



PORT

STBD

1  
00:00:04,470 --> 00:00:02,310  
reuben h fleet science center this is

2  
00:00:06,950 --> 00:00:04,480  
mission control houston please call

3  
00:00:08,230 --> 00:00:06,960  
station for a voice check

4  
00:00:12,790 --> 00:00:08,240  
stations

5  
00:00:18,070 --> 00:00:15,270  
we have you loud and clear

6  
00:00:19,349 --> 00:00:18,080  
all right excellent

7  
00:00:21,029 --> 00:00:19,359  
good morning for us i'm not sure what

8  
00:00:22,630 --> 00:00:21,039  
time it is up there but

9  
00:00:23,990 --> 00:00:22,640  
glad to have you join us today let's

10  
00:00:25,189 --> 00:00:24,000  
jump right into we got some great

11  
00:00:26,870 --> 00:00:25,199  
questions from the kids here and i want

12  
00:00:28,870 --> 00:00:26,880  
to make sure we get to them not listen

13  
00:00:32,549 --> 00:00:28,880

to the battle let's start right off with

14

00:00:39,670 --> 00:00:34,150

how long do you get to stay on the space

15

00:00:42,630 --> 00:00:41,670

we get to stay for five and a half

16

00:00:44,950 --> 00:00:42,640

months

17

00:00:47,350 --> 00:00:44,960

and how long could you stay for me five

18

00:00:48,549 --> 00:00:47,360

and a half months however i think

19

00:00:49,510 --> 00:00:48,559

there's other people are going to stay

20

00:00:52,229 --> 00:00:49,520

longer

21

00:00:54,150 --> 00:00:52,239

and uh and it all depends i think more

22

00:00:55,590 --> 00:00:54,160

on your psychological

23

00:00:57,189 --> 00:00:55,600

aspect of this physically i think you

24

00:00:58,950 --> 00:00:57,199

can stay here for a while

25

00:01:01,830 --> 00:00:58,960

but after a while you just want to come

26

00:01:06,230 --> 00:01:03,430

all right our next question here is from

27

00:01:14,230 --> 00:01:08,950

what's up academic appropriation do you

28

00:01:14,240 --> 00:01:17,510

uh okay

29

00:01:24,550 --> 00:01:18,710

get as close as you can to the

30

00:01:27,190 --> 00:01:25,910

is there any way you could repeat the

31

00:01:29,510 --> 00:01:27,200

question a little closer to the

32

00:01:31,830 --> 00:01:29,520

microphone

33

00:01:33,910 --> 00:01:31,840

what type of academic preparation do you

34

00:01:39,670 --> 00:01:33,920

need to become an astronaut do you have

35

00:01:43,670 --> 00:01:41,670

yeah i think it was what's the education

36

00:01:46,950 --> 00:01:43,680

to become an astronaut i'd say yes you

37

00:01:49,109 --> 00:01:46,960

need a masters uh in many cases like uh

38

00:01:51,030 --> 00:01:49,119

steve swanson has a phd i have a

39

00:01:53,109 --> 00:01:51,040

master's degree so you

40

00:01:55,109 --> 00:01:53,119

at least need that and then what field

41

00:01:57,030 --> 00:01:55,119

do you study i would say pick a field of

42

00:01:58,870 --> 00:01:57,040

study that you really enjoy i think

43

00:02:00,389 --> 00:01:58,880

that's kind of the key is if you really

44

00:02:02,389 --> 00:02:00,399

enjoy and are passionate about what

45

00:02:05,510 --> 00:02:02,399

you're studying then that's kind of what

46

00:02:07,350 --> 00:02:05,520

nasa wants that's what they look for

47

00:02:09,589 --> 00:02:07,360

please get as close to the microphone as

48

00:02:11,270 --> 00:02:09,599

you can when you ask your questions

49

00:02:14,790 --> 00:02:11,280

students all right next up we have a

50

00:02:14,800 --> 00:02:20,070

is it always dark outside

51  
00:02:24,949 --> 00:02:22,710  
no it is not always dark outside

52  
00:02:27,589 --> 00:02:24,959  
we go around the earth every 90 minutes

53  
00:02:30,309 --> 00:02:27,599  
and that gives us 16 sunrises and 16

54  
00:02:33,589 --> 00:02:30,319  
sunsets every day so it's wonderful for

55  
00:02:35,190 --> 00:02:33,599  
us we get to have a beautiful time up

56  
00:02:39,110 --> 00:02:35,200  
here looking out the window it's

57  
00:02:53,589 --> 00:02:40,550  
all right thank you next up we have

58  
00:03:04,470 --> 00:02:55,190  
how far away from the earth are you and

59  
00:03:08,710 --> 00:03:06,869  
so that's a great question uh because it

60  
00:03:10,229 --> 00:03:08,720  
seems like we would be so much closer to

61  
00:03:12,229 --> 00:03:10,239  
the moon than to the earth when we're up

62  
00:03:15,509 --> 00:03:12,239  
here but in reality we're going around

63  
00:03:18,309 --> 00:03:15,519

the earth just barely only about 250

64

00:03:20,470 --> 00:03:18,319

miles off the surface of the earth so

65

00:03:22,149 --> 00:03:20,480

we're really really close and if i was

66

00:03:24,470 --> 00:03:22,159

to show you the moon it would be about

67

00:03:26,630 --> 00:03:24,480

40 feet away from us so it would be

68

00:03:28,790 --> 00:03:26,640

outside of the space station

69

00:03:30,949 --> 00:03:28,800

in this in this little model so from up

70

00:03:35,030 --> 00:03:30,959

here the moon still looks very small and

71

00:03:39,830 --> 00:03:37,990

all right no surprising answer let's

72

00:03:45,030 --> 00:03:39,840

look at the scale of where they are next

73

00:03:51,509 --> 00:03:46,949

what is your favorite type of food to

74

00:03:55,750 --> 00:03:53,509

my favorite type of food that's a good

75

00:03:57,350 --> 00:03:55,760

question i think it changes a little bit

76  
00:03:59,670 --> 00:03:57,360  
as the time goes on when you're up here

77  
00:04:01,030 --> 00:03:59,680  
but right now i'm going with the seafood

78  
00:04:02,789 --> 00:04:01,040  
gumbo

79  
00:04:04,710 --> 00:04:02,799  
and i happen to have one right here so

80  
00:04:07,110 --> 00:04:04,720  
this is what our food comes in little

81  
00:04:09,429 --> 00:04:07,120  
packages and we heat it up we put it in

82  
00:04:11,030 --> 00:04:09,439  
a little heater and we just open it up

83  
00:04:12,869 --> 00:04:11,040  
and then use a spoon and eat it just

84  
00:04:14,949 --> 00:04:12,879  
like you would at home except we get to

85  
00:04:17,830 --> 00:04:14,959  
play with our food and uh that's the fun

86  
00:04:19,990 --> 00:04:17,840  
part of eating up here

87  
00:04:21,509 --> 00:04:20,000  
steve if you could repeat every question

88  
00:04:23,749 --> 00:04:21,519

and be helpful we can't hear the

89

00:04:28,310 --> 00:04:23,759

students too

90

00:04:31,909 --> 00:04:30,070

how competitive is it to become an

91

00:04:35,670 --> 00:04:31,919

astronaut did you have to take a

92

00:04:41,590 --> 00:04:37,030

how competitive is it to become an

93

00:04:45,590 --> 00:04:43,270

so to become an astronaut yes it's

94

00:04:50,790 --> 00:04:45,600

extremely competitive in the last group

95

00:04:53,270 --> 00:04:50,800

we just selected eight uh people in 2013

96

00:04:56,710 --> 00:04:53,280

and there was almost 7 000 people

97

00:04:58,230 --> 00:04:56,720

applied and we only picked eight and

98

00:04:59,830 --> 00:04:58,240

so what sort of exams do you have to go

99

00:05:02,390 --> 00:04:59,840

through it's a it's a pretty rigorous

100

00:05:03,590 --> 00:05:02,400

two-week uh interview process and i

101  
00:05:05,749 --> 00:05:03,600  
would say the thing that you're most

102  
00:05:07,749 --> 00:05:05,759  
nervous for is the medical tests and

103  
00:05:08,790 --> 00:05:07,759  
also the interview with a panel of about

104  
00:05:10,550 --> 00:05:08,800  
10

105  
00:05:14,469 --> 00:05:10,560  
astronauts and that always gets the

106  
00:05:14,479 --> 00:05:18,310  
all right next up we have maya

107  
00:05:18,320 --> 00:05:25,590  
is the food good do you get hot coffee

108  
00:05:25,600 --> 00:05:29,510  
house of food

109  
00:05:34,150 --> 00:05:31,909  
yes do we get hot coffee and how's the

110  
00:05:35,110 --> 00:05:34,160  
food i think was a question so this is

111  
00:05:37,430 --> 00:05:35,120  
again

112  
00:05:38,950 --> 00:05:37,440  
what our drinks come in for come in and

113  
00:05:40,870 --> 00:05:38,960

also this is a coffee drink right here

114

00:05:43,189 --> 00:05:40,880

we can just add water to it shake it up

115

00:05:45,110 --> 00:05:43,199

a little bit and we have our coffee now

116

00:05:47,110 --> 00:05:45,120

may not be might not be a starbucks

117

00:05:48,629 --> 00:05:47,120

coffee but it's pretty good

118

00:05:49,909 --> 00:05:48,639

and steve doesn't drink coffee so i'm

119

00:05:52,150 --> 00:05:49,919

gonna steal this from him right now and

120

00:05:54,710 --> 00:05:52,160

put it in my pocket

121

00:05:56,390 --> 00:05:54,720

no and the food is good too it's it's

122

00:05:58,790 --> 00:05:56,400

not like eating at home but it's still

123

00:06:03,430 --> 00:06:00,070

all right next up the question is from

124

00:06:12,469 --> 00:06:06,550

is there gravity in space if so why

125

00:06:15,350 --> 00:06:13,990

that's a great question and one that i

126

00:06:16,710 --> 00:06:15,360

didn't really understand for quite a

127

00:06:18,390 --> 00:06:16,720

while and

128

00:06:20,629 --> 00:06:18,400

steve will demonstrate here that we

129

00:06:22,790 --> 00:06:20,639

don't really feel the effect of gravity

130

00:06:25,029 --> 00:06:22,800

but yes right now the earth is pulling

131

00:06:27,510 --> 00:06:25,039

us almost as hard as it's pulling you

132

00:06:29,189 --> 00:06:27,520

but the difference is we're just falling

133

00:06:31,670 --> 00:06:29,199

around the earth so if you imagine

134

00:06:33,510 --> 00:06:31,680

taking a baseball and throwing it so

135

00:06:34,950 --> 00:06:33,520

unbelievably hard that that it would

136

00:06:36,309 --> 00:06:34,960

just always be going around the earth

137

00:06:38,150 --> 00:06:36,319

and then that baseball would be in orbit

138

00:06:39,670 --> 00:06:38,160

with us and that's really the only thing

139

00:06:42,309 --> 00:06:39,680

that the rocket did when it launched us

140

00:06:43,909 --> 00:06:42,319

is it just through us so fast that we're

141

00:06:46,150 --> 00:06:43,919

always falling around earth but never

142

00:06:47,990 --> 00:06:46,160

hitting it so it looks like we have no

143

00:06:49,430 --> 00:06:48,000

gravity and we don't feel gravity but

144

00:06:52,390 --> 00:06:49,440

we're still getting pulled by earth just

145

00:06:57,270 --> 00:06:53,670

all right thank you next up we have

146

00:07:05,029 --> 00:06:59,749

what has been your most breathtaking

147

00:07:09,110 --> 00:07:07,350

my most breathtaking moment while in

148

00:07:11,350 --> 00:07:09,120

space that's a tough one there's lots of

149

00:07:12,950 --> 00:07:11,360

them up here but for me i think it was

150

00:07:15,029 --> 00:07:12,960

on my first mission

151  
00:07:16,950 --> 00:07:15,039  
doing my first space walk

152  
00:07:19,270 --> 00:07:16,960  
and it was dark when i went out the

153  
00:07:21,270 --> 00:07:19,280  
hatch and so it was kind of all normal

154  
00:07:22,950 --> 00:07:21,280  
it felt like i was just training

155  
00:07:24,309 --> 00:07:22,960  
that's exactly like in the big pool we

156  
00:07:26,070 --> 00:07:24,319  
used for training

157  
00:07:27,510 --> 00:07:26,080  
and then i climbed up to the top of the

158  
00:07:29,270 --> 00:07:27,520  
station which the way it was built then

159  
00:07:31,350 --> 00:07:29,280  
we had a top about 50 feet above the

160  
00:07:33,189 --> 00:07:31,360  
station and that's when the sun came out

161  
00:07:35,909 --> 00:07:33,199  
and i got to see the earth below the

162  
00:07:39,830 --> 00:07:35,919  
station below me and it was so beautiful

163  
00:07:44,790 --> 00:07:41,350

all right thank you

164

00:07:46,870 --> 00:07:44,800

and this one helped us for ruth

165

00:07:48,550 --> 00:07:46,880

do you have to speak other languages on

166

00:07:55,110 --> 00:07:48,560

the international space station to

167

00:07:57,990 --> 00:07:56,469

you have to speak other languages the

168

00:08:02,790 --> 00:07:58,000

international space station to be able

169

00:08:07,270 --> 00:08:04,869

well primarily we we speak english

170

00:08:09,830 --> 00:08:07,280

however we do have one german crewmate

171

00:08:11,909 --> 00:08:09,840

and three russian crewmates and so when

172

00:08:13,749 --> 00:08:11,919

we all gather around the dinner table

173

00:08:15,430 --> 00:08:13,759

sometimes the language will just switch

174

00:08:17,430 --> 00:08:15,440

from english to russian and back to

175

00:08:19,270 --> 00:08:17,440

english and occasionally there's a

176

00:08:22,710 --> 00:08:19,280

little bit of german thrown in

177

00:08:28,150 --> 00:08:22,720

but primarily english and russian

178

00:08:30,950 --> 00:08:29,350

we have definitely been following the

179

00:08:32,389 --> 00:08:30,960

world cup we actually get a satellite

180

00:08:33,909 --> 00:08:32,399

feed and we've been watching all of the

181

00:08:35,350 --> 00:08:33,919

games and uh it's quite a blast

182

00:08:38,550 --> 00:08:35,360

tomorrow's the big one though for this

183

00:08:38,560 --> 00:08:42,949

all right next time we have alexander

184

00:08:50,389 --> 00:08:46,150

how how does time work on on the space

185

00:08:54,470 --> 00:08:52,230

how does time work that's another good

186

00:08:57,910 --> 00:08:54,480

question

187

00:08:59,590 --> 00:08:57,920

yes so we go off a gmt time which is

188

00:09:01,910 --> 00:08:59,600

greenwich means time or the same time

189

00:09:03,590 --> 00:09:01,920

that london is on and besides that

190

00:09:06,230 --> 00:09:03,600

though we have a normal day even though

191

00:09:08,550 --> 00:09:06,240

we have the 17 sorry 16 sunrises and

192

00:09:11,030 --> 00:09:08,560

sunsets every day we still go off the

193

00:09:13,590 --> 00:09:11,040

normal day we wake up about 6 6 30 we

194

00:09:16,310 --> 00:09:13,600

start work about 7 30 and we work till

195

00:09:18,389 --> 00:09:16,320

about six seven o'clock at night and

196

00:09:20,150 --> 00:09:18,399

then we take a little break and

197

00:09:22,230 --> 00:09:20,160

watch a tv or whatever you want to do in

198

00:09:23,910 --> 00:09:22,240

the evening read a book and then we go

199

00:09:25,670 --> 00:09:23,920

to bed about 10 o'clock and wake up and

200

00:09:27,509 --> 00:09:25,680

do it again the next day so that's a

201  
00:09:31,269 --> 00:09:27,519  
normal standard day but we just live off

202  
00:09:31,279 --> 00:09:36,470  
all right here's a question from elias

203  
00:09:45,910 --> 00:09:41,350  
how did it feel to launch into space

204  
00:09:47,910 --> 00:09:45,920  
actually

205  
00:09:48,870 --> 00:09:47,920  
that's a great question and

206  
00:09:50,870 --> 00:09:48,880  
really

207  
00:09:53,590 --> 00:09:50,880  
it wasn't there weren't a lot of nerves

208  
00:09:56,230 --> 00:09:53,600  
it actually felt uh it felt great it's

209  
00:09:58,310 --> 00:09:56,240  
the rocket we ride up on a russian soyuz

210  
00:10:01,509 --> 00:09:58,320  
rocket and the ride's actually really

211  
00:10:04,790 --> 00:10:01,519  
smooth but i do remember about 10

212  
00:10:06,630 --> 00:10:04,800  
seconds after liftoff i'm a pilot by my

213  
00:10:09,350 --> 00:10:06,640

profession and about 10 seconds after

214

00:10:11,910 --> 00:10:09,360

liftoff the wind noise over the outside

215

00:10:13,269 --> 00:10:11,920

of the rocket was so intense i couldn't

216

00:10:15,350 --> 00:10:13,279

believe it and it

217

00:10:17,750 --> 00:10:15,360

it dawned on me that we were already

218

00:10:19,350 --> 00:10:17,760

greater than the speed of sound and

219

00:10:22,230 --> 00:10:19,360

eight minutes after liftoff we're

220

00:10:23,990 --> 00:10:22,240

already going about 17 000 miles an hour

221

00:10:26,150 --> 00:10:24,000

so when you piece that all together in

222

00:10:28,069 --> 00:10:26,160

your brain it's completely overwhelming

223

00:10:30,630 --> 00:10:28,079

the amount of energy and speed that you

224

00:10:34,150 --> 00:10:30,640

build so quickly uh in about eight and a

225

00:10:34,160 --> 00:10:37,590

all right next we have crystal

226

00:10:41,670 --> 00:10:39,190

how do you train your body to go to

227

00:10:48,389 --> 00:10:41,680

space do you need to eat dirty foods or

228

00:10:51,509 --> 00:10:49,910

yeah

229

00:10:53,030 --> 00:10:51,519

but for being up here you don't really

230

00:10:55,350 --> 00:10:53,040

have to be anything really special but

231

00:10:57,190 --> 00:10:55,360

it really helps to have your body in

232

00:10:59,750 --> 00:10:57,200

shape and to be strong and your muscles

233

00:11:01,269 --> 00:10:59,760

strong sorry and your bones also strong

234

00:11:02,870 --> 00:11:01,279

while you're up here so that's really

235

00:11:04,949 --> 00:11:02,880

important because when you're up here

236

00:11:08,710 --> 00:11:04,959

you lose some muscle and you lose some

237

00:11:11,350 --> 00:11:08,720

bone density and so it's good to help

238

00:11:15,670 --> 00:11:11,360

start off with a really good strong body

239

00:11:20,870 --> 00:11:16,870

all right i have a question from

240

00:11:20,880 --> 00:11:27,190

is there wi-fi on the space station

241

00:11:32,069 --> 00:11:29,750

we absolutely have wi-fi on the space

242

00:11:34,790 --> 00:11:32,079

station but what our wi-fi is not

243

00:11:37,110 --> 00:11:34,800

connected to is the internet so all of

244

00:11:38,949 --> 00:11:37,120

our computers talk to each other but the

245

00:11:42,389 --> 00:11:38,959

really the only internet connectivity we

246

00:11:44,470 --> 00:11:42,399

have up here is email so we can email uh

247

00:11:46,069 --> 00:11:44,480

our family and our friends back on earth

248

00:11:47,990 --> 00:11:46,079

but we really have a lot of trouble

249

00:11:49,990 --> 00:11:48,000

getting on the internet uh which is

250

00:11:51,910 --> 00:11:50,000

quite a change when you're so used to

251  
00:11:53,509 --> 00:11:51,920  
having your your smartphone down on the

252  
00:11:55,110 --> 00:11:53,519  
ground it takes a little while to get

253  
00:11:56,630 --> 00:11:55,120  
used to it but we're getting along just

254  
00:11:58,150 --> 00:11:56,640  
fine

255  
00:12:00,630 --> 00:11:58,160  
have a lot of ketchup on your facebook

256  
00:12:04,389 --> 00:12:00,640  
page right

257  
00:12:04,399 --> 00:12:08,829  
have you ever been

258  
00:12:14,629 --> 00:12:11,190  
outside you ever been outside the space

259  
00:12:19,350 --> 00:12:17,750  
yes i have i've been on five space walks

260  
00:12:21,030 --> 00:12:19,360  
so that was five times going outside the

261  
00:12:22,470 --> 00:12:21,040  
space station and that is a great

262  
00:12:24,550 --> 00:12:22,480  
experience to do

263  
00:12:26,069 --> 00:12:24,560

again it has uh it's uh many different

264

00:12:27,829 --> 00:12:26,079

emotions go through you when you do a

265

00:12:28,870 --> 00:12:27,839

space walk one of course you have to get

266

00:12:30,629 --> 00:12:28,880

the job done so there's a little

267

00:12:32,230 --> 00:12:30,639

pressure on you to get the job done but

268

00:12:34,389 --> 00:12:32,240

two of the view is so beautiful and the

269

00:12:36,310 --> 00:12:34,399

whole idea of being outside uh and just

270

00:12:38,550 --> 00:12:36,320

seeing everything uh for yourself inside

271

00:12:40,230 --> 00:12:38,560

that suit is just fantastic but then

272

00:12:42,069 --> 00:12:40,240

again at the same time you're you're

273

00:12:43,750 --> 00:12:42,079

outside in the vacuum of space in a

274

00:12:47,509 --> 00:12:43,760

little suit and that adds a little

275

00:12:47,519 --> 00:12:52,069

all right next we have bernice

276

00:13:00,870 --> 00:12:54,870

what are the different types of jobs you

277

00:13:06,389 --> 00:13:03,110

well we do we do have to take uh just

278

00:13:08,470 --> 00:13:06,399

about any role you could imagine so

279

00:13:11,670 --> 00:13:08,480

really we act as doctors

280

00:13:13,910 --> 00:13:11,680

we act as repairmen

281

00:13:16,310 --> 00:13:13,920

we acted as plumbers earlier today

282

00:13:19,350 --> 00:13:16,320

working on our toilet

283

00:13:21,269 --> 00:13:19,360

we act as scientists so basically any

284

00:13:23,030 --> 00:13:21,279

job that you you could ever imagine we

285

00:13:25,509 --> 00:13:23,040

have to do this is not only is this our

286

00:13:28,069 --> 00:13:25,519

laboratory this is also our home this is

287

00:13:29,750 --> 00:13:28,079

our gymnasium so this is really it and

288

00:13:31,030 --> 00:13:29,760

we have to take care of it we have to

289

00:13:34,629 --> 00:13:31,040

work on it and we have to keep it

290

00:13:42,629 --> 00:13:34,639

running in tip-top shape

291

00:13:51,750 --> 00:13:44,389

how does being weightless affect the

292

00:13:54,389 --> 00:13:53,110

well yes how does it affect the body

293

00:13:56,629 --> 00:13:54,399

well the first thing being weightless is

294

00:13:58,629 --> 00:13:56,639

really fun so we we will definitely do

295

00:14:00,790 --> 00:13:58,639

almost anything to get up here

296

00:14:02,710 --> 00:14:00,800

but it does affect the body one of

297

00:14:05,030 --> 00:14:02,720

course as you notice we don't walk

298

00:14:07,829 --> 00:14:05,040

around so our muscles especially in our

299

00:14:11,509 --> 00:14:07,839

legs become weaker the bones become

300

00:14:13,590 --> 00:14:11,519

weaker and smaller and also it affects

301

00:14:15,189 --> 00:14:13,600

your immune system it isn't as strong

302

00:14:16,870 --> 00:14:15,199

either so we could get sick more easily

303

00:14:18,790 --> 00:14:16,880

up here so you have to take precautions

304

00:14:20,629 --> 00:14:18,800

for that it also makes changes in your

305

00:14:22,470 --> 00:14:20,639

eyesight so we're learning we keep

306

00:14:24,550 --> 00:14:22,480

learning new things about how it affects

307

00:14:26,150 --> 00:14:24,560

our bodies as we keep flying in space up

308

00:14:27,990 --> 00:14:26,160

here that's why we do all the science on

309

00:14:31,189 --> 00:14:28,000

ourselves at the same time but we try to

310

00:14:33,509 --> 00:14:31,199

have precautions or methods to help out

311

00:14:36,790 --> 00:14:33,519

and mitigate these issues and so we come

312

00:14:36,800 --> 00:14:40,870

all right thank you now we have evelyn

313

00:14:40,880 --> 00:14:47,829

where do you sleep

314

00:14:52,230 --> 00:14:49,430

well if you've ever gone camping and

315

00:14:54,310 --> 00:14:52,240

slept in a uh sleeping bag we all sleep

316

00:14:56,230 --> 00:14:54,320

actually in sleeping bags and we have

317

00:14:57,910 --> 00:14:56,240

little tiny bedrooms that are about the

318

00:14:59,509 --> 00:14:57,920

size of a telephone booth they're

319

00:15:01,110 --> 00:14:59,519

extremely small

320

00:15:02,870 --> 00:15:01,120

but because we're weightless it actually

321

00:15:04,870 --> 00:15:02,880

feels like they're a bit bigger

322

00:15:06,389 --> 00:15:04,880

the crazy thing is right behind us in

323

00:15:08,790 --> 00:15:06,399

the camera one of us sleeps on the

324

00:15:10,710 --> 00:15:08,800

ceiling two of us sleep on the walls and

325

00:15:12,310 --> 00:15:10,720

one of us sleeps on the floor

326

00:15:13,750 --> 00:15:12,320

and we just have our sleeping bags tied

327

00:15:15,269 --> 00:15:13,760

off to the wall so we don't float out of

328

00:15:16,389 --> 00:15:15,279

our bedrooms and actually it works out

329

00:15:21,750 --> 00:15:16,399

really well it's actually pretty

330

00:15:21,760 --> 00:15:25,110

all right

331

00:15:33,110 --> 00:15:27,509

does somebody have to drive the space

332

00:15:37,430 --> 00:15:35,509

yeah mission control is in charge of

333

00:15:39,269 --> 00:15:37,440

driving the space station so they kind

334

00:15:40,629 --> 00:15:39,279

of set it up and today we actually had

335

00:15:42,150 --> 00:15:40,639

our reboost which is kind of like

336

00:15:43,910 --> 00:15:42,160

driving we once in a while we have to

337

00:15:45,829 --> 00:15:43,920

put the station a little bit higher

338

00:15:47,750 --> 00:15:45,839

because there's just a tiny bit of drag

339

00:15:49,910 --> 00:15:47,760

out here and it lowers our orbit just a

340

00:15:51,590 --> 00:15:49,920

little bit every day and so every few

341

00:15:53,350 --> 00:15:51,600

months we go ahead and raise it back up

342

00:15:54,710 --> 00:15:53,360

and we did that today and that was all

343

00:15:56,310 --> 00:15:54,720

done for mission control so they're the

344

00:15:59,749 --> 00:15:56,320

ones in charge of driving the space

345

00:16:04,790 --> 00:16:01,430

all right and now a question from

346

00:16:10,949 --> 00:16:08,870

what experience are you working on

347

00:16:12,470 --> 00:16:10,959

what experiments are you working on

348

00:16:14,150 --> 00:16:12,480

i think the question was what yeah what

349

00:16:16,230 --> 00:16:14,160

experiments we're working on right now

350

00:16:17,990 --> 00:16:16,240

and i don't know how well a video shows

351

00:16:19,749 --> 00:16:18,000

but right now i have a sensor on my

352

00:16:21,749 --> 00:16:19,759

forehead which

353

00:16:23,350 --> 00:16:21,759

is not the most glamorous experiment but

354

00:16:25,509 --> 00:16:23,360

they're measuring my body temperature

355

00:16:28,069 --> 00:16:25,519

over a two and a half day period

356

00:16:30,230 --> 00:16:28,079

just to see what space does to your

357

00:16:32,470 --> 00:16:30,240

your sleep cycles and there's very

358

00:16:33,670 --> 00:16:32,480

interesting data there and just

359

00:16:36,470 --> 00:16:33,680

yesterday

360

00:16:38,710 --> 00:16:36,480

a couple of us were working on

361

00:16:40,870 --> 00:16:38,720

massachusetts institute of technology

362

00:16:42,550 --> 00:16:40,880

experiment involving these

363

00:16:44,389 --> 00:16:42,560

tiny satellites and we have several of

364

00:16:46,230 --> 00:16:44,399

them and they all communicate with each

365

00:16:47,990 --> 00:16:46,240

other and they'll fly around and do

366

00:16:49,110 --> 00:16:48,000

different formations and someday

367

00:16:51,350 --> 00:16:49,120

hopefully

368

00:16:52,949 --> 00:16:51,360

these little things will go outside and

369

00:16:54,790 --> 00:16:52,959

start working on our space station

370

00:16:56,310 --> 00:16:54,800

without us needing to do anything which

371

00:16:57,990 --> 00:16:56,320

would really be neat and so that's a

372

00:16:59,749 --> 00:16:58,000

super fun experiment

373

00:17:01,350 --> 00:16:59,759

we've been burning things we've been

374

00:17:03,269 --> 00:17:01,360

doing plenty of experiments on our

375

00:17:05,750 --> 00:17:03,279

bodies

376

00:17:07,669 --> 00:17:05,760

and so and uh steve just got done

377

00:17:09,909 --> 00:17:07,679

growing some lettuce and our russians

378

00:17:11,429 --> 00:17:09,919

were growing onions so it's an extremely

379

00:17:14,150 --> 00:17:11,439

lively environment up here right now

380

00:17:17,350 --> 00:17:15,429

well thank you very much i know you've

381

00:17:18,789 --> 00:17:17,360

got limited time you've got lots to do

382

00:17:20,069 --> 00:17:18,799

up there but let me ask you one last

383

00:17:21,829 --> 00:17:20,079

question what's the most surprising

384

00:17:27,429 --> 00:17:21,839

thing you guys have encountered since

385

00:17:31,190 --> 00:17:28,950

that's a good question the most

386

00:17:32,549 --> 00:17:31,200

surprising thing since we've encountered

387

00:17:33,830 --> 00:17:32,559

since we've we've encountered since

388

00:17:34,710 --> 00:17:33,840

we've been up here do you have a good

389

00:17:36,390 --> 00:17:34,720

question

390

00:17:37,590 --> 00:17:36,400

so really this may seem like an odd

391

00:17:39,510 --> 00:17:37,600

answer i've been up here for about a

392

00:17:41,350 --> 00:17:39,520

month steve's been up here for about

393

00:17:42,870 --> 00:17:41,360

three and a half months i think the most

394

00:17:44,390 --> 00:17:42,880

surprising thing for me once you get

395

00:17:46,310 --> 00:17:44,400

over being weightless and looking

396

00:17:48,470 --> 00:17:46,320

outside and the beauty of the earth it's

397

00:17:51,190 --> 00:17:48,480

just how quickly the human body adapts

398

00:17:53,270 --> 00:17:51,200

to living up here so just just after

399

00:17:55,669 --> 00:17:53,280

about two weeks i was already used to

400

00:17:57,270 --> 00:17:55,679

almost every sensation up here and so at

401  
00:17:59,029 --> 00:17:57,280  
first it was just crazy and i didn't

402  
00:18:00,870 --> 00:17:59,039  
understand my brain didn't work and my

403  
00:18:02,630 --> 00:18:00,880  
stomach didn't work but now it just

404  
00:18:04,310 --> 00:18:02,640  
feels like a regular old everyday life

405  
00:18:06,470 --> 00:18:04,320  
and i'm right back into my normal habit

406  
00:18:08,390 --> 00:18:06,480  
so really the human body is the biggest

407  
00:18:25,590 --> 00:18:08,400  
surprise for me it's an amazing piece of

408  
00:18:36,070 --> 00:18:28,470  
station this is houston acr thank you

409  
00:18:40,710 --> 00:18:38,630  
thank you ruben h fleet science center

410  
00:18:42,630 --> 00:18:40,720  
and students stationed we are now