



1
00:00:05,349 --> 00:00:02,950
station this is the european space

2
00:00:06,950 --> 00:00:05,359
agency how do you hear me

3
00:00:08,470 --> 00:00:06,960
european space agency this is the

4
00:00:13,910 --> 00:00:08,480
international space station i hear you

5
00:00:18,550 --> 00:00:16,150
well hello tim good afternoon you are

6
00:00:21,349 --> 00:00:18,560
now connected with the uk

7
00:00:23,750 --> 00:00:21,359
poland and norway if you'd like to say

8
00:00:28,230 --> 00:00:23,760
hello to them then we'll open the floor

9
00:00:33,270 --> 00:00:30,870
well to everybody in the uk poland and

10
00:00:34,870 --> 00:00:33,280
norway it's a huge pleasure and a

11
00:00:36,389 --> 00:00:34,880
privilege to be speaking to you this

12
00:00:41,830 --> 00:00:36,399
afternoon from the international space

13
00:00:48,069 --> 00:00:44,310

and we're now going to the york uk for

14

00:00:54,229 --> 00:00:51,029

hello tim tom holloway hillcroft primary

15

00:00:57,270 --> 00:00:54,239

school which skills or experiences have

16

00:01:02,150 --> 00:00:57,280

unexpectedly proven most useful to you

17

00:01:06,390 --> 00:01:04,549

hello tom um that's a that's a good

18

00:01:08,710 --> 00:01:06,400

question and uh one that's hard to

19

00:01:11,270 --> 00:01:08,720

answer because there's not much in the

20

00:01:13,350 --> 00:01:11,280

space business that is unexpected and i

21

00:01:15,270 --> 00:01:13,360

guess that's a good thing

22

00:01:17,590 --> 00:01:15,280

i suppose you could say that the ability

23

00:01:20,070 --> 00:01:17,600

to put together an ikea wardrobe is

24

00:01:22,789 --> 00:01:20,080

probably one of the unexpected skills

25

00:01:24,789 --> 00:01:22,799

and what i mean by that is is just the

26

00:01:26,710 --> 00:01:24,799

ability really to be able to operate

27

00:01:29,109 --> 00:01:26,720

with tools and equipment to read

28

00:01:31,429 --> 00:01:29,119

procedures efficiently and effectively

29

00:01:33,030 --> 00:01:31,439

that's our day-to-day operation and it's

30

00:01:35,990 --> 00:01:33,040

something that we have to be good for a

31

00:01:38,310 --> 00:01:36,000

good at but our training is so

32

00:01:40,870 --> 00:01:38,320

comprehensive and we spend so long we've

33

00:01:43,190 --> 00:01:40,880

got such a good ground team thousands of

34

00:01:45,109 --> 00:01:43,200

people who prepare us for this mission

35

00:01:54,550 --> 00:01:45,119

that in all reality there's not much

36

00:01:58,230 --> 00:01:55,830

hi tim

37

00:02:01,670 --> 00:01:58,240

karen hammond head teacher mellow

38

00:02:04,149 --> 00:02:01,680

community primary school in leicester

39

00:02:07,190 --> 00:02:04,159

what training have you received to

40

00:02:14,150 --> 00:02:07,200

support the development of your creative

41

00:02:18,710 --> 00:02:16,309

hi karen um that's an interesting

42

00:02:20,710 --> 00:02:18,720

question and i think really in terms of

43

00:02:22,710 --> 00:02:20,720

creative thinking and problem solving

44

00:02:24,150 --> 00:02:22,720

that's something that we develop

45

00:02:25,910 --> 00:02:24,160

throughout our entire lives and

46

00:02:28,550 --> 00:02:25,920

certainly for the early part of my

47

00:02:30,470 --> 00:02:28,560

career as a military officer and 18

48

00:02:32,309 --> 00:02:30,480

years as a military pilot and

49

00:02:35,190 --> 00:02:32,319

subsequently as a test pilot as well

50

00:02:37,670 --> 00:02:35,200

we're constantly being taught how to be

51
00:02:39,270 --> 00:02:37,680
critical of our surroundings and uh the

52
00:02:41,589 --> 00:02:39,280
things that we're working with and how

53
00:02:42,949 --> 00:02:41,599
to improve on things and that certainly

54
00:02:45,350 --> 00:02:42,959
helps with the creative thinking and

55
00:02:47,910 --> 00:02:45,360
problem solving in terms of the training

56
00:02:49,509 --> 00:02:47,920
i've received from the space agency two

57
00:02:52,390 --> 00:02:49,519
elements stand out in particular and

58
00:02:54,869 --> 00:02:52,400
that's the european space agency's caves

59
00:02:56,949 --> 00:02:54,879
training where we live for seven days

60
00:02:58,309 --> 00:02:56,959
seven days and nights in a cave in

61
00:03:00,949 --> 00:02:58,319
sardinia

62
00:03:02,470 --> 00:03:00,959
with five or six fellow astronauts and

63
00:03:04,790 --> 00:03:02,480

cosmonauts

64

00:03:06,630 --> 00:03:04,800

and we are put under pressure we're

65

00:03:08,790 --> 00:03:06,640

trying to do tasks that are similar to

66

00:03:11,430 --> 00:03:08,800

the task will be expected of us in space

67

00:03:13,509 --> 00:03:11,440

and it's a wonderful environment to do

68

00:03:16,390 --> 00:03:13,519

uh all of the site kind of psychological

69

00:03:17,589 --> 00:03:16,400

profiling and also to try and involve

70

00:03:19,830 --> 00:03:17,599

those creative thinking those

71

00:03:21,110 --> 00:03:19,840

problem-solving type skills and the

72

00:03:22,949 --> 00:03:21,120

second training event which was

73

00:03:25,990 --> 00:03:22,959

excellent for that as well which is a

74

00:03:28,630 --> 00:03:26,000

nasa's nemo event where i spent 12 days

75

00:03:30,710 --> 00:03:28,640

underwater off the coast of florida

76

00:03:37,509 --> 00:03:30,720

and again we were using that as a space

77

00:03:44,229 --> 00:03:39,990

thank you tim we're now going to warsaw

78

00:03:48,070 --> 00:03:45,430

hi tim

79

00:03:53,110 --> 00:03:48,080

koji czech primary school

80

00:03:55,750 --> 00:03:53,120

number 94 in warsaw my question is

81

00:04:02,149 --> 00:03:55,760

is the career of an astronaut your

82

00:04:06,229 --> 00:04:03,750

well it's great to be speaking to you in

83

00:04:08,789 --> 00:04:06,239

in warsaw this afternoon and yes i mean

84

00:04:10,949 --> 00:04:08,799

being an astronaut is certainly uh has

85

00:04:13,270 --> 00:04:10,959

been a passion of mine since a very

86

00:04:15,910 --> 00:04:13,280

early age and uh that's when my interest

87

00:04:18,870 --> 00:04:15,920

in space began really as a young boy but

88

00:04:21,110 --> 00:04:18,880

as a teenager i became very interested

89

00:04:23,110 --> 00:04:21,120

and very passionate about flying and i

90

00:04:25,749 --> 00:04:23,120

think really that stemmed from an

91

00:04:28,310 --> 00:04:25,759

involvement in a cadet force at school

92

00:04:30,469 --> 00:04:28,320

where i was able to fly light aircraft

93

00:04:32,710 --> 00:04:30,479

from the age of kind of 14 and 15

94

00:04:35,189 --> 00:04:32,720

onwards and i decided i wanted to be a

95

00:04:37,510 --> 00:04:35,199

pilot and i was just very fortunate i

96

00:04:40,390 --> 00:04:37,520

was able to fulfill that dream

97

00:04:42,629 --> 00:04:40,400

and by the age of 20 i was a military

98

00:04:45,590 --> 00:04:42,639

pilot and had a wonderful career that

99

00:04:48,150 --> 00:04:45,600

led to me being a test pilot and i see

100

00:04:50,310 --> 00:04:48,160

icy being an astronaut really as

101
00:04:52,710 --> 00:04:50,320
the pinnacle of a test pilot's career so

102
00:04:54,950 --> 00:04:52,720
for me it was more of a logical

103
00:04:57,270 --> 00:04:54,960
progression throughout my life and i was

104
00:04:58,950 --> 00:04:57,280
very fortunate that that resulted in

105
00:05:01,029 --> 00:04:58,960
being in the right time and the right

106
00:05:03,510 --> 00:05:01,039
place i had the correct qualifications

107
00:05:07,029 --> 00:05:03,520
and i was able to apply for the european

108
00:05:08,790 --> 00:05:07,039
space agency astronaut selection um and

109
00:05:11,029 --> 00:05:08,800
in 2008

110
00:05:13,990 --> 00:05:11,039
so really it was just a culmination of

111
00:05:21,749 --> 00:05:14,000
all of those years that uh began with a

112
00:05:26,150 --> 00:05:24,230
hello tim wanda saha

113
00:05:27,909 --> 00:05:26,160

the autonomic middle school of support

114

00:05:30,070 --> 00:05:27,919

and i wanted to ask you

115

00:05:32,390 --> 00:05:30,080

which results from an experiment on the

116

00:05:33,909 --> 00:05:32,400

iss have proven to be the most

117

00:05:36,550 --> 00:05:33,919

surprising to you

118

00:05:41,749 --> 00:05:36,560

and what skills do you use when

119

00:05:46,070 --> 00:05:43,909

uh great question um

120

00:05:47,350 --> 00:05:46,080

so the in terms of the results of the

121

00:05:49,270 --> 00:05:47,360

experiments you know a lot of the

122

00:05:52,310 --> 00:05:49,280

experiments that we do

123

00:05:55,590 --> 00:05:52,320

run for a number of years because they

124

00:05:57,350 --> 00:05:55,600

have a small sample rate and so in order

125

00:05:59,350 --> 00:05:57,360

to have enough samples to make them

126
00:06:01,909 --> 00:05:59,360
viable they have to run for a number of

127
00:06:04,309 --> 00:06:01,919
years so we don't often get instant

128
00:06:06,070 --> 00:06:04,319
gratification in terms of the results of

129
00:06:08,309 --> 00:06:06,080
scientific experiments often we have to

130
00:06:10,469 --> 00:06:08,319
wait for a long time

131
00:06:12,390 --> 00:06:10,479
but i've certainly enjoyed a lot of the

132
00:06:13,830 --> 00:06:12,400
human physiology experiments i've been

133
00:06:16,150 --> 00:06:13,840
doing up here

134
00:06:18,070 --> 00:06:16,160
actually seeing physical changes in in

135
00:06:19,590 --> 00:06:18,080
my own body in terms of things like

136
00:06:22,710 --> 00:06:19,600
blood pressure

137
00:06:23,909 --> 00:06:22,720
ultrasounds and ocular vision testing

138
00:06:25,350 --> 00:06:23,919

etc

139

00:06:27,270 --> 00:06:25,360

and also doing some of the flame

140

00:06:29,350 --> 00:06:27,280

combustion techniques those

141

00:06:31,830 --> 00:06:29,360

those experiments which are very visual

142

00:06:33,990 --> 00:06:31,840

and certainly watching flame combustion

143

00:06:37,110 --> 00:06:34,000

in in zero gravity is is incredibly

144

00:06:39,270 --> 00:06:37,120

vigil visual and very exciting um i i

145

00:06:42,309 --> 00:06:39,280

really enjoyed the airway monitoring

146

00:06:44,230 --> 00:06:42,319

experiment which where we used the the

147

00:06:46,390 --> 00:06:44,240

international space station's airlock as

148

00:06:47,590 --> 00:06:46,400

a hyperbaric chamber for the first time

149

00:06:49,189 --> 00:06:47,600

ever

150

00:06:50,550 --> 00:06:49,199

and that will hopefully be an experiment

151
00:06:53,110 --> 00:06:50,560
that will continue for a number of years

152
00:06:54,710 --> 00:06:53,120
to investigate airway inflammation and

153
00:06:56,629 --> 00:06:54,720
will have huge benefits for people on

154
00:06:58,390 --> 00:06:56,639
earth for example those people who

155
00:07:00,390 --> 00:06:58,400
suffer from asthma

156
00:07:02,790 --> 00:07:00,400
so that's just an example of some of the

157
00:07:04,469 --> 00:07:02,800
experiments we've been doing

158
00:07:06,870 --> 00:07:04,479
and in terms of the skills that we need

159
00:07:08,230 --> 00:07:06,880
to perform them well obviously we're

160
00:07:09,830 --> 00:07:08,240
very interested and we're passionate

161
00:07:11,430 --> 00:07:09,840
about what we're doing up here and in

162
00:07:14,150 --> 00:07:11,440
particular the science

163
00:07:16,710 --> 00:07:14,160

we need to be able to be very accurate

164

00:07:19,749 --> 00:07:16,720

in our work it's important that we don't

165

00:07:21,430 --> 00:07:19,759

lose any scientific data obviously it's

166

00:07:23,430 --> 00:07:21,440

uh it's an expensive and it's a long

167

00:07:25,749 --> 00:07:23,440

process in getting scientific payloads

168

00:07:27,270 --> 00:07:25,759

into space so by the time it comes down

169

00:07:29,510 --> 00:07:27,280

to the astronauts we need to make sure

170

00:07:31,270 --> 00:07:29,520

that we work quickly and effect

171

00:07:33,270 --> 00:07:31,280

effectively and efficiently but most

172

00:07:38,870 --> 00:07:33,280

importantly that we're very accurate in

173

00:07:45,189 --> 00:07:41,990

and now we go to oslo norway for their

174

00:07:48,230 --> 00:07:45,199

two questions

175

00:07:49,749 --> 00:07:48,240

hi tim i am venkaiah

176
00:07:51,270 --> 00:07:49,759
teaching at

177
00:07:53,670 --> 00:07:51,280
the columbia school

178
00:07:55,589 --> 00:07:53,680
can you remember the first time you had

179
00:07:57,670 --> 00:07:55,599
an interest in space

180
00:08:02,790 --> 00:07:57,680
and how did this influence on your

181
00:08:06,869 --> 00:08:04,629
well good afternoon norway

182
00:08:10,070 --> 00:08:06,879
and what a great question the first time

183
00:08:12,629 --> 00:08:10,080
that really space had an influence on me

184
00:08:15,270 --> 00:08:12,639
i think was as a very young boy when i

185
00:08:17,749 --> 00:08:15,280
used to love looking up at the stars um

186
00:08:19,909 --> 00:08:17,759
and i always had kind of questions to my

187
00:08:22,629 --> 00:08:19,919
parents about where we are what's the

188
00:08:25,189 --> 00:08:22,639

universe made of um what are the planets

189

00:08:26,950 --> 00:08:25,199

in the solar system and i loved just

190

00:08:29,029 --> 00:08:26,960

learning about the stars and the

191

00:08:32,149 --> 00:08:29,039

universe and really that progressed

192

00:08:34,630 --> 00:08:32,159

throughout my life into a passion for

193

00:08:36,230 --> 00:08:34,640

physics and as an adult i i love

194

00:08:38,230 --> 00:08:36,240

studying things like quantum physics and

195

00:08:39,909 --> 00:08:38,240

i still ask those big questions about

196

00:08:41,589 --> 00:08:39,919

our place in the universe and how

197

00:08:48,230 --> 00:08:41,599

science can help to answer those

198

00:08:52,710 --> 00:08:50,550

uh hi tim i'm seaman bagweek from

199

00:08:55,350 --> 00:08:52,720

underneath school in norway

200

00:08:57,590 --> 00:08:55,360

if you had the opportunity to start your

201
00:09:03,590 --> 00:08:57,600
education again would you have done

202
00:09:06,790 --> 00:09:05,269
uh what a great question would i do

203
00:09:08,389 --> 00:09:06,800
anything differently i would i would say

204
00:09:10,710 --> 00:09:08,399
absolutely no i wouldn't do anything

205
00:09:12,230 --> 00:09:10,720
differently because i'm stood here or

206
00:09:14,790 --> 00:09:12,240
floating here talking to you from the

207
00:09:16,389 --> 00:09:14,800
international space station so i i'm

208
00:09:19,030 --> 00:09:16,399
exceptionally happy obviously in the way

209
00:09:21,670 --> 00:09:19,040
that my career has worked out but it

210
00:09:24,150 --> 00:09:21,680
certainly was a fairly unorthodox route

211
00:09:25,990 --> 00:09:24,160
to becoming an astronaut

212
00:09:28,870 --> 00:09:26,000
if you were to say to somebody do you

213
00:09:32,070 --> 00:09:28,880

think leaving school at the age of 19

214

00:09:34,470 --> 00:09:32,080

with three very average a-levels and not

215

00:09:36,150 --> 00:09:34,480

going to university but joining the army

216

00:09:38,310 --> 00:09:36,160

was a good route to becoming an

217

00:09:40,710 --> 00:09:38,320

astronaut perhaps the answer would be no

218

00:09:43,590 --> 00:09:40,720

um i was very fortunate that for me that

219

00:09:45,509 --> 00:09:43,600

meant i had a huge amount of operational

220

00:09:47,670 --> 00:09:45,519

experience in the early part of my

221

00:09:50,550 --> 00:09:47,680

career and i was very fortunate that i

222

00:09:52,870 --> 00:09:50,560

was able to do a degree later in life

223

00:09:54,470 --> 00:09:52,880

but i didn't achieve that until the age

224

00:09:56,070 --> 00:09:54,480

of 33

225

00:09:57,190 --> 00:09:56,080

where effectively i had to go back to

226

00:09:59,829 --> 00:09:57,200

school

227

00:10:01,269 --> 00:09:59,839

relearn maths to a very high level and

228

00:10:02,790 --> 00:10:01,279

then complete a degree in flight

229

00:10:04,710 --> 00:10:02,800

dynamics

230

00:10:06,470 --> 00:10:04,720

so yes it was a fairly unorthodox route

231

00:10:11,990 --> 00:10:06,480

to becoming an astronaut but it worked

232

00:10:16,710 --> 00:10:14,150

well thank you so much tim this is

233

00:10:19,269 --> 00:10:16,720

melanie and aztec i've just heard we

234

00:10:21,030 --> 00:10:19,279

have no more time for questions so we'd

235

00:10:23,750 --> 00:10:21,040

like to thank you for your time and give

236

00:10:28,870 --> 00:10:23,760

you a chance to say goodbye to the uk

237

00:10:32,949 --> 00:10:31,350

well to everybody that is there today

238

00:10:34,230 --> 00:10:32,959

i've it's been a real pleasure talking

239

00:10:36,550 --> 00:10:34,240

to you thank you so much for the

240

00:10:37,829 --> 00:10:36,560

brilliant questions and i wish you all a

241

00:10:46,710 --> 00:10:37,839

great day from up here on the

242

00:10:51,670 --> 00:10:49,350

station this is houston acr

243

00:10:53,910 --> 00:10:51,680

that concludes the european space agency

244

00:10:58,150 --> 00:10:53,920

portion of the event please stand by for

245

00:11:05,269 --> 00:11:00,790

station this is the associated press how

246

00:11:09,190 --> 00:11:06,790

we hear you loud and clear from the

247

00:11:11,990 --> 00:11:09,200

international space station

248

00:11:13,829 --> 00:11:12,000

well good day gentlemen from the kennedy

249

00:11:15,829 --> 00:11:13,839

space center in florida this is marcia

250

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

dunn of the ap speaking to you this

251
00:11:19,910 --> 00:11:17,680
morning

252
00:11:22,069 --> 00:11:19,920
thank you all for participating it's

253
00:11:24,150 --> 00:11:22,079
been an exciting past couple of weeks

254
00:11:25,670 --> 00:11:24,160
for commercial space

255
00:11:27,590 --> 00:11:25,680
let's start with last friday's

256
00:11:30,230 --> 00:11:27,600
successful landing of the falcon first

257
00:11:32,470 --> 00:11:30,240
stage off the coast of florida i'm sure

258
00:11:34,310 --> 00:11:32,480
you've seen some pictures and video how

259
00:11:36,710 --> 00:11:34,320
do you see this is shaping the future of

260
00:11:40,550 --> 00:11:36,720
space flight bringing back rockets and

261
00:11:44,870 --> 00:11:42,790
you know anytime we can make uh space

262
00:11:46,790 --> 00:11:44,880
flight more efficient and less costly

263
00:11:49,269 --> 00:11:46,800

then it's a huge step forward and i

264

00:11:51,110 --> 00:11:49,279

think uh you know both uh companies that

265

00:11:52,150 --> 00:11:51,120

have achieved this amazing event to be

266

00:11:54,949 --> 00:11:52,160

able to

267

00:11:56,629 --> 00:11:54,959

to land a a stage of a rocket like that

268

00:11:59,190 --> 00:11:56,639

and so that it can be reused like blue

269

00:12:01,430 --> 00:11:59,200

origin and spacex is an amazing event

270

00:12:03,509 --> 00:12:01,440

you know to me it reminds me of science

271

00:12:05,670 --> 00:12:03,519

fiction movies when we were a kid when

272

00:12:07,670 --> 00:12:05,680

all rockets landed like that and so it's

273

00:12:09,430 --> 00:12:07,680

a it's really neat to see but from a

274

00:12:12,150 --> 00:12:09,440

very practical standpoint and for our

275

00:12:13,990 --> 00:12:12,160

future it demonstrates that the

276
00:12:16,949 --> 00:12:14,000
commercial space industry is alive and

277
00:12:18,629 --> 00:12:16,959
well and being very productive and

278
00:12:21,509 --> 00:12:18,639
progressive in terms of the techniques

279
00:12:23,509 --> 00:12:21,519
that they plan to use in the future

280
00:12:25,750 --> 00:12:23,519
tell me were you watching the launch and

281
00:12:34,150 --> 00:12:25,760
the landing live on friday evening or

282
00:12:37,990 --> 00:12:36,150
no we were not watching it marcia it

283
00:12:40,230 --> 00:12:38,000
didn't work out with our schedule so we

284
00:12:43,190 --> 00:12:40,240
saw the coverage of course afterwards we

285
00:12:45,590 --> 00:12:43,200
heard about it as soon as we got up

286
00:12:47,110 --> 00:12:45,600
but no we did not see it live

287
00:12:48,790 --> 00:12:47,120
well you know there's also the bigelow

288
00:12:50,949 --> 00:12:48,800

expandable module that you've got up

289

00:12:53,509 --> 00:12:50,959

there right now and if we could talk for

290

00:12:54,870 --> 00:12:53,519

that for a few minutes um how excited

291

00:12:57,350 --> 00:12:54,880

are you about getting the first

292

00:12:59,430 --> 00:12:57,360

inflatable module for astronauts and

293

00:13:01,910 --> 00:12:59,440

getting to try it out granted not for

294

00:13:03,269 --> 00:13:01,920

another month or so but

295

00:13:05,269 --> 00:13:03,279

tell me tell me your thoughts on

296

00:13:10,710 --> 00:13:05,279

expandable inflatable

297

00:13:15,509 --> 00:13:13,110

well we're excited to attach another

298

00:13:16,470 --> 00:13:15,519

vehicle essentially onto space station

299

00:13:18,949 --> 00:13:16,480

and

300

00:13:20,790 --> 00:13:18,959

again this is an example of where the

301

00:13:22,870 --> 00:13:20,800

commercial space industry has really

302

00:13:24,870 --> 00:13:22,880

been innovative in their techniques and

303

00:13:26,470 --> 00:13:24,880

so this will be a great way for us to

304

00:13:28,230 --> 00:13:26,480

test out both the thermal

305

00:13:31,350 --> 00:13:28,240

characteristics of this new type of

306

00:13:33,670 --> 00:13:31,360

module and its radiation protection

307

00:13:34,870 --> 00:13:33,680

so it's going to be a neat thing to have

308

00:13:36,949 --> 00:13:34,880

on station we're not going to use it

309

00:13:38,629 --> 00:13:36,959

routinely but we'll go in to

310

00:13:41,269 --> 00:13:38,639

to add sensors and to make sure

311

00:13:42,470 --> 00:13:41,279

everything is working properly

312

00:13:44,470 --> 00:13:42,480

what kind of a role are you going to

313

00:13:47,590 --> 00:13:44,480

play in the next couple of days as it's

314

00:13:50,150 --> 00:13:47,600

detached from its from the trunk of the

315

00:13:52,150 --> 00:13:50,160

dragon and put on board you're going to

316

00:13:55,670 --> 00:13:52,160

just monitor that oversee it or will you

317

00:14:01,189 --> 00:13:58,870

mostly we'll be monitoring it

318

00:14:03,430 --> 00:14:01,199

in terms of the robotic activity as you

319

00:14:04,790 --> 00:14:03,440

know over the years we started out in

320

00:14:06,790 --> 00:14:04,800

the beginning where the crew on board

321

00:14:08,550 --> 00:14:06,800

did all the robotic activity and then

322

00:14:10,710 --> 00:14:08,560

that we started developing the ability

323

00:14:13,910 --> 00:14:10,720

for the for the ground to do it and now

324

00:14:15,750 --> 00:14:13,920

they're doing virtually everything

325

00:14:17,269 --> 00:14:15,760

with just a couple exceptions like the

326

00:14:19,430 --> 00:14:17,279

track and capture of the vehicles that

327

00:14:21,350 --> 00:14:19,440

you saw the last couple of weeks

328

00:14:24,870 --> 00:14:21,360

they will move it over with the robotic

329

00:14:26,230 --> 00:14:24,880

arm and then we will grab it with the

330

00:14:28,629 --> 00:14:26,240

latches

331

00:14:30,230 --> 00:14:28,639

on the berthing mechanism and then do

332

00:14:31,990 --> 00:14:30,240

the initial bolting and then the ground

333

00:14:33,990 --> 00:14:32,000

will take over after that of course

334

00:14:36,150 --> 00:14:34,000

we'll do leak checks later on

335

00:14:37,829 --> 00:14:36,160

before we ingress it and uh instrument

336

00:14:39,670 --> 00:14:37,839

it as tim mentioned

337

00:14:41,430 --> 00:14:39,680

well you know robert bigelow said just

338

00:14:44,870 --> 00:14:41,440

the other day that he'd like his first

339

00:14:46,949 --> 00:14:44,880

super big inflatable b330 to link up

340

00:14:50,310 --> 00:14:46,959

with the international space station in

341

00:14:51,910 --> 00:14:50,320

2020 what do you think about that

342

00:15:00,150 --> 00:14:51,920

might that be a

343

00:15:04,310 --> 00:15:02,230

you know i think anytime we can bring up

344

00:15:06,310 --> 00:15:04,320

new modules to space station we're going

345

00:15:08,069 --> 00:15:06,320

to be excited about that we have a big

346

00:15:09,990 --> 00:15:08,079

station here but there's room to make it

347

00:15:12,150 --> 00:15:10,000

bigger and so if we could add you know

348

00:15:14,710 --> 00:15:12,160

additional modules to test out the

349

00:15:16,310 --> 00:15:14,720

future of space exploration and

350

00:15:18,710 --> 00:15:16,320

and the way that humans are going to

351
00:15:21,110 --> 00:15:18,720
interact and and work with with modules

352
00:15:23,430 --> 00:15:21,120
i think it's a great idea

353
00:15:25,990 --> 00:15:23,440
um back to the dragon uh

354
00:15:28,949 --> 00:15:26,000
what special treats did you guys find in

355
00:15:30,710 --> 00:15:28,959
the latest delivery prizes or

356
00:15:34,550 --> 00:15:30,720
something that hit the taste buds just

357
00:15:38,069 --> 00:15:35,910
well you know one of the things that the

358
00:15:39,829 --> 00:15:38,079
crew love about visiting vehicles is

359
00:15:42,470 --> 00:15:39,839
that we get a few fresh supplies and

360
00:15:44,790 --> 00:15:42,480
certainly dragon was uh no exception to

361
00:15:47,350 --> 00:15:44,800
that we had some fresh fruit uh some

362
00:15:49,670 --> 00:15:47,360
oranges some apples on board and some

363
00:15:51,110 --> 00:15:49,680

personal items as well so uh that's some

364

00:15:53,189 --> 00:15:51,120

of the nice things that come up in the

365

00:15:55,829 --> 00:15:53,199

cargo vehicles

366

00:15:58,230 --> 00:15:55,839

um for the two tims you've been up there

367

00:15:59,910 --> 00:15:58,240

a while and and scott kelly

368

00:16:01,670 --> 00:15:59,920

being back on earth now from his one

369

00:16:04,150 --> 00:16:01,680

year mission has mentioned the

370

00:16:06,150 --> 00:16:04,160

psychological stress that you know he

371

00:16:07,749 --> 00:16:06,160

had to endure for a year in space

372

00:16:10,230 --> 00:16:07,759

granted you're only up there for six

373

00:16:12,870 --> 00:16:10,240

months but that's still a long time

374

00:16:15,189 --> 00:16:12,880

what's your take so far on psychological

375

00:16:20,629 --> 00:16:15,199

stress on long duration space flight as

376

00:16:24,470 --> 00:16:22,790

you know it's a great question and uh

377

00:16:27,430 --> 00:16:24,480

you know it was really a pleasure to be

378

00:16:29,990 --> 00:16:27,440

here with with scott for his last few

379

00:16:33,110 --> 00:16:30,000

months and uh you know it's evident to

380

00:16:35,030 --> 00:16:33,120

us that you know scott had uh

381

00:16:37,509 --> 00:16:35,040

had developed this ability to just

382

00:16:39,829 --> 00:16:37,519

endure up here from all the stresses and

383

00:16:42,310 --> 00:16:39,839

strains and really had this nice steady

384

00:16:44,310 --> 00:16:42,320

approach and so you know really i think

385

00:16:46,550 --> 00:16:44,320

that we can learn from him in terms of

386

00:16:48,230 --> 00:16:46,560

of what is what's necessary in order to

387

00:16:49,749 --> 00:16:48,240

sustain for a long period of time you

388

00:16:52,150 --> 00:16:49,759

know there are stresses and strains up

389

00:16:54,949 --> 00:16:52,160

here we have a very busy schedule

390

00:16:56,870 --> 00:16:54,959

and uh we work and live in the same

391

00:16:59,189 --> 00:16:56,880

place so it's not really that you can

392

00:17:01,430 --> 00:16:59,199

escape your work and and uh

393

00:17:03,350 --> 00:17:01,440

and sort of detach away from what you're

394

00:17:05,110 --> 00:17:03,360

doing every day but at the same time i

395

00:17:07,909 --> 00:17:05,120

think that you can learn to develop a

396

00:17:09,350 --> 00:17:07,919

pace where it's uh it's very easy to

397

00:17:11,350 --> 00:17:09,360

work and live up here and the other

398

00:17:12,870 --> 00:17:11,360

thing that's very vital is to have the

399

00:17:14,870 --> 00:17:12,880

right kind of people so when you have a

400

00:17:17,029 --> 00:17:14,880

great crew like we do and like we had

401
00:17:19,669 --> 00:17:17,039
when scott was here it makes life that

402
00:17:21,750 --> 00:17:19,679
much better and i think you can sustain

403
00:17:22,870 --> 00:17:21,760
as long as you need to as long as we can

404
00:17:26,470 --> 00:17:22,880
break the code on some of the

405
00:17:28,710 --> 00:17:26,480
physiological aspects of zero gravity

406
00:17:30,789 --> 00:17:28,720
um for tim peake i'm wondering how the

407
00:17:32,710 --> 00:17:30,799
carbo loading is going up there in the

408
00:17:35,029 --> 00:17:32,720
training you know the london marathon is

409
00:17:38,070 --> 00:17:35,039
just another week and a half away tell

410
00:17:40,630 --> 00:17:38,080
me tell me how you anticipate doing how

411
00:17:44,830 --> 00:17:40,640
are you feeling and

412
00:17:49,190 --> 00:17:47,510
before yes i i'm really looking forward

413
00:17:50,710 --> 00:17:49,200

to this it's a it's a great challenge

414

00:17:52,070 --> 00:17:50,720

that i've set myself

415

00:17:54,150 --> 00:17:52,080

and i'm quite glad that this is

416

00:17:55,990 --> 00:17:54,160

happening later on in the mission so

417

00:17:58,310 --> 00:17:56,000

i've had plenty of time now to get used

418

00:18:00,150 --> 00:17:58,320

to the t2 treadmill and one of the

419

00:18:02,470 --> 00:18:00,160

biggest challenges is the harness system

420

00:18:04,230 --> 00:18:02,480

obviously my body weight has to be kept

421

00:18:05,990 --> 00:18:04,240

firmly attached to the treadmill by this

422

00:18:07,990 --> 00:18:06,000

harness and that can rub on the

423

00:18:09,590 --> 00:18:08,000

shoulders and around the waist

424

00:18:11,669 --> 00:18:09,600

but i've got the i've got the harness

425

00:18:13,430 --> 00:18:11,679

fitting pretty well now i'm very used to

426
00:18:15,190 --> 00:18:13,440
running i've done a few half marathons

427
00:18:17,350 --> 00:18:15,200
and a little bit longer

428
00:18:19,029 --> 00:18:17,360
and i really enjoy running up here and

429
00:18:20,789 --> 00:18:19,039
so i'm looking forward to the event next

430
00:18:22,710 --> 00:18:20,799
sunday

431
00:18:24,630 --> 00:18:22,720
well will this be your first marathon on

432
00:18:29,110 --> 00:18:24,640
earth or in space or have you run

433
00:18:34,230 --> 00:18:31,390
i actually ran the london marathon in

434
00:18:36,630 --> 00:18:34,240
1999 and i did it in uh about three

435
00:18:38,549 --> 00:18:36,640
hours and 15 minutes so i'm not gonna

436
00:18:40,390 --> 00:18:38,559
beat that time i'm sure up here but i'd

437
00:18:43,029 --> 00:18:40,400
like to do it in under four hours if i'm

438
00:18:44,870 --> 00:18:43,039

feeling really good maybe three hours 33

439

00:18:46,230 --> 00:18:44,880
hours 45.

440

00:18:48,710 --> 00:18:46,240
well that sounds good enough to get you

441

00:18:49,830 --> 00:18:48,720
to boston next year um wouldn't that be

442

00:18:53,029 --> 00:18:49,840
something

443

00:18:54,310 --> 00:18:53,039
uh for the other two

444

00:18:55,510 --> 00:18:54,320
astronauts

445

00:18:56,950 --> 00:18:55,520
could you tell me how are you going to

446

00:18:59,590 --> 00:18:56,960
be monitoring him are you going to be

447

00:19:05,830 --> 00:18:59,600
bringing him water or wiping his brow

448

00:19:09,350 --> 00:19:07,750
well depends upon the schedule when he's

449

00:19:11,270 --> 00:19:09,360
actually running it but no we'll help

450

00:19:13,270 --> 00:19:11,280
him out with whatever he needs we'll

451
00:19:15,029 --> 00:19:13,280
check in on him every now and then and

452
00:19:18,230 --> 00:19:15,039
make sure he gets all the food and drink

453
00:19:19,750 --> 00:19:18,240
that that he needs to make it through it

454
00:19:22,390 --> 00:19:19,760
um jeff you're going to be breaking the

455
00:19:25,669 --> 00:19:22,400
u.s record for most cumulative time

456
00:19:28,630 --> 00:19:25,679
spent in space i guess this fall

457
00:19:29,669 --> 00:19:28,640
uh how is it for you being back in space

458
00:19:30,870 --> 00:19:29,679
um

459
00:19:32,870 --> 00:19:30,880
and and

460
00:19:34,470 --> 00:19:32,880
does it seem like

461
00:19:37,110 --> 00:19:34,480
you're going to have spent so much time

462
00:19:39,510 --> 00:19:37,120
in space by the end of this mission it's

463
00:19:41,110 --> 00:19:39,520

a long way even though it's split over

464

00:19:43,029 --> 00:19:41,120

several flights and

465

00:19:44,789 --> 00:19:43,039

and if that's my last question i'll say

466

00:19:48,230 --> 00:19:44,799

god speak to you right now all three of

467

00:19:50,950 --> 00:19:49,510

thank you i

468

00:19:53,029 --> 00:19:50,960

i don't really think too much about that

469

00:19:54,710 --> 00:19:53,039

i think of it more in terms of the of

470

00:19:56,789 --> 00:19:54,720

the accomplishment of the international

471

00:19:58,470 --> 00:19:56,799

space station as you know the first time

472

00:20:00,789 --> 00:19:58,480

i got here uh it was right at the

473

00:20:02,630 --> 00:20:00,799

beginning before expedition one and then

474

00:20:04,870 --> 00:20:02,640

came back halfway through the the build

475

00:20:06,789 --> 00:20:04,880

and then i was here at almost assembly

476

00:20:08,630 --> 00:20:06,799

complete and now we're in full

477

00:20:10,950 --> 00:20:08,640

utilization mode so it's been an honor

478

00:20:13,029 --> 00:20:10,960

to be part of the space station program

479

00:20:16,789 --> 00:20:13,039

in that respect the day is the number of

480

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

well thank you again all three of you

481

00:20:25,510 --> 00:20:21,120

safe travels and

482

00:20:31,669 --> 00:20:26,950

thank you so much marcia it's been nice