



1  
00:00:05,510 --> 00:00:02,149  
station this is houston are you ready

2  
00:00:10,470 --> 00:00:08,390  
i am ready for the event

3  
00:00:12,310 --> 00:00:10,480  
colorado mesa university this is mission

4  
00:00:14,230 --> 00:00:12,320  
control houston please call station for

5  
00:00:16,310 --> 00:00:14,240  
a voice check

6  
00:00:20,550 --> 00:00:16,320  
station this is cardo mesa university

7  
00:00:20,560 --> 00:00:25,429  
i hear you uh pretty good

8  
00:00:30,470 --> 00:00:27,269  
okay that should work

9  
00:00:33,190 --> 00:00:30,480  
um how's it up there

10  
00:00:36,310 --> 00:00:33,200  
um i'm gonna hand you over to our first

11  
00:00:38,869 --> 00:00:36,320  
questioner hannah

12  
00:00:41,590 --> 00:00:38,879  
hi my name is hannah my question for you

13  
00:00:43,590 --> 00:00:41,600

is after spending a year viewing the air

14

00:00:45,510 --> 00:00:43,600

through your window what message or

15

00:00:52,790 --> 00:00:45,520

advice would you have for the students

16

00:00:58,790 --> 00:00:55,430

i think you know the advice i would have

17

00:01:01,430 --> 00:00:58,800

for for anyone that wants to be a uh

18

00:01:03,189 --> 00:01:01,440

you know leader in our country or for

19

00:01:04,789 --> 00:01:03,199

for that matter around the world would

20

00:01:06,149 --> 00:01:04,799

be to uh

21

00:01:06,950 --> 00:01:06,159

you know pick

22

00:01:32,310 --> 00:01:06,960

a

23

00:01:33,670 --> 00:01:32,320

to society more so uh

24

00:01:35,590 --> 00:01:33,680

you know i think the best advice i would

25

00:01:38,230 --> 00:01:35,600

give is just choose choose something

26  
00:01:44,870 --> 00:01:38,240  
that interests interests you and then uh

27  
00:01:49,590 --> 00:01:47,429  
hello my name is ryan benson and my

28  
00:01:55,590 --> 00:01:49,600  
question for you is what is the weirdest

29  
00:01:59,990 --> 00:01:59,109  
the weirdest thing i've seen in space

30  
00:02:01,670 --> 00:02:00,000  
huh

31  
00:02:03,510 --> 00:02:01,680  
interesting so

32  
00:02:05,190 --> 00:02:03,520  
i guess you're

33  
00:02:08,630 --> 00:02:05,200  
assuming maybe

34  
00:02:10,630 --> 00:02:08,640  
by looking out the window um and not

35  
00:02:13,670 --> 00:02:10,640  
inside here there's

36  
00:02:16,070 --> 00:02:13,680  
not uh you know this is a uh

37  
00:02:18,710 --> 00:02:16,080  
it's an interesting place it's uh in

38  
00:02:21,110 --> 00:02:18,720

some ways it's kind of magical you know

39

00:02:22,710 --> 00:02:21,120

with everything floating

40

00:02:24,949 --> 00:02:22,720

but um

41

00:02:25,750 --> 00:02:24,959

i wouldn't say there's much uh weirdness

42

00:02:29,990 --> 00:02:25,760

here

43

00:02:31,750 --> 00:02:30,000

out the window you know certainly uh

44

00:02:34,550 --> 00:02:31,760

you know there are times where you see

45

00:02:35,430 --> 00:02:34,560

some you know phenomena with you know

46

00:02:38,630 --> 00:02:35,440

the

47

00:02:42,150 --> 00:02:38,640

background of of stars and

48

00:02:44,470 --> 00:02:42,160

uh planets and stuff as they as they

49

00:02:46,949 --> 00:02:44,480

pass through the uh the atmosphere and

50

00:02:49,430 --> 00:02:46,959

the horizon that look uh

51  
00:02:51,350 --> 00:02:49,440  
they look uh you know kind of strange

52  
00:02:53,270 --> 00:02:51,360  
but uh you know as

53  
00:02:55,190 --> 00:02:53,280  
as they come up in the sky they start to

54  
00:02:57,509 --> 00:02:55,200  
not look normal again

55  
00:02:59,430 --> 00:02:57,519  
um

56  
00:03:04,470 --> 00:02:59,440  
so

57  
00:03:06,070 --> 00:03:04,480  
pretty spectacular things with uh you

58  
00:03:08,550 --> 00:03:06,080  
know looking out the window certainly

59  
00:03:10,309 --> 00:03:08,560  
the uh the aurora that we see sometimes

60  
00:03:12,630 --> 00:03:10,319  
actually we're seeing seeing a little

61  
00:03:15,110 --> 00:03:12,640  
bit of that right now and uh you know

62  
00:03:16,149 --> 00:03:15,120  
it's affected by the uh the activity of

63  
00:03:17,270 --> 00:03:16,159

the sun

64

00:03:19,110 --> 00:03:17,280

um

65

00:03:20,630 --> 00:03:19,120

but also some

66

00:03:22,470 --> 00:03:20,640

you know some of the rockets that have

67

00:03:24,869 --> 00:03:22,480

launched towards the space station we've

68

00:03:27,589 --> 00:03:24,879

seen that from the space station

69

00:03:33,750 --> 00:03:27,599

and uh also looks uh looks very

70

00:03:36,550 --> 00:03:35,030

question for you is what have you

71

00:03:38,309 --> 00:03:36,560

learned about your body reacting and

72

00:03:47,110 --> 00:03:38,319

adapting to the harsh environment of

73

00:03:50,789 --> 00:03:48,869

so um

74

00:03:53,350 --> 00:03:50,799

there are some things that go on with

75

00:03:56,229 --> 00:03:53,360

our physiology up here due to the

76

00:03:58,470 --> 00:03:56,239

microgravity environment mostly and uh

77

00:04:00,630 --> 00:03:58,480

you lose bone mass and

78

00:04:02,470 --> 00:04:00,640

you know some muscle all the muscle mass

79

00:04:05,110 --> 00:04:02,480

although we do have exercises that we

80

00:04:05,910 --> 00:04:05,120

try to uh prevent both of those things

81

00:04:10,949 --> 00:04:05,920

from

82

00:04:12,070 --> 00:04:10,959

immune system and and our vision

83

00:04:13,670 --> 00:04:12,080

and uh

84

00:04:15,350 --> 00:04:13,680

but you know one of the reasons we're

85

00:04:16,789 --> 00:04:15,360

here is to study those so we can learn

86

00:04:18,949 --> 00:04:16,799

more about them and

87

00:04:21,670 --> 00:04:18,959

and develop ways to

88

00:04:23,670 --> 00:04:21,680

prevent them or to do a better job at

89

00:04:25,110 --> 00:04:23,680

preventing them so

90

00:04:28,790 --> 00:04:25,120

someday

91

00:04:31,270 --> 00:04:28,800

maybe in in your future we can go on to

92

00:04:32,469 --> 00:04:31,280

mars or or other places that'll take

93

00:04:33,830 --> 00:04:32,479

much longer and that's one of the

94

00:04:36,390 --> 00:04:33,840

reasons why

95

00:04:39,430 --> 00:04:36,400

my russian colleague misha kornienko and

96

00:04:41,110 --> 00:04:39,440

i are up here for a whole year is to try

97

00:04:43,749 --> 00:04:41,120

to better understand

98

00:04:50,550 --> 00:04:43,759

what's going on with our physiology and

99

00:04:55,350 --> 00:04:53,189

hello my name is morgan and stacy my

100

00:05:00,950 --> 00:04:55,360

question for you is what is the number

101  
00:05:04,310 --> 00:05:02,150  
i'm sorry can you say that again the

102  
00:05:09,670 --> 00:05:04,320  
number one what

103  
00:05:13,590 --> 00:05:11,350  
the number one rule

104  
00:05:20,230 --> 00:05:13,600  
i think you're saying is that is that

105  
00:05:23,590 --> 00:05:21,909  
i have never been asked that question

106  
00:05:25,510 --> 00:05:23,600  
before i've been asked a lot of

107  
00:05:28,469 --> 00:05:25,520  
questions

108  
00:05:46,390 --> 00:05:31,350  
be nice to other people and eat all your

109  
00:05:49,830 --> 00:05:47,990  
hello my name is faith braley my

110  
00:05:51,749 --> 00:05:49,840  
question for you is now that humans have

111  
00:05:53,430 --> 00:05:51,759  
lived on the space station continuously

112  
00:05:58,950 --> 00:05:53,440  
for 15 years what are the plans for the

113  
00:06:03,189 --> 00:06:00,309

so

114

00:06:05,430 --> 00:06:03,199

nasa is building a new new rocket and a

115

00:06:07,510 --> 00:06:05,440

new spacecraft that

116

00:06:09,830 --> 00:06:07,520

you'd all be able to take us out of low

117

00:06:11,270 --> 00:06:09,840

earth orbit and

118

00:06:13,430 --> 00:06:11,280

you know currently we're working on

119

00:06:16,070 --> 00:06:13,440

plans towards

120

00:06:17,749 --> 00:06:16,080

going to an asteroid there are also

121

00:06:19,189 --> 00:06:17,759

other

122

00:06:22,230 --> 00:06:19,199

plans

123

00:06:23,029 --> 00:06:22,240

that we've been you know discussing

124

00:06:25,029 --> 00:06:23,039

for

125

00:06:27,670 --> 00:06:25,039

decades now since

126

00:06:29,189 --> 00:06:27,680

uh people have you know basically since

127

00:06:30,950 --> 00:06:29,199

people have flown in space we've been

128

00:06:33,350 --> 00:06:30,960

talking about uh

129

00:06:35,590 --> 00:06:33,360

going to mars and you know i hope in the

130

00:06:39,110 --> 00:06:35,600

in the future those plans will be

131

00:06:41,110 --> 00:06:39,120

more solidified um but i think between

132

00:06:43,590 --> 00:06:41,120

you know what nasa's doing in the forms

133

00:06:46,390 --> 00:06:43,600

of you know developing a vehicle for

134

00:06:50,469 --> 00:06:46,400

exploration and to you know to go to

135

00:06:51,909 --> 00:06:50,479

other places maybe the moon maybe mars

136

00:06:55,029 --> 00:06:51,919

to retrieve

137

00:06:57,110 --> 00:06:55,039

and do science with an asteroid is also

138

00:06:59,430 --> 00:06:57,120

part of the plan like i said there's

139

00:07:01,350 --> 00:06:59,440

also some very exciting things go on

140

00:07:03,029 --> 00:07:01,360

going on in the uh

141

00:07:07,110 --> 00:07:03,039

you know the commercial

142

00:07:09,270 --> 00:07:07,120

uh space sector where where nasa has uh

143

00:07:11,749 --> 00:07:09,280

you know has partnered or

144

00:07:14,710 --> 00:07:11,759

basically hired certain companies to

145

00:07:16,870 --> 00:07:14,720

provide commercial services to the

146

00:07:19,589 --> 00:07:16,880

international space station and we have

147

00:07:22,950 --> 00:07:19,599

we have a vehicle here

148

00:07:23,749 --> 00:07:22,960

from from a company that that built a

149

00:07:26,790 --> 00:07:23,759

this

150

00:07:29,350 --> 00:07:26,800

resupply craft called cygnus and there's

151  
00:07:31,430 --> 00:07:29,360  
also companies like spacex that are

152  
00:07:33,629 --> 00:07:31,440  
developing uh

153  
00:07:36,390 --> 00:07:33,639  
in addition to

154  
00:07:38,390 --> 00:07:36,400  
unmanned vehicles also

155  
00:07:40,629 --> 00:07:38,400  
the ability to take astronauts to and

156  
00:07:43,430 --> 00:07:40,639  
from the international space station or

157  
00:07:45,589 --> 00:07:43,440  
other places in space so i think the the

158  
00:07:47,749 --> 00:07:45,599  
the future of space

159  
00:07:49,830 --> 00:07:47,759  
both in the commercial

160  
00:07:54,950 --> 00:07:49,840  
realm but also within the government and

161  
00:07:59,510 --> 00:07:57,270  
hello my name is alyssa haynes my

162  
00:08:00,950 --> 00:07:59,520  
question for you is what inspired you to

163  
00:08:06,710 --> 00:08:00,960

risk your life to go to space and

164

00:08:11,110 --> 00:08:09,430

well for one i think it's it's important

165

00:08:12,790 --> 00:08:11,120

you know i think what we're doing here

166

00:08:14,710 --> 00:08:12,800

is

167

00:08:17,909 --> 00:08:14,720

you know pushing the boundaries of of

168

00:08:19,189 --> 00:08:17,919

what people are capable of doing from a

169

00:08:23,749 --> 00:08:19,199

uh

170

00:08:25,830 --> 00:08:23,759

you know the

171

00:08:28,469 --> 00:08:25,840

human performance

172

00:08:30,950 --> 00:08:28,479

standpoint as far as living in

173

00:08:33,670 --> 00:08:30,960

in this environment which is uh

174

00:08:35,670 --> 00:08:33,680

which is pretty harsh so

175

00:08:38,709 --> 00:08:35,680

you know the reason i would risk

176  
00:08:40,469 --> 00:08:38,719  
basically everything um

177  
00:08:42,550 --> 00:08:40,479  
is you know

178  
00:08:44,550 --> 00:08:42,560  
as far as you know like a personal you

179  
00:08:45,430 --> 00:08:44,560  
know personal safety and per personal

180  
00:08:48,230 --> 00:08:45,440  
health

181  
00:08:49,430 --> 00:08:48,240  
perspective is because i do believe in

182  
00:08:52,790 --> 00:08:49,440  
it and i think it's important and i

183  
00:08:54,389 --> 00:08:52,800  
think by doing things like this it uh

184  
00:08:56,150 --> 00:08:54,399  
you know it it provides

185  
00:08:58,710 --> 00:08:56,160  
a uh

186  
00:08:59,430 --> 00:08:58,720  
you know a stimulus to our economy and

187  
00:09:01,269 --> 00:08:59,440  
uh

188  
00:09:03,269 --> 00:09:01,279

you know causes us to develop things

189

00:09:05,430 --> 00:09:03,279

that are you know

190

00:09:07,190 --> 00:09:05,440

we couldn't even imagine

191

00:09:09,190 --> 00:09:07,200

um

192

00:09:11,430 --> 00:09:09,200

you know years ago for instance you know

193

00:09:12,550 --> 00:09:11,440

when we made the computers to land on

194

00:09:13,990 --> 00:09:12,560

the moon

195

00:09:16,230 --> 00:09:14,000

uh we had to make them small and

196

00:09:18,150 --> 00:09:16,240

powerful and you know by

197

00:09:20,150 --> 00:09:18,160

continuing to make small and powerful

198

00:09:22,870 --> 00:09:20,160

computers today you have

199

00:09:24,790 --> 00:09:22,880

you know a computer in your pocket

200

00:09:26,310 --> 00:09:24,800

perhaps in the form of your telephone

201  
00:09:29,190 --> 00:09:26,320  
that is much more

202  
00:09:31,110 --> 00:09:29,200  
um it's something that the men that

203  
00:09:33,670 --> 00:09:31,120  
walked on the moon

204  
00:09:36,630 --> 00:09:33,680  
uh couldn't even have imagined so you

205  
00:09:37,350 --> 00:09:36,640  
know i think that's why i do this plus

206  
00:09:42,710 --> 00:09:37,360  
it's

207  
00:09:49,030 --> 00:09:45,910  
hello my name is brody and my question

208  
00:09:56,470 --> 00:09:49,040  
for you is what are the procedures if

209  
00:10:01,430 --> 00:09:59,670  
so we have a pretty uh sophisticated

210  
00:10:04,550 --> 00:10:01,440  
communication system and we do have

211  
00:10:07,509 --> 00:10:04,560  
procedures that that cover that we have

212  
00:10:09,269 --> 00:10:07,519  
various ways to to talk to the ground

213  
00:10:12,230 --> 00:10:09,279

and

214

00:10:14,870 --> 00:10:12,240

we our systems are redundant so that

215

00:10:17,430 --> 00:10:14,880

means if one of them fails we have a

216

00:10:19,990 --> 00:10:17,440

completely identical

217

00:10:23,509 --> 00:10:20,000

other one that we can use

218

00:10:25,430 --> 00:10:23,519

and then if both of those fail we have a

219

00:10:26,630 --> 00:10:25,440

other system that we can communicate

220

00:10:29,829 --> 00:10:26,640

that is

221

00:10:34,870 --> 00:10:31,430

and we also have the ability to

222

00:10:35,910 --> 00:10:34,880

communicate with a vhf radio that's on

223

00:10:40,389 --> 00:10:35,920

the

224

00:10:42,150 --> 00:10:40,399

when we're over ground sites not

225

00:10:44,630 --> 00:10:42,160

through our normal way which is through

226

00:10:46,550 --> 00:10:44,640

satellites it's also a ham radio on

227

00:10:49,590 --> 00:10:46,560

board that we could really use if we had

228

00:10:51,509 --> 00:10:49,600

no other alternative i've had situations

229

00:10:53,590 --> 00:10:51,519

up here when we have lost communication

230

00:10:55,509 --> 00:10:53,600

with the ground and we've you know

231

00:10:56,790 --> 00:10:55,519

worked through the procedures and it's

232

00:10:59,350 --> 00:10:56,800

gotten calm

233

00:11:01,509 --> 00:10:59,360

the ability to talk to the ground back

234

00:11:03,430 --> 00:11:01,519

at times it hasn't even been issues with

235

00:11:04,389 --> 00:11:03,440

the space station it's been issues with

236

00:11:06,389 --> 00:11:04,399

the uh

237

00:11:07,430 --> 00:11:06,399

you know the hardware on the ground that

238

00:11:09,670 --> 00:11:07,440

uh

239

00:11:11,110 --> 00:11:09,680

that allow us to communicate with them

240

00:11:13,590 --> 00:11:11,120

so uh

241

00:11:15,910 --> 00:11:13,600

we have uh nasa's pretty good at having

242

00:11:20,310 --> 00:11:15,920

a lot of backups to the uh

243

00:11:25,829 --> 00:11:23,430

hello my name is alex my question for

244

00:11:32,230 --> 00:11:25,839

you is how does the vacuum of space

245

00:11:38,230 --> 00:11:36,630

so a lot of the communication like

246

00:11:40,829 --> 00:11:38,240

well i'll answer this in two ways you

247

00:11:44,790 --> 00:11:40,839

know there's the radio communication and

248

00:11:47,829 --> 00:11:44,800

those uh electromagnetic signals travel

249

00:11:50,150 --> 00:11:47,839

great in the vacuum of space there is no

250

00:11:52,310 --> 00:11:50,160

problem at all and

251  
00:11:54,310 --> 00:11:52,320  
you know that's how a cell phone might

252  
00:11:57,509 --> 00:11:54,320  
go from

253  
00:12:00,150 --> 00:11:57,519  
uh your hand to a cell phone tower which

254  
00:12:02,150 --> 00:12:00,160  
would eventually go to a satellite dish

255  
00:12:04,629 --> 00:12:02,160  
which would go to a satellite and maybe

256  
00:12:07,110 --> 00:12:04,639  
back to the ground and when it's going

257  
00:12:09,350 --> 00:12:07,120  
through to the satellite it goes through

258  
00:12:11,990 --> 00:12:09,360  
the vacuum of space and it's just works

259  
00:12:16,470 --> 00:12:13,990  
however you know in a vacuum there is no

260  
00:12:17,990 --> 00:12:16,480  
air so sound waves wouldn't travel you

261  
00:12:20,150 --> 00:12:18,000  
know if there was a

262  
00:12:23,110 --> 00:12:20,160  
an astronaut

263  
00:12:25,350 --> 00:12:23,120

you know on the outside of this

264

00:12:27,829 --> 00:12:25,360

module in a spacesuit

265

00:12:30,310 --> 00:12:27,839

and i banged on the side of it there's

266

00:12:31,829 --> 00:12:30,320

no way that he would ever be he or she

267

00:12:32,949 --> 00:12:31,839

would ever be able to hear me because

268

00:12:36,790 --> 00:12:32,959

those

269

00:12:39,269 --> 00:12:36,800

travel through a vacuum because they

270

00:12:40,550 --> 00:12:39,279

sound waves need something to travel on

271

00:12:42,870 --> 00:12:40,560

essentially

272

00:12:44,710 --> 00:12:42,880

and that is you know air

273

00:12:47,190 --> 00:12:44,720

so uh

274

00:12:49,110 --> 00:12:47,200

yeah so from our perspective it works

275

00:12:51,350 --> 00:12:49,120

pretty well because we use radio

276

00:12:52,710 --> 00:12:51,360

communication when we're outside and we

277

00:12:56,949 --> 00:12:52,720

wouldn't want to be outside the space

278

00:13:02,150 --> 00:12:59,750

hello my name is kai stavalepsi and i'm

279

00:13:05,110 --> 00:13:02,160

i'm clifford and i'm titus

280

00:13:07,269 --> 00:13:05,120

our question for you is how does it feel

281

00:13:08,949 --> 00:13:07,279

to float 24 7.

282

00:13:13,829 --> 00:13:08,959

sometimes do you just want to put your

283

00:13:19,269 --> 00:13:16,710

yeah so you know floating is definitely

284

00:13:22,069 --> 00:13:19,279

uh fun but

285

00:13:24,550 --> 00:13:22,079

it makes a lot of things we do more

286

00:13:25,829 --> 00:13:24,560

complicated and uh

287

00:13:29,430 --> 00:13:25,839

and harder

288

00:13:31,670 --> 00:13:29,440

um you definitely you know over time

289

00:13:34,150 --> 00:13:31,680

the more you're here you definitely get

290

00:13:35,829 --> 00:13:34,160

get better at it and you can move around

291

00:13:38,310 --> 00:13:35,839

very easily

292

00:13:39,750 --> 00:13:38,320

with your feet and it's almost in a lot

293

00:13:42,870 --> 00:13:39,760

of ways like

294

00:13:45,189 --> 00:13:42,880

you know i i can kind of walk

295

00:13:48,470 --> 00:13:45,199

around the space station but i

296

00:13:51,990 --> 00:13:48,480

definitely miss a lot of things that

297

00:13:53,590 --> 00:13:52,000

that gravity provide for us

298

00:13:55,509 --> 00:13:53,600

the other thing about gravity is that

299

00:13:57,990 --> 00:13:55,519

you might not expect is because you're

300

00:13:59,110 --> 00:13:58,000

holding yourself up against gravity all

301  
00:14:01,030 --> 00:13:59,120  
day long

302  
00:14:03,269 --> 00:14:01,040  
when you when it's time to go to sleep

303  
00:14:04,790 --> 00:14:03,279  
and you go lie down or even just sitting

304  
00:14:07,750 --> 00:14:04,800  
down and on a

305  
00:14:10,710 --> 00:14:07,760  
comfortable couch

306  
00:14:11,990 --> 00:14:10,720  
it's relaxing here this position i'm in

307  
00:14:14,230 --> 00:14:12,000  
now

308  
00:14:16,150 --> 00:14:14,240  
talking to you or or

309  
00:14:18,470 --> 00:14:16,160  
you know doing some other activity is

310  
00:14:20,629 --> 00:14:18,480  
the same kind of position i'm going to

311  
00:14:22,550 --> 00:14:20,639  
be in when it's time to go to sleep

312  
00:14:24,949 --> 00:14:22,560  
and you just close your eyes and try to

313  
00:14:27,189 --> 00:14:24,959

go to sleep so there's no real change in

314

00:14:28,389 --> 00:14:27,199

how you feel

315

00:14:31,189 --> 00:14:28,399

from a

316

00:14:33,590 --> 00:14:31,199

comfort or relaxation perspective it's

317

00:14:35,509 --> 00:14:33,600

all the same all the time you're always

318

00:14:37,910 --> 00:14:35,519

just floating so there are some things

319

00:14:40,069 --> 00:14:37,920

about gravity that you might not

320

00:14:43,350 --> 00:14:40,079

might not think of that make gravity

321

00:14:47,750 --> 00:14:45,829

hello my name is hannah kuhn my question

322

00:14:50,069 --> 00:14:47,760

for you is since station is a

323

00:14:51,750 --> 00:14:50,079

microgravity environment can you explain

324

00:14:58,470 --> 00:14:51,760

how it feels to breathe your earth's

325

00:14:58,480 --> 00:15:02,230

can you ask that one more time

326

00:15:06,710 --> 00:15:04,550

since station is a microgravity

327

00:15:08,949 --> 00:15:06,720

environment can you explain how it feels

328

00:15:18,069 --> 00:15:08,959

to re-enter earth's atmosphere and the

329

00:15:23,189 --> 00:15:21,350

i think your question

330

00:15:28,790 --> 00:15:23,199

has to do with the space station

331

00:15:28,800 --> 00:15:34,949

just you

332

00:15:34,959 --> 00:15:40,710

how does it feel when you well so

333

00:15:44,310 --> 00:15:43,269

oh when we re-enter the earth i'm sorry

334

00:15:45,829 --> 00:15:44,320

it's

335

00:15:47,430 --> 00:15:45,839

having a little bit of a hard time

336

00:15:49,509 --> 00:15:47,440

hearing you how does it feel when we

337

00:15:52,949 --> 00:15:49,519

re-enter so yeah we're floating around

338

00:15:56,150 --> 00:15:52,959

24 hours a day seven days a week in my

339

00:15:58,069 --> 00:15:56,160

case for for almost a year up here

340

00:15:59,189 --> 00:15:58,079

and when you re-enter the atmosphere you

341

00:16:01,910 --> 00:15:59,199

definitely

342

00:16:03,670 --> 00:16:01,920

feel gravity's full effect

343

00:16:07,110 --> 00:16:03,680

um

344

00:16:08,710 --> 00:16:07,120

we're going 17 500 miles an hour

345

00:16:11,670 --> 00:16:08,720

and uh

346

00:16:14,550 --> 00:16:11,680

we have to slow down and the and the way

347

00:16:17,030 --> 00:16:14,560

the capsule slows down is with friction

348

00:16:19,269 --> 00:16:17,040

uh hitting the atmosphere

349

00:16:21,990 --> 00:16:19,279

and because of that there's a lot of

350

00:16:23,430 --> 00:16:22,000

deceleration so we'll feel you know five

351

00:16:26,470 --> 00:16:23,440

six times

352

00:16:28,069 --> 00:16:26,480

maybe the force of of gravity as we're

353

00:16:30,470 --> 00:16:28,079

we're re-entering the atmosphere in the

354

00:16:32,710 --> 00:16:30,480

soyuz and it makes it hard to move it's

355

00:16:34,550 --> 00:16:32,720

kind of hard to breathe for a while

356

00:16:37,110 --> 00:16:34,560

but uh and then when you get on the

357

00:16:40,470 --> 00:16:37,120

ground you definitely feel you know

358

00:16:42,470 --> 00:16:40,480

pretty heavy for a while and but after a

359

00:16:46,949 --> 00:16:42,480

few days you get used to it and it

360

00:16:51,430 --> 00:16:48,829

hello my name

361

00:16:53,509 --> 00:16:51,440

is my question for you is if you had the

362

00:17:01,110 --> 00:16:53,519

choice to live on mars for most of your

363

00:17:07,270 --> 00:17:04,549

um so if we're talking about mars that

364

00:17:09,429 --> 00:17:07,280

was somehow

365

00:17:11,990 --> 00:17:09,439

what i think is referred to as terror

366

00:17:14,870 --> 00:17:12,000

forming in other words you take mars

367

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

and you affect its uh

368

00:17:19,429 --> 00:17:17,280

you know what minimal atmosphere it has

369

00:17:22,150 --> 00:17:19,439

and somehow make it into an earth-like

370

00:17:24,150 --> 00:17:22,160

atmosphere then i would uh

371

00:17:26,150 --> 00:17:24,160

i would definitely consider it but if

372

00:17:28,309 --> 00:17:26,160

you're asking if i would go to mars like

373

00:17:31,270 --> 00:17:28,319

it is now and live

374

00:17:33,029 --> 00:17:31,280

in a uh in some kind of a habitat on the

375

00:17:34,230 --> 00:17:33,039

surface that would probably be very

376  
00:17:37,830 --> 00:17:34,240  
similar

377  
00:17:39,669 --> 00:17:37,840  
to this space station and

378  
00:17:40,390 --> 00:17:39,679  
when you went outside you'd have to be

379  
00:17:41,750 --> 00:17:40,400  
in

380  
00:17:44,390 --> 00:17:41,760  
you know a

381  
00:17:47,190 --> 00:17:44,400  
space suit probably not exactly like the

382  
00:17:48,950 --> 00:17:47,200  
ones we wear when we go on spacewalks

383  
00:17:50,710 --> 00:17:48,960  
here but something that would protect

384  
00:17:53,590 --> 00:17:50,720  
you from the fact that there is very

385  
00:17:55,590 --> 00:17:53,600  
little atmosphere on mars very low

386  
00:17:58,630 --> 00:17:55,600  
atmospheric pressure

387  
00:18:01,270 --> 00:17:58,640  
a atmosphere that is not

388  
00:18:02,549 --> 00:18:01,280

you know we cannot breathe um and

389

00:18:04,870 --> 00:18:02,559

survive

390

00:18:07,510 --> 00:18:04,880

i would say no i wouldn't want to spend

391

00:18:08,950 --> 00:18:07,520

uh you know most of the rest of my life

392

00:18:10,710 --> 00:18:08,960

there i definitely

393

00:18:12,950 --> 00:18:10,720

you know consider

394

00:18:14,710 --> 00:18:12,960

visiting um

395

00:18:16,470 --> 00:18:14,720

but i wouldn't uh

396

00:18:18,630 --> 00:18:16,480

you know want to give up everything

397

00:18:20,390 --> 00:18:18,640

earth has to offer to

398

00:18:25,990 --> 00:18:20,400

live inside of a

399

00:18:30,549 --> 00:18:28,230

hello my name is dija my question for

400

00:18:38,310 --> 00:18:30,559

you is what were your goals when you

401  
00:18:43,510 --> 00:18:41,270  
i was when i was in like middle school

402  
00:18:47,029 --> 00:18:43,520  
and high school i was interested in uh

403  
00:18:50,310 --> 00:18:47,039  
in being a medical doctor but my

404  
00:18:53,190 --> 00:18:50,320  
my grades and my study habits were never

405  
00:18:54,070 --> 00:18:53,200  
quite uh good enough at that time

406  
00:18:56,470 --> 00:18:54,080  
and then

407  
00:18:58,710 --> 00:18:56,480  
you know later on um

408  
00:18:59,590 --> 00:18:58,720  
after i graduated from high school

409  
00:19:18,950 --> 00:18:59,600  
i

410  
00:19:21,190 --> 00:19:18,960  
school and

411  
00:19:23,830 --> 00:19:21,200  
and to kind of get you know moving in

412  
00:19:24,789 --> 00:19:23,840  
the in the right direction with a sense

413  
00:19:25,990 --> 00:19:24,799

of

414

00:19:27,350 --> 00:19:26,000

purpose

415

00:19:28,230 --> 00:19:27,360

and

416

00:19:31,110 --> 00:19:28,240

you know

417

00:19:32,950 --> 00:19:31,120

times flown by and now

418

00:19:35,510 --> 00:19:32,960

it's been uh

419

00:19:36,789 --> 00:19:35,520

you know over 30 years and and i'm you

420

00:19:38,630 --> 00:19:36,799

know still

421

00:19:40,789 --> 00:19:38,640

still going at it in the you know

422

00:19:44,390 --> 00:19:40,799

aerospace business and and still

423

00:19:46,150 --> 00:19:44,400

enjoying it and and feel like it's uh

424

00:19:48,950 --> 00:19:46,160

you know really been a great uh

425

00:19:51,430 --> 00:19:48,960

privilege to to be able to do this job

426

00:20:03,510 --> 00:19:51,440

and also to serve my country in the

427

00:20:08,390 --> 00:20:06,789

so she just said thank you

428

00:20:16,310 --> 00:20:08,400

okay thank you so much for talking with

429

00:20:19,510 --> 00:20:17,990

well it was my pleasure i guess you

430

00:20:21,029 --> 00:20:19,520

don't you guys are

431

00:20:23,029 --> 00:20:21,039

if you don't have any more questions

432

00:20:25,110 --> 00:20:23,039

yeah i really enjoyed uh

433

00:20:29,430 --> 00:20:25,120

this conversation today but uh i think

434

00:20:37,669 --> 00:20:32,470

if we i don't know wait

435

00:20:46,230 --> 00:20:39,430

keep going okay we'll get you another

436

00:20:49,350 --> 00:20:47,590

all right go ahead

437

00:20:51,510 --> 00:20:49,360

hello scott kelly my name is joel

438

00:20:56,870 --> 00:20:51,520

doherty my question for you is can you

439

00:21:01,830 --> 00:20:59,270

so i wake up we have a morning

440

00:21:05,909 --> 00:21:01,840

conference where we talk to the ground

441

00:21:08,630 --> 00:21:05,919

about the plan of the day and

442

00:21:10,549 --> 00:21:08,640

and i usually get up about an hour to 45

443

00:21:13,350 --> 00:21:10,559

minutes before that i don't get up at

444

00:21:15,029 --> 00:21:13,360

our normal wake time when they say for

445

00:21:16,789 --> 00:21:15,039

us to get up which is six i usually

446

00:21:18,390 --> 00:21:16,799

sleep in a little bit

447

00:21:20,549 --> 00:21:18,400

uh

448

00:21:24,149 --> 00:21:20,559

i go to sleep later too than than i'm

449

00:21:25,909 --> 00:21:24,159

supposed to don't tell anybody

450

00:21:28,549 --> 00:21:25,919

but

451  
00:21:30,789 --> 00:21:28,559  
we do that conference and then we have

452  
00:21:32,630 --> 00:21:30,799  
you know a bunch of different activities

453  
00:21:35,510 --> 00:21:32,640  
and it depends on the day like today we

454  
00:21:38,070 --> 00:21:35,520  
were working on a carbon dioxide removal

455  
00:21:39,110 --> 00:21:38,080  
system we have one of them was broken

456  
00:21:42,470 --> 00:21:39,120  
and

457  
00:21:43,270 --> 00:21:42,480  
fixing that

458  
00:21:44,789 --> 00:21:43,280  
and

459  
00:21:46,070 --> 00:21:44,799  
we don't know if it's fixed but

460  
00:21:48,710 --> 00:21:46,080  
hopefully we'll find out here pretty

461  
00:21:51,830 --> 00:21:48,720  
soon but uh sometimes you do science

462  
00:21:53,190 --> 00:21:51,840  
experiments um the day before i spent a

463  
00:21:55,110 --> 00:21:53,200

lot of time

464

00:21:57,350 --> 00:21:55,120

um with this

465

00:21:58,470 --> 00:21:57,360

combustion rack here putting some new

466

00:22:01,590 --> 00:21:58,480

fuel

467

00:22:03,270 --> 00:22:01,600

and igniters in it so it can do

468

00:22:04,950 --> 00:22:03,280

some great

469

00:22:07,270 --> 00:22:04,960

science on

470

00:22:08,870 --> 00:22:07,280

combustion

471

00:22:11,350 --> 00:22:08,880

technology and

472

00:22:14,070 --> 00:22:11,360

you know understand the combustion

473

00:22:15,510 --> 00:22:14,080

process better and basic uh

474

00:22:17,590 --> 00:22:15,520

science and sometimes we're doing

475

00:22:20,710 --> 00:22:17,600

medical tests uh

476

00:22:23,350 --> 00:22:20,720

you know recently we did uh the other my

477

00:22:25,350 --> 00:22:23,360

yesterday actually while i was

478

00:22:27,510 --> 00:22:25,360

you know working on other things uh

479

00:22:30,390 --> 00:22:27,520

russian cosmonauts were doing a uh a

480

00:22:31,430 --> 00:22:30,400

spacewalk and we have those occasionally

481

00:22:42,870 --> 00:22:31,440

uh

482

00:22:43,750 --> 00:22:42,880

routine we do extra we exercise every

483

00:22:45,909 --> 00:22:43,760

day

484

00:22:48,710 --> 00:22:45,919

um you know sometimes we do things like

485

00:22:50,230 --> 00:22:48,720

this have the opportunity to talk to

486

00:22:52,149 --> 00:22:50,240

talk to you guys

487

00:22:53,990 --> 00:22:52,159

um and then about you know seven o'clock

488

00:22:56,310 --> 00:22:54,000

at night so we get up at you know around

489

00:22:57,830 --> 00:22:56,320

6 30 in the morning or at least i do

490

00:23:00,230 --> 00:22:57,840

and then uh

491

00:23:01,990 --> 00:23:00,240

wrap up our day at around 7 00

492

00:23:03,350 --> 00:23:02,000

p.m and have another conference with the

493

00:23:06,789 --> 00:23:03,360

ground and then

494

00:23:09,110 --> 00:23:06,799

uh supposed to go to sleep at about 9 30

495

00:23:10,710 --> 00:23:09,120

but i generally don't

496

00:23:13,669 --> 00:23:10,720

all right

497

00:23:15,510 --> 00:23:13,679

okay we can just wait

498

00:23:17,029 --> 00:23:15,520

all right everybody bye-bye all right

499

00:23:19,270 --> 00:23:17,039

we'll tell you bye and thank you so much

500

00:23:23,270 --> 00:23:19,280

again for talking with us today

501

00:23:30,950 --> 00:23:24,789

all right my pleasure

502

00:23:37,110 --> 00:23:33,830

station this is houston acr thank you

503

00:23:39,190 --> 00:23:37,120

that concludes our event

504

00:23:41,430 --> 00:23:39,200

thank you colorado mesa university