



1
00:00:06,309 --> 00:00:04,630
hi welcome to the international space

2
00:00:09,030 --> 00:00:06,319
station flight control room we're here

3
00:00:11,270 --> 00:00:09,040
for a distance learning network event

4
00:00:13,350 --> 00:00:11,280
we're talking to seventh grade students

5
00:00:15,829 --> 00:00:13,360
with creighton middle school creighton

6
00:00:18,710 --> 00:00:15,839
meet clayton because here today we have

7
00:00:21,990 --> 00:00:18,720
nasa astronaut clay anderson clay had

8
00:00:23,349 --> 00:00:22,000
flown a five month to 152 days aboard

9
00:00:26,150 --> 00:00:23,359
the international space station on

10
00:00:27,990 --> 00:00:26,160
expedition 15 and 16 in fact you

11
00:00:29,830 --> 00:00:28,000
actually replaced commander suni

12
00:00:31,910 --> 00:00:29,840
williams who's actually up on station

13
00:00:33,990 --> 00:00:31,920

for expedition 15 and he also flew

14

00:00:35,670 --> 00:00:34,000

aboard um the space shuttle during

15

00:00:37,270 --> 00:00:35,680

sts-131

16

00:00:39,350 --> 00:00:37,280

welcome and thank you for coming hey

17

00:00:41,670 --> 00:00:39,360

thanks for having me he also did what

18

00:00:43,430 --> 00:00:41,680

three space walks well a total of six

19

00:00:45,830 --> 00:00:43,440

total of six okay so the first one was

20

00:00:48,869 --> 00:00:45,840

first three were on expedition 15 and

21

00:00:50,549 --> 00:00:48,879

16. and um so he he has done it all

22

00:00:54,229 --> 00:00:50,559

right so uh we're ready for your

23

00:00:58,310 --> 00:00:56,549

hi my name is vantaja and here's my

24

00:01:00,630 --> 00:00:58,320

question what do the patches on the

25

00:01:02,549 --> 00:01:00,640

astronaut uniform represent

26

00:01:04,789 --> 00:01:02,559

hi fantasia it's great to see you guys

27

00:01:06,710 --> 00:01:04,799

on the camera by the way the patches on

28

00:01:08,630 --> 00:01:06,720

the suits represent several different

29

00:01:09,670 --> 00:01:08,640

things we have a flag to represent the

30

00:01:11,830 --> 00:01:09,680

country because now we're an

31

00:01:13,750 --> 00:01:11,840

international space station crew so not

32

00:01:15,350 --> 00:01:13,760

everyone is from the united states and

33

00:01:18,310 --> 00:01:15,360

then if you look at my shirt here you

34

00:01:20,310 --> 00:01:18,320

see a brief version of our expedition 15

35

00:01:22,070 --> 00:01:20,320

patch which is also

36

00:01:23,350 --> 00:01:22,080

symbolic of

37

00:01:25,190 --> 00:01:23,360

what we were trying to accomplish on

38

00:01:27,429 --> 00:01:25,200

station so what happens is the crew

39

00:01:29,350 --> 00:01:27,439

designs those patches and now we'll have

40

00:01:30,870 --> 00:01:29,360

a soyuz patch that represents the crew

41

00:01:32,149 --> 00:01:30,880

going up on the soyuz we'll have a space

42

00:01:33,990 --> 00:01:32,159

station patch

43

00:01:35,910 --> 00:01:34,000

for the first crew that comes to station

44

00:01:37,670 --> 00:01:35,920

and then for example with sunny williams

45

00:01:39,590 --> 00:01:37,680

now she had a crew

46

00:01:41,270 --> 00:01:39,600

previously before she became commander

47

00:01:43,350 --> 00:01:41,280

and now when she's commander they have a

48

00:01:44,950 --> 00:01:43,360

new patch so all the patches are

49

00:01:46,630 --> 00:01:44,960

symbolic of

50

00:01:49,510 --> 00:01:46,640

special activities that are going to

51
00:01:51,109 --> 00:01:49,520
occur on the mission that we're on or

52
00:01:54,310 --> 00:01:51,119
things that represent

53
00:01:56,550 --> 00:01:54,320
the crew

54
00:01:59,590 --> 00:01:56,560
my name is brianna and my question is

55
00:02:01,429 --> 00:01:59,600
can you build a fire in space

56
00:02:03,109 --> 00:02:01,439
brianna you can build a fire in space

57
00:02:05,670 --> 00:02:03,119
but you have to be very very careful

58
00:02:07,670 --> 00:02:05,680
when you do it and what we do when we

59
00:02:09,749 --> 00:02:07,680
do experiments to see how fire behaves

60
00:02:11,350 --> 00:02:09,759
in microgravity we have to enclose it in

61
00:02:12,869 --> 00:02:11,360
something that we call the microscience

62
00:02:15,190 --> 00:02:12,879
glove box so

63
00:02:16,790 --> 00:02:15,200

we do do flames we do burn things but

64

00:02:19,030 --> 00:02:16,800

it's very very controlled you don't want

65

00:02:21,110 --> 00:02:19,040

to have an out of control flame on an

66

00:02:23,589 --> 00:02:21,120

international space station because it's

67

00:02:25,830 --> 00:02:23,599

a very uh dangerous environment when you

68

00:02:26,869 --> 00:02:25,840

have flames going around so everything's

69

00:02:30,869 --> 00:02:26,879

done with

70

00:02:36,070 --> 00:02:33,589

my name is dylan and i'd like to know i

71

00:02:38,869 --> 00:02:36,080

read that commander suny williams ran a

72

00:02:41,990 --> 00:02:38,879

marathon while she was on the iss

73

00:02:43,430 --> 00:02:42,000

how can you run a marathon in space

74

00:02:45,350 --> 00:02:43,440

hey dylan that's a great question you

75

00:02:48,070 --> 00:02:45,360

know i think sonny's a little crazy when

76

00:02:49,750 --> 00:02:48,080

she runs a marathon 26.4 miles is way

77

00:02:50,869 --> 00:02:49,760

too far for me to run i'd rather ride a

78

00:02:53,030 --> 00:02:50,879

bike but

79

00:02:54,550 --> 00:02:53,040

the way sunny does it is that we have a

80

00:02:56,710 --> 00:02:54,560

treadmill on board the international

81

00:02:58,790 --> 00:02:56,720

space station we actually have two uh

82

00:03:01,110 --> 00:02:58,800

one's kind of an older version and one's

83

00:03:03,430 --> 00:03:01,120

the newer version and sunny wrote on the

84

00:03:05,350 --> 00:03:03,440

new version so she basically puts a

85

00:03:07,430 --> 00:03:05,360

harness on that holds her down to the

86

00:03:09,430 --> 00:03:07,440

treadmill and she turns it on and she

87

00:03:12,149 --> 00:03:09,440

simply begins to run and when she ran

88

00:03:13,110 --> 00:03:12,159

she started her uh run at the exact time

89

00:03:14,550 --> 00:03:13,120

that the

90

00:03:16,309 --> 00:03:14,560

folks started the

91

00:03:18,949 --> 00:03:16,319

marathon on earth and so she ran her

92

00:03:20,710 --> 00:03:18,959

26.4 miles and then she provides them

93

00:03:23,030 --> 00:03:20,720

her time i think she might have even had

94

00:03:25,190 --> 00:03:23,040

an official number that she wore so

95

00:03:26,390 --> 00:03:25,200

sonny's a big runner and she loves to do

96

00:03:28,229 --> 00:03:26,400

things like that

97

00:03:29,910 --> 00:03:28,239

and fitness and actually on this

98

00:03:32,789 --> 00:03:29,920

particular mission she just completed a

99

00:03:34,470 --> 00:03:32,799

triathlon so she actually used all three

100

00:03:37,190 --> 00:03:34,480

pieces of gem equipment on board the

101

00:03:39,509 --> 00:03:37,200

station that involves a cycle a

102

00:03:42,309 --> 00:03:39,519

stationary cycle the treadmill that clay

103

00:03:44,070 --> 00:03:42,319

described and also an advanced

104

00:03:45,750 --> 00:03:44,080

resistive exercise device that simulates

105

00:03:47,430 --> 00:03:45,760

weight lifting here on earth

106

00:03:49,670 --> 00:03:47,440

that was actually to help simulate the

107

00:03:51,589 --> 00:03:49,680

swim portion of that triathlon so yeah

108

00:03:53,429 --> 00:03:51,599

sunny is very big into her fitness and

109

00:03:56,710 --> 00:03:53,439

fitness as you know is important here on

110

00:04:00,309 --> 00:03:56,720

earth but it's even more so in space

111

00:04:03,830 --> 00:04:00,319

absolutely and i still think she's crazy

112

00:04:07,750 --> 00:04:05,509

my name is lauren and here is my

113

00:04:10,390 --> 00:04:07,760

question when i do something that i like

114

00:04:12,149 --> 00:04:10,400

it seems like time goes by fast when you

115

00:04:15,190 --> 00:04:12,159

are doing a spacewalk does it feel like

116

00:04:18,150 --> 00:04:15,200

six hours or does it feel like it goes

117

00:04:19,509 --> 00:04:18,160

faster or slower

118

00:04:20,710 --> 00:04:19,519

thank you lauren that's a great question

119

00:04:22,069 --> 00:04:20,720

i'm sure that you think when you're

120

00:04:24,390 --> 00:04:22,079

studying your homework at night that

121

00:04:27,430 --> 00:04:24,400

that goes by really really fast

122

00:04:29,110 --> 00:04:27,440

but a space walk you are so focused on

123

00:04:31,990 --> 00:04:29,120

accomplishing all the goals of that

124

00:04:33,749 --> 00:04:32,000

mission of that spacewalk and

125

00:04:35,590 --> 00:04:33,759

not making any mistakes right making

126

00:04:37,590 --> 00:04:35,600

sure that everybody is kept safe that

127

00:04:39,030 --> 00:04:37,600

all the equipment's protected that you

128

00:04:40,870 --> 00:04:39,040

do the right thing and the amount of

129

00:04:41,749 --> 00:04:40,880

time that's allotted so you're exactly

130

00:04:43,430 --> 00:04:41,759

right

131

00:04:46,070 --> 00:04:43,440

it's a very enjoyable experience it's

132

00:04:47,990 --> 00:04:46,080

mentally tough it's not as physically

133

00:04:50,070 --> 00:04:48,000

difficult as it is when we train in the

134

00:04:51,909 --> 00:04:50,080

big swimming pool down here but doing a

135

00:04:53,990 --> 00:04:51,919

spacewalk in outer space it's a lot

136

00:04:55,909 --> 00:04:54,000

easier for your body except that you

137

00:04:58,070 --> 00:04:55,919

have to focus and concentrate so much

138

00:04:59,830 --> 00:04:58,080

more it's very difficult mentally but

139

00:05:01,189 --> 00:04:59,840

the time does just sail by you know

140

00:05:02,390 --> 00:05:01,199

you'll think holy cow we've only been

141

00:05:03,749 --> 00:05:02,400

out here an hour and they'll tell you

142

00:05:06,070 --> 00:05:03,759

you've been out there for five minutes

143

00:05:09,270 --> 00:05:06,080

so uh it's quite a great experience i

144

00:05:12,150 --> 00:05:09,280

hope you all get to do one someday

145

00:05:13,830 --> 00:05:12,160

uh my name is brianna and my question is

146

00:05:16,230 --> 00:05:13,840

what was the largest plant that has ever

147

00:05:17,670 --> 00:05:16,240

been grown at the space station

148

00:05:19,510 --> 00:05:17,680

hey brianna that's a great question i

149

00:05:21,590 --> 00:05:19,520

think you're trying to get me to tell

150

00:05:24,070 --> 00:05:21,600

you that when i was on the space station

151
00:05:26,710 --> 00:05:24,080
we tried to grow basil seeds and lettuce

152
00:05:28,469 --> 00:05:26,720
seeds and they started out growing and i

153
00:05:30,150 --> 00:05:28,479
ended up killing them all so i feel

154
00:05:31,909 --> 00:05:30,160
really badly about talking about plants

155
00:05:34,469 --> 00:05:31,919
in space but the russians

156
00:05:36,550 --> 00:05:34,479
had an actual pea plant

157
00:05:39,590 --> 00:05:36,560
in their segment that grew to be quite

158
00:05:41,110 --> 00:05:39,600
tall at least 12 inches so

159
00:05:42,870 --> 00:05:41,120
we can grow

160
00:05:44,230 --> 00:05:42,880
plants in space and it's very important

161
00:05:46,390 --> 00:05:44,240
as we think about going to a place like

162
00:05:48,150 --> 00:05:46,400
mars or to an asteroid or to the moon

163
00:05:51,189 --> 00:05:48,160

the ability to grow plants to have food

164

00:05:53,029 --> 00:05:51,199

to eat or to provide oxygen forest which

165

00:05:54,710 --> 00:05:53,039

is what plants do and they also absorb

166

00:05:57,110 --> 00:05:54,720

carbon dioxide so those are all three

167

00:05:59,270 --> 00:05:57,120

good things that a plant can do for us

168

00:06:01,029 --> 00:05:59,280

for astronauts on a space crew and

169

00:06:04,710 --> 00:06:01,039

that's why we're looking at it so hard

170

00:06:06,870 --> 00:06:04,720

so the biggest plant i didn't see it but

171

00:06:08,870 --> 00:06:06,880

they grew a pretty big pea-sized or pea

172

00:06:11,510 --> 00:06:08,880

plant in the russian segment and while

173

00:06:13,990 --> 00:06:11,520

that pea plant was the largest to be

174

00:06:15,830 --> 00:06:14,000

grown in space most recently

175

00:06:18,309 --> 00:06:15,840

astronaut don pettit who was aboard the

176

00:06:20,550 --> 00:06:18,319

international space station spotted the

177

00:06:22,710 --> 00:06:20,560

zucchini and the zucchini had a life of

178

00:06:24,029 --> 00:06:22,720

its own actually you can go online and

179

00:06:26,469 --> 00:06:24,039

read about that either go to

180

00:06:28,710 --> 00:06:26,479

blogs.nasa.gov or you can follow the

181

00:06:30,629 --> 00:06:28,720

zucchini on twitter believe it or not at

182

00:06:32,629 --> 00:06:30,639

astrozook and

183

00:06:34,390 --> 00:06:32,639

and and learn about exactly growing

184

00:06:36,550 --> 00:06:34,400

plants in space as well good question

185

00:06:38,550 --> 00:06:36,560

you have another one

186

00:06:40,710 --> 00:06:38,560

my name is matthew and my question is

187

00:06:43,029 --> 00:06:40,720

have you seen any hurricanes or typhoons

188

00:06:45,990 --> 00:06:43,039

from space can you do anything to help

189

00:06:47,909 --> 00:06:46,000

earth when you see one

190

00:06:49,830 --> 00:06:47,919

hey matt that's a great question uh when

191

00:06:52,950 --> 00:06:49,840

i flew on the space station i flew

192

00:06:55,029 --> 00:06:52,960

between june and november of 2007 and

193

00:06:57,670 --> 00:06:55,039

believe it or not those are the exact

194

00:06:59,189 --> 00:06:57,680

months of hurricane season so it starts

195

00:07:01,749 --> 00:06:59,199

on june the first and it ends on the

196

00:07:03,749 --> 00:07:01,759

30th of november and i saw many many

197

00:07:04,629 --> 00:07:03,759

hurricanes it was very cool because i

198

00:07:06,390 --> 00:07:04,639

saw

199

00:07:08,150 --> 00:07:06,400

uh you may hear the weathermen talk

200

00:07:10,550 --> 00:07:08,160

about a tropical wave coming off the

201
00:07:12,309 --> 00:07:10,560
coast of africa so i saw those and then

202
00:07:13,749 --> 00:07:12,319
as they moved across the atlantic ocean

203
00:07:16,150 --> 00:07:13,759
toward the united states i would see

204
00:07:18,309 --> 00:07:16,160
them develop into a tropical depression

205
00:07:20,469 --> 00:07:18,319
and then into a tropical storm and then

206
00:07:22,870 --> 00:07:20,479
into a full-blown hurricane and it

207
00:07:25,029 --> 00:07:22,880
actually turns out that i saw at least

208
00:07:27,189 --> 00:07:25,039
three category fives the biggest most

209
00:07:28,710 --> 00:07:27,199
dangerous hurricanes you can see uh two

210
00:07:31,749 --> 00:07:28,720
of them were called hurricane dean and

211
00:07:34,790 --> 00:07:31,759
hurricane felix and in actuality

212
00:07:36,309 --> 00:07:34,800
hurricane dean caused the sts-118 crew

213
00:07:38,790 --> 00:07:36,319

who came to visit me while i was on the

214

00:07:40,550 --> 00:07:38,800

space station they had to leave early

215

00:07:42,390 --> 00:07:40,560

because hurricane dean was a category

216

00:07:44,309 --> 00:07:42,400

five and it was bearing down on houston

217

00:07:45,909 --> 00:07:44,319

texas and all the folks in the mission

218

00:07:47,189 --> 00:07:45,919

control were worried that the crew might

219

00:07:49,270 --> 00:07:47,199

not be able to get home and protect

220

00:07:51,749 --> 00:07:49,280

their families so what we ended up doing

221

00:07:53,749 --> 00:07:51,759

was cutting the mission short we cut two

222

00:07:55,430 --> 00:07:53,759

of our spacewalks short as well so that

223

00:07:57,909 --> 00:07:55,440

we could get things put together and

224

00:08:00,150 --> 00:07:57,919

they could come home so a hurricane is

225

00:08:02,469 --> 00:08:00,160

absolutely beautiful from outer space

226

00:08:04,150 --> 00:08:02,479

it's safer to see it from outer space

227

00:08:05,990 --> 00:08:04,160

but you really worry about the folks who

228

00:08:07,830 --> 00:08:06,000

are beneath that hurricane here on earth

229

00:08:09,990 --> 00:08:07,840

especially if it's your family and being

230

00:08:12,230 --> 00:08:10,000

from south carolina you guys know that

231

00:08:14,309 --> 00:08:12,240

hurricanes can come and hit the coast of

232

00:08:16,230 --> 00:08:14,319

south carolina as well so we need to be

233

00:08:18,390 --> 00:08:16,240

very careful with those

234

00:08:20,309 --> 00:08:18,400

and i actually recall hurricane dean as

235

00:08:22,390 --> 00:08:20,319

it was um and you guys were on a

236

00:08:24,070 --> 00:08:22,400

spacewalk at the time we captured video

237

00:08:25,990 --> 00:08:24,080

so you guys can go to youtube as well if

238

00:08:27,670 --> 00:08:26,000

you want to see that just search hurt

239

00:08:29,510 --> 00:08:27,680

hurricane dean and you can see that

240

00:08:30,790 --> 00:08:29,520

video that clay actually

241

00:08:32,070 --> 00:08:30,800

witnessed while he was there aboard the

242

00:08:34,149 --> 00:08:32,080

international space station that was a

243

00:08:36,389 --> 00:08:34,159

great question next

244

00:08:40,790 --> 00:08:36,399

um my name is cara and i'd like to know

245

00:08:42,870 --> 00:08:40,800

is there such a thing as sports in space

246

00:08:44,389 --> 00:08:42,880

hey cara you're right up my alley with

247

00:08:46,150 --> 00:08:44,399

sports and space

248

00:08:48,230 --> 00:08:46,160

when i lived on the space station i took

249

00:08:50,310 --> 00:08:48,240

a college football from the university

250

00:08:52,550 --> 00:08:50,320

of nebraska which is where i'm from

251
00:08:54,790 --> 00:08:52,560
and i had a needle to inflate it and i

252
00:08:56,790 --> 00:08:54,800
would kick field goals at the camera so

253
00:08:57,990 --> 00:08:56,800
just like if you look behind my head

254
00:08:59,750 --> 00:08:58,000
right now you'll see that there are

255
00:09:01,990 --> 00:08:59,760
camera views on board the international

256
00:09:03,910 --> 00:09:02,000
space station so sometimes we would set

257
00:09:05,590 --> 00:09:03,920
those cameras up to look inside the lab

258
00:09:07,030 --> 00:09:05,600
module so what i would do is tee up the

259
00:09:08,790 --> 00:09:07,040
football because in zero gravity i

260
00:09:11,030 --> 00:09:08,800
didn't need a football tee and i would

261
00:09:12,870 --> 00:09:11,040
just kick it toward the camera and then

262
00:09:14,949 --> 00:09:12,880
i'd look at the camera and i'd signal

263
00:09:16,470 --> 00:09:14,959

touchdown as if the field goal was good

264

00:09:17,670 --> 00:09:16,480

and i asked the ground team to keep

265

00:09:19,350 --> 00:09:17,680

score but they really didn't want to

266

00:09:21,350 --> 00:09:19,360

play with me

267

00:09:24,070 --> 00:09:21,360

they were too busy doing real work but i

268

00:09:27,110 --> 00:09:24,080

had a baseball on board that i would

269

00:09:28,870 --> 00:09:27,120

pitch and toss and catch and hit with a

270

00:09:30,949 --> 00:09:28,880

bat that i fashioned from some equipment

271

00:09:33,110 --> 00:09:30,959

on station and i also had a nerf

272

00:09:34,550 --> 00:09:33,120

basketball and a nerf basketball hoop

273

00:09:37,030 --> 00:09:34,560

and fyodor yurchikhin who was my

274

00:09:39,269 --> 00:09:37,040

commander he and i we didn't play pig

275

00:09:40,949 --> 00:09:39,279

we played iss

276

00:09:42,470 --> 00:09:40,959

and the only way you could win iss was

277

00:09:44,389 --> 00:09:42,480

you had to be really good at banking the

278

00:09:45,750 --> 00:09:44,399

nerf ball off of the ceiling or the wall

279

00:09:47,670 --> 00:09:45,760

to get it to go through the basketball

280

00:09:49,910 --> 00:09:47,680

hoop

281

00:09:51,829 --> 00:09:49,920

there you have it creative play in space

282

00:09:55,190 --> 00:09:51,839

next question

283

00:09:56,550 --> 00:09:55,200

um my name is anna k and my question is

284

00:09:59,190 --> 00:09:56,560

we're getting annoyed with your cabin

285

00:10:01,670 --> 00:10:00,389

and okay

286

00:10:04,389 --> 00:10:01,680

i had great

287

00:10:06,310 --> 00:10:04,399

crewmates oleg kotov and fyodor

288

00:10:07,829 --> 00:10:06,320

yurchikhin were two russian cosmonauts

289

00:10:10,069 --> 00:10:07,839

they were great guys

290

00:10:11,910 --> 00:10:10,079

we had children that were approximately

291

00:10:12,949 --> 00:10:11,920

the same ages so we often talked about

292

00:10:14,550 --> 00:10:12,959

our kids

293

00:10:16,150 --> 00:10:14,560

we really didn't do any well i don't

294

00:10:18,630 --> 00:10:16,160

know if i did anything that aggravated

295

00:10:19,670 --> 00:10:18,640

them i probably did

296

00:10:21,190 --> 00:10:19,680

but

297

00:10:23,190 --> 00:10:21,200

the only things they would really do to

298

00:10:25,269 --> 00:10:23,200

aggravate me was they teased me a lot i

299

00:10:27,910 --> 00:10:25,279

would watch nebraska football games from

300

00:10:29,350 --> 00:10:27,920

space and on saturdays nebraska didn't

301
00:10:31,030 --> 00:10:29,360
have a really good year that year so

302
00:10:33,269 --> 00:10:31,040
olig would float down and he'd say he'd

303
00:10:34,710 --> 00:10:33,279
ask me how's the football going and then

304
00:10:35,829 --> 00:10:34,720
i'd say oh it's going okay because it

305
00:10:37,190 --> 00:10:35,839
was early in the game and then he'd

306
00:10:38,710 --> 00:10:37,200
float down later and he'd say hey the

307
00:10:40,870 --> 00:10:38,720
game's not going so good huh and he

308
00:10:42,310 --> 00:10:40,880
could tell by my face so they like to

309
00:10:44,389 --> 00:10:42,320
tease me about being

310
00:10:45,350 --> 00:10:44,399
an american who loved american football

311
00:10:47,110 --> 00:10:45,360
but

312
00:10:48,790 --> 00:10:47,120
for the most part we got along very very

313
00:10:51,670 --> 00:10:48,800

well they were my space brothers our

314

00:10:54,310 --> 00:10:51,680

nickname was three mushkitiri which is

315

00:10:55,829 --> 00:10:54,320

russian for three musketeers so

316

00:10:57,750 --> 00:10:55,839

i cherish that friendship with them and

317

00:11:01,190 --> 00:10:57,760

they're actually here in houston as we

318

00:11:03,590 --> 00:11:01,200

speak training for their next flights

319

00:11:05,509 --> 00:11:03,600

my name is blair and here is my question

320

00:11:07,750 --> 00:11:05,519

when do you consider it night in space

321

00:11:09,829 --> 00:11:07,760

since there are 16 sunrises and sunsets

322

00:11:10,710 --> 00:11:09,839

every day

323

00:11:13,269 --> 00:11:10,720

well

324

00:11:14,870 --> 00:11:13,279

we don't have great windows in the

325

00:11:16,389 --> 00:11:14,880

station we do have the cupola now that

326

00:11:18,870 --> 00:11:16,399

we can go into

327

00:11:21,590 --> 00:11:18,880

and look outside but we really don't

328

00:11:24,550 --> 00:11:21,600

have night and day per se you're correct

329

00:11:27,350 --> 00:11:24,560

in that we have 16 sunrises and sunsets

330

00:11:30,310 --> 00:11:27,360

so if you count that as your day or your

331

00:11:31,829 --> 00:11:30,320

night we do have 16 day night cycles but

332

00:11:33,750 --> 00:11:31,839

from a crew perspective you're simply

333

00:11:35,350 --> 00:11:33,760

going by the clock so you wake up at six

334

00:11:37,430 --> 00:11:35,360

o'clock o'clock in the morning greenwich

335

00:11:39,910 --> 00:11:37,440

time you work all day and you go to bed

336

00:11:42,069 --> 00:11:39,920

about 10 30 at night greenwich time so

337

00:11:44,150 --> 00:11:42,079

you really don't think about whether

338

00:11:46,389 --> 00:11:44,160

it's night or whether it's day in terms

339

00:11:48,389 --> 00:11:46,399

of sunlight and darkness you think about

340

00:11:50,230 --> 00:11:48,399

it in terms of clock time

341

00:11:51,509 --> 00:11:50,240

so that's kind of how we cope with that

342

00:11:53,509 --> 00:11:51,519

in space

343

00:11:55,269 --> 00:11:53,519

so when you go to bed it's night

344

00:11:57,750 --> 00:11:55,279

yeah it's nice it could be daylight

345

00:12:00,710 --> 00:11:57,760

outside but it's night for us because

346

00:12:03,110 --> 00:12:00,720

it's night time right and if we were to

347

00:12:04,629 --> 00:12:03,120

sleep in a module that had windows we

348

00:12:06,629 --> 00:12:04,639

would have to block those windows with

349

00:12:08,870 --> 00:12:06,639

something because it's very unnerving

350

00:12:10,550 --> 00:12:08,880

when the sun hits the window when you're

351
00:12:12,550 --> 00:12:10,560
deep in your sleep and it might wake you

352
00:12:13,910 --> 00:12:12,560
up so and i imagine you don't have any

353
00:12:15,190 --> 00:12:13,920
trouble falling asleep when it's

354
00:12:17,110 --> 00:12:15,200
nighttime

355
00:12:18,310 --> 00:12:17,120
after a long busy day aboard the

356
00:12:20,150 --> 00:12:18,320
international space station great

357
00:12:21,750 --> 00:12:20,160
question do we have any more

358
00:12:23,190 --> 00:12:21,760
hi my name is janik and here's my

359
00:12:25,590 --> 00:12:23,200
question what's the most interesting

360
00:12:27,350 --> 00:12:25,600
thing you've seen in space

361
00:12:28,949 --> 00:12:27,360
oh that's tough the most interesting

362
00:12:30,069 --> 00:12:28,959
thing i've seen in space i would have to

363
00:12:32,310 --> 00:12:30,079

say

364

00:12:35,110 --> 00:12:32,320

uh when i was out on my

365

00:12:37,430 --> 00:12:35,120

to see second spacewalk of my life

366

00:12:39,350 --> 00:12:37,440

i was able to fly over a place on the

367

00:12:41,110 --> 00:12:39,360

earth called dubai and you guys can

368

00:12:42,790 --> 00:12:41,120

probably go look at that on a map and

369

00:12:45,990 --> 00:12:42,800

there are resorts that they're building

370

00:12:47,990 --> 00:12:46,000

out in the ocean off the coast of dubai

371

00:12:50,230 --> 00:12:48,000

they're called the palm resorts and the

372

00:12:52,069 --> 00:12:50,240

world resort and the world resort is

373

00:12:53,430 --> 00:12:52,079

shaped like the continents on earth so

374

00:12:56,389 --> 00:12:53,440

you have north and south america

375

00:12:58,150 --> 00:12:56,399

australia asia africa antarctica and

376

00:13:00,710 --> 00:12:58,160

then they also have the palm resorts

377

00:13:02,150 --> 00:13:00,720

that are shaped like a big palm frond so

378

00:13:03,509 --> 00:13:02,160

you should go look that up on the

379

00:13:04,949 --> 00:13:03,519

internet and see if you can see pictures

380

00:13:07,030 --> 00:13:04,959

of that but when i saw that for the

381

00:13:09,430 --> 00:13:07,040

first time from outer space it was

382

00:13:12,069 --> 00:13:09,440

absolutely breathtaking and i got to see

383

00:13:14,870 --> 00:13:12,079

it again when i flew to space again on

384

00:13:16,629 --> 00:13:14,880

sts-131 we were out on our spacewalk and

385

00:13:18,310 --> 00:13:16,639

my partner rick mastracchio had never

386

00:13:19,910 --> 00:13:18,320

seen them and it just so happened we

387

00:13:21,829 --> 00:13:19,920

were waiting on the front of the station

388

00:13:23,670 --> 00:13:21,839

just hanging out and we looked down at

389

00:13:26,629 --> 00:13:23,680

my feet and there they were so rick got

390

00:13:28,550 --> 00:13:26,639

to see them on his space walk with me

391

00:13:31,269 --> 00:13:28,560

very good and not to commit you to do

392

00:13:33,110 --> 00:13:31,279

anything extra but clay is also on

393

00:13:35,590 --> 00:13:33,120

twitter and you can follow him at astro

394

00:13:38,069 --> 00:13:35,600

clay and he does have a little thing he

395

00:13:39,750 --> 00:13:38,079

does clay's pick of the day and perhaps

396

00:13:42,949 --> 00:13:39,760

he might

397

00:13:44,710 --> 00:13:42,959

tweet a photo or two of maybe dubai or a

398

00:13:46,389 --> 00:13:44,720

hurricane or something again not to

399

00:13:48,389 --> 00:13:46,399

commit you to do something

400

00:13:49,990 --> 00:13:48,399

and maybe i'll even see if i can find uh

401

00:13:51,350 --> 00:13:50,000

where creighton middle school is in

402

00:13:53,269 --> 00:13:51,360

south carolina and see if i took a

403

00:13:55,350 --> 00:13:53,279

picture of that for there we go so guys

404

00:13:57,350 --> 00:13:55,360

go to twitter and follow him on astro

405

00:13:58,550 --> 00:13:57,360

underscore clay and maybe you can see

406

00:14:01,269 --> 00:13:58,560

those photos that he's talking about

407

00:14:03,829 --> 00:14:01,279

today um next question hi my name is

408

00:14:05,750 --> 00:14:03,839

yotoam and here's my question when you

409

00:14:07,509 --> 00:14:05,760

come back to earth how long did you stay

410

00:14:09,350 --> 00:14:07,519

in bed before your body gets strong

411

00:14:10,790 --> 00:14:09,360

again

412

00:14:13,670 --> 00:14:10,800

well when i came back to earth you tell

413

00:14:15,110 --> 00:14:13,680

i didn't even go to bed for a long long

414

00:14:17,350 --> 00:14:15,120

long time that was one of the longest

415

00:14:19,350 --> 00:14:17,360

days of my life we had awakened on the

416

00:14:21,670 --> 00:14:19,360

shuttle right by our shuttle clock which

417

00:14:24,389 --> 00:14:21,680

is just like the space station so we

418

00:14:25,910 --> 00:14:24,399

awoke that morning and we had a long day

419

00:14:27,990 --> 00:14:25,920

to get ready to come home and land and

420

00:14:29,350 --> 00:14:28,000

then once we landed i still didn't get

421

00:14:31,750 --> 00:14:29,360

to go to sleep even though it would have

422

00:14:33,750 --> 00:14:31,760

been our night time to go to sleep on

423

00:14:36,069 --> 00:14:33,760

the space station or the shuttle i had

424

00:14:37,430 --> 00:14:36,079

to stay up i had to go into a room at

425

00:14:39,430 --> 00:14:37,440

the kennedy space center and i had to do

426

00:14:41,910 --> 00:14:39,440

a bunch of experiments where they were

427

00:14:43,189 --> 00:14:41,920

taking data on me and so by the end of

428

00:14:45,829 --> 00:14:43,199

the day

429

00:14:47,509 --> 00:14:45,839

the real day on earth it was 8 31 i

430

00:14:49,750 --> 00:14:47,519

remember my clock had the digital

431

00:14:51,750 --> 00:14:49,760

numbers 8 31 and that's all i remember

432

00:14:52,870 --> 00:14:51,760

because i just passed out at that point

433

00:14:54,310 --> 00:14:52,880

so

434

00:14:56,710 --> 00:14:54,320

that was the first time i got to go to

435

00:14:59,030 --> 00:14:56,720

bed on my first day home

436

00:15:00,790 --> 00:14:59,040

and i was really tired

437

00:15:01,670 --> 00:15:00,800

my name is nicholas and here's my

438

00:15:03,750 --> 00:15:01,680

question

439

00:15:05,350 --> 00:15:03,760

what type of protective suit do

440

00:15:07,910 --> 00:15:05,360

astronauts wear to keep them safe and

441

00:15:10,710 --> 00:15:07,920

warm from the space environment

442

00:15:13,110 --> 00:15:10,720

ah good question uh inside you know we

443

00:15:14,710 --> 00:15:13,120

don't need to wear a suit we can wear

444

00:15:17,509 --> 00:15:14,720

shirt sleeve and shorts if we'd like

445

00:15:19,910 --> 00:15:17,519

because it's a balmy 72 degrees with 55

446

00:15:22,790 --> 00:15:19,920

humidity slight breeze from the south

447

00:15:24,470 --> 00:15:22,800

and no clouds if we go outside though

448

00:15:26,389 --> 00:15:24,480

that's a great question because anytime

449

00:15:28,150 --> 00:15:26,399

you're outside it's a vacuum right

450

00:15:30,310 --> 00:15:28,160

there's no pressure there's no oxygen

451
00:15:33,350 --> 00:15:30,320
there's no nothing so everything you

452
00:15:35,269 --> 00:15:33,360
need to survive has to be contained in

453
00:15:37,189 --> 00:15:35,279
that little spaceship that we call our

454
00:15:38,710 --> 00:15:37,199
spacesuit so the one that you see the

455
00:15:41,110 --> 00:15:38,720
astronauts in come out of the space

456
00:15:43,670 --> 00:15:41,120
station is the white suit and that's

457
00:15:45,749 --> 00:15:43,680
called our extra vehicular mobility unit

458
00:15:47,749 --> 00:15:45,759
which is basically a spacewalk suit but

459
00:15:50,069 --> 00:15:47,759
it has the ability to keep us warm or

460
00:15:52,310 --> 00:15:50,079
keep us cool it has water for us to

461
00:15:54,550 --> 00:15:52,320
drink and it also protects us from

462
00:15:56,550 --> 00:15:54,560
meteoroids that could hit us it protects

463
00:15:58,470 --> 00:15:56,560

us from the cold and the hot of deep

464

00:15:59,670 --> 00:15:58,480

space and it provides us oxygen to

465

00:16:00,949 --> 00:15:59,680

breathe and gets rid of our carbon

466

00:16:03,030 --> 00:16:00,959

dioxide so

467

00:16:04,949 --> 00:16:03,040

great question it's very very important

468

00:16:07,110 --> 00:16:04,959

that we are protected by our own little

469

00:16:09,189 --> 00:16:07,120

spaceship whenever we go outside because

470

00:16:11,110 --> 00:16:09,199

space is a really really dangerous

471

00:16:12,949 --> 00:16:11,120

environment

472

00:16:16,870 --> 00:16:12,959

very good question do we have time for

473

00:16:20,389 --> 00:16:18,629

hi my name is christian here's my

474

00:16:23,189 --> 00:16:20,399

question what does the earth look like

475

00:16:24,790 --> 00:16:23,199

from space

476

00:16:26,310 --> 00:16:24,800

christian when i flew on the space

477

00:16:28,230 --> 00:16:26,320

station we always had to look through

478

00:16:31,030 --> 00:16:28,240

round circular windows so it looks

479

00:16:33,509 --> 00:16:31,040

simply like the earth through a circle

480

00:16:36,870 --> 00:16:33,519

but now we have this cupola and imagine

481

00:16:39,110 --> 00:16:36,880

that you can crawl into a big glass bowl

482

00:16:41,110 --> 00:16:39,120

and look any direction

483

00:16:44,550 --> 00:16:41,120

at the earth it's amazing you can

484

00:16:46,949 --> 00:16:44,560

actually see about a 3000 mile arc of

485

00:16:48,710 --> 00:16:46,959

the horizon of the earth and as you fly

486

00:16:51,110 --> 00:16:48,720

over florida and as you fly over the

487

00:16:53,189 --> 00:16:51,120

midwest or you fly over saudi arabia you

488

00:16:54,470 --> 00:16:53,199

can see so many cool things the colors

489

00:16:58,710 --> 00:16:54,480

are beautiful

490

00:16:59,749 --> 00:16:58,720

gorgeous and it's very hard to describe

491

00:17:01,829 --> 00:16:59,759

that view

492

00:17:05,669 --> 00:17:01,839

but it's actually the most beautiful

493

00:17:07,350 --> 00:17:05,679

thing you could imagine to see

494

00:17:09,829 --> 00:17:07,360

very few people have ever been able to

495

00:17:11,270 --> 00:17:09,839

see that so it's i guess a real honor

496

00:17:13,829 --> 00:17:11,280

and a privilege that you were able to do

497

00:17:18,870 --> 00:17:13,839

that i'm very blessed good question do

498

00:17:23,829 --> 00:17:21,750

hi my name is lane and i was wondering

499

00:17:25,270 --> 00:17:23,839

do you use a microwave and cell phones

500

00:17:26,710 --> 00:17:25,280

in space

501
00:17:28,390 --> 00:17:26,720
i wish we had a microwave dude that

502
00:17:30,870 --> 00:17:28,400
would be a really great way to uh heat

503
00:17:33,350 --> 00:17:30,880
our food we don't have a microwave per

504
00:17:35,350 --> 00:17:33,360
se but we do have a little uh food

505
00:17:37,350 --> 00:17:35,360
warmer that's like a suitcase that you

506
00:17:38,870 --> 00:17:37,360
put all your food bags in and then you

507
00:17:40,950 --> 00:17:38,880
turn on the switch and it kind of

508
00:17:42,630 --> 00:17:40,960
electrically heats up your food the

509
00:17:44,150 --> 00:17:42,640
russians have a different version but

510
00:17:46,710 --> 00:17:44,160
it's the same idea and they can put

511
00:17:49,830 --> 00:17:46,720
their cans in a slot and then those cans

512
00:17:51,430 --> 00:17:49,840
heat up through the electricity

513
00:17:53,750 --> 00:17:51,440

cell phones we actually do have the

514

00:17:55,909 --> 00:17:53,760

capability to talk as if we had a cell

515

00:17:57,669 --> 00:17:55,919

phone we have a computer program that

516

00:17:59,830 --> 00:17:57,679

takes our phone signal and i wear a

517

00:18:01,830 --> 00:17:59,840

headset just like i have on today and

518

00:18:03,669 --> 00:18:01,840

then i can punch in the telephone number

519

00:18:05,510 --> 00:18:03,679

on the computer and then that signal

520

00:18:06,870 --> 00:18:05,520

goes to the satellites in space comes

521

00:18:08,950 --> 00:18:06,880

down to the earth and then it's

522

00:18:10,789 --> 00:18:08,960

converted to a cell phone signal and my

523

00:18:13,350 --> 00:18:10,799

wife and family had that cell phone on

524

00:18:15,750 --> 00:18:13,360

them and whenever i called it said nasa

525

00:18:17,669 --> 00:18:15,760

and my wife always knew it was me and so

526

00:18:19,190 --> 00:18:17,679

she chose not to pick up the phone

527

00:18:20,950 --> 00:18:19,200

oftentimes but

528

00:18:22,630 --> 00:18:20,960

we had the opportunity to have lots of

529

00:18:26,830 --> 00:18:22,640

great conversations together as we

530

00:18:33,110 --> 00:18:30,870

earth hi my name is my question what do

531

00:18:35,830 --> 00:18:33,120

you put in here what do you put inside

532

00:18:41,190 --> 00:18:38,230

that's a loaded question um

533

00:18:42,870 --> 00:18:41,200

we drink a lot of uh water

534

00:18:44,950 --> 00:18:42,880

coffee tea

535

00:18:47,029 --> 00:18:44,960

and fruit flavored drinks when we're on

536

00:18:49,510 --> 00:18:47,039

the space station so all of its we don't

537

00:18:51,350 --> 00:18:49,520

really put anything into our drinks it's

538

00:18:53,510 --> 00:18:51,360

already done for us so all we have to do

539

00:18:55,830 --> 00:18:53,520

is take the packet which has all the the

540

00:18:56,950 --> 00:18:55,840

tea bag or it has the coffee grounds or

541

00:18:59,270 --> 00:18:56,960

it has the

542

00:19:01,430 --> 00:18:59,280

the tang or the fruit flavored drink we

543

00:19:02,630 --> 00:19:01,440

add the water shake it up and just drink

544

00:19:04,549 --> 00:19:02,640

it down so

545

00:19:07,270 --> 00:19:04,559

we don't have anything the ability to

546

00:19:09,110 --> 00:19:07,280

add something to that packet is not

547

00:19:10,789 --> 00:19:09,120

available to an astronaut once he's in

548

00:19:12,549 --> 00:19:10,799

space it's already done for us it's

549

00:19:14,390 --> 00:19:12,559

pre-prepared pre-packaged kind of like

550

00:19:15,590 --> 00:19:14,400

drinking a capri sun

551
00:19:16,630 --> 00:19:15,600
something like that

552
00:19:18,870 --> 00:19:16,640
and

553
00:19:20,789 --> 00:19:18,880
you get that from that potable dispenser

554
00:19:22,549 --> 00:19:20,799
that's how you get the water out into

555
00:19:24,710 --> 00:19:22,559
your right there's a machine on the

556
00:19:26,710 --> 00:19:24,720
station that we we stick a needle

557
00:19:28,710 --> 00:19:26,720
through the hole in the pouch and then

558
00:19:31,110 --> 00:19:28,720
we push a couple buttons and the water

559
00:19:33,190 --> 00:19:31,120
fills up the pouch and then you pull it

560
00:19:35,029 --> 00:19:33,200
off and it's sealed and you add a little

561
00:19:36,789 --> 00:19:35,039
straw that has a clip on it to pinch it

562
00:19:38,310 --> 00:19:36,799
off and then you shake it up good and

563
00:19:39,990 --> 00:19:38,320

you squeeze it and mix it up really well

564

00:19:42,070 --> 00:19:40,000

so that it all gets dissolved just like

565

00:19:44,150 --> 00:19:42,080

you do on earth if you mix some nestle's

566

00:19:45,590 --> 00:19:44,160

quickened milk or whatever and then you

567

00:19:47,430 --> 00:19:45,600

drink it down right and so if you've

568

00:19:49,110 --> 00:19:47,440

been following along the

569

00:19:51,110 --> 00:19:49,120

activities on board the space station

570

00:19:53,110 --> 00:19:51,120

now you would know that that commander

571

00:19:54,870 --> 00:19:53,120

sunni williams and also hoshide had

572

00:19:57,190 --> 00:19:54,880

recently replaced the filter for that

573

00:19:58,549 --> 00:19:57,200

dispenser that he is talking about

574

00:20:00,549 --> 00:19:58,559

good question

575

00:20:03,190 --> 00:20:00,559

we have another one

576

00:20:06,950 --> 00:20:06,070

hello my name is rob and here's my

577

00:20:08,789 --> 00:20:06,960

question

578

00:20:11,750 --> 00:20:08,799

why don't you just build some more

579

00:20:14,710 --> 00:20:11,760

robonauts to go up in space so you don't

580

00:20:16,950 --> 00:20:14,720

have to worry about your help

581

00:20:19,590 --> 00:20:16,960

now that's a really really really good

582

00:20:20,710 --> 00:20:19,600

question but the bottom line answer is

583

00:20:23,110 --> 00:20:20,720

money

584

00:20:25,430 --> 00:20:23,120

uh if we had the ability to to build the

585

00:20:27,350 --> 00:20:25,440

robots to do all the things an astronaut

586

00:20:29,750 --> 00:20:27,360

could do that would be effective it

587

00:20:31,590 --> 00:20:29,760

would be safer to keep a human being

588

00:20:33,750 --> 00:20:31,600

from having to go outside in this nasty

589

00:20:35,350 --> 00:20:33,760

environment that we call outer space

590

00:20:38,549 --> 00:20:35,360

but

591

00:20:40,870 --> 00:20:38,559

a robonaut or a robot can't necessarily

592

00:20:42,870 --> 00:20:40,880

see things and think of alternative

593

00:20:45,350 --> 00:20:42,880

solutions like a spacewalker can for

594

00:20:48,070 --> 00:20:45,360

example imagine that a robot's out there

595

00:20:49,830 --> 00:20:48,080

and he gets to a bolt that he can't undo

596

00:20:52,549 --> 00:20:49,840

just like we had recently on our space

597

00:20:54,950 --> 00:20:52,559

walks and maybe he can make his wrench

598

00:20:57,110 --> 00:20:54,960

turn harder or turn faster or whatever

599

00:21:00,230 --> 00:20:57,120

but he can't think of ways

600

00:21:02,710 --> 00:21:00,240

to cleverly clean out the hole or to

601
00:21:04,390 --> 00:21:02,720
change the way he's doing something to

602
00:21:06,070 --> 00:21:04,400
to make it

603
00:21:08,710 --> 00:21:06,080
available to him to actually complete

604
00:21:11,350 --> 00:21:08,720
the task so the ability for a human to

605
00:21:12,470 --> 00:21:11,360
think and to reason is one of the

606
00:21:14,950 --> 00:21:12,480
important

607
00:21:16,549 --> 00:21:14,960
realities of why we want humans in space

608
00:21:18,470 --> 00:21:16,559
astronauts can do many things they can

609
00:21:20,470 --> 00:21:18,480
do many good things for us they can

610
00:21:22,789 --> 00:21:20,480
scout ahead and look at landing sites on

611
00:21:24,549 --> 00:21:22,799
the moon or in an asteroid or mars and

612
00:21:26,070 --> 00:21:24,559
those will be excellent uses of robotic

613
00:21:28,230 --> 00:21:26,080

technology but there are just some

614

00:21:29,430 --> 00:21:28,240

things that a robot can't do that a

615

00:21:30,870 --> 00:21:29,440

human can do

616

00:21:33,110 --> 00:21:30,880

and when you couple that with the

617

00:21:35,270 --> 00:21:33,120

expense that's required to build

618

00:21:37,270 --> 00:21:35,280

a small army of robots to do astronaut

619

00:21:38,870 --> 00:21:37,280

work outside the station we're moving in

620

00:21:41,270 --> 00:21:38,880

that direction but it's going to take a

621

00:21:42,549 --> 00:21:41,280

little bit of time and some more money

622

00:21:44,470 --> 00:21:42,559

and i think we've been able to

623

00:21:46,310 --> 00:21:44,480

demonstrate just the usefulness of

624

00:21:47,990 --> 00:21:46,320

robots or robotics even today we had the

625

00:21:50,950 --> 00:21:48,000

deployment of the

626

00:21:52,950 --> 00:21:50,960

the uh small satellites that were

627

00:21:54,390 --> 00:21:52,960

launched using the remote manipulator

628

00:21:55,909 --> 00:21:54,400

system this is the robot arm the

629

00:21:58,310 --> 00:21:55,919

japanese robot arm

630

00:22:01,029 --> 00:21:58,320

outside of kibo which is the japanese

631

00:22:03,990 --> 00:22:01,039

experiment module and then also

632

00:22:06,070 --> 00:22:04,000

they'll be spending actually sunny and

633

00:22:07,990 --> 00:22:06,080

hoshide are actually doing a training

634

00:22:09,350 --> 00:22:08,000

session today using the robotics

635

00:22:11,990 --> 00:22:09,360

workstation

636

00:22:14,549 --> 00:22:12,000

where they will use the station arm to

637

00:22:17,190 --> 00:22:14,559

eventually grapple the dragon spacecraft

638

00:22:19,190 --> 00:22:17,200

that is scheduled to launch this sunday

639

00:22:21,510 --> 00:22:19,200

so you guys come back and watch

640

00:22:22,870 --> 00:22:21,520

nasa tv you can watch it

641

00:22:25,029 --> 00:22:22,880

here live

642

00:22:27,669 --> 00:22:25,039

beginning at 6 pm

643

00:22:30,070 --> 00:22:27,679

central time and you can see robotics in

644

00:22:31,750 --> 00:22:30,080

action um eventually when that uh

645

00:22:33,990 --> 00:22:31,760

spacecraft arrives to the space station

646

00:22:36,789 --> 00:22:34,000

it is scheduled to arrive on october the

647

00:22:38,710 --> 00:22:36,799

10th so obviously there's um several

648

00:22:40,549 --> 00:22:38,720

ways and and reasons to have robotics

649

00:22:41,669 --> 00:22:40,559

work with us but obviously we need

650

00:22:43,510 --> 00:22:41,679

humans

651

00:22:44,950 --> 00:22:43,520

to be involved in that in space

652

00:22:46,950 --> 00:22:44,960

exploration as well good very good

653

00:22:48,630 --> 00:22:46,960

question do we have any more questions

654

00:22:52,310 --> 00:22:48,640

good homework assignment for creighton

655

00:22:57,190 --> 00:22:54,870

any more questions one of the questions

656

00:22:59,430 --> 00:22:57,200

that a lot of the students had was what

657

00:23:01,669 --> 00:22:59,440

was the scariest thing for you being an

658

00:23:04,230 --> 00:23:01,679

astronaut and being on the station or in

659

00:23:08,710 --> 00:23:06,310

uh the scariest thing

660

00:23:11,510 --> 00:23:08,720

uh i think was when i woke up one night

661

00:23:12,630 --> 00:23:11,520

and saw olig in his underwear but

662

00:23:13,430 --> 00:23:12,640

that's okay

663

00:23:17,270 --> 00:23:13,440

um

664

00:23:19,430 --> 00:23:17,280

they train the scared out of us they

665

00:23:21,270 --> 00:23:19,440

train the fear out of us you're so

666

00:23:23,270 --> 00:23:21,280

ready to do all the things that you need

667

00:23:25,190 --> 00:23:23,280

to do your mind is so focused on step

668

00:23:26,070 --> 00:23:25,200

one step two step three step four step

669

00:23:27,830 --> 00:23:26,080

five

670

00:23:29,909 --> 00:23:27,840

that often times

671

00:23:31,669 --> 00:23:29,919

if there were fear to be had

672

00:23:33,669 --> 00:23:31,679

uh you're not really thinking about it

673

00:23:35,270 --> 00:23:33,679

you're focused on something else for

674

00:23:36,789 --> 00:23:35,280

example when i opened the hatch for the

675

00:23:39,190 --> 00:23:36,799

very first time

676

00:23:41,990 --> 00:23:39,200

in july of 2007 to go out on my very

677

00:23:43,510 --> 00:23:42,000

first spacewalk i wasn't scared at all

678

00:23:45,029 --> 00:23:43,520

there was no fear

679

00:23:46,789 --> 00:23:45,039

what i thought when i looked out into

680

00:23:50,390 --> 00:23:46,799

the blackness of space was

681

00:23:51,269 --> 00:23:50,400

i was born to be here right now doing

682

00:23:52,149 --> 00:23:51,279

this

683

00:23:53,669 --> 00:23:52,159

and

684

00:23:56,149 --> 00:23:53,679

i don't know if everyone experiences

685

00:23:57,990 --> 00:23:56,159

that feeling or or thinks that way but

686

00:23:59,990 --> 00:23:58,000

for me there was no fear there might

687

00:24:01,350 --> 00:24:00,000

have been a little anxiety right about i

688

00:24:02,870 --> 00:24:01,360

don't want to make a mistake i don't

689

00:24:05,190 --> 00:24:02,880

want to screw up i hope everything goes

690

00:24:07,269 --> 00:24:05,200

well but there was never any fear

691

00:24:08,950 --> 00:24:07,279

involved

692

00:24:10,470 --> 00:24:08,960

and to follow up on that i actually

693

00:24:11,350 --> 00:24:10,480

thought about death

694

00:24:14,070 --> 00:24:11,360

more

695

00:24:15,669 --> 00:24:14,080

the second time i flew on sts-131 as we

696

00:24:17,750 --> 00:24:15,679

were preparing for the final days of the

697

00:24:19,750 --> 00:24:17,760

mission and getting ready to launch that

698

00:24:22,070 --> 00:24:19,760

was when i wondered was i cheating death

699

00:24:24,470 --> 00:24:22,080

you know had i i had my shot on

700

00:24:27,510 --> 00:24:24,480

expedition 15 and should i still be

701
00:24:28,950 --> 00:24:27,520
going up on sts-131

702
00:24:35,350 --> 00:24:28,960
and it's just something you have to you

703
00:24:39,350 --> 00:24:38,149
any other questions

704
00:24:40,789 --> 00:24:39,360
i have a question you're going to change

705
00:24:45,510 --> 00:24:40,799
the name of your school to clayton

706
00:24:45,520 --> 00:24:49,350
thank you very much

707
00:24:53,269 --> 00:24:51,269
all right well clay and amico we would

708
00:24:55,350 --> 00:24:53,279
like to thank you so much for joining us

709
00:24:57,029 --> 00:24:55,360
today i know taking time out is very

710
00:24:59,350 --> 00:24:57,039
difficult especially how busy you guys

711
00:25:01,590 --> 00:24:59,360
are there in mission control

712
00:25:03,110 --> 00:25:01,600
monitoring the space station and we'd

713
00:25:04,549 --> 00:25:03,120

like to thank you actually creighton

714

00:25:06,070 --> 00:25:04,559

middle school do you have any final

715

00:25:08,070 --> 00:25:06,080

words that you'd like to

716

00:25:13,990 --> 00:25:08,080

say to clayton

717

00:25:17,110 --> 00:25:15,830

my pleasure