



1  
00:00:06,150 --> 00:00:04,470  
well welcome to uh mission control

2  
00:00:08,470 --> 00:00:06,160  
houston i know you guys are just down

3  
00:00:11,110 --> 00:00:08,480  
the street in building nine at the space

4  
00:00:13,350 --> 00:00:11,120  
vehicle mock-up facility uh but we're

5  
00:00:14,789 --> 00:00:13,360  
inside the mission control center this

6  
00:00:17,430 --> 00:00:14,799  
is the international space station

7  
00:00:19,510 --> 00:00:17,440  
flight control room i'm kyle hearing i'm

8  
00:00:22,630 --> 00:00:19,520  
the public affairs officer who's on duty

9  
00:00:24,790 --> 00:00:22,640  
this week for space station commentary

10  
00:00:27,109 --> 00:00:24,800  
and i'm very pleased to be joined by

11  
00:00:28,870 --> 00:00:27,119  
dottie metcalf lindenberger dottie

12  
00:00:30,790 --> 00:00:28,880  
agreed to come over and talk to you guys

13  
00:00:32,870 --> 00:00:30,800

and answer your questions i think she's

14

00:00:35,590 --> 00:00:32,880

an expert at knowing what

15

00:00:38,150 --> 00:00:35,600

life in space is all about she flew

16

00:00:40,790 --> 00:00:38,160

in space on a shuttle flight for a

17

00:00:42,389 --> 00:00:40,800

number of days 10 of those days at least

18

00:00:44,549 --> 00:00:42,399

were docked to the international space

19

00:00:46,229 --> 00:00:44,559

station that this flight control team in

20

00:00:48,389 --> 00:00:46,239

this room is operating right now

21

00:00:50,869 --> 00:00:48,399

watching over uh the six crew members

22

00:00:53,189 --> 00:00:50,879

that are on board so dottie welcome

23

00:00:54,790 --> 00:00:53,199

thanks for joining us for this it's uh

24

00:00:56,869 --> 00:00:54,800

exciting to have you here thank you very

25

00:01:01,270 --> 00:00:56,879

much kyle and for you guys out there

26

00:01:05,509 --> 00:01:03,270

um my name's grace i was kind of

27

00:01:07,510 --> 00:01:05,519

wondering um

28

00:01:08,950 --> 00:01:07,520

how did you like work with payloads how

29

00:01:11,590 --> 00:01:08,960

did they have to be altered in order to

30

00:01:13,270 --> 00:01:11,600

work in microgravity

31

00:01:15,990 --> 00:01:13,280

grace that's a great question about the

32

00:01:17,910 --> 00:01:16,000

payloads um you know one of the reasons

33

00:01:20,310 --> 00:01:17,920

we take payloads to space is because of

34

00:01:23,109 --> 00:01:20,320

microgravity and the fact that it offers

35

00:01:25,429 --> 00:01:23,119

a different environment for the fluids

36

00:01:27,670 --> 00:01:25,439

or the combustibles that we want to look

37

00:01:29,749 --> 00:01:27,680

at or the way things are crystallizing

38

00:01:31,830 --> 00:01:29,759

so i personally didn't have a chance to

39

00:01:33,830 --> 00:01:31,840

work on any specific payloads we were a

40

00:01:35,749 --> 00:01:33,840

delivery flight and we brought up

41

00:01:39,429 --> 00:01:35,759

several payloads that were to be used in

42

00:01:44,630 --> 00:01:39,439

the years following our flight

43

00:01:48,389 --> 00:01:46,630

hi um my name's susan and i was

44

00:01:49,670 --> 00:01:48,399

wondering was there like a defining

45

00:01:52,469 --> 00:01:49,680

point in your life when you knew you

46

00:01:54,069 --> 00:01:52,479

wanted to be an astronaut

47

00:01:55,749 --> 00:01:54,079

susan that's a great question i think

48

00:01:57,270 --> 00:01:55,759

there were many points along my life

49

00:02:00,069 --> 00:01:57,280

that led me in the way to be an

50

00:02:02,149 --> 00:02:00,079

astronaut um i enjoyed going to the

51  
00:02:04,389 --> 00:02:02,159  
museum of natural history in denver

52  
00:02:06,630 --> 00:02:04,399  
where i grew up and going to the

53  
00:02:08,389 --> 00:02:06,640  
planetarium and at that time there was a

54  
00:02:10,630 --> 00:02:08,399  
lot of information coming back about

55  
00:02:13,110 --> 00:02:10,640  
exploration in our solar system and it

56  
00:02:15,589 --> 00:02:13,120  
fascinated me as well as

57  
00:02:19,430 --> 00:02:15,599  
i remember the challenger launch

58  
00:02:20,830 --> 00:02:19,440  
and that was defining and then also

59  
00:02:23,350 --> 00:02:20,840  
in middle school i had some

60  
00:02:25,589 --> 00:02:23,360  
opportunities with science to do some

61  
00:02:28,070 --> 00:02:25,599  
presentations on

62  
00:02:29,990 --> 00:02:28,080  
fuels alternative fuels and then also a

63  
00:02:31,910 --> 00:02:30,000

chance to go to space camp so i think

64

00:02:33,670 --> 00:02:31,920

all of those things helped me realize

65

00:02:36,150 --> 00:02:33,680

that i really enjoyed science and i

66

00:02:38,309 --> 00:02:36,160

wanted to work hard at it and when the

67

00:02:40,390 --> 00:02:38,319

opportunity came to apply

68

00:02:49,509 --> 00:02:40,400

as a teacher for being an astronaut i

69

00:02:53,430 --> 00:02:51,710

hello ma'am what was the most uh

70

00:02:55,830 --> 00:02:53,440

adrenaline-inducing event that you've

71

00:02:57,910 --> 00:02:55,840

experienced in space

72

00:03:01,030 --> 00:02:57,920

i think the most adrenaline-inducing

73

00:03:04,229 --> 00:03:01,040

experience was the actual launch um it

74

00:03:06,470 --> 00:03:04,239

was very dynamic in the shuttle and it

75

00:03:08,790 --> 00:03:06,480

was you'd been working really hard as a

76

00:03:10,790 --> 00:03:08,800

team for that specific day

77

00:03:12,630 --> 00:03:10,800

and it was just exciting that we were

78

00:03:14,710 --> 00:03:12,640

going off because there's always the

79

00:03:17,030 --> 00:03:14,720

chance that there could be a scrub

80

00:03:19,270 --> 00:03:17,040

and the weather had been a little bit

81

00:03:21,509 --> 00:03:19,280

foggy leading up to our launch and so it

82

00:03:23,990 --> 00:03:21,519

was great to actually be launching but

83

00:03:26,470 --> 00:03:24,000

then the dynamics kick in and you feel

84

00:03:28,550 --> 00:03:26,480

the solid rocket boosters lifting you

85

00:03:30,070 --> 00:03:28,560

up into space and

86

00:03:33,030 --> 00:03:30,080

it's more than what you feel in the

87

00:03:35,990 --> 00:03:33,040

simulators so that was definitely

88

00:03:41,670 --> 00:03:36,000

adrenaline inducing

89  
00:03:45,830 --> 00:03:44,390  
hi my name is hannah and i was wondering

90  
00:03:47,750 --> 00:03:45,840  
if you could go back and change one

91  
00:03:49,509 --> 00:03:47,760  
thing about your past education or the

92  
00:03:51,509 --> 00:03:49,519  
steps that you took to get to nasa what

93  
00:03:53,990 --> 00:03:51,519  
would it be

94  
00:03:55,589 --> 00:03:54,000  
hannah i think i would um have taken

95  
00:03:57,910 --> 00:03:55,599  
some engineering courses they weren't

96  
00:03:59,990 --> 00:03:57,920  
offered at my school but

97  
00:04:02,070 --> 00:04:00,000  
maybe i would have had a chance to to

98  
00:04:04,229 --> 00:04:02,080  
take a few more now i've been able to

99  
00:04:06,789 --> 00:04:04,239  
learn those things here on the job but i

100  
00:04:08,949 --> 00:04:06,799  
just i enjoy learning and so i think

101  
00:04:11,509 --> 00:04:08,959  
that would be something that i would do

102  
00:04:14,470 --> 00:04:11,519  
as well as to just take more advanced

103  
00:04:16,390 --> 00:04:14,480  
classes in other science areas as well

104  
00:04:17,830 --> 00:04:16,400  
as technology because you can never

105  
00:04:20,069 --> 00:04:17,840  
learn too much and i think that's the

106  
00:04:22,790 --> 00:04:20,079  
exciting part about working here is that

107  
00:04:25,430 --> 00:04:22,800  
every day we continue to learn more

108  
00:04:27,749 --> 00:04:25,440  
about ourselves and about the way things

109  
00:04:29,670 --> 00:04:27,759  
operate in space so that we can continue

110  
00:04:36,469 --> 00:04:29,680  
exploring

111  
00:04:39,830 --> 00:04:38,390  
hi i'm cassidy and i was wondering that

112  
00:04:41,430 --> 00:04:39,840  
going into space requires a lot of

113  
00:04:43,830 --> 00:04:41,440

training and what was the hardest part

114

00:04:47,189 --> 00:04:43,840

and what was your favorite part

115

00:04:49,030 --> 00:04:47,199

uh cassidy training definitely we spent

116

00:04:50,070 --> 00:04:49,040

a little over a year as a shuttle crew

117

00:04:51,030 --> 00:04:50,080

training

118

00:04:52,710 --> 00:04:51,040

and

119

00:04:54,550 --> 00:04:52,720

i think actually the hardest part came

120

00:04:56,390 --> 00:04:54,560

when i was doing my initial astronaut

121

00:04:58,790 --> 00:04:56,400

candidacy training and that was the

122

00:05:01,909 --> 00:04:58,800

water survival i'd never been in a

123

00:05:04,310 --> 00:05:01,919

helicopter dunker and we went to florida

124

00:05:05,990 --> 00:05:04,320

and they lower the dunker into the water

125

00:05:07,670 --> 00:05:06,000

and then it flips over and you have to

126  
00:05:08,870 --> 00:05:07,680  
wait while you're buckled in before

127  
00:05:11,670 --> 00:05:08,880  
escaping

128  
00:05:13,510 --> 00:05:11,680  
and the first time that i did it um

129  
00:05:16,070 --> 00:05:13,520  
definitely it caused some adrenaline

130  
00:05:17,189 --> 00:05:16,080  
that was an adrenal inducing event

131  
00:05:19,270 --> 00:05:17,199  
and

132  
00:05:20,710 --> 00:05:19,280  
i i ended up doing all of the survival

133  
00:05:21,590 --> 00:05:20,720  
techniques but it just was not my

134  
00:05:23,670 --> 00:05:21,600  
favorite

135  
00:05:26,150 --> 00:05:23,680  
it's kind of survivable drowning and it

136  
00:05:28,070 --> 00:05:26,160  
just wasn't as enjoyable to me but i

137  
00:05:29,029 --> 00:05:28,080  
really enjoyed training as a shuttle

138  
00:05:30,710 --> 00:05:29,039

crew

139

00:05:32,870 --> 00:05:30,720

we had a great team

140

00:05:34,310 --> 00:05:32,880

this wonderful commander and pilot and

141

00:05:36,710 --> 00:05:34,320

mission specialist

142

00:05:39,029 --> 00:05:36,720

and i think that the classes that we

143

00:05:40,950 --> 00:05:39,039

took and all of our instructors just

144

00:05:43,270 --> 00:05:40,960

made it so enjoyable that you wanted to

145

00:05:44,950 --> 00:05:43,280

come every day and i really enjoyed the

146

00:05:47,270 --> 00:05:44,960

the long simulations that we would

147

00:05:48,790 --> 00:05:47,280

participate in where you would take a

148

00:05:49,990 --> 00:05:48,800

whole flight date and practice

149

00:05:51,510 --> 00:05:50,000

everything that you were going to do on

150

00:05:54,629 --> 00:05:51,520

that flight day from the robotic

151  
00:05:56,870 --> 00:05:54,639  
operations or maybe to the ev opera eva

152  
00:06:07,510 --> 00:05:56,880  
operations we just practice all of those

153  
00:06:11,590 --> 00:06:09,590  
hi i'm betsy and i was wondering what

154  
00:06:15,110 --> 00:06:11,600  
advice you'd give to an aspiring young

155  
00:06:17,189 --> 00:06:15,120  
scholar in the math or aerospace field

156  
00:06:19,430 --> 00:06:17,199  
betsy i would give the advice that you

157  
00:06:20,550 --> 00:06:19,440  
should always work hard and ask

158  
00:06:22,070 --> 00:06:20,560  
questions

159  
00:06:23,990 --> 00:06:22,080  
there's going to be challenges along the

160  
00:06:26,790 --> 00:06:24,000  
way and not everything is going to come

161  
00:06:29,350 --> 00:06:26,800  
easily but if you

162  
00:06:31,909 --> 00:06:29,360  
pursue your interests and you follow up

163  
00:06:34,550 --> 00:06:31,919

with your teachers or professors

164

00:06:38,309 --> 00:06:34,560

and you ask questions then you will have

165

00:06:46,550 --> 00:06:38,319

a rewarding path along that journey

166

00:06:51,189 --> 00:06:49,350

hi i'm heather um i was wondering if you

167

00:06:52,950 --> 00:06:51,199

knew what you wanted to do before you

168

00:06:56,070 --> 00:06:52,960

got to college and

169

00:06:57,270 --> 00:06:56,080

like what you knew um how what to major

170

00:06:58,790 --> 00:06:57,280

in

171

00:07:00,790 --> 00:06:58,800

heather that's a great question you know

172

00:07:02,390 --> 00:07:00,800

i did set off to college thinking i'm

173

00:07:04,790 --> 00:07:02,400

going to be a math major just like my

174

00:07:07,189 --> 00:07:04,800

mom and i took math classes at school

175

00:07:09,589 --> 00:07:07,199

and i really enjoyed them but i wasn't

176

00:07:11,909 --> 00:07:09,599

as passionate about them as i was about

177

00:07:14,070 --> 00:07:11,919

an intro to geology course i really

178

00:07:16,070 --> 00:07:14,080

enjoyed the field trips i loved putting

179

00:07:18,870 --> 00:07:16,080

together the histories of the rock and

180

00:07:21,749 --> 00:07:18,880

figuring out what they meant and so

181

00:07:24,790 --> 00:07:21,759

after that intro course my freshman year

182

00:07:27,029 --> 00:07:24,800

i look i sat down and i decided

183

00:07:29,430 --> 00:07:27,039

that i enjoyed the math but i was going

184

00:07:30,550 --> 00:07:29,440

to change my direction and go with

185

00:07:32,469 --> 00:07:30,560

geology

186

00:07:35,670 --> 00:07:32,479

and i had some opportunities to do

187

00:07:38,070 --> 00:07:35,680

internships both mapping in

188

00:07:40,150 --> 00:07:38,080

outside of yellowstone for a summer and

189

00:07:42,070 --> 00:07:40,160

looking at the last glaciation there and

190

00:07:45,270 --> 00:07:42,080

then also doing some mapping in southern

191

00:07:47,909 --> 00:07:45,280

colorado and both of those experiences

192

00:07:49,270 --> 00:07:47,919

were very rewarding to me so i'm glad i

193

00:07:51,110 --> 00:07:49,280

made that change and i think that's

194

00:07:53,110 --> 00:07:51,120

important that you realize you can

195

00:07:54,710 --> 00:07:53,120

change your path and many times you

196

00:07:56,390 --> 00:07:54,720

might change your path and that's okay

197

00:07:58,390 --> 00:07:56,400

as long as you

198

00:08:00,790 --> 00:07:58,400

are enjoying what you're doing

199

00:08:02,550 --> 00:08:00,800

and uh and finding that it's challenging

200

00:08:07,749 --> 00:08:02,560

to you

201  
00:08:11,270 --> 00:08:09,830  
my name is laura and my question was

202  
00:08:12,950 --> 00:08:11,280  
what is the greatest difficulty you've

203  
00:08:16,790 --> 00:08:12,960  
encountered as a woman and to what

204  
00:08:20,390 --> 00:08:18,710  
laura that's a it's a challenging

205  
00:08:22,869 --> 00:08:20,400  
question

206  
00:08:25,110 --> 00:08:22,879  
you know as a woman a lot of my mentors

207  
00:08:27,510 --> 00:08:25,120  
were not women because there were not

208  
00:08:28,790 --> 00:08:27,520  
professors in my field that were women

209  
00:08:30,710 --> 00:08:28,800  
and so

210  
00:08:32,469 --> 00:08:30,720  
while i couldn't see someone that looked

211  
00:08:34,709 --> 00:08:32,479  
exactly like me

212  
00:08:37,029 --> 00:08:34,719  
i made the opportunity to

213  
00:08:39,269 --> 00:08:37,039

meet really great men who taught me lots

214

00:08:40,949 --> 00:08:39,279

of interesting things and i learned a

215

00:08:43,670 --> 00:08:40,959

lot from them and i still keep in touch

216

00:08:45,190 --> 00:08:43,680

with my professors to this day

217

00:08:47,430 --> 00:08:45,200

so i think that

218

00:08:48,790 --> 00:08:47,440

you can realize that you want to see

219

00:08:50,389 --> 00:08:48,800

people that

220

00:08:52,630 --> 00:08:50,399

maybe look like you but that doesn't

221

00:08:56,230 --> 00:08:52,640

mean it should limit your possibility

222

00:08:58,230 --> 00:08:56,240

that that you can still find great um

223

00:09:00,389 --> 00:08:58,240

commonalities with uh

224

00:09:02,550 --> 00:09:00,399

with whoever is teaching you and again

225

00:09:04,630 --> 00:09:02,560

just keep asking questions and believing

226

00:09:05,670 --> 00:09:04,640

in yourself

227

00:09:09,269 --> 00:09:05,680

okay

228

00:09:12,949 --> 00:09:11,590

hi i'm munu and i was wondering why

229

00:09:15,350 --> 00:09:12,959

science appealed to you when you were a

230

00:09:17,829 --> 00:09:15,360

child

231

00:09:19,430 --> 00:09:17,839

well science appealed to me because it's

232

00:09:20,949 --> 00:09:19,440

it's got so many things that are

233

00:09:23,110 --> 00:09:20,959

changing and we're always learning

234

00:09:25,269 --> 00:09:23,120

something new so like i said i enjoyed

235

00:09:26,790 --> 00:09:25,279

going to the museum and planetarium

236

00:09:28,790 --> 00:09:26,800

because we were learning new information

237

00:09:30,710 --> 00:09:28,800

about our solar system and we continue

238

00:09:33,110 --> 00:09:30,720

to learn more information every day

239

00:09:35,350 --> 00:09:33,120

through nasa and our partners

240

00:09:37,190 --> 00:09:35,360

and i think that's just what always has

241

00:09:40,230 --> 00:09:37,200

fascinated me is that it's an unending

242

00:09:41,269 --> 00:09:40,240

story and there's so many possibilities

243

00:09:42,710 --> 00:09:41,279

and

244

00:09:44,550 --> 00:09:42,720

i just really enjoyed those

245

00:09:46,949 --> 00:09:44,560

possibilities and the fact that they

246

00:09:49,110 --> 00:09:46,959

were challenging um it meant that i had

247

00:09:51,110 --> 00:09:49,120

to do research and that i had to work

248

00:09:52,790 --> 00:09:51,120

math problems or physics problems i had

249

00:09:55,509 --> 00:09:52,800

to spend some extra time

250

00:09:57,350 --> 00:09:55,519

but the satisfaction i had when i solved

251  
00:09:59,350 --> 00:09:57,360  
those problems or when i worked with

252  
00:10:02,470 --> 00:09:59,360  
others to solve problems that was very

253  
00:10:04,870 --> 00:10:02,480  
rewarding too so science to me offers a

254  
00:10:07,110 --> 00:10:04,880  
lot of opportunities it's going to help

255  
00:10:09,750 --> 00:10:07,120  
us in the future we absolutely need to

256  
00:10:11,430 --> 00:10:09,760  
understand the language of science to be

257  
00:10:13,910 --> 00:10:11,440  
successful in the future

258  
00:10:16,550 --> 00:10:13,920  
and to make this planet better so

259  
00:10:20,470 --> 00:10:16,560  
that's why i like science

260  
00:10:25,590 --> 00:10:22,949  
hi my name is claire i was wondering how

261  
00:10:27,990 --> 00:10:25,600  
being an educated educator positive

262  
00:10:30,470 --> 00:10:28,000  
positively influenced you and like led

263  
00:10:32,069 --> 00:10:30,480

you to a career working at nasa

264

00:10:33,910 --> 00:10:32,079

claire that's a great question actually

265

00:10:36,389 --> 00:10:33,920

the questions of my students are what

266

00:10:38,630 --> 00:10:36,399

led me to find out that i could be that

267

00:10:39,910 --> 00:10:38,640

i could apply as a teacher to be an

268

00:10:42,230 --> 00:10:39,920

astronaut

269

00:10:44,710 --> 00:10:42,240

one of my students in an astronomy class

270

00:10:46,310 --> 00:10:44,720

had been kind of struggling and

271

00:10:48,150 --> 00:10:46,320

i wanted her to realize that i really

272

00:10:50,310 --> 00:10:48,160

cared about her questions and so one day

273

00:10:52,470 --> 00:10:50,320

she asked how do astronauts go to the

274

00:10:54,630 --> 00:10:52,480

bathroom in space that's a very popular

275

00:10:55,670 --> 00:10:54,640

question that we get here at nasa

276

00:10:57,110 --> 00:10:55,680

and

277

00:10:59,110 --> 00:10:57,120

i was really glad she asked that

278

00:11:01,030 --> 00:10:59,120

question because i didn't know what the

279

00:11:02,470 --> 00:11:01,040

exact mechanism looked like i didn't

280

00:11:03,509 --> 00:11:02,480

know what the bathroom for the shuttle

281

00:11:06,230 --> 00:11:03,519

looked like

282

00:11:08,550 --> 00:11:06,240

and in researching it i also came across

283

00:11:10,310 --> 00:11:08,560

then the application process but i just

284

00:11:12,069 --> 00:11:10,320

think being an educator helped me

285

00:11:13,990 --> 00:11:12,079

realize that there's more questions that

286

00:11:15,829 --> 00:11:14,000

i don't think of you guys think of some

287

00:11:17,670 --> 00:11:15,839

really awesome questions and those

288

00:11:19,990 --> 00:11:17,680

questions are going to propel us to

289

00:11:22,630 --> 00:11:20,000

answers in the future so keep asking

290

00:11:24,790 --> 00:11:22,640

them and i'm glad i had the opportunity

291

00:11:29,509 --> 00:11:24,800

to be a teacher

292

00:11:33,190 --> 00:11:31,509

hello my name is gracie and i was

293

00:11:34,949 --> 00:11:33,200

wondering what it was like working with

294

00:11:36,310 --> 00:11:34,959

astronauts from other countries such as

295

00:11:38,870 --> 00:11:36,320

russia

296

00:11:40,550 --> 00:11:38,880

gracie that's a great great question

297

00:11:42,949 --> 00:11:40,560

we joined

298

00:11:44,710 --> 00:11:42,959

russian cosmonauts on orbit and they

299

00:11:46,710 --> 00:11:44,720

were fantastic to work with they had in

300

00:11:48,630 --> 00:11:46,720

fact just gotten to the space station a

301  
00:11:50,069 --> 00:11:48,640  
few days earlier than us

302  
00:11:53,110 --> 00:11:50,079  
and so there were there ended up being

303  
00:11:54,710 --> 00:11:53,120  
13 of us on orbit at one time which is

304  
00:11:57,030 --> 00:11:54,720  
um right at the record there had been

305  
00:11:59,030 --> 00:11:57,040  
other missions that had 13 as well

306  
00:12:00,150 --> 00:11:59,040  
and that's a lot of people in space but

307  
00:12:02,069 --> 00:12:00,160  
it's never too crowded in the

308  
00:12:03,829 --> 00:12:02,079  
international space station and i think

309  
00:12:06,550 --> 00:12:03,839  
the neat thing was that they took us on

310  
00:12:08,389 --> 00:12:06,560  
tours of their modules they're

311  
00:12:11,110 --> 00:12:08,399  
they're really proud of their systems

312  
00:12:13,110 --> 00:12:11,120  
and showing that to us and it gave us a

313  
00:12:15,829 --> 00:12:13,120

framework to appreciate our systems and

314

00:12:17,269 --> 00:12:15,839

then to compare them and and understand

315

00:12:18,870 --> 00:12:17,279

more about their systems and how they

316

00:12:21,350 --> 00:12:18,880

all work together

317

00:12:23,030 --> 00:12:21,360

also while i was on the international

318

00:12:25,910 --> 00:12:23,040

space station i had the opportunity to

319

00:12:29,350 --> 00:12:25,920

work with two japanese astronauts um

320

00:12:30,230 --> 00:12:29,360

suici and naoko yamasaki

321

00:12:31,590 --> 00:12:30,240

and

322

00:12:33,110 --> 00:12:31,600

that was really rewarding to us the

323

00:12:35,829 --> 00:12:33,120

first time that there were two japanese

324

00:12:37,990 --> 00:12:35,839

astronauts in space and naoko was on our

325

00:12:39,670 --> 00:12:38,000

crew and she just worked so hard and

326

00:12:41,110 --> 00:12:39,680

diligently and she was just a great

327

00:12:43,269 --> 00:12:41,120

crewmate to have

328

00:12:44,870 --> 00:12:43,279

so i love the aspect of the

329

00:12:47,030 --> 00:12:44,880

international space station and getting

330

00:12:49,030 --> 00:12:47,040

to work with people from all around the

331

00:12:54,310 --> 00:12:49,040

world

332

00:12:58,389 --> 00:12:56,389

hi my name is stephanie i was wondering

333

00:13:00,629 --> 00:12:58,399

if anyone ever tried to talk you out of

334

00:13:02,790 --> 00:13:00,639

pursuing a career at nasa and ultimately

335

00:13:04,629 --> 00:13:02,800

becoming an astronaut and if so how did

336

00:13:07,030 --> 00:13:04,639

you handle that

337

00:13:09,590 --> 00:13:07,040

well stephanie i feel pretty lucky that

338

00:13:11,590 --> 00:13:09,600

the people around me supported me in my

339

00:13:12,870 --> 00:13:11,600

pursuit they were realistic and they

340

00:13:13,910 --> 00:13:12,880

said that you know it's a difficult

341

00:13:15,430 --> 00:13:13,920

challenge

342

00:13:17,829 --> 00:13:15,440

my husband pointed out that there are

343

00:13:20,870 --> 00:13:17,839

many talented people that could do the

344

00:13:23,590 --> 00:13:20,880

same job and and that's absolutely true

345

00:13:27,190 --> 00:13:23,600

and and yet they all supported

346

00:13:29,030 --> 00:13:27,200

my applying and they were excited when i

347

00:13:30,710 --> 00:13:29,040

received notice that i was going to

348

00:13:32,710 --> 00:13:30,720

become an astronaut and they've

349

00:13:35,829 --> 00:13:32,720

continued to be supportive so my parents

350

00:13:37,269 --> 00:13:35,839

supported my dream my husband and then i

351  
00:13:39,990 --> 00:13:37,279  
even had a chance to bring my daughter

352  
00:13:44,550 --> 00:13:40,000  
along in the journey

353  
00:13:48,389 --> 00:13:46,550  
hi my name is laura

354  
00:13:50,629 --> 00:13:48,399  
you have so many interests regarding the

355  
00:13:53,030 --> 00:13:50,639  
study of space from robotics to

356  
00:13:54,870 --> 00:13:53,040  
materials and their many applications

357  
00:13:56,470 --> 00:13:54,880  
how do you balance family and hobbies

358  
00:13:58,389 --> 00:13:56,480  
with the many interesting parts of your

359  
00:14:00,310 --> 00:13:58,399  
career

360  
00:14:01,350 --> 00:14:00,320  
well like all things balancing is a

361  
00:14:02,629 --> 00:14:01,360  
challenge

362  
00:14:04,629 --> 00:14:02,639  
but uh

363  
00:14:07,750 --> 00:14:04,639

you just you know you try to work things

364

00:14:09,269 --> 00:14:07,760

as you can and uh you know like i said

365

00:14:11,269 --> 00:14:09,279

there's there's time to be passionate

366

00:14:13,350 --> 00:14:11,279

about the science that you're doing and

367

00:14:15,670 --> 00:14:13,360

be excited about the training and

368

00:14:17,269 --> 00:14:15,680

learning more and then it's also just as

369

00:14:19,269 --> 00:14:17,279

fun to be out on the soccer field with

370

00:14:22,310 --> 00:14:19,279

my daughter and then i have a personal

371

00:14:23,910 --> 00:14:22,320

hobby of running that um helps me stay

372

00:14:25,430 --> 00:14:23,920

grounded too so

373

00:14:27,990 --> 00:14:25,440

all i like to try to keep all those

374

00:14:32,150 --> 00:14:28,000

things going when possible

375

00:14:36,150 --> 00:14:34,629

hi my name is ariane um i was wondering

376

00:14:37,590 --> 00:14:36,160

if you had known when you were our age

377

00:14:40,550 --> 00:14:37,600

that you would accomplish so much what

378

00:14:42,470 --> 00:14:40,560

advice would you have given yourself

379

00:14:44,710 --> 00:14:42,480

well eric that's a that's a really good

380

00:14:46,870 --> 00:14:44,720

question i didn't have any idea that i

381

00:14:49,110 --> 00:14:46,880

would be doing all this at your age i

382

00:14:51,590 --> 00:14:49,120

did have dreams of doing it but i also

383

00:14:54,150 --> 00:14:51,600

saw myself doing other things too and i

384

00:14:55,829 --> 00:14:54,160

think that's the important thing about

385

00:14:57,990 --> 00:14:55,839

as you journey through life is that you

386

00:14:59,590 --> 00:14:58,000

see yourself doing multiple things

387

00:15:00,710 --> 00:14:59,600

there's always dreams and goals out

388

00:15:02,870 --> 00:15:00,720

there

389

00:15:04,949 --> 00:15:02,880

one of my passions is hiking and it's

390

00:15:07,110 --> 00:15:04,959

kind of like in hiking you see other

391

00:15:08,710 --> 00:15:07,120

mountain ranges that you want to go to

392

00:15:10,389 --> 00:15:08,720

and there's other

393

00:15:12,790 --> 00:15:10,399

places that you want to venture and

394

00:15:16,310 --> 00:15:12,800

travel to and so it's it's the same in

395

00:15:18,790 --> 00:15:16,320

this i i dreamed it and i worked hard

396

00:15:20,069 --> 00:15:18,800

but i also knew that um if this didn't

397

00:15:22,150 --> 00:15:20,079

work out there would be other things

398

00:15:23,910 --> 00:15:22,160

that would work out as well and so i

399

00:15:26,150 --> 00:15:23,920

encourage you to have

400

00:15:28,230 --> 00:15:26,160

dreams and pursue them and pursue them

401  
00:15:33,670 --> 00:15:28,240  
with passion

402  
00:15:38,870 --> 00:15:36,470  
hi my name is smithy i was wondering who

403  
00:15:41,749 --> 00:15:38,880  
or what inspired you to pursue science

404  
00:15:43,990 --> 00:15:41,759  
and to become an astronaut

405  
00:15:46,949 --> 00:15:44,000  
well many people inspired me along the

406  
00:15:48,870 --> 00:15:46,959  
way i grew up with parents that were

407  
00:15:51,509 --> 00:15:48,880  
teachers and teachers in math and

408  
00:15:54,389 --> 00:15:51,519  
science and so from a young age they

409  
00:15:56,790 --> 00:15:54,399  
were already setting the seeds of of

410  
00:15:59,189 --> 00:15:56,800  
growth there and then i had really great

411  
00:16:01,749 --> 00:15:59,199  
teachers in middle school i had a

412  
00:16:03,590 --> 00:16:01,759  
teacher that took me to california for

413  
00:16:05,990 --> 00:16:03,600

the alternative fuels where i got had a

414

00:16:08,790 --> 00:16:06,000

chance to present to other adults and

415

00:16:10,389 --> 00:16:08,800

that was challenging to me and helped me

416

00:16:11,350 --> 00:16:10,399

learn more

417

00:16:13,030 --> 00:16:11,360

and

418

00:16:15,990 --> 00:16:13,040

then i had some really great high school

419

00:16:17,430 --> 00:16:16,000

teachers both math and science that won

420

00:16:19,749 --> 00:16:17,440

my math coach

421

00:16:21,990 --> 00:16:19,759

was my coach as well for cross country

422

00:16:24,069 --> 00:16:22,000

and just i continued to keep in touch

423

00:16:25,509 --> 00:16:24,079

with them today because they were so

424

00:16:28,550 --> 00:16:25,519

inspiring to me and they really helped

425

00:16:31,189 --> 00:16:28,560

me work hard and to realize that i had

426

00:16:33,829 --> 00:16:31,199

the possibilities within me to be good

427

00:16:40,230 --> 00:16:33,839

at math and science

428

00:16:44,069 --> 00:16:42,470

hi my name is julia and i was wondering

429

00:16:46,310 --> 00:16:44,079

what were some of the payloads that you

430

00:16:48,389 --> 00:16:46,320

helped send up and which were most

431

00:16:51,350 --> 00:16:48,399

interesting to you

432

00:16:53,829 --> 00:16:51,360

oh great question julia um we actually

433

00:16:56,069 --> 00:16:53,839

brought up some um

434

00:16:58,550 --> 00:16:56,079

vaccines to look at that will help us

435

00:16:59,990 --> 00:16:58,560

understand more about our

436

00:17:00,870 --> 00:17:00,000

immune system

437

00:17:02,310 --> 00:17:00,880

and

438

00:17:03,670 --> 00:17:02,320

the thing that that's difficult

439

00:17:06,309 --> 00:17:03,680

sometimes about the science that you

440

00:17:08,150 --> 00:17:06,319

bring up is it can't always be analyzed

441

00:17:09,510 --> 00:17:08,160

in a short time frame and so it's still

442

00:17:11,990 --> 00:17:09,520

an analysis

443

00:17:13,909 --> 00:17:12,000

but that was one of the

444

00:17:16,230 --> 00:17:13,919

experiments that we brought up to space

445

00:17:18,710 --> 00:17:16,240

was a way to look at how to better deal

446

00:17:21,189 --> 00:17:18,720

with salmonella and then also we brought

447

00:17:23,590 --> 00:17:21,199

up the window observation research

448

00:17:26,150 --> 00:17:23,600

facility which is called the wharf and

449

00:17:27,590 --> 00:17:26,160

it is a big rack that houses many

450

00:17:29,669 --> 00:17:27,600

different cameras

451  
00:17:32,070 --> 00:17:29,679  
and all of those cameras are allowing us

452  
00:17:33,990 --> 00:17:32,080  
to look at the earth in a different way

453  
00:17:36,070 --> 00:17:34,000  
some of it is an infrared and some of it

454  
00:17:39,110 --> 00:17:36,080  
is just in better

455  
00:17:40,630 --> 00:17:39,120  
digital camera views and so it was with

456  
00:17:41,430 --> 00:17:40,640  
great pride that we brought that up as

457  
00:17:42,230 --> 00:17:41,440  
well

458  
00:17:44,549 --> 00:17:42,240  
and

459  
00:17:46,789 --> 00:17:44,559  
there were other experiments that we

460  
00:17:48,630 --> 00:17:46,799  
brought up we can't name them all but

461  
00:17:50,950 --> 00:17:48,640  
we're glad that they were able to be put

462  
00:17:53,029 --> 00:17:50,960  
into use for the scientists around the

463  
00:17:54,870 --> 00:17:53,039

world to help us do things better here

464

00:17:57,029 --> 00:17:54,880

on earth as well as to get ready for

465

00:18:01,590 --> 00:17:57,039

exploring

466

00:18:06,710 --> 00:18:04,630

hello my name is jessica i was wondering

467

00:18:09,190 --> 00:18:06,720

why do you think it is so important for

468

00:18:10,789 --> 00:18:09,200

women to pursue stem careers despite all

469

00:18:13,590 --> 00:18:10,799

the difficulties we face being a

470

00:18:15,590 --> 00:18:13,600

minority in the field

471

00:18:17,750 --> 00:18:15,600

jessica i think it's important for women

472

00:18:20,310 --> 00:18:17,760

to pursue stem careers because we're

473

00:18:22,630 --> 00:18:20,320

good at them and because we're

474

00:18:24,310 --> 00:18:22,640

continuing to grow in the field and

475

00:18:27,029 --> 00:18:24,320

we're seeing more and more women being

476

00:18:29,190 --> 00:18:27,039

successful in these areas so as we have

477

00:18:30,549 --> 00:18:29,200

more mentors that are women as we see

478

00:18:31,830 --> 00:18:30,559

people like karen nyberg on the

479

00:18:33,990 --> 00:18:31,840

international space station and the

480

00:18:35,830 --> 00:18:34,000

women that have gone before her i think

481

00:18:38,150 --> 00:18:35,840

it's really important that we realize

482

00:18:40,230 --> 00:18:38,160

that uh this is a place for us and that

483

00:18:43,750 --> 00:18:40,240

we can do great things here and that we

484

00:18:49,750 --> 00:18:43,760

have great colleagues to share that with

485

00:18:53,510 --> 00:18:51,830

hello i'm michelle and i was wondering

486

00:18:56,470 --> 00:18:53,520

what were your responsibilities when you

487

00:18:58,630 --> 00:18:56,480

flew on the sds 131

488

00:19:01,190 --> 00:18:58,640

488 michelle that's a great question

489

00:19:02,950 --> 00:19:01,200

i was the flight engineer on the flight

490

00:19:05,669 --> 00:19:02,960

deck which means that i backed up the

491

00:19:07,909 --> 00:19:05,679

commander and pilot as we launched into

492

00:19:10,150 --> 00:19:07,919

space and then once we were on orbit i

493

00:19:12,950 --> 00:19:10,160

was a robotic arm operator for the space

494

00:19:15,350 --> 00:19:12,960

shuttle's robotic arm as well as the

495

00:19:16,950 --> 00:19:15,360

intravehicular

496

00:19:19,510 --> 00:19:16,960

crew member who helped with the three

497

00:19:21,909 --> 00:19:19,520

spacewalks that we conducted and i was a

498

00:19:23,909 --> 00:19:21,919

mover we had over six tons of equipment

499

00:19:26,230 --> 00:19:23,919

to deliver to the space station

500

00:19:27,990 --> 00:19:26,240

everything from clothing and food to the

501  
00:19:31,669 --> 00:19:28,000  
experiments i've been talking about and

502  
00:19:34,230 --> 00:19:31,679  
logistics racks and so we were movers

503  
00:19:38,549 --> 00:19:34,240  
robotic arm operators uh

504  
00:19:43,990 --> 00:19:38,559  
spacewalkers and flight engineer

505  
00:19:49,590 --> 00:19:47,029  
hi my name is diane and i was wondering

506  
00:19:51,190 --> 00:19:49,600  
how microgravity affected how you ate a

507  
00:19:53,510 --> 00:19:51,200  
meal

508  
00:19:55,990 --> 00:19:53,520  
that's a great question

509  
00:19:58,310 --> 00:19:56,000  
microgravity does affect your stomach it

510  
00:20:01,590 --> 00:19:58,320  
kind of floats up into your

511  
00:20:03,270 --> 00:20:01,600  
upper chest and so when uh when at first

512  
00:20:05,110 --> 00:20:03,280  
you don't feel real hungry when you get

513  
00:20:07,110 --> 00:20:05,120

to space but you know you need to eat

514

00:20:09,270 --> 00:20:07,120

one of the things we had continuously

515

00:20:11,029 --> 00:20:09,280

heard from those who flew before us is

516

00:20:13,029 --> 00:20:11,039

to make sure that you

517

00:20:14,230 --> 00:20:13,039

do the normal eating habits and drinking

518

00:20:16,070 --> 00:20:14,240

habits that you have on earth because

519

00:20:17,430 --> 00:20:16,080

they'll keep your body healthy

520

00:20:19,190 --> 00:20:17,440

and so

521

00:20:22,149 --> 00:20:19,200

some some challenges that you have of

522

00:20:24,549 --> 00:20:22,159

course are keeping liquids in containers

523

00:20:26,549 --> 00:20:24,559

we have special pinches on straws that

524

00:20:28,549 --> 00:20:26,559

keep the liquids contained in the in the

525

00:20:30,149 --> 00:20:28,559

containers but sometimes you bump them

526

00:20:31,830 --> 00:20:30,159

and they float out and they make big

527

00:20:33,750 --> 00:20:31,840

bubbles so you have to be careful with

528

00:20:35,909 --> 00:20:33,760

that and then

529

00:20:37,590 --> 00:20:35,919

your food you you definitely want to

530

00:20:40,789 --> 00:20:37,600

keep it in the containers that you have

531

00:20:42,470 --> 00:20:40,799

so you cut them open carefully and you

532

00:20:47,110 --> 00:20:42,480

scoop very gently you don't want to

533

00:20:50,230 --> 00:20:47,990

and and

534

00:20:51,909 --> 00:20:50,240

and then sometimes the spices that we

535

00:20:53,350 --> 00:20:51,919

take up you have to be careful with too

536

00:20:56,390 --> 00:20:53,360

i had a little bit of hot sauce that i

537

00:20:58,470 --> 00:20:56,400

would put on some eggs one morning and

538

00:21:00,870 --> 00:20:58,480

um the tortilla that i had the egg on

539

00:21:03,190 --> 00:21:00,880

kind of got bumped and the eggs got

540

00:21:04,710 --> 00:21:03,200

loose and uh i went to grab them but i

541

00:21:06,390 --> 00:21:04,720

also swiped my eye and i got a little

542

00:21:08,710 --> 00:21:06,400

bit of hot sauce in my eye and

543

00:21:10,549 --> 00:21:08,720

it burned a little bit so you just have

544

00:21:12,870 --> 00:21:10,559

to be a little more careful because your

545

00:21:14,789 --> 00:21:12,880

food takes on that third dimension but i

546

00:21:16,549 --> 00:21:14,799

think that caused us to play with food a

547

00:21:18,789 --> 00:21:16,559

little bit more so

548

00:21:20,310 --> 00:21:18,799

you know we'd float chocolates and flip

549

00:21:21,669 --> 00:21:20,320

around them and then grab them in our

550

00:21:23,750 --> 00:21:21,679

mouth or

551  
00:21:26,390 --> 00:21:23,760  
float different m ms to each other that

552  
00:21:30,230 --> 00:21:26,400  
makes it fun

553  
00:21:35,029 --> 00:21:32,630  
hi i'm mira i was just wondering how

554  
00:21:37,270 --> 00:21:35,039  
your body felt after you came down from

555  
00:21:40,470 --> 00:21:37,280  
the micro like the microgravity levels

556  
00:21:41,750 --> 00:21:40,480  
up in space like were you sore or tired

557  
00:21:43,909 --> 00:21:41,760  
you know that's a great question our

558  
00:21:45,669 --> 00:21:43,919  
bodies do change while we're in space

559  
00:21:48,149 --> 00:21:45,679  
and one of the biggest things that we

560  
00:21:50,630 --> 00:21:48,159  
notice are a fluid shift in the in the

561  
00:21:52,950 --> 00:21:50,640  
reduction of blood volume

562  
00:21:54,870 --> 00:21:52,960  
i felt uh when i first got back a little

563  
00:21:57,430 --> 00:21:54,880

bit dizzy it was hard to walk just

564

00:21:59,590 --> 00:21:57,440

straight and our neurovestibular system

565

00:22:02,070 --> 00:21:59,600

the stuff that keeps us balanced

566

00:22:04,549 --> 00:22:02,080

wasn't adapted to earth's gravity quite

567

00:22:07,270 --> 00:22:04,559

yet takes a little over three days for

568

00:22:09,270 --> 00:22:07,280

that to really happen so i'd find myself

569

00:22:12,630 --> 00:22:09,280

walking what i thought was straight but

570

00:22:15,750 --> 00:22:12,640

i might be leaning a little bit um

571

00:22:18,149 --> 00:22:15,760

and uh so i didn't feel 100 the first

572

00:22:19,669 --> 00:22:18,159

day but i did find some time to go out

573

00:22:21,190 --> 00:22:19,679

on the beach and dance with my daughter

574

00:22:23,909 --> 00:22:21,200

so i was just extra careful when i was

575

00:22:25,909 --> 00:22:23,919

dancing i didn't do any exotic moves

576

00:22:28,310 --> 00:22:25,919

but um you just have to be a little bit

577

00:22:30,470 --> 00:22:28,320

extra careful those first few days and

578

00:22:32,950 --> 00:22:30,480

as we see folks return from longer space

579

00:22:35,270 --> 00:22:32,960

missions they have a very intensive uh

580

00:22:37,990 --> 00:22:35,280

rehab regimen that they follow and

581

00:22:39,669 --> 00:22:38,000

that's very important and uh it starts

582

00:22:42,070 --> 00:22:39,679

from that very first day that they

583

00:22:43,750 --> 00:22:42,080

returned back to earth and continues for

584

00:22:47,430 --> 00:22:43,760

several weeks

585

00:22:49,590 --> 00:22:47,440

to get them all back into shape so

586

00:22:51,110 --> 00:22:49,600

space flight is wonderful but it does

587

00:22:53,350 --> 00:22:51,120

take a little bit of a toll on your body

588

00:22:55,350 --> 00:22:53,360

and we've worked out ways to mitigate

589

00:22:59,110 --> 00:22:55,360

that

590

00:23:03,510 --> 00:23:01,270

hi my name is kelly and i was wondering

591

00:23:05,909 --> 00:23:03,520

what is your current like work like

592

00:23:07,990 --> 00:23:05,919

typical work day

593

00:23:09,590 --> 00:23:08,000

kelly that's a great question i'm

594

00:23:12,149 --> 00:23:09,600

supporting the international space

595

00:23:14,950 --> 00:23:12,159

station operations branch in our office

596

00:23:17,270 --> 00:23:14,960

and uh my day job is

597

00:23:19,350 --> 00:23:17,280

going to different meetings that support

598

00:23:20,870 --> 00:23:19,360

future flights and the manifesting of

599

00:23:23,110 --> 00:23:20,880

equipment to our crew members making

600

00:23:24,789 --> 00:23:23,120

sure they're going to get the right food

601  
00:23:26,630 --> 00:23:24,799  
and supplies that they're expecting at

602  
00:23:27,510 --> 00:23:26,640  
the times that they're expecting

603  
00:23:29,990 --> 00:23:27,520  
and

604  
00:23:32,789 --> 00:23:30,000  
then doing getting chances to talk to

605  
00:23:34,870 --> 00:23:32,799  
students like you or to other outreach

606  
00:23:37,270 --> 00:23:34,880  
groups as well as to share my

607  
00:23:40,230 --> 00:23:37,280  
experiences with space but every day is

608  
00:23:40,240 --> 00:23:44,549  
thank you

609  
00:23:48,470 --> 00:23:46,310  
okay hi my name is anna and i was

610  
00:23:52,390 --> 00:23:48,480  
wondering where you hope to see nasa's

611  
00:23:53,990 --> 00:23:52,400  
future after the days of the iss

612  
00:23:56,950 --> 00:23:54,000  
and i hope we take what we're learning

613  
00:23:59,590 --> 00:23:56,960

on the iss and we go out into our solar

614

00:24:02,390 --> 00:23:59,600

system for exploration and i know that

615

00:24:04,870 --> 00:24:02,400

one day mars is going to be our our

616

00:24:06,390 --> 00:24:04,880

destination and i really i look forward

617

00:24:08,549 --> 00:24:06,400

to that day because i think as a

618

00:24:11,350 --> 00:24:08,559

geologist personally there's some

619

00:24:13,430 --> 00:24:11,360

exciting stuff that we can do on mars

620

00:24:16,070 --> 00:24:13,440

there's there's the possibility of

621

00:24:18,630 --> 00:24:16,080

course of uh finding more evidence of

622

00:24:20,470 --> 00:24:18,640

life and then i think climbing those

623

00:24:21,990 --> 00:24:20,480

mountains and looking at those canyons

624

00:24:23,909 --> 00:24:22,000

would be amazing

625

00:24:26,710 --> 00:24:23,919

so i would really like to see us on the

626

00:24:32,470 --> 00:24:26,720

surface of mars one day

627

00:24:36,950 --> 00:24:34,630

hi my name is haley and i was wondering

628

00:24:39,269 --> 00:24:36,960

um since you're also an astronaut

629

00:24:41,070 --> 00:24:39,279

educator what kind of people like has

630

00:24:47,830 --> 00:24:41,080

that let you know

631

00:24:52,149 --> 00:24:49,590

did we lose you guys haley i heard a

632

00:24:54,070 --> 00:24:52,159

little bit of that question um you were

633

00:24:56,390 --> 00:24:54,080

asking about being an educator and being

634

00:24:58,070 --> 00:24:56,400

an astronaut and who have i had a chance

635

00:24:59,350 --> 00:24:58,080

to work with i do get a chance to work

636

00:25:00,789 --> 00:24:59,360

with other

637

00:25:02,390 --> 00:25:00,799

teachers and go out and talk to them and

638

00:25:04,549 --> 00:25:02,400

share my experiences so that they can

639

00:25:06,390 --> 00:25:04,559

take them the experiences into their

640

00:25:07,830 --> 00:25:06,400

classroom and i really enjoy talking to

641

00:25:09,750 --> 00:25:07,840

students like you i know you guys are

642

00:25:11,269 --> 00:25:09,760

all juniors and you're here on a summer

643

00:25:13,110 --> 00:25:11,279

program and that takes a lot of

644

00:25:14,789 --> 00:25:13,120

dedication and i know that you're

645

00:25:18,149 --> 00:25:14,799

working hard back in your classrooms to

646

00:25:19,669 --> 00:25:18,159

have this opportunity so um i really

647

00:25:22,149 --> 00:25:19,679

enjoy that

648

00:25:24,549 --> 00:25:22,159

aspect of getting to to

649

00:25:26,390 --> 00:25:24,559

share with people that i once taught in

650

00:25:28,149 --> 00:25:26,400

a classroom with or that i was

651

00:25:31,669 --> 00:25:28,159

colleagues with

652

00:25:34,149 --> 00:25:31,679

back about almost nine years ago

653

00:25:36,149 --> 00:25:34,159

well thanks we uh we really enjoyed you

654

00:25:38,070 --> 00:25:36,159

guys joining us here and and hope that

655

00:25:39,350 --> 00:25:38,080

you guys enjoy your stay

656

00:25:41,269 --> 00:25:39,360

there as well there's a lot of

657

00:25:43,750 --> 00:25:41,279

exploration tools in that same building

658

00:25:46,230 --> 00:25:43,760

where you guys are located so

659

00:25:48,549 --> 00:25:46,240

enjoy your stay and we really enjoyed