



1  
00:00:05,110 --> 00:00:03,750  
i'll give you a brief introduction uh i

2  
00:00:06,950 --> 00:00:05,120  
think you know we have a couple of cast

3  
00:00:09,669 --> 00:00:06,960  
members here from the martian and

4  
00:00:11,030 --> 00:00:09,679  
sebastian plays uh astronaut and flight

5  
00:00:12,789 --> 00:00:11,040  
surgeon so

6  
00:00:15,509 --> 00:00:12,799  
he you know may have some questions for

7  
00:00:17,670 --> 00:00:15,519  
you uh chris beck is his character

8  
00:00:19,830 --> 00:00:17,680  
and mackenzie davis plays a flight

9  
00:00:20,550 --> 00:00:19,840  
controller named mindy park

10  
00:00:22,230 --> 00:00:20,560  
and

11  
00:00:24,070 --> 00:00:22,240  
they've had some interaction with our

12  
00:00:25,109 --> 00:00:24,080  
employees today we've taken them on a

13  
00:00:27,189 --> 00:00:25,119

tour

14

00:00:29,189 --> 00:00:27,199

and i i did want to say scott

15

00:00:31,029 --> 00:00:29,199

congratulations on getting to the midway

16

00:00:36,069 --> 00:00:31,039

point of the one year mission we've been

17

00:00:40,150 --> 00:00:38,470

hey it's a good talk to you to be able

18

00:00:41,510 --> 00:00:40,160

to talk to you guys today

19

00:00:42,950 --> 00:00:41,520

it's interesting for us we're looking

20

00:00:45,990 --> 00:00:42,960

forward to watching a movie thank you

21

00:00:47,510 --> 00:00:46,000

ellen it's uh it's a big milestone but

22

00:00:48,790 --> 00:00:47,520

i'm not going to start counting days

23

00:00:50,229 --> 00:00:48,800

down yet i'm going to think i'm going to

24

00:00:52,069 --> 00:00:50,239

wait until march

25

00:00:54,389 --> 00:00:52,079

then i'm going to allow myself to to

26  
00:00:56,229 --> 00:00:54,399  
count how many days i have remaining

27  
00:00:57,590 --> 00:00:56,239  
counting up for the time being

28  
00:01:01,029 --> 00:00:57,600  
but

29  
00:01:02,470 --> 00:01:01,039  
great to uh to see you guys there and uh

30  
00:01:04,390 --> 00:01:02,480  
hey if you got any questions for us

31  
00:01:07,270 --> 00:01:04,400  
about living in space you know this is a

32  
00:01:08,789 --> 00:01:07,280  
great uh great spaceship we're on and uh

33  
00:01:09,830 --> 00:01:08,799  
you know similar to i guess what you

34  
00:01:12,149 --> 00:01:09,840  
guys were

35  
00:01:18,070 --> 00:01:12,159  
uh you know telling a story about in

36  
00:01:21,429 --> 00:01:20,469  
i always have more basic human questions

37  
00:01:23,749 --> 00:01:21,439  
than

38  
00:01:25,109 --> 00:01:23,759

technical ones but if you could um have

39

00:01:33,030 --> 00:01:25,119

anything right now what would you want

40

00:01:33,040 --> 00:01:37,670

could be food could be a hug

41

00:01:41,510 --> 00:01:38,630

my

42

00:01:43,109 --> 00:01:41,520

the ability to to leave here

43

00:01:44,710 --> 00:01:43,119

um

44

00:01:47,429 --> 00:01:44,720

you know i think one people

45

00:01:49,749 --> 00:01:47,439

something people don't recognize is that

46

00:01:50,630 --> 00:01:49,759

you know being on the space station

47

00:01:52,469 --> 00:01:50,640

is

48

00:01:54,550 --> 00:01:52,479

probably a lot like being in some kind

49

00:01:57,109 --> 00:01:54,560

of uh you know confinement like

50

00:01:58,709 --> 00:01:57,119

isolation you know you can't go outside

51  
00:02:00,789 --> 00:01:58,719  
even though you can see outside the

52  
00:02:02,870 --> 00:02:00,799  
earth's incredibly beautiful

53  
00:02:05,749 --> 00:02:02,880  
you know not having the the ability to

54  
00:02:06,709 --> 00:02:05,759  
leave is a pretty uh

55  
00:02:09,589 --> 00:02:06,719  
you know

56  
00:02:12,070 --> 00:02:09,599  
an all-present feeling and uh although

57  
00:02:14,470 --> 00:02:12,080  
i'm not claustrophobic at all uh it

58  
00:02:15,990 --> 00:02:14,480  
would be nice to get outside and i'm not

59  
00:02:18,790 --> 00:02:16,000  
talking about outside like on a

60  
00:02:20,869 --> 00:02:18,800  
spacewalk but you know put my feet in

61  
00:02:29,350 --> 00:02:20,879  
the grass and you know feel the wind on

62  
00:02:33,589 --> 00:02:32,150  
tell how are you

63  
00:02:34,869 --> 00:02:33,599

so i was just

64

00:02:37,750 --> 00:02:34,879

wondering

65

00:02:40,070 --> 00:02:37,760

because i guess i was playing uh a

66

00:02:41,670 --> 00:02:40,080

flight surgeon and um

67

00:02:43,750 --> 00:02:41,680

my character ended up doing all these

68

00:02:45,670 --> 00:02:43,760

space walks and um

69

00:02:47,830 --> 00:02:45,680

so i guess what i learned is that it's

70

00:02:49,509 --> 00:02:47,840

not so black and white uh obviously what

71

00:02:51,670 --> 00:02:49,519

you guys do up there so i was wondering

72

00:02:54,229 --> 00:02:51,680

how many times

73

00:02:59,270 --> 00:02:54,239

do you get to go on on spacewalks on a

74

00:03:03,350 --> 00:03:01,110

it's great well first let me say it's

75

00:03:05,990 --> 00:03:03,360

it's great to get to chat with you all

76

00:03:08,149 --> 00:03:06,000

um like scott said we're very excited to

77

00:03:09,990 --> 00:03:08,159

to see the movie and uh i've read the

78

00:03:10,710 --> 00:03:10,000

book a couple of times already and it's

79

00:03:12,550 --> 00:03:10,720

uh

80

00:03:15,509 --> 00:03:12,560

it's neat to see the the people that are

81

00:03:17,589 --> 00:03:15,519

that are picking up these roles um

82

00:03:19,110 --> 00:03:17,599

you know scott and i neither scott's

83

00:03:22,309 --> 00:03:19,120

been in space for

84

00:03:24,070 --> 00:03:22,319

300 days over 300 almost a year now uh

85

00:03:25,910 --> 00:03:24,080

with with all the consecutive time that

86

00:03:27,750 --> 00:03:25,920

he's been in space on previous missions

87

00:03:29,830 --> 00:03:27,760

and this of course is my first mission

88

00:03:30,949 --> 00:03:29,840

i've been up here for about six weeks

89

00:03:33,190 --> 00:03:30,959

but neither of us has had the

90

00:03:35,589 --> 00:03:33,200

opportunity to do a spacewalk yet

91

00:03:37,110 --> 00:03:35,599

but we are currently scheduled to do two

92

00:03:39,670 --> 00:03:37,120

we'll do a spacewalk at the end of

93

00:03:41,350 --> 00:03:39,680

october and maybe one in early november

94

00:03:43,270 --> 00:03:41,360

and we're both really looking forward to

95

00:03:45,350 --> 00:03:43,280

that it's i think

96

00:03:47,270 --> 00:03:45,360

an exciting opportunity also a very

97

00:03:50,470 --> 00:03:47,280

challenging and technical

98

00:03:52,229 --> 00:03:50,480

type of work that i think we both enjoy

99

00:03:53,910 --> 00:03:52,239

doing that sort of work

100

00:03:57,990 --> 00:03:53,920

you know accepting that type of

101  
00:04:00,949 --> 00:03:59,509  
the other thing i was going to ask is

102  
00:04:02,869 --> 00:04:00,959  
one of the things that i actually did

103  
00:04:04,070 --> 00:04:02,879  
for research uh which was kind of

104  
00:04:06,869 --> 00:04:04,080  
helpful

105  
00:04:09,670 --> 00:04:06,879  
was um i i was looking up what you guys

106  
00:04:11,910 --> 00:04:09,680  
do on on your instagrams which is which

107  
00:04:14,710 --> 00:04:11,920  
is kind of funny from time to time

108  
00:04:15,589 --> 00:04:14,720  
uh to keep up with you guys um but i was

109  
00:04:17,349 --> 00:04:15,599  
wondering

110  
00:04:18,789 --> 00:04:17,359  
i know you've got so many things going

111  
00:04:21,110 --> 00:04:18,799  
on up there and you're constantly busy

112  
00:04:23,030 --> 00:04:21,120  
but is there any time at all where you

113  
00:04:30,310 --> 00:04:23,040

guys get to play pranks on one another

114

00:04:34,870 --> 00:04:32,469

oh we haven't played too many pranks on

115

00:04:36,310 --> 00:04:34,880

each other although before we uh started

116

00:04:38,310 --> 00:04:36,320

where did i put it

117

00:04:40,950 --> 00:04:38,320

we were playing uh we just made up a new

118

00:04:43,350 --> 00:04:40,960

game we found this elastic band and uh

119

00:04:44,390 --> 00:04:43,360

we were guarding the opposite ends of

120

00:04:46,550 --> 00:04:44,400

the uh

121

00:04:49,430 --> 00:04:46,560

the lab here and playing kind of space

122

00:04:51,030 --> 00:04:49,440

uh space soccer so uh

123

00:04:53,189 --> 00:04:51,040

that's a that's that was a kind of a

124

00:05:02,550 --> 00:04:53,199

neat game um i don't think we've played

125

00:05:05,990 --> 00:05:04,469

sorry so what determines when you get

126  
00:05:07,350 --> 00:05:06,000  
you said you had two spacewalks

127  
00:05:09,670 --> 00:05:07,360  
scheduled

128  
00:05:14,230 --> 00:05:09,680  
is it for repairs or maintenance or it's

129  
00:05:19,670 --> 00:05:17,510  
no definitely not for a treat and

130  
00:05:21,670 --> 00:05:19,680  
the the people who determine that are

131  
00:05:23,749 --> 00:05:21,680  
kind of like you know ellen and the

132  
00:05:25,350 --> 00:05:23,759  
folks that work for her and the people

133  
00:05:26,710 --> 00:05:25,360  
on the other side of her the flight

134  
00:05:28,870 --> 00:05:26,720  
control team

135  
00:05:32,230 --> 00:05:28,880  
and um you know in some cases we're

136  
00:05:34,550 --> 00:05:32,240  
fixing stuff that uh that that broke

137  
00:05:36,070 --> 00:05:34,560  
in other cases we're doing uh you know

138  
00:05:38,390 --> 00:05:36,080

kind of like upgrades to the space

139

00:05:41,189 --> 00:05:38,400

station we have some uh a bunch of

140

00:05:43,270 --> 00:05:41,199

different tasks uh coming up running

141

00:05:45,590 --> 00:05:43,280

some cables outside for

142

00:05:48,230 --> 00:05:45,600

for future uh hardware that's gonna be

143

00:05:49,990 --> 00:05:48,240

on the space station we're

144

00:05:52,070 --> 00:05:50,000

you know fixing a radiator it's not

145

00:05:55,350 --> 00:05:52,080

broken but we need to put it back into

146

00:05:56,710 --> 00:05:55,360

its original configuration we rewired it

147

00:05:59,749 --> 00:05:56,720

because we thought it had a leak at one

148

00:06:01,350 --> 00:05:59,759

time so stuff like that um

149

00:06:03,749 --> 00:06:01,360

you know the space walk just takes so

150

00:06:05,590 --> 00:06:03,759

much work to get ready to do

151  
00:06:08,230 --> 00:06:05,600  
the suits are very complicated the

152  
00:06:10,710 --> 00:06:08,240  
procedures are very complicated

153  
00:06:12,790 --> 00:06:10,720  
it's going to take you know us a couple

154  
00:06:15,189 --> 00:06:12,800  
of weeks to get ready to do it

155  
00:06:17,590 --> 00:06:15,199  
the ground much much more time in the

156  
00:06:19,189 --> 00:06:17,600  
planning and preparation for them so

157  
00:06:22,390 --> 00:06:19,199  
it's not something that we can just do

158  
00:06:24,550 --> 00:06:22,400  
at uh at a moment's notice although if

159  
00:06:26,070 --> 00:06:24,560  
there was an emergency kind of repair we

160  
00:06:27,749 --> 00:06:26,080  
needed to do on the outside we could

161  
00:06:34,710 --> 00:06:27,759  
probably pull it off within a few days

162  
00:06:38,950 --> 00:06:36,390  
i know you guys said you were gonna

163  
00:06:40,950 --> 00:06:38,960

watch the the mooc both uh

164

00:06:41,909 --> 00:06:40,960

decided for you to see

165

00:06:43,670 --> 00:06:41,919

um

166

00:06:54,790 --> 00:06:43,680

but uh where where are you gonna watch

167

00:06:57,110 --> 00:06:55,990

can you hear me

168

00:07:01,110 --> 00:06:57,120

yeah

169

00:07:03,830 --> 00:07:01,120

and uh and if so do you guys we lost

170

00:07:11,189 --> 00:07:03,840

you got me okay uh and if so do you get

171

00:07:15,270 --> 00:07:13,189

i uh we we lost part of your question

172

00:07:17,350 --> 00:07:15,280

but i think you're asking basically how

173

00:07:19,990 --> 00:07:17,360

do we wash things up here and and what

174

00:07:21,670 --> 00:07:20,000

do we have to watch um

175

00:07:23,990 --> 00:07:21,680

we used to just be able to watch things

176  
00:07:25,990 --> 00:07:24,000  
on on the laptops and so we would gather

177  
00:07:27,029 --> 00:07:26,000  
when we were having dinner on a friday

178  
00:07:28,390 --> 00:07:27,039  
night we'd gather the whole crew

179  
00:07:32,629 --> 00:07:28,400  
together and we'd be kind of huddled

180  
00:07:34,790 --> 00:07:32,639  
around a laptop to to watch a movie um

181  
00:07:36,710 --> 00:07:34,800  
very recently we had a projector sent up

182  
00:07:39,589 --> 00:07:36,720  
that helps us with our training but we

183  
00:07:41,670 --> 00:07:39,599  
can also utilize uh to watch movies and

184  
00:07:42,790 --> 00:07:41,680  
so we have a large screen that will pull

185  
00:07:44,950 --> 00:07:42,800  
out and

186  
00:07:46,629 --> 00:07:44,960  
it's uh about the half the size of a

187  
00:07:48,309 --> 00:07:46,639  
hatch and will point the projector at it

188  
00:07:50,550 --> 00:07:48,319

and so it's our it's our kind of a

189

00:07:52,309 --> 00:07:50,560

friday night treat to watch a movie

190

00:07:54,710 --> 00:07:52,319

together as a crew

191

00:07:56,869 --> 00:07:54,720

and we're very fortunate in uh that

192

00:07:58,710 --> 00:07:56,879

frequently we have

193

00:08:00,790 --> 00:07:58,720

we work with the studios and they'll

194

00:08:01,990 --> 00:08:00,800

send up fairly recent movies uh that we

195

00:08:03,990 --> 00:08:02,000

get to watch and we have a fairly

196

00:08:05,589 --> 00:08:04,000

extensive library of

197

00:08:08,950 --> 00:08:05,599

space movies and action movies and

198

00:08:11,909 --> 00:08:08,960

comedies that we like to watch as well

199

00:08:14,390 --> 00:08:11,919

i watched hot tub time machine too a few

200

00:08:19,270 --> 00:08:14,400

weeks ago

201  
00:08:19,280 --> 00:08:22,710  
that was probably a good thing

202  
00:08:22,720 --> 00:08:26,629  
yes you're right

203  
00:08:31,430 --> 00:08:28,469  
like do you think that um after you

204  
00:08:33,509 --> 00:08:31,440  
return when in april that you'll go back

205  
00:08:37,110 --> 00:08:33,519  
up to space again or is this your last

206  
00:08:43,110 --> 00:08:40,389  
you know i i i like you know going to

207  
00:08:45,509 --> 00:08:43,120  
space i enjoy the mission i uh you know

208  
00:08:47,829 --> 00:08:45,519  
enjoy the challenge i'd like to have the

209  
00:08:48,710 --> 00:08:47,839  
opportunity to do it again but you know

210  
00:08:51,829 --> 00:08:48,720  
i'll

211  
00:08:54,150 --> 00:08:51,839  
at that point have uh well over 500 days

212  
00:08:55,750 --> 00:08:54,160  
in space and i think my colleagues

213  
00:08:57,829 --> 00:08:55,760

probably wouldn't appreciate it too much

214

00:09:05,829 --> 00:08:57,839

if i was going up here again but you

215

00:09:14,310 --> 00:09:07,110

what's the first thing you're going to

216

00:09:14,320 --> 00:09:25,670

probably a salad

217

00:09:28,710 --> 00:09:27,269

i'll ask you guys a question that we get

218

00:09:29,750 --> 00:09:28,720

asked a lot

219

00:09:32,470 --> 00:09:29,760

um

220

00:09:33,990 --> 00:09:32,480

uh having read the martian how

221

00:09:35,750 --> 00:09:34,000

well do you think you could survive by

222

00:09:41,590 --> 00:09:35,760

yourself on mars in the same

223

00:09:45,670 --> 00:09:43,590

i read the martian about a year ago and

224

00:09:47,509 --> 00:09:45,680

then actually just reread it this past

225

00:09:49,509 --> 00:09:47,519

summer

226

00:09:51,110 --> 00:09:49,519

i mean it's a tremendous story and i

227

00:09:52,470 --> 00:09:51,120

think one of the things that really

228

00:09:55,110 --> 00:09:52,480

appeals to me is

229

00:09:56,630 --> 00:09:55,120

how i think technically

230

00:09:58,710 --> 00:09:56,640

accurate

231

00:10:00,790 --> 00:09:58,720

even though it's set in the future still

232

00:10:02,310 --> 00:10:00,800

that it seems like

233

00:10:04,790 --> 00:10:02,320

really tried to

234

00:10:06,710 --> 00:10:04,800

to make you accurate as possible and and

235

00:10:11,030 --> 00:10:06,720

uh

236

00:10:12,790 --> 00:10:11,040

have the know-how to

237

00:10:15,350 --> 00:10:12,800

macgyver all of the the different

238

00:10:16,790 --> 00:10:15,360

systems to you know scrub carbon dioxide

239

00:10:19,430 --> 00:10:16,800

and create oxygen and do all of the

240

00:10:20,949 --> 00:10:19,440

things that uh the main character

241

00:10:24,710 --> 00:10:20,959

watney does in the book

242

00:10:26,949 --> 00:10:24,720

um but i think it does really speak to

243

00:10:28,790 --> 00:10:26,959

the mission that we in the astronauts

244

00:10:30,790 --> 00:10:28,800

that we send to mars you know right now

245

00:10:33,110 --> 00:10:30,800

on the space station we have a

246

00:10:35,670 --> 00:10:33,120

tremendous support from the ground

247

00:10:37,350 --> 00:10:35,680

we have a logistics chain with cargo

248

00:10:40,630 --> 00:10:37,360

vehicles that are coming up every few

249

00:10:42,710 --> 00:10:40,640

months that bring supplies and food and

250

00:10:44,630 --> 00:10:42,720

all sorts of cargo up to us and when we

251  
00:10:46,630 --> 00:10:44,640  
have that mission to mars the astronauts

252  
00:10:49,750 --> 00:10:46,640  
that go there are going to have to have

253  
00:10:51,750 --> 00:10:49,760  
that depth of knowledge and expertise to

254  
00:10:52,870 --> 00:10:51,760  
be able to fix

255  
00:10:54,550 --> 00:10:52,880  
systems

256  
00:10:56,630 --> 00:10:54,560  
to have somebody that can you know

257  
00:10:58,470 --> 00:10:56,640  
that's a physician maybe that can help

258  
00:10:59,509 --> 00:10:58,480  
if anybody gets ill

259  
00:11:01,269 --> 00:10:59,519  
there's going to have to be a lot of

260  
00:11:11,430 --> 00:11:01,279  
cross training and a lot of

261  
00:11:14,710 --> 00:11:13,430  
hey well well you know to add to what

262  
00:11:16,230 --> 00:11:14,720  
what uh

263  
00:11:17,829 --> 00:11:16,240

shell mentioned you know a lot of the

264

00:11:19,430 --> 00:11:17,839

the systems we have up here are

265

00:11:21,990 --> 00:11:19,440

something that we're going to use

266

00:11:23,670 --> 00:11:22,000

someday and and build upon them to to go

267

00:11:26,150 --> 00:11:23,680

to mars it's uh

268

00:11:27,269 --> 00:11:26,160

really an amazing uh space station we

269

00:11:29,590 --> 00:11:27,279

have here

270

00:11:31,590 --> 00:11:29,600

and the sustainable energy if you want

271

00:11:33,590 --> 00:11:31,600

to call it that that we that we use to

272

00:11:36,870 --> 00:11:33,600

survive and we have these huge solar

273

00:11:39,750 --> 00:11:36,880

arrays outside they make electricity

274

00:11:40,630 --> 00:11:39,760

we take our urine and we turn it into

275

00:11:42,470 --> 00:11:40,640

water

276

00:11:44,870 --> 00:11:42,480

obviously using the electricity to run

277

00:11:46,310 --> 00:11:44,880

the hardware to do that

278

00:11:49,030 --> 00:11:46,320

from that water

279

00:11:50,790 --> 00:11:49,040

we make we make oxygen

280

00:11:52,230 --> 00:11:50,800

we also you know have a system that

281

00:11:54,870 --> 00:11:52,240

scrubs the

282

00:11:56,230 --> 00:11:54,880

carbon dioxide out of the atmosphere

283

00:11:58,389 --> 00:11:56,240

and it uh

284

00:11:59,750 --> 00:11:58,399

you know those those two systems that

285

00:12:01,350 --> 00:11:59,760

that

286

00:12:03,670 --> 00:12:01,360

you know make the oxygen and scrub the

287

00:12:06,069 --> 00:12:03,680

carbon dioxide then combine

288

00:12:07,670 --> 00:12:06,079

in another system to make more water and

289

00:12:09,350 --> 00:12:07,680

it's uh you know it's almost a

290

00:12:11,430 --> 00:12:09,360

closed-loop system occasionally we have

291

00:12:12,389 --> 00:12:11,440

to add water to it we get energy from

292

00:12:14,870 --> 00:12:12,399

the sun

293

00:12:16,470 --> 00:12:14,880

but it's uh you know really a uh you

294

00:12:18,389 --> 00:12:16,480

know state-of-the-art

295

00:12:19,430 --> 00:12:18,399

you know renewable energy system that

296

00:12:21,990 --> 00:12:19,440

someday

297

00:12:24,310 --> 00:12:22,000

uh we're gonna take to mars or a version

298

00:12:26,710 --> 00:12:24,320

of it you know recently we've grown uh

299

00:12:29,430 --> 00:12:26,720

lettuce on board so we have the ability

300

00:12:31,670 --> 00:12:29,440

to you know use the resources to produce

301

00:12:33,910 --> 00:12:31,680

food and uh you know hopefully we'll

302

00:12:35,509 --> 00:12:33,920

learn enough from that to where

303

00:12:37,509 --> 00:12:35,519

you know when we do go to mars we'll be

304

00:12:40,230 --> 00:12:37,519

able to grow our own food because you

305

00:12:42,310 --> 00:12:40,240

know the the resupply chain is going to

306

00:12:44,470 --> 00:12:42,320

be very far away from us uh you know

307

00:12:50,069 --> 00:12:44,480

when we get there

308

00:12:54,069 --> 00:12:52,150

so we had these uh you know we don't

309

00:12:56,550 --> 00:12:54,079

have dirt but we had these like pads

310

00:12:59,030 --> 00:12:56,560

that had some uh um

311

00:13:00,790 --> 00:12:59,040

uh food in them like basically and then

312

00:13:03,590 --> 00:13:00,800

we uh

313

00:13:06,389 --> 00:13:03,600

you know kind of like i guess a uh

314

00:13:08,949 --> 00:13:06,399

hydroponic almost system

315

00:13:11,590 --> 00:13:08,959

that you know we had some uh

316

00:13:15,190 --> 00:13:11,600

led lights and we added water to the

317

00:13:18,150 --> 00:13:15,200

seeds and it and it grew very well and

318

00:13:20,230 --> 00:13:18,160

uh it was actually uh you know not only

319

00:13:22,069 --> 00:13:20,240

did we enjoy eating it because it tasted

320

00:13:25,670 --> 00:13:22,079

good but it was uh you know good

321

00:13:27,269 --> 00:13:25,680

nutrition and also uh you know gave us a

322

00:13:29,110 --> 00:13:27,279

you know a little bit of satisfaction

323

00:13:31,030 --> 00:13:29,120

from growing our own food and watching

324

00:13:33,350 --> 00:13:31,040

it grow and seeing some

325

00:13:38,150 --> 00:13:33,360

some green on board which is a kind of

326

00:13:45,829 --> 00:13:39,269

it's good to be able to achieve

327

00:13:48,629 --> 00:13:46,870

talking to

328

00:13:50,629 --> 00:13:48,639

hopper down here he was telling us how

329

00:13:52,870 --> 00:13:50,639

uh at certain points and times

330

00:13:55,430 --> 00:13:52,880

uh you guys had

331

00:13:58,069 --> 00:13:55,440

mice up there or spiders or

332

00:13:59,990 --> 00:13:58,079

just uh other living things with you

333

00:14:04,870 --> 00:14:00,000

like ants do you do you currently have

334

00:14:10,629 --> 00:14:06,710

no we don't uh

335

00:14:11,910 --> 00:14:10,639

yeah we didn't uh get any mice on the

336

00:14:15,670 --> 00:14:11,920

htv

337

00:14:17,509 --> 00:14:15,680

japanese vehicle and uh we we

338

00:14:20,150 --> 00:14:17,519

you know used our mice that we had on

339

00:14:22,629 --> 00:14:20,160

board earlier uh for

340

00:14:24,230 --> 00:14:22,639

the last research it's quite possibly we

341

00:14:26,310 --> 00:14:24,240

might have some uh

342

00:14:28,870 --> 00:14:26,320

might be a jaxa experiment that has some

343

00:14:31,910 --> 00:14:28,880

living organisms some uh

344

00:14:33,910 --> 00:14:31,920

i know we had some uh worms recently

345

00:14:35,110 --> 00:14:33,920

uh you know microscopic kind of worms

346

00:14:37,110 --> 00:14:35,120

i'm not sure if they're still live we

347

00:14:39,430 --> 00:14:37,120

got over 400 different experiments going

348

00:14:41,030 --> 00:14:39,440

on up here throughout the year i'm here

349

00:14:43,430 --> 00:14:41,040

some of which we're very involved in

350

00:14:45,430 --> 00:14:43,440

some of which are kind of self-contained

351

00:14:46,870 --> 00:14:45,440

that you know they turn it on and it

352

00:14:48,949 --> 00:14:46,880

kind of does their own thing and they

353

00:14:52,230 --> 00:14:48,959

fly the samples to the ground or analyze

354

00:14:54,629 --> 00:14:52,240

the data on the ground but

355

00:14:59,189 --> 00:14:54,639

you know right now no no significant

356

00:15:02,150 --> 00:14:59,199

living things other than the six of us

357

00:15:04,150 --> 00:15:02,160

is there uh is there a part um

358

00:15:06,790 --> 00:15:04,160

of the earth that you when you guys pass

359

00:15:08,230 --> 00:15:06,800

over it every time like a country or a

360

00:15:10,069 --> 00:15:08,240

continent or something that looks

361

00:15:11,269 --> 00:15:10,079

striking to you that that you look at it

362

00:15:17,030 --> 00:15:11,279

you go you know what i'm going to go

363

00:15:20,870 --> 00:15:19,509

i think that's one of the

364

00:15:23,030 --> 00:15:20,880

obviously one of the real neat things

365

00:15:24,310 --> 00:15:23,040

about being up here is

366

00:15:26,150 --> 00:15:24,320

just over the course of the day you look

367

00:15:28,150 --> 00:15:26,160

down through the window and you can see

368

00:15:29,590 --> 00:15:28,160

different parts of the earth australia

369

00:15:31,749 --> 00:15:29,600

is very striking

370

00:15:32,870 --> 00:15:31,759

the colors the reds and yellows and

371

00:15:33,990 --> 00:15:32,880

browns

372

00:15:36,870 --> 00:15:34,000

so you always know when you're flying

373

00:15:39,590 --> 00:15:38,310

africa also

374

00:15:40,629 --> 00:15:39,600

you can you can tell when you look out

375

00:15:43,509 --> 00:15:40,639

the window

376

00:15:45,590 --> 00:15:43,519

and uh i always enjoy flying over

377

00:15:47,670 --> 00:15:45,600

the us and flying over places where i've

378

00:15:50,710 --> 00:15:47,680

lived and where i have friends

379

00:15:53,030 --> 00:15:50,720

um and kind of wave and and recognize

380

00:15:54,310 --> 00:15:53,040

that uh have friends and family uh below

381

00:15:55,990 --> 00:15:54,320

one of the real striking things about

382

00:15:58,550 --> 00:15:56,000

flying over the earth though is when you

383

00:15:59,829 --> 00:15:58,560

look outside almost invariably it's blue

384

00:16:02,629 --> 00:15:59,839

and white

385

00:16:03,910 --> 00:16:02,639

just how much water covers the earth and

386

00:16:06,150 --> 00:16:03,920

and the clouds

387

00:16:08,470 --> 00:16:06,160

always changing always beautiful

388

00:16:10,629 --> 00:16:08,480

it's very very striking um when you look

389

00:16:13,189 --> 00:16:10,639

outside

390

00:16:14,949 --> 00:16:13,199

and and just to add to what chelsea i

391

00:16:17,269 --> 00:16:14,959

always find it fascinating that the

392

00:16:19,590 --> 00:16:17,279

places that are the most appealing you

393

00:16:22,550 --> 00:16:19,600

know aesthetically on the earth are the

394

00:16:25,030 --> 00:16:22,560

places that are generally harder to live

395

00:16:27,749 --> 00:16:25,040

like you know the water you know uh you

396

00:16:30,470 --> 00:16:27,759

know reefs the bahamas things like that

397

00:16:31,590 --> 00:16:30,480

and deserts are incredibly beautiful

398

00:16:32,470 --> 00:16:31,600

um

399

00:16:34,389 --> 00:16:32,480

where

400

00:16:36,470 --> 00:16:34,399

you know the areas that have a lot of

401

00:16:38,389 --> 00:16:36,480

forestation and and

402

00:16:40,790 --> 00:16:38,399

you know north america europe things

403

00:16:43,590 --> 00:16:40,800

like that asia where a lot of the people

404

00:16:46,310 --> 00:16:43,600

live don't look as as beautiful as some

405

00:16:48,790 --> 00:16:46,320

of these places that are less uh

406

00:16:53,189 --> 00:16:48,800

you know less easy to survive in

407

00:16:57,749 --> 00:16:55,269

well we we hope you uh

408

00:17:02,550 --> 00:16:57,759

you enjoy uh the mars that ridley scott

409

00:17:06,789 --> 00:17:04,549

and and i suppose uh finally you don't

410

00:17:09,510 --> 00:17:06,799

you don't get very tired of doing those

411

00:17:11,350 --> 00:17:09,520

flips uh i suppose

412

00:17:16,829 --> 00:17:11,360

is it just something you keep you keep

413

00:17:22,949 --> 00:17:20,549

can you know yeah

414

00:17:25,429 --> 00:17:22,959

we're pretty busy working so we don't uh

415

00:17:27,510 --> 00:17:25,439

you know do that kind of stuff too much

416

00:17:28,950 --> 00:17:27,520

but uh i tell you you definitely get

417

00:17:31,430 --> 00:17:28,960

better at it the longer you've been up

418

00:17:32,710 --> 00:17:31,440

here i can do a pretty mean flip now

419

00:17:35,110 --> 00:17:32,720

after

420

00:17:39,750 --> 00:17:35,120

being up here for

421

00:17:39,760 --> 00:17:45,110

and i'm getting better at it

422

00:17:45,120 --> 00:18:01,510

can we see yours please

423

00:18:08,390 --> 00:18:03,669

so that was great i know i went for the

424

00:18:12,470 --> 00:18:10,150

oh yeah he did hook his feet into that

425

00:18:20,150 --> 00:18:12,480

pole on the bottom but that was really

426  
00:18:26,310 --> 00:18:21,669  
have you ever gotten lost in the space

427  
00:18:30,230 --> 00:18:28,950  
you know that's a it's a funny question

428  
00:18:31,590 --> 00:18:30,240  
it's a fairly

429  
00:18:34,470 --> 00:18:31,600  
small

430  
00:18:36,390 --> 00:18:34,480  
you know habitable volume so we have

431  
00:18:39,590 --> 00:18:36,400  
about to the interior volume of a

432  
00:18:42,390 --> 00:18:39,600  
five-bedroom house at this point um

433  
00:18:44,070 --> 00:18:42,400  
what's interesting though is uh

434  
00:18:45,510 --> 00:18:44,080  
you really kind of pay attention to how

435  
00:18:47,270 --> 00:18:45,520  
perception changes when you're up here

436  
00:18:48,870 --> 00:18:47,280  
on the space station and so things are

437  
00:18:50,789 --> 00:18:48,880  
built so that this is kind of up and

438  
00:18:53,830 --> 00:18:50,799

this is down the lights are

439

00:18:55,029 --> 00:18:53,840  
on the upper surfaces and

440

00:18:56,470 --> 00:18:55,039  
and so you really kind of orient

441

00:18:59,110 --> 00:18:56,480  
yourself in this position over the

442

00:19:01,029 --> 00:18:59,120  
course of the day but uh

443

00:19:02,950 --> 00:19:01,039  
if you find when things are dark and if

444

00:19:05,669 --> 00:19:02,960  
you kind of turn yourself upside down it

445

00:19:10,710 --> 00:19:05,679  
is it actually is fairly easy to

446

00:19:12,310 --> 00:19:10,720  
get uh very disoriented and and uh maybe

447

00:19:15,510 --> 00:19:12,320  
lose your way a little bit there was one

448

00:19:17,350 --> 00:19:15,520  
evening where i went into the cupola

449

00:19:19,350 --> 00:19:17,360  
and where it's very

450

00:19:20,870 --> 00:19:19,360  
um when it was very dark outside and the

451  
00:19:22,310 --> 00:19:20,880  
cupola is our seven bay window that

452  
00:19:24,070 --> 00:19:22,320  
looks down towards the earth and i was

453  
00:19:26,549 --> 00:19:24,080  
remarking to myself wow it is very

454  
00:19:28,549 --> 00:19:26,559  
really really dark i can't uh i can't

455  
00:19:30,150 --> 00:19:28,559  
see the earth i can't even find the

456  
00:19:31,510 --> 00:19:30,160  
handles to hold on to

457  
00:19:33,590 --> 00:19:31,520  
um and then i discovered that i was

458  
00:19:35,510 --> 00:19:33,600  
actually in uh one of our logistics

459  
00:19:36,390 --> 00:19:35,520  
modules and i wasn't in the cupola at

460  
00:19:37,830 --> 00:19:36,400  
all

461  
00:19:39,909 --> 00:19:37,840  
so uh

462  
00:19:43,510 --> 00:19:39,919  
so if it's dark and you're disoriented

463  
00:19:45,590 --> 00:19:43,520

uh it's possible to get lost

464

00:19:46,710 --> 00:19:45,600

i've gotten lost in my crew quarters

465

00:19:48,470 --> 00:19:46,720

when you

466

00:19:50,310 --> 00:19:48,480

have an alarm that wakes you up in the

467

00:19:52,310 --> 00:19:50,320

middle of the night and the lights are

468

00:19:54,549 --> 00:19:52,320

out you can't find the door because you

469

00:19:59,270 --> 00:19:54,559

can you think you're completely upside

470

00:19:59,280 --> 00:20:05,270

what are your two watches for

471

00:20:09,430 --> 00:20:07,270

well one's to tell time

472

00:20:11,590 --> 00:20:09,440

and it's got some fancy alarms and the

473

00:20:12,310 --> 00:20:11,600

other one's a sleep study

474

00:20:13,350 --> 00:20:12,320

that

475

00:20:16,070 --> 00:20:13,360

measures

476

00:20:19,270 --> 00:20:16,080

how much light and

477

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

acceleration so it you know can tell

478

00:20:22,470 --> 00:20:21,120

sort of when you're sleeping

479

00:20:42,310 --> 00:20:22,480

and

480

00:20:44,070 --> 00:20:42,320

children down there so it's just waving

481

00:20:49,909 --> 00:20:44,080

to them and i think they're probably

482

00:20:49,919 --> 00:20:53,830

hey daddy

483

00:20:59,669 --> 00:20:55,990

hey alexandra you guys got out of school

484

00:21:06,630 --> 00:20:59,679

a little early i see that's awesome

485

00:21:15,430 --> 00:21:08,149

i still had to do my weight training up

486

00:21:22,870 --> 00:21:17,669

hey tour how are you doing buddy good i

487

00:21:29,990 --> 00:21:24,390

he's really got to get a high five from

488

00:21:36,630 --> 00:21:31,590

what's that sweetie

489

00:21:36,640 --> 00:21:40,070

hello

490

00:21:40,080 --> 00:21:50,390

hey kai it's great to see you guys

491

00:21:53,909 --> 00:21:51,750

hey babe

492

00:21:56,630 --> 00:21:53,919

happy hump day

493

00:21:59,270 --> 00:21:56,640

happy holiday

494

00:22:00,630 --> 00:21:59,280

hey good to see you good to see you as

495

00:22:02,070 --> 00:22:00,640

well

496

00:22:12,390 --> 00:22:02,080

thank you

497

00:22:15,350 --> 00:22:14,310

well thanks for joining us today scott

498

00:22:17,510 --> 00:22:15,360

and chill

499

00:22:19,270 --> 00:22:17,520

it was fun for us to hear your answers

500

00:22:20,710 --> 00:22:19,280

and to give them a chance to ask you a

501  
00:22:25,510 --> 00:22:20,720  
few questions and hope you have a good

502  
00:22:30,230 --> 00:22:27,669  
yeah thanks ellen and uh great talking

503  
00:22:31,750 --> 00:22:30,240  
to you guys and uh yeah our day is

504  
00:22:33,270 --> 00:22:31,760  
almost over it's almost eight o'clock at

505  
00:22:34,549 --> 00:22:33,280  
night here so uh

506  
00:22:35,990 --> 00:22:34,559  
we're gonna

507  
00:22:38,390 --> 00:22:36,000  
probably have some dinner and watch

508  
00:22:40,630 --> 00:22:38,400  
something on tv for a little bit and

509  
00:22:42,470 --> 00:22:40,640  
then uh go to bed but i really enjoyed

510  
00:22:43,990 --> 00:22:42,480  
talking to you and hope the movie does

511  
00:22:52,310 --> 00:22:44,000  
well and we look forward to seeing it up