
00:20:18,960 --> 00:20:27,270
show him some appreciation

471
00:20:31,990 --> 00:20:29,590
so on behalf of suny oneonta and all

472
00:20:34,789 --> 00:20:32,000
these fantastic students joining us this

473
00:20:36,549 --> 00:20:34,799
morning we just want to say thank you i

474
00:20:38,710 --> 00:20:36,559
basically you know became an adult in

475
00:20:40,390 --> 00:20:38,720
oneonta and it was you know where my

476
00:20:41,830 --> 00:20:40,400
roots are there and

477
00:20:44,230 --> 00:20:41,840
you know it's a great honor and a great

478
00:20:46,470 --> 00:20:44,240
privilege and a great pleasure to be

479
00:20:48,630 --> 00:20:46,480
able to speak to everybody today and

480
00:20:50,630 --> 00:20:48,640
i just want to say remember study hard

481
00:20:52,549 --> 00:20:50,640
work hard and don't give up on your

482
00:20:54,870 --> 00:20:52,559
dreams because they can they they will

483
00:20:56,789 --> 00:20:54,880
come true if you work hard enough and

484
00:20:58,149 --> 00:20:56,799
you give a draw so

485
00:21:01,270 --> 00:20:58,159
it was really nice talking to everybody

486
00:21:03,350 --> 00:21:01,280
today those are great great questions

487
00:21:15,590 --> 00:21:03,360
and i really appreciate them so take