



1
00:00:05,349 --> 00:00:03,590
hi welcome to the international space

2
00:00:08,070 --> 00:00:05,359
station flight control room we're here

3
00:00:10,549 --> 00:00:08,080
for a distance learning network event

4
00:00:12,709 --> 00:00:10,559
we're talking to 7th grade students with

5
00:00:15,350 --> 00:00:12,719
creighton middle school creighton meet

6
00:00:18,870 --> 00:00:15,360
clayton because here today we have nasa

7
00:00:21,109 --> 00:00:18,880
astronaut clay anderson clay had flown a

8
00:00:22,390 --> 00:00:21,119
five month tour 152 days aboard the

9
00:00:25,109 --> 00:00:22,400
international space station on

10
00:00:27,029 --> 00:00:25,119
expedition 15 and 16 in fact you

11
00:00:28,790 --> 00:00:27,039
actually replaced commander suni

12
00:00:30,950 --> 00:00:28,800
williams who's actually up on station

13
00:00:33,310 --> 00:00:30,960

for expedition 15 and he also flew

14

00:00:36,069 --> 00:00:33,320

aboard um the space shuttle during

15

00:00:38,150 --> 00:00:36,079

sts-131 welcome and thank you for coming

16

00:00:40,709 --> 00:00:38,160

hey thanks for having me he also did

17

00:00:42,470 --> 00:00:40,719

what three space walks well total of six

18

00:00:44,869 --> 00:00:42,480

total of six okay so the first one was

19

00:00:47,910 --> 00:00:44,879

first three were on expedition 15 and

20

00:00:49,590 --> 00:00:47,920

16. and um so he he has done it all

21

00:00:52,069 --> 00:00:49,600

right so uh we're ready for your

22

00:00:53,830 --> 00:00:52,079

questions guys

23

00:01:00,709 --> 00:00:53,840

all right we will go ahead and get

24

00:01:04,789 --> 00:01:03,029

hi my name is fantasia and here's my

25

00:01:07,030 --> 00:01:04,799

question what do the patches on the

26

00:01:09,510 --> 00:01:07,040

astronaut uniform represent

27

00:01:11,270 --> 00:01:09,520

hi ventaja it's great to see you guys on

28

00:01:13,190 --> 00:01:11,280

the camera by the way uh the patches on

29

00:01:15,109 --> 00:01:13,200

the suits represent several different

30

00:01:16,149 --> 00:01:15,119

things we have a flag to represent the

31

00:01:18,310 --> 00:01:16,159

country because now we're an

32

00:01:20,230 --> 00:01:18,320

international space station crew so not

33

00:01:21,830 --> 00:01:20,240

everyone is from the united states and

34

00:01:24,789 --> 00:01:21,840

then if you look at my shirt here you

35

00:01:26,789 --> 00:01:24,799

see a brief version of our expedition 15

36

00:01:28,550 --> 00:01:26,799

patch which is also

37

00:01:29,830 --> 00:01:28,560

symbolic of

38

00:01:31,670 --> 00:01:29,840

what we were trying to accomplish on

39

00:01:33,910 --> 00:01:31,680

station so what happens is the crew

40

00:01:35,830 --> 00:01:33,920

designs those patches and now we'll have

41

00:01:37,350 --> 00:01:35,840

a soyuz patch that represents the crew

42

00:01:38,630 --> 00:01:37,360

going up on the soyuz we'll have a space

43

00:01:40,469 --> 00:01:38,640

station patch

44

00:01:42,389 --> 00:01:40,479

for the first crew that comes to station

45

00:01:44,149 --> 00:01:42,399

and then for example with sunny williams

46

00:01:46,149 --> 00:01:44,159

now she had a crew

47

00:01:47,749 --> 00:01:46,159

previously before she became commander

48

00:01:49,830 --> 00:01:47,759

and now when she's commander they have a

49

00:01:51,429 --> 00:01:49,840

new patch so all the patches are

50

00:01:53,109 --> 00:01:51,439

symbolic of

51
00:01:54,389 --> 00:01:53,119
special activities that are going to

52
00:01:56,469 --> 00:01:54,399
occur on the

53
00:01:57,590 --> 00:01:56,479
mission that we're on or things that

54
00:02:00,870 --> 00:01:57,600
represent

55
00:02:07,990 --> 00:02:02,069
thank you

56
00:02:13,190 --> 00:02:10,150
my name is brianna and my question is

57
00:02:15,030 --> 00:02:13,200
can you build a fire in space

58
00:02:16,790 --> 00:02:15,040
brianna you can build a fire in space

59
00:02:19,350 --> 00:02:16,800
but you have to be very very careful

60
00:02:21,350 --> 00:02:19,360
when you do it and what we do when we

61
00:02:23,350 --> 00:02:21,360
do experiments to see how fire behaves

62
00:02:25,030 --> 00:02:23,360
in microgravity we have to enclose it in

63
00:02:26,470 --> 00:02:25,040

something that we call the microscience

64

00:02:28,790 --> 00:02:26,480

glove box so

65

00:02:30,390 --> 00:02:28,800

we do do flames we do burn things but

66

00:02:32,630 --> 00:02:30,400

it's very very controlled you don't want

67

00:02:34,790 --> 00:02:32,640

to have an out of control flame on an

68

00:02:37,270 --> 00:02:34,800

international space station because it's

69

00:02:39,430 --> 00:02:37,280

a very uh dangerous environment when you

70

00:02:40,550 --> 00:02:39,440

have flames going around so everything's

71

00:02:46,630 --> 00:02:40,560

done with

72

00:02:51,589 --> 00:02:49,509

good question do we have another one

73

00:02:54,390 --> 00:02:51,599

yes

74

00:02:56,869 --> 00:02:54,400

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

75

00:02:59,670 --> 00:02:56,879

read that commander suny williams ran a

76

00:03:02,790 --> 00:02:59,680

marathon while she was on the iss

77

00:03:04,229 --> 00:03:02,800

how can you run a marathon in space

78

00:03:06,070 --> 00:03:04,239

hey dylan that's a great question you

79

00:03:08,869 --> 00:03:06,080

know i think sonny's a little crazy when

80

00:03:10,630 --> 00:03:08,879

she runs a marathon 26.4 miles is way

81

00:03:11,589 --> 00:03:10,640

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

82

00:03:13,750 --> 00:03:11,599

bike but

83

00:03:15,350 --> 00:03:13,760

the way sunny does it is that we have a

84

00:03:17,430 --> 00:03:15,360

treadmill on board the international

85

00:03:19,589 --> 00:03:17,440

space station we actually have two

86

00:03:21,910 --> 00:03:19,599

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

87

00:03:24,229 --> 00:03:21,920

the newer version and sunny wrote on the

88

00:03:26,149 --> 00:03:24,239

new version so she basically puts a

89

00:03:28,229 --> 00:03:26,159

harness on that holds her down to the

90

00:03:30,229 --> 00:03:28,239

treadmill and she turns it on and she

91

00:03:32,949 --> 00:03:30,239

simply begins to run and when she ran

92

00:03:35,270 --> 00:03:32,959

she started her uh run at the exact time

93

00:03:37,110 --> 00:03:35,280

that this the folks started the

94

00:03:39,750 --> 00:03:37,120

marathon on earth and so she ran her

95

00:03:41,430 --> 00:03:39,760

26.4 miles and then she provides them

96

00:03:43,830 --> 00:03:41,440

her time i think she might have even had

97

00:03:45,990 --> 00:03:43,840

an official number that she wore so

98

00:03:47,990 --> 00:03:46,000

sonny's a big runner and she loves to do

99

00:03:49,910 --> 00:03:48,000

things like that and fitness and

100

00:03:51,670 --> 00:03:49,920

actually on this particular mission she

101
00:03:53,589 --> 00:03:51,680
just completed a triathlon so she

102
00:03:55,270 --> 00:03:53,599
actually used all three

103
00:03:57,990 --> 00:03:55,280
pieces of gym equipment on board the

104
00:04:00,229 --> 00:03:58,000
station that involves a cycle a

105
00:04:03,030 --> 00:04:00,239
stationary cycle the treadmill that clay

106
00:04:04,869 --> 00:04:03,040
described and also an advanced

107
00:04:06,550 --> 00:04:04,879
resistive exercise device that simulates

108
00:04:08,229 --> 00:04:06,560
weightlifting here on earth

109
00:04:10,470 --> 00:04:08,239
that was actually to help simulate the

110
00:04:12,390 --> 00:04:10,480
swim portion of that triathlon so yeah

111
00:04:14,229 --> 00:04:12,400
sunny is very big into our fitness and

112
00:04:17,509 --> 00:04:14,239
fitness as you know is important here on

113
00:04:20,949 --> 00:04:17,519

earth but it's even more so in space

114

00:04:29,270 --> 00:04:20,959

absolutely and i still think she's crazy

115

00:04:33,110 --> 00:04:30,870

my name is lauren and here is my

116

00:04:35,830 --> 00:04:33,120

question when i do something that i like

117

00:04:37,510 --> 00:04:35,840

it seems like time goes by fast when you

118

00:04:40,629 --> 00:04:37,520

are doing a spacewalk does it feel like

119

00:04:43,510 --> 00:04:40,639

six hours or does it feel like it goes

120

00:04:44,950 --> 00:04:43,520

faster and slower

121

00:04:46,150 --> 00:04:44,960

thank you lauren that's a great question

122

00:04:47,510 --> 00:04:46,160

i'm sure that you think when you're

123

00:04:49,749 --> 00:04:47,520

studying your homework at night that

124

00:04:52,870 --> 00:04:49,759

that goes by really really fast

125

00:04:54,550 --> 00:04:52,880

but a spacewalk you are so focused on

126

00:04:57,350 --> 00:04:54,560

accomplishing all the goals of that

127

00:04:59,110 --> 00:04:57,360

mission of that spacewalk and

128

00:05:00,950 --> 00:04:59,120

not making any mistakes right making

129

00:05:02,870 --> 00:05:00,960

sure that everybody is kept safe that

130

00:05:04,390 --> 00:05:02,880

all the equipment's protected uh that

131

00:05:06,310 --> 00:05:04,400

you do the right thing and the amount of

132

00:05:07,110 --> 00:05:06,320

time that's allotted so you're exactly

133

00:05:08,790 --> 00:05:07,120

right

134

00:05:11,430 --> 00:05:08,800

it's a very enjoyable experience it's

135

00:05:13,430 --> 00:05:11,440

mentally tough it's not as physically

136

00:05:15,510 --> 00:05:13,440

difficult as it is when we train in the

137

00:05:17,270 --> 00:05:15,520

big swimming pool down here but doing a

138

00:05:19,350 --> 00:05:17,280

spacewalk in outer space it's a lot

139

00:05:21,270 --> 00:05:19,360

easier for your body except that you

140

00:05:23,430 --> 00:05:21,280

have to focus and concentrate so much

141

00:05:25,189 --> 00:05:23,440

more it's very difficult mentally but

142

00:05:26,550 --> 00:05:25,199

the time does just sail by you know

143

00:05:27,830 --> 00:05:26,560

you'll think holy cow we've only been

144

00:05:29,110 --> 00:05:27,840

out here an hour and they'll tell you

145

00:05:29,990 --> 00:05:29,120

you've been out there for five minutes

146

00:05:31,749 --> 00:05:30,000

so

147

00:05:35,430 --> 00:05:31,759

it's quite a great experience i hope you

148

00:05:35,440 --> 00:05:39,510

next question

149

00:05:44,070 --> 00:05:42,469

uh my name is brianna and my question is

150

00:05:46,469 --> 00:05:44,080

what was the largest plant that has ever

151
00:05:47,909 --> 00:05:46,479
been grown at the space station

152
00:05:49,749 --> 00:05:47,919
hey brianna that's a great question i

153
00:05:51,830 --> 00:05:49,759
think you're trying to get me to tell

154
00:05:54,310 --> 00:05:51,840
you that when i was on the space station

155
00:05:56,950 --> 00:05:54,320
we tried to grow basil seeds and lettuce

156
00:05:58,710 --> 00:05:56,960
seeds and they started out growing and i

157
00:06:00,390 --> 00:05:58,720
ended up killing them all so i feel

158
00:06:02,150 --> 00:06:00,400
really badly about talking about plants

159
00:06:04,710 --> 00:06:02,160
in space but the russians

160
00:06:06,790 --> 00:06:04,720
had an actual pea plant

161
00:06:09,909 --> 00:06:06,800
in their segment that grew to be quite

162
00:06:11,350 --> 00:06:09,919
tall uh at least 12 inches so

163
00:06:13,110 --> 00:06:11,360

we can grow

164

00:06:14,469 --> 00:06:13,120

plants in space and it's very important

165

00:06:16,629 --> 00:06:14,479

as we think about going to a place like

166

00:06:18,390 --> 00:06:16,639

mars or to an asteroid or to the moon

167

00:06:21,430 --> 00:06:18,400

the ability to grow plants to have food

168

00:06:23,270 --> 00:06:21,440

to eat or to provide oxygen for us which

169

00:06:24,950 --> 00:06:23,280

is what plants do and they also absorb

170

00:06:27,350 --> 00:06:24,960

carbon dioxide so those are all three

171

00:06:29,510 --> 00:06:27,360

good things that a plant can do for us

172

00:06:31,270 --> 00:06:29,520

for astronauts on a space crew and

173

00:06:34,950 --> 00:06:31,280

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

174

00:06:37,110 --> 00:06:34,960

so the biggest plant i didn't see it but

175

00:06:39,110 --> 00:06:37,120

they grew a pretty big pea-sized or pea

176
00:06:41,749 --> 00:06:39,120
plant in the russian segment and while

177
00:06:44,230 --> 00:06:41,759
that pea plant was the largest to be

178
00:06:46,070 --> 00:06:44,240
grown in space most recently

179
00:06:48,550 --> 00:06:46,080
astronaut don pettit who was aboard the

180
00:06:50,790 --> 00:06:48,560
international space station spotted the

181
00:06:52,950 --> 00:06:50,800
zucchini and the zucchini had a life of

182
00:06:54,270 --> 00:06:52,960
its own actually you can go online and

183
00:06:56,710 --> 00:06:54,280
read about that either go to

184
00:06:58,950 --> 00:06:56,720
blogs.nasa.gov or you can follow the

185
00:07:00,870 --> 00:06:58,960
zucchini on twitter believe it or not at

186
00:07:02,870 --> 00:07:00,880
astrozook and

187
00:07:04,629 --> 00:07:02,880
and and learn about exactly growing

188
00:07:10,710 --> 00:07:04,639

plants in space as well good question

189

00:07:14,870 --> 00:07:12,710

my name is matthew and my question is

190

00:07:17,270 --> 00:07:14,880

have you seen any hurricanes or typhoons

191

00:07:20,150 --> 00:07:17,280

from space can you do anything to help

192

00:07:22,309 --> 00:07:20,160

earth when you see one

193

00:07:24,469 --> 00:07:22,319

hey matt that's a great question when i

194

00:07:25,350 --> 00:07:24,479

flew on the space station i flew between

195

00:07:27,589 --> 00:07:25,360

june

196

00:07:30,070 --> 00:07:27,599

and november of 2007 and believe it or

197

00:07:32,230 --> 00:07:30,080

not those are the exact months of

198

00:07:33,830 --> 00:07:32,240

hurricane season so it starts on june

199

00:07:36,629 --> 00:07:33,840

the first and it ends on the 30th of

200

00:07:39,270 --> 00:07:36,639

november and i saw many many hurricanes

201
00:07:40,950 --> 00:07:39,280
it was very cool because i saw

202
00:07:42,710 --> 00:07:40,960
you may hear the weathermen talk about a

203
00:07:45,029 --> 00:07:42,720
tropical wave coming off the coast of

204
00:07:46,710 --> 00:07:45,039
africa so i saw those and then as they

205
00:07:48,070 --> 00:07:46,720
moved across the atlantic ocean toward

206
00:07:50,550 --> 00:07:48,080
the united states i would see them

207
00:07:52,790 --> 00:07:50,560
develop into a tropical depression and

208
00:07:54,950 --> 00:07:52,800
then into a tropical storm and then into

209
00:07:57,350 --> 00:07:54,960
a full-blown hurricane and it actually

210
00:07:59,189 --> 00:07:57,360
turns out that i saw at least three

211
00:08:01,189 --> 00:07:59,199
category fives the biggest most

212
00:08:02,790 --> 00:08:01,199
dangerous hurricanes you can see

213
00:08:05,990 --> 00:08:02,800

two of them were called hurricane dean

214

00:08:08,950 --> 00:08:06,000

and hurricane felix and in actuality

215

00:08:10,469 --> 00:08:08,960

hurricane dean caused the sts-118 crew

216

00:08:12,950 --> 00:08:10,479

who came to visit me while i was on the

217

00:08:14,790 --> 00:08:12,960

space station they had to leave early

218

00:08:16,550 --> 00:08:14,800

because hurricane dean was a category

219

00:08:18,469 --> 00:08:16,560

five and it was bearing down on houston

220

00:08:20,070 --> 00:08:18,479

texas and all the folks in the mission

221

00:08:21,350 --> 00:08:20,080

control were worried that the crew might

222

00:08:23,430 --> 00:08:21,360

not be able to get home and protect

223

00:08:25,909 --> 00:08:23,440

their families so what we ended up doing

224

00:08:27,990 --> 00:08:25,919

was cutting the mission short we cut two

225

00:08:29,589 --> 00:08:28,000

of our spacewalks short as well so that

226

00:08:32,070 --> 00:08:29,599

we could get things put together and

227

00:08:34,310 --> 00:08:32,080

they could come home so a hurricane is

228

00:08:36,630 --> 00:08:34,320

absolutely beautiful from outer space

229

00:08:38,389 --> 00:08:36,640

it's safer to see it from outer space

230

00:08:40,149 --> 00:08:38,399

but you really worry about the folks who

231

00:08:41,990 --> 00:08:40,159

are beneath that hurricane here on earth

232

00:08:44,149 --> 00:08:42,000

especially if it's your family and being

233

00:08:46,389 --> 00:08:44,159

from south carolina you guys know that

234

00:08:48,470 --> 00:08:46,399

hurricanes can come and hit the coast of

235

00:08:50,389 --> 00:08:48,480

south carolina as well so we need to be

236

00:08:52,550 --> 00:08:50,399

very careful with those

237

00:08:54,470 --> 00:08:52,560

and i actually recall hurricane dean as

238

00:08:56,550 --> 00:08:54,480

it was um and you guys were on a

239

00:08:58,230 --> 00:08:56,560

spacewalk at the time we captured video

240

00:09:00,150 --> 00:08:58,240

so you guys can go to youtube as well if

241

00:09:01,829 --> 00:09:00,160

you want to see that just search um

242

00:09:04,070 --> 00:09:01,839

hurricane dean and you can see that

243

00:09:04,949 --> 00:09:04,080

video that clay actually um witnessed

244

00:09:06,230 --> 00:09:04,959

while he was there aboard the

245

00:09:11,430 --> 00:09:06,240

international space station that was a

246

00:09:18,070 --> 00:09:13,670

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

247

00:09:20,070 --> 00:09:18,080

is there such a thing as sports in space

248

00:09:21,670 --> 00:09:20,080

hey cara you're right up my alley with

249

00:09:23,430 --> 00:09:21,680

sports and space

250

00:09:25,509 --> 00:09:23,440

when i lived on the space station i took

251

00:09:27,590 --> 00:09:25,519

a college football from the university

252

00:09:29,829 --> 00:09:27,600

of nebraska which is where i'm from

253

00:09:32,070 --> 00:09:29,839

and i had a needle to inflate it and i

254

00:09:33,990 --> 00:09:32,080

would kick field goals at the camera so

255

00:09:35,269 --> 00:09:34,000

just like if you look behind my head

256

00:09:37,030 --> 00:09:35,279

right now you'll see that there are

257

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

camera views on board the international

258

00:09:41,190 --> 00:09:39,279

space station so sometimes we would set

259

00:09:42,870 --> 00:09:41,200

those cameras up to look inside the lab

260

00:09:44,310 --> 00:09:42,880

module so what i would do is t up the

261

00:09:46,070 --> 00:09:44,320

football because in zero gravity i

262

00:09:48,310 --> 00:09:46,080

didn't need a football tee and i would

263

00:09:50,150 --> 00:09:48,320

just kick it toward the camera and then

264

00:09:52,230 --> 00:09:50,160

i'd look at the camera and i'd signal

265

00:09:53,670 --> 00:09:52,240

touchdown as if the field goal was good

266

00:09:54,870 --> 00:09:53,680

and i asked the ground team to keep

267

00:09:56,630 --> 00:09:54,880

score but they really didn't want to

268

00:09:58,630 --> 00:09:56,640

play with me um

269

00:10:01,350 --> 00:09:58,640

they were too busy doing real work but i

270

00:10:04,389 --> 00:10:01,360

had a baseball on board that i would uh

271

00:10:06,150 --> 00:10:04,399

pitch and toss and catch and hit with a

272

00:10:08,230 --> 00:10:06,160

bat that i fashioned from some equipment

273

00:10:10,389 --> 00:10:08,240

on station and i also had a nerf

274

00:10:11,829 --> 00:10:10,399

basketball and a nerf basketball hoop

275

00:10:14,310 --> 00:10:11,839

and fyodor yurchikhin who was my

276

00:10:16,550 --> 00:10:14,320

commander he and i we didn't play pig

277

00:10:18,230 --> 00:10:16,560

we played iss

278

00:10:19,590 --> 00:10:18,240

and the only way you could win iss was

279

00:10:21,430 --> 00:10:19,600

you have to be really good at banking

280

00:10:22,550 --> 00:10:21,440

the nerf ball off of the ceiling or the

281

00:10:24,949 --> 00:10:22,560

wall to get it to go through the

282

00:10:27,190 --> 00:10:24,959

basketball hoop

283

00:10:29,509 --> 00:10:27,200

there you have it creative play in space

284

00:10:34,550 --> 00:10:29,519

next question

285

00:10:39,269 --> 00:10:37,509

um my name is anna kaye and my question

286

00:10:41,910 --> 00:10:39,279

is ever get annoyed with your cabin

287

00:10:47,110 --> 00:10:44,389

and okay i uh i had great

288

00:10:49,030 --> 00:10:47,120

crewmates oleg kotov and fyodor

289

00:10:51,829 --> 00:10:49,040

yurchikhin were two russian cosmonauts

290

00:10:53,670 --> 00:10:51,839

they were great guys uh we had children

291

00:10:55,670 --> 00:10:53,680

that were approximately the same ages so

292

00:10:57,269 --> 00:10:55,680

we often talked about our kids

293

00:10:58,870 --> 00:10:57,279

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

294

00:11:01,350 --> 00:10:58,880

know if i did anything that aggravated

295

00:11:02,389 --> 00:11:01,360

them i probably did

296

00:11:03,910 --> 00:11:02,399

but

297

00:11:05,910 --> 00:11:03,920

the only things they would really do to

298

00:11:07,990 --> 00:11:05,920

aggravate me was they teased me a lot i

299

00:11:10,630 --> 00:11:08,000

would watch nebraska football games from

300

00:11:12,069 --> 00:11:10,640

space and on saturdays nebraska didn't

301
00:11:13,750 --> 00:11:12,079
have a really good year that year so

302
00:11:15,990 --> 00:11:13,760
olig would float down and he'd say he'd

303
00:11:17,430 --> 00:11:16,000
ask me how's the football going and then

304
00:11:18,550 --> 00:11:17,440
i'd say oh it's going okay because it

305
00:11:19,910 --> 00:11:18,560
was early in the game and then he'd

306
00:11:21,430 --> 00:11:19,920
float down later and he'd say hey the

307
00:11:23,590 --> 00:11:21,440
game's not going so good huh and he

308
00:11:25,030 --> 00:11:23,600
could tell by my face so they like to

309
00:11:27,110 --> 00:11:25,040
tease me about being

310
00:11:28,069 --> 00:11:27,120
an american who loved american football

311
00:11:29,829 --> 00:11:28,079
but

312
00:11:31,509 --> 00:11:29,839
for the most part we got along very very

313
00:11:34,389 --> 00:11:31,519

well they were my space brothers our

314

00:11:37,030 --> 00:11:34,399

nickname was three mushkitiri which is

315

00:11:38,550 --> 00:11:37,040

russian for three musketeers so

316

00:11:40,470 --> 00:11:38,560

i cherish that friendship with them and

317

00:11:43,670 --> 00:11:40,480

they're actually here in houston as we

318

00:11:45,269 --> 00:11:43,680

speak training for their next flights

319

00:11:50,870 --> 00:11:45,279

very good question do you have another

320

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

my name is blair and here is my question

321

00:11:57,430 --> 00:11:55,279

when do you consider it night in space

322

00:11:59,509 --> 00:11:57,440

since there are 16 sunrises and sunsets

323

00:12:00,389 --> 00:11:59,519

every day

324

00:12:02,949 --> 00:12:00,399

well

325

00:12:04,550 --> 00:12:02,959

we don't have great windows in the

326

00:12:06,150 --> 00:12:04,560

station we do have the cupola now that

327

00:12:08,629 --> 00:12:06,160

we can go into

328

00:12:11,269 --> 00:12:08,639

and look outside but we really don't

329

00:12:14,230 --> 00:12:11,279

have night and day per se you're correct

330

00:12:17,030 --> 00:12:14,240

in that we have 16 sunrises and sunsets

331

00:12:19,990 --> 00:12:17,040

so if you count that as your day or your

332

00:12:21,509 --> 00:12:20,000

night we do have 16 day night cycles but

333

00:12:23,430 --> 00:12:21,519

from a crew perspective you're simply

334

00:12:25,030 --> 00:12:23,440

going by the clock so you wake up at six

335

00:12:27,110 --> 00:12:25,040

o'clock o'clock in the morning greenwich

336

00:12:29,590 --> 00:12:27,120

time you work all day and you go to bed

337

00:12:31,509 --> 00:12:29,600

about 10 30 at night greenwich time so

338

00:12:33,350 --> 00:12:31,519

you really don't think about

339

00:12:35,670 --> 00:12:33,360

whether it's night or whether it's day

340

00:12:38,470 --> 00:12:35,680

in terms of sunlight and darkness you

341

00:12:40,150 --> 00:12:38,480

think about it in terms of clock time so

342

00:12:41,190 --> 00:12:40,160

that's kind of how we cope with that in

343

00:12:43,190 --> 00:12:41,200

space

344

00:12:44,949 --> 00:12:43,200

so when you go to bed it's night

345

00:12:47,430 --> 00:12:44,959

yeah it's nice it could be daylight

346

00:12:50,470 --> 00:12:47,440

outside but it's night for us because

347

00:12:52,790 --> 00:12:50,480

it's night time right and if we were to

348

00:12:54,389 --> 00:12:52,800

sleep in a module that had windows we

349

00:12:56,389 --> 00:12:54,399

would have to block those windows with

350

00:12:58,550 --> 00:12:56,399

something because it's very unnerving

351
00:13:00,310 --> 00:12:58,560
when the sun hits the window when you're

352
00:13:02,230 --> 00:13:00,320
deep in your sleep and it might wake you

353
00:13:03,590 --> 00:13:02,240
up so and i imagine you don't have any

354
00:13:04,870 --> 00:13:03,600
trouble falling asleep when it's

355
00:13:06,790 --> 00:13:04,880
nighttime

356
00:13:08,069 --> 00:13:06,800
after a long busy day aboard the

357
00:13:12,310 --> 00:13:08,079
international space station great

358
00:13:15,269 --> 00:13:13,829
hi my name is janik and here's my

359
00:13:17,750 --> 00:13:15,279
question what's the most interesting

360
00:13:19,509 --> 00:13:17,760
thing you've seen in space

361
00:13:21,110 --> 00:13:19,519
oh that's tough the most interesting

362
00:13:22,230 --> 00:13:21,120
thing i've seen in space i would have to

363
00:13:24,550 --> 00:13:22,240

say

364

00:13:27,269 --> 00:13:24,560

uh when i was out on my

365

00:13:29,590 --> 00:13:27,279

see second spacewalk of my life

366

00:13:31,509 --> 00:13:29,600

i was able to fly over a place on the

367

00:13:33,269 --> 00:13:31,519

earth called dubai and you guys can

368

00:13:34,949 --> 00:13:33,279

probably go look at that on a map and

369

00:13:38,069 --> 00:13:34,959

there are resorts that they're building

370

00:13:40,150 --> 00:13:38,079

out in the ocean off the coast of dubai

371

00:13:42,389 --> 00:13:40,160

they're called the palm resorts and the

372

00:13:44,230 --> 00:13:42,399

world resort and the world resort is

373

00:13:45,590 --> 00:13:44,240

shaped like the continents on earth so

374

00:13:48,389 --> 00:13:45,600

you have north and south america

375

00:13:50,230 --> 00:13:48,399

australia asia africa antarctica

376

00:13:52,870 --> 00:13:50,240

and then they also have the palm resorts

377

00:13:54,230 --> 00:13:52,880

that are shaped like a big palm frond so

378

00:13:55,670 --> 00:13:54,240

you should go look that up on the

379

00:13:57,110 --> 00:13:55,680

internet and see if you can see pictures

380

00:13:59,189 --> 00:13:57,120

of that but when i saw that for the

381

00:14:01,590 --> 00:13:59,199

first time from outer space it was

382

00:14:04,150 --> 00:14:01,600

absolutely breathtaking and i got to see

383

00:14:06,870 --> 00:14:04,160

it again when i flew to space again on

384

00:14:08,470 --> 00:14:06,880

sts-131 we were out on our space walk

385

00:14:10,310 --> 00:14:08,480

and my partner rick mastracchio had

386

00:14:11,670 --> 00:14:10,320

never seen them and it just so happened

387

00:14:13,670 --> 00:14:11,680

we were waiting on the front of the

388

00:14:15,350 --> 00:14:13,680

station just hanging out and we looked

389

00:14:17,509 --> 00:14:15,360

down at my feet and there they were so

390

00:14:18,790 --> 00:14:17,519

rick got to see them on his space walk

391

00:14:20,710 --> 00:14:18,800

with me

392

00:14:22,230 --> 00:14:20,720

very good and not to commit you to do

393

00:14:24,230 --> 00:14:22,240

anything extra but

394

00:14:26,550 --> 00:14:24,240

clay is also on twitter and you can

395

00:14:28,710 --> 00:14:26,560

follow him at astro clay and he does

396

00:14:31,910 --> 00:14:28,720

have a little thing he does clay's pick

397

00:14:34,870 --> 00:14:31,920

of the day and perhaps he might

398

00:14:36,790 --> 00:14:34,880

tweet a photo or two of maybe dubai or

399

00:14:38,550 --> 00:14:36,800

or a hurricane or something again not to

400

00:14:40,470 --> 00:14:38,560

commit you to do something

401
00:14:42,150 --> 00:14:40,480
and maybe i'll even see if i can find uh

402
00:14:43,430 --> 00:14:42,160
where creighton middle school is in

403
00:14:45,430 --> 00:14:43,440
south carolina and see if i took a

404
00:14:47,509 --> 00:14:45,440
picture of that for there we go so guys

405
00:14:49,430 --> 00:14:47,519
go to twitter and follow him on astro

406
00:14:50,710 --> 00:14:49,440
underscore clay and maybe you can see

407
00:14:54,710 --> 00:14:50,720
those photos that he's talking about

408
00:14:58,870 --> 00:14:57,030
hi my name is youtube and here's my

409
00:15:00,870 --> 00:14:58,880
question when you come back to earth how

410
00:15:03,590 --> 00:15:00,880
long did you stay in bed before your

411
00:15:04,949 --> 00:15:03,600
body gets strong again

412
00:15:07,910 --> 00:15:04,959
well when i came back to earth you tell

413
00:15:09,269 --> 00:15:07,920

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

414

00:15:11,509 --> 00:15:09,279

long time that was one of the longest

415

00:15:13,509 --> 00:15:11,519

days of my life we had awakened on the

416

00:15:15,430 --> 00:15:13,519

shuttle right by our shuttle clock which

417

00:15:18,069 --> 00:15:15,440

is just like the space station

418

00:15:19,750 --> 00:15:18,079

so we awoke that morning and we had a

419

00:15:21,829 --> 00:15:19,760

long day to get ready to come home and

420

00:15:23,350 --> 00:15:21,839

land and then once we landed i still

421

00:15:24,550 --> 00:15:23,360

didn't get to go to sleep even though it

422

00:15:26,629 --> 00:15:24,560

would have been our

423

00:15:28,790 --> 00:15:26,639

night time to go to sleep on the space

424

00:15:30,710 --> 00:15:28,800

station or the shuttle i had to stay up

425

00:15:32,069 --> 00:15:30,720

i had to go into a room at the kennedy

426

00:15:34,389 --> 00:15:32,079

space center and i had to do a bunch of

427

00:15:37,350 --> 00:15:34,399

experiments where they were taking data

428

00:15:40,069 --> 00:15:37,360

on me and so by the end of the day

429

00:15:41,749 --> 00:15:40,079

the real day on earth it was 8 31 i

430

00:15:43,910 --> 00:15:41,759

remember my clock had the digital

431

00:15:45,990 --> 00:15:43,920

numbers 8 31 and that's all i remember

432

00:15:47,030 --> 00:15:46,000

because i just passed out at that point

433

00:15:48,470 --> 00:15:47,040

so

434

00:15:49,269 --> 00:15:48,480

that was the first time i got to go to

435

00:15:52,710 --> 00:15:49,279

bed

436

00:15:52,720 --> 00:15:56,069

next question

437

00:16:00,069 --> 00:15:58,310

and i was really tired

438

00:16:03,030 --> 00:16:00,079

my name is nicholas and here's my

439

00:16:04,629 --> 00:16:03,040

question what type of protective suit do

440

00:16:07,590 --> 00:16:04,639

astronauts wear to keep them safe and

441

00:16:10,069 --> 00:16:07,600

warm from the space environment

442

00:16:12,470 --> 00:16:10,079

good question uh inside you know we

443

00:16:14,069 --> 00:16:12,480

don't need to wear a suit we can wear

444

00:16:16,870 --> 00:16:14,079

shirt sleeve and shorts if we'd like

445

00:16:19,269 --> 00:16:16,880

because it's a balmy 72 degrees with 55

446

00:16:22,150 --> 00:16:19,279

humidity slight breeze from the south

447

00:16:23,749 --> 00:16:22,160

and no clouds if we go outside though

448

00:16:25,749 --> 00:16:23,759

that's a great question because anytime

449

00:16:27,430 --> 00:16:25,759

you're outside it's a vacuum right

450

00:16:29,670 --> 00:16:27,440

there's no pressure there's no oxygen

451
00:16:32,710 --> 00:16:29,680
there's no nothing so everything you

452
00:16:34,629 --> 00:16:32,720
need to survive has to be contained in

453
00:16:36,550 --> 00:16:34,639
that little spaceship that we call our

454
00:16:38,069 --> 00:16:36,560
spacesuit so the one that you see the

455
00:16:40,470 --> 00:16:38,079
astronauts in come out of the space

456
00:16:43,030 --> 00:16:40,480
station is the white suit and that's

457
00:16:45,110 --> 00:16:43,040
called our extra vehicular mobility unit

458
00:16:47,030 --> 00:16:45,120
which is basically a spacewalk suit but

459
00:16:49,350 --> 00:16:47,040
it has the ability to keep us warm or

460
00:16:51,670 --> 00:16:49,360
keep us cool it has water for us to

461
00:16:53,829 --> 00:16:51,680
drink and it also protects us from

462
00:16:55,910 --> 00:16:53,839
meteoroids that could hit us it protects

463
00:16:57,749 --> 00:16:55,920

us from the cold and the hot of deep

464

00:16:58,949 --> 00:16:57,759

space and it provides us oxygen to

465

00:17:00,310 --> 00:16:58,959

breathe and gets rid of our carbon

466

00:17:02,389 --> 00:17:00,320

dioxide so

467

00:17:04,309 --> 00:17:02,399

great question it's very very important

468

00:17:06,470 --> 00:17:04,319

that we are protected by our own little

469

00:17:08,470 --> 00:17:06,480

spaceship whenever we go outside because

470

00:17:10,470 --> 00:17:08,480

space is a really really dangerous

471

00:17:12,309 --> 00:17:10,480

environment

472

00:17:16,230 --> 00:17:12,319

very good question we have time for

473

00:17:19,750 --> 00:17:17,909

hi my name is christian here's my

474

00:17:22,470 --> 00:17:19,760

question what does the earth look like

475

00:17:25,669 --> 00:17:24,069

christian when i flew on the space

476
00:17:27,590 --> 00:17:25,679
station we always had to look through

477
00:17:30,390 --> 00:17:27,600
round circular windows so it looks

478
00:17:32,870 --> 00:17:30,400
simply like the earth through a circle

479
00:17:36,230 --> 00:17:32,880
but now we have this cupola and imagine

480
00:17:39,590 --> 00:17:36,240
that you can crawl into a big glass bowl

481
00:17:42,230 --> 00:17:39,600
and look any direction at the earth it's

482
00:17:45,430 --> 00:17:42,240
amazing you can actually see about a 3

483
00:17:47,510 --> 00:17:45,440
000 mile arc of the horizon of the earth

484
00:17:49,430 --> 00:17:47,520
and as you fly over florida and as you

485
00:17:51,669 --> 00:17:49,440
fly over the midwest or you fly over

486
00:17:53,750 --> 00:17:51,679
saudi arabia you can see so many cool

487
00:17:55,590 --> 00:17:53,760
things the colors are beautiful

488
00:17:58,070 --> 00:17:55,600

the clouds are beautiful everything is

489

00:18:00,390 --> 00:17:58,080

gorgeous and it's very hard to describe

490

00:18:01,990 --> 00:18:00,400

that view but it's actually

491

00:18:04,950 --> 00:18:02,000

the most beautiful thing you can imagine

492

00:18:09,190 --> 00:18:06,710

very few people have ever been able to

493

00:18:10,549 --> 00:18:09,200

see that so it's i guess a real honor

494

00:18:13,110 --> 00:18:10,559

and a privilege that you were able to do

495

00:18:18,230 --> 00:18:13,120

that i'm very blessed good question do

496

00:18:23,110 --> 00:18:20,390

hi my name is lane and i was wondering

497

00:18:24,630 --> 00:18:23,120

do y'all use a microwave and cell phones

498

00:18:26,070 --> 00:18:24,640

in space

499

00:18:27,909 --> 00:18:26,080

i wish we had a microwave dude that

500

00:18:30,470 --> 00:18:27,919

would be a really great way to heat our

501
00:18:32,390 --> 00:18:30,480
food we don't have a microwave per se

502
00:18:34,549 --> 00:18:32,400
but we do have a little

503
00:18:36,549 --> 00:18:34,559
food warmer that's like a suitcase that

504
00:18:38,150 --> 00:18:36,559
you put all your food bags in and then

505
00:18:40,310 --> 00:18:38,160
you turn on the switch and it kind of

506
00:18:41,990 --> 00:18:40,320
electrically heats up your food the

507
00:18:43,430 --> 00:18:42,000
russians have a different version but

508
00:18:45,990 --> 00:18:43,440
it's the same idea and they can put

509
00:18:49,190 --> 00:18:46,000
their cans in a slot and then those cans

510
00:18:50,789 --> 00:18:49,200
heat up through the electricity

511
00:18:53,110 --> 00:18:50,799
cell phones we actually do have the

512
00:18:55,270 --> 00:18:53,120
capability to talk as if we had a cell

513
00:18:57,029 --> 00:18:55,280

phone we have a computer program that

514

00:18:59,110 --> 00:18:57,039

takes our phone signal and i wear a

515

00:19:01,190 --> 00:18:59,120

headset just like i have on today and

516

00:19:03,029 --> 00:19:01,200

then i can punch in the telephone number

517

00:19:04,870 --> 00:19:03,039

on the computer and then that signal

518

00:19:06,150 --> 00:19:04,880

goes to the satellites in space comes

519

00:19:08,230 --> 00:19:06,160

down to the earth and then it's

520

00:19:10,150 --> 00:19:08,240

converted to a cell phone signal and my

521

00:19:12,630 --> 00:19:10,160

wife and family had that cell phone on

522

00:19:15,029 --> 00:19:12,640

them and whenever i called it said nasa

523

00:19:17,029 --> 00:19:15,039

and my wife always knew it was me and so

524

00:19:19,590 --> 00:19:17,039

she chose not to pick up the phone

525

00:19:21,190 --> 00:19:19,600

oftentimes but uh we had the opportunity

526

00:19:23,270 --> 00:19:21,200

to have lots of great conversations

527

00:19:34,630 --> 00:19:23,280

together as we chatted from outer space

528

00:19:40,070 --> 00:19:37,909

hi my name is my question what do you

529

00:19:42,549 --> 00:19:40,080

put in here what do you put inside your

530

00:19:46,710 --> 00:19:44,950

that's a loaded question um

531

00:19:47,909 --> 00:19:46,720

we drink a lot of

532

00:19:49,590 --> 00:19:47,919

water

533

00:19:51,669 --> 00:19:49,600

coffee tea

534

00:19:53,750 --> 00:19:51,679

and fruit flavored drinks when we're on

535

00:19:56,230 --> 00:19:53,760

the space station so all of its we don't

536

00:19:58,070 --> 00:19:56,240

really put anything into our drinks it's

537

00:20:00,310 --> 00:19:58,080

already done for us so all we have to do

538

00:20:02,630 --> 00:20:00,320

is take the packet which has all the the

539

00:20:05,270 --> 00:20:02,640

tea bag or it has the coffee grounds or

540

00:20:07,110 --> 00:20:05,280

it has the uh the tang or the fruit

541

00:20:09,350 --> 00:20:07,120

flavored drink we add the water shake it

542

00:20:11,270 --> 00:20:09,360

up and just drink it down so

543

00:20:13,990 --> 00:20:11,280

we don't have anything the ability to

544

00:20:15,830 --> 00:20:14,000

add something to that packet is not

545

00:20:17,510 --> 00:20:15,840

available to an astronaut once he's in

546

00:20:19,270 --> 00:20:17,520

space it's already done for us it's

547

00:20:21,110 --> 00:20:19,280

pre-prepared pre-packaged kind of like

548

00:20:22,310 --> 00:20:21,120

drinking a capri sun

549

00:20:23,350 --> 00:20:22,320

something like that

550

00:20:25,669 --> 00:20:23,360

and

551
00:20:27,510 --> 00:20:25,679
you get that from that potable dispenser

552
00:20:29,270 --> 00:20:27,520
that's how you get the water out into

553
00:20:31,430 --> 00:20:29,280
your right there's a machine on the

554
00:20:33,430 --> 00:20:31,440
station that we we stick a needle

555
00:20:35,430 --> 00:20:33,440
through the hole in the pouch and then

556
00:20:37,830 --> 00:20:35,440
we push a couple buttons and the water

557
00:20:39,909 --> 00:20:37,840
fills up the pouch and then you pull it

558
00:20:41,750 --> 00:20:39,919
off and it's sealed and you add a little

559
00:20:43,510 --> 00:20:41,760
straw that has a clip on it to pinch it

560
00:20:45,110 --> 00:20:43,520
off and then you shake it up good and

561
00:20:46,710 --> 00:20:45,120
you squeeze it and mix it up really well

562
00:20:48,789 --> 00:20:46,720
so that it all gets dissolved just like

563
00:20:50,870 --> 00:20:48,799

you do on earth if you mix some nestle's

564

00:20:52,310 --> 00:20:50,880

quickered milk or whatever and then you

565

00:20:54,149 --> 00:20:52,320

drink it down right and so if you've

566

00:20:55,830 --> 00:20:54,159

been following along the

567

00:20:57,830 --> 00:20:55,840

activities on board the space station

568

00:20:59,830 --> 00:20:57,840

now you would know that the commander

569

00:21:01,590 --> 00:20:59,840

sunni williams and also hoshide had

570

00:21:03,990 --> 00:21:01,600

recently replaced the filter for that

571

00:21:05,270 --> 00:21:04,000

dispenser that he is talking about

572

00:21:07,270 --> 00:21:05,280

good question

573

00:21:09,909 --> 00:21:07,280

we have another one

574

00:21:13,669 --> 00:21:12,789

hello my name is rob and here's my

575

00:21:15,510 --> 00:21:13,679

question

576

00:21:18,230 --> 00:21:15,520

why don't you just build some more

577

00:21:21,430 --> 00:21:18,240

rubber notes to go up in space so you

578

00:21:23,669 --> 00:21:21,440

don't have to worry about your help

579

00:21:26,390 --> 00:21:23,679

now that's a really really really good

580

00:21:27,750 --> 00:21:26,400

question but the bottom line answer is

581

00:21:29,830 --> 00:21:27,760

money

582

00:21:32,230 --> 00:21:29,840

if we had the ability to to build the

583

00:21:34,070 --> 00:21:32,240

robots to do all the things an astronaut

584

00:21:36,470 --> 00:21:34,080

could do that would be effective it

585

00:21:38,310 --> 00:21:36,480

would be safer to keep a human being

586

00:21:40,549 --> 00:21:38,320

from having to go outside in this nasty

587

00:21:42,149 --> 00:21:40,559

environment that we call outer space

588

00:21:45,270 --> 00:21:42,159

but

589

00:21:47,590 --> 00:21:45,280

a robo knot or a robot can't necessarily

590

00:21:49,590 --> 00:21:47,600

see things and think of alternative

591

00:21:52,070 --> 00:21:49,600

solutions like a spacewalker can for

592

00:21:54,789 --> 00:21:52,080

example imagine that a robot's out there

593

00:21:56,149 --> 00:21:54,799

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

594

00:21:58,950 --> 00:21:56,159

just like we had recently on our

595

00:22:01,350 --> 00:21:58,960

spacewalks and maybe he can make his

596

00:22:03,830 --> 00:22:01,360

wrench turn harder or turn faster or

597

00:22:06,950 --> 00:22:03,840

whatever but he can't think of ways

598

00:22:09,430 --> 00:22:06,960

to cleverly clean out the hole or to

599

00:22:11,110 --> 00:22:09,440

change the way he's doing something to

600

00:22:12,789 --> 00:22:11,120

to make it

601
00:22:15,430 --> 00:22:12,799
available to him to actually complete

602
00:22:18,070 --> 00:22:15,440
the task so the ability for a human to

603
00:22:19,190 --> 00:22:18,080
think and to reason is one of the

604
00:22:21,669 --> 00:22:19,200
important

605
00:22:23,270 --> 00:22:21,679
realities of why we want humans in space

606
00:22:25,270 --> 00:22:23,280
astronauts can do many things they can

607
00:22:27,190 --> 00:22:25,280
do many good things for us they can

608
00:22:29,510 --> 00:22:27,200
scout ahead and look at landing sites on

609
00:22:31,270 --> 00:22:29,520
the moon or in an asteroid or mars and

610
00:22:32,789 --> 00:22:31,280
those will be excellent uses of robotic

611
00:22:34,950 --> 00:22:32,799
technology but there are just some

612
00:22:37,270 --> 00:22:34,960
things that a robot can't do that a

613
00:22:38,950 --> 00:22:37,280

human can do and when you couple that

614

00:22:41,590 --> 00:22:38,960

with the expense that's required to

615

00:22:43,590 --> 00:22:41,600

build a small army of robots to do

616

00:22:45,110 --> 00:22:43,600

astronaut work outside the station we're

617

00:22:47,029 --> 00:22:45,120

moving in that direction but it's going

618

00:22:48,950 --> 00:22:47,039

to take a little bit of time and some

619

00:22:51,190 --> 00:22:48,960

more money and i think we've been able

620

00:22:53,029 --> 00:22:51,200

to demonstrate just the usefulness of

621

00:22:54,710 --> 00:22:53,039

robots or robotics even today we had the

622

00:22:57,750 --> 00:22:54,720

deployment of the

623

00:22:59,750 --> 00:22:57,760

the uh small satellites that were

624

00:23:01,110 --> 00:22:59,760

launched using the remote manipulator

625

00:23:03,990 --> 00:23:01,120

system this is the robot arm the

626
00:23:06,149 --> 00:23:04,000
japanese robot arm outside of kibo which

627
00:23:08,630 --> 00:23:06,159
is the japanese experiment module and

628
00:23:10,710 --> 00:23:08,640
then also um they'll be spending

629
00:23:12,789 --> 00:23:10,720
actually sunny and um

630
00:23:14,710 --> 00:23:12,799
hoshide are actually doing a training

631
00:23:16,070 --> 00:23:14,720
session today using the robotics

632
00:23:18,710 --> 00:23:16,080
workstation

633
00:23:21,270 --> 00:23:18,720
where they will use the station arm to

634
00:23:23,909 --> 00:23:21,280
eventually grapple the dragon spacecraft

635
00:23:25,909 --> 00:23:23,919
that is scheduled to launch this sunday

636
00:23:28,310 --> 00:23:25,919
so you guys come back and watch

637
00:23:29,590 --> 00:23:28,320
nasa tv you can watch it

638
00:23:31,750 --> 00:23:29,600

here live

639

00:23:34,390 --> 00:23:31,760

beginning at 6 pm

640

00:23:35,430 --> 00:23:34,400

central time and you can see robotics in

641

00:23:37,669 --> 00:23:35,440

action

642

00:23:39,270 --> 00:23:37,679

eventually when that spacecraft arrives

643

00:23:42,310 --> 00:23:39,280

to the space station it is scheduled to

644

00:23:43,190 --> 00:23:42,320

arrive on october the 10th so obviously

645

00:23:45,029 --> 00:23:43,200

there's

646

00:23:46,710 --> 00:23:45,039

several ways and and reasons to have

647

00:23:48,390 --> 00:23:46,720

robotics work with us but obviously we

648

00:23:50,230 --> 00:23:48,400

need humans

649

00:23:51,669 --> 00:23:50,240

to be involved in that in space

650

00:23:53,750 --> 00:23:51,679

exploration as well good very good

651

00:23:55,350 --> 00:23:53,760

question do we have any more questions

652

00:23:59,029 --> 00:23:55,360

good homework assignment for creighton

653

00:24:02,390 --> 00:24:00,710

any more questions

654

00:24:05,029 --> 00:24:02,400

one of the questions that a lot of the

655

00:24:06,870 --> 00:24:05,039

students had was what was the scariest

656

00:24:10,950 --> 00:24:06,880

thing for you being an astronaut and

657

00:24:15,430 --> 00:24:13,029

uh the scariest thing

658

00:24:18,549 --> 00:24:15,440

uh i think was when i woke up one night

659

00:24:19,350 --> 00:24:18,559

and saw olig in his underwear but that's

660

00:24:20,149 --> 00:24:19,360

okay

661

00:24:23,990 --> 00:24:20,159

um

662

00:24:26,230 --> 00:24:24,000

they train the scared out of us they

663

00:24:27,990 --> 00:24:26,240

train the fear out of us you're so

664

00:24:29,990 --> 00:24:28,000

ready to do all the things that you need

665

00:24:31,909 --> 00:24:30,000

to do your mind is so focused on step

666

00:24:32,789 --> 00:24:31,919

one step two step three step four step

667

00:24:34,549 --> 00:24:32,799

five

668

00:24:37,190 --> 00:24:34,559

that often times

669

00:24:38,549 --> 00:24:37,200

if there were fear to be had uh you're

670

00:24:40,789 --> 00:24:38,559

not really thinking about it you're

671

00:24:42,230 --> 00:24:40,799

focused on something else for example

672

00:24:43,510 --> 00:24:42,240

when i opened the hatch for the very

673

00:24:45,909 --> 00:24:43,520

first time

674

00:24:48,710 --> 00:24:45,919

in july of 2007 to go out on my very

675

00:24:50,310 --> 00:24:48,720

first spacewalk i wasn't scared at all

676
00:24:51,830 --> 00:24:50,320
there was no fear

677
00:24:53,510 --> 00:24:51,840
what i thought when i looked out in the

678
00:24:56,789 --> 00:24:53,520
blackness of space was

679
00:24:57,990 --> 00:24:56,799
i was born to be here right now

680
00:24:58,870 --> 00:24:58,000
doing this

681
00:25:00,390 --> 00:24:58,880
and

682
00:25:02,870 --> 00:25:00,400
i don't know if everyone experiences

683
00:25:04,789 --> 00:25:02,880
that feeling or or thinks that way but

684
00:25:06,789 --> 00:25:04,799
for me there was no fear there might

685
00:25:08,070 --> 00:25:06,799
have been a little anxiety right about i

686
00:25:09,590 --> 00:25:08,080
don't want to make a mistake i don't

687
00:25:11,990 --> 00:25:09,600
want to screw up i hope everything goes

688
00:25:15,350 --> 00:25:12,000

well but there was never any fear

689

00:25:17,190 --> 00:25:15,360

involved um and to follow up on that i

690

00:25:18,070 --> 00:25:17,200

actually thought about death

691

00:25:20,870 --> 00:25:18,080

more

692

00:25:22,390 --> 00:25:20,880

the second time i flew on sts-131 as we

693

00:25:24,470 --> 00:25:22,400

were preparing for the final days of the

694

00:25:26,470 --> 00:25:24,480

mission and getting ready to launch that

695

00:25:28,789 --> 00:25:26,480

was when i wondered was i cheating death

696

00:25:31,190 --> 00:25:28,799

you know had i i had my shot on

697

00:25:34,230 --> 00:25:31,200

expedition 15 and should i still be

698

00:25:35,669 --> 00:25:34,240

going up on sts-131

699

00:25:42,070 --> 00:25:35,679

and it's just something you have to you

700

00:25:46,149 --> 00:25:44,870

any other questions

701
00:25:47,510 --> 00:25:46,159
i have a question you're going to change

702
00:25:52,230 --> 00:25:47,520
the name of your school to clayton

703
00:25:52,240 --> 00:25:56,149
thank you very much

704
00:25:59,990 --> 00:25:57,990
all right well clay and amico we would

705
00:26:02,070 --> 00:26:00,000
like to thank you so much for joining us

706
00:26:03,750 --> 00:26:02,080
today i know taking time out is very

707
00:26:06,070 --> 00:26:03,760
difficult especially how busy you guys

708
00:26:08,390 --> 00:26:06,080
are um they're in mission control uh

709
00:26:09,830 --> 00:26:08,400
monitoring the space station and we'd

710
00:26:11,269 --> 00:26:09,840
like to thank you actually creighton

711
00:26:13,190 --> 00:26:11,279
middle school do you have any final

712
00:26:14,870 --> 00:26:13,200
words that you'd like to uh say to

713
00:26:20,710 --> 00:26:14,880

clayton

714

00:26:23,830 --> 00:26:22,549

my pleasure