



1
00:00:07,990 --> 00:00:04,150
station this is houston are you ready

2
00:00:11,110 --> 00:00:09,669
houston station we're ready for the

3
00:00:13,190 --> 00:00:11,120
event

4
00:00:15,669 --> 00:00:13,200
o'henny middle school this is mission

5
00:00:17,910 --> 00:00:15,679
control houston please call station for

6
00:00:20,230 --> 00:00:17,920
a voice check

7
00:00:22,310 --> 00:00:20,240
station this is congressman lamar smith

8
00:00:27,589 --> 00:00:22,320
at little henry middle school in austin

9
00:00:30,310 --> 00:00:29,109
congressman smith we've got you loud and

10
00:00:32,470 --> 00:00:30,320
clear welcome aboard the international

11
00:00:34,069 --> 00:00:32,480
space station

12
00:00:38,150 --> 00:00:34,079
great we're looking forward to this

13
00:00:41,430 --> 00:00:39,830

and we'll proceed with the questions by

14

00:00:44,069 --> 00:00:41,440

the students here at o'henry middle

15

00:00:45,430 --> 00:00:44,079

school

16

00:00:47,590 --> 00:00:45,440

good morning space station this is

17

00:00:49,350 --> 00:00:47,600

matthew nelson with henry middle school

18

00:00:51,430 --> 00:00:49,360

we have several future astronauts and

19

00:00:54,389 --> 00:00:51,440

scientists have some questions to ask

20

00:01:06,950 --> 00:00:54,399

you guys today first up is levon

21

00:01:10,710 --> 00:01:09,109

my name is levon and my question is for

22

00:01:12,310 --> 00:01:10,720

dan

23

00:01:17,109 --> 00:01:12,320

how long does it take to get in your

24

00:01:19,830 --> 00:01:18,630

well that depends on the spacesuit

25

00:01:21,749 --> 00:01:19,840

you're talking about if you're talking

26

00:01:24,070 --> 00:01:21,759

about the ones that we typically wear

27

00:01:25,670 --> 00:01:24,080

when we launch and enter on a soyuz

28

00:01:27,590 --> 00:01:25,680

capsule which are very similar to the

29

00:01:29,429 --> 00:01:27,600

ones we wore on the space shuttle

30

00:01:31,270 --> 00:01:29,439

it probably takes about 20 or 30 minutes

31

00:01:32,710 --> 00:01:31,280

to actually put it on and then we spend

32

00:01:35,109 --> 00:01:32,720

some time actually checking it out to

33

00:01:37,429 --> 00:01:35,119

make sure that it's uh it's leak tight

34

00:01:39,510 --> 00:01:37,439

and the communications

35

00:01:41,670 --> 00:01:39,520

system in the suit works if you're

36

00:01:43,030 --> 00:01:41,680

talking about the spacesuit that we use

37

00:01:44,630 --> 00:01:43,040

to go outside when we're doing a

38

00:01:46,550 --> 00:01:44,640

spacewalk on space station that one's a

39

00:01:49,030 --> 00:01:46,560

little bit more complicated and it'll

40

00:01:51,030 --> 00:01:49,040

take over an hour to get that one

41

00:02:01,429 --> 00:01:51,040

completely donned and checked out and

42

00:02:06,709 --> 00:02:04,310

my name is ireland and i and my question

43

00:02:14,229 --> 00:02:06,719

is for dawn how much room do you have to

44

00:02:18,869 --> 00:02:15,910

we we have

45

00:02:21,510 --> 00:02:18,879

a lot of volume up here on space station

46

00:02:23,990 --> 00:02:21,520

it's equivalent to living in a big house

47

00:02:25,910 --> 00:02:24,000

and and it's divided instead of being

48

00:02:28,630 --> 00:02:25,920

divided into rooms it's divided into

49

00:02:36,309 --> 00:02:28,640

modules and we could float all around or

50

00:02:40,550 --> 00:02:38,710

my name is jack and my question is for

51

00:02:47,430 --> 00:02:40,560

andre

52

00:02:51,270 --> 00:02:49,430

this is a very essential question a very

53

00:02:53,110 --> 00:02:51,280

good question actually and a lot of

54

00:02:55,589 --> 00:02:53,120

people think about that

55

00:02:58,390 --> 00:02:55,599

well we don't have weight so we have to

56

00:03:00,550 --> 00:02:58,400

to to simulate or we have to replace

57

00:03:02,710 --> 00:03:00,560

that and we do that with airflow so you

58

00:03:04,070 --> 00:03:02,720

have to put on some kind of vacuum

59

00:03:05,750 --> 00:03:04,080

cleaner

60

00:03:07,350 --> 00:03:05,760

in order to get everything in the right

61

00:03:09,190 --> 00:03:07,360

place and of course you have to hold

62

00:03:11,990 --> 00:03:09,200

yourself as well to stay in the right

63

00:03:14,550 --> 00:03:12,000

position so it's it's a

64

00:03:17,990 --> 00:03:14,560

little endeavor to go to the restroom in

65

00:03:22,630 --> 00:03:18,000

space but it works all fine

66

00:03:27,670 --> 00:03:25,589

um my name is amity and my question is

67

00:03:30,149 --> 00:03:27,680

for dan

68

00:03:31,910 --> 00:03:30,159

what process do you go through and what

69

00:03:37,990 --> 00:03:31,920

certifications do you need to be

70

00:03:40,390 --> 00:03:39,270

okay probably the first and most

71

00:03:41,990 --> 00:03:40,400

important thing you have to do is you

72

00:03:44,630 --> 00:03:42,000

have to apply for it you actually have

73

00:03:46,390 --> 00:03:44,640

to send an application to nasa

74

00:03:48,229 --> 00:03:46,400

to to compete with lots and lots of

75

00:03:49,910 --> 00:03:48,239

other people that want to do this

76

00:03:52,390 --> 00:03:49,920

um at the very beginning of the space

77

00:03:54,390 --> 00:03:52,400

program almost everybody that flew uh

78

00:03:56,869 --> 00:03:54,400

were test pilots military test pilots

79

00:03:58,630 --> 00:03:56,879

nowadays uh they represent uh actually a

80

00:04:01,670 --> 00:03:58,640

minority of all the people that actually

81

00:04:04,630 --> 00:04:01,680

fly so we've got scientists engineers

82

00:04:06,550 --> 00:04:04,640

we've got physicians like andre here uh

83

00:04:08,149 --> 00:04:06,560

we've got uh pilots still of course of

84

00:04:09,830 --> 00:04:08,159

course we even have teachers so there

85

00:04:11,750 --> 00:04:09,840

are many many different people i think

86

00:04:13,830 --> 00:04:11,760

the thing that we all have in common all

87

00:04:15,350 --> 00:04:13,840

of us have completed college and

88

00:04:17,590 --> 00:04:15,360

sometimes

89

00:04:19,749 --> 00:04:17,600

a couple of colleges or certainly more

90

00:04:22,150 --> 00:04:19,759

years than uh the initial bachelor's

91

00:04:24,230 --> 00:04:22,160

degree would be uh but but everybody

92

00:04:26,230 --> 00:04:24,240

that gets picked to be an astronaut

93

00:04:28,629 --> 00:04:26,240

typically did very well at the things

94

00:04:31,270 --> 00:04:28,639

that they they did before so they were

95

00:04:32,230 --> 00:04:31,280

whether they were pilots or or engineers

96

00:04:34,390 --> 00:04:32,240

they were

97

00:04:36,469 --> 00:04:34,400

very good at that and the key to being

98

00:04:38,710 --> 00:04:36,479

good at those things is to choose wisely

99

00:04:40,230 --> 00:04:38,720

to find something that you love to do so

100

00:04:43,030 --> 00:04:40,240

that working hard at it and become

101
00:04:45,749 --> 00:04:43,040
becoming good at it is is not like work

102
00:04:49,670 --> 00:04:45,759
it's more like play

103
00:04:55,510 --> 00:04:52,469
my name is nick and my question is for

104
00:05:02,070 --> 00:04:57,189
what is your favorite activity to do in

105
00:05:08,390 --> 00:05:04,629
my favorite activity to do in space is

106
00:05:10,870 --> 00:05:08,400
to do science experiments or engineering

107
00:05:11,749 --> 00:05:10,880
experiments and we have all kinds of

108
00:05:13,670 --> 00:05:11,759
these

109
00:05:15,909 --> 00:05:13,680
that we could do on space station

110
00:05:19,510 --> 00:05:15,919
engineering experiments might be working

111
00:05:21,430 --> 00:05:19,520
on a new kind of toilet and we have one

112
00:05:24,070 --> 00:05:21,440
up here that we call regenerative life

113
00:05:26,310 --> 00:05:24,080

support that can take the urine that we

114

00:05:28,310 --> 00:05:26,320

generate and turn it back and pump it

115

00:05:29,830 --> 00:05:28,320

back in to purify it and then pump it

116

00:05:31,909 --> 00:05:29,840

back into our galley and we use it for

117

00:05:33,830 --> 00:05:31,919

making our coffee and then we have all

118

00:05:36,550 --> 00:05:33,840

kinds of scientific experiments ranging

119

00:05:37,430 --> 00:05:36,560

from experiments that we do on ourselves

120

00:05:39,350 --> 00:05:37,440

to

121

00:05:43,590 --> 00:05:39,360

physical science experiments like

122

00:05:43,600 --> 00:05:46,310

thank you

123

00:05:50,469 --> 00:05:49,189

my name is evan and my question is for

124

00:05:52,230 --> 00:05:50,479

andre

125

00:05:53,749 --> 00:05:52,240

what does it feel like to be in zero

126
00:05:55,590 --> 00:05:53,759
gravity and

127
00:06:01,749 --> 00:05:55,600
what kinds of things do you have to do

128
00:06:05,990 --> 00:06:03,510
yeah microgravity

129
00:06:07,590 --> 00:06:06,000
weightlessness is a fantastic feeling

130
00:06:10,070 --> 00:06:07,600
and uh

131
00:06:11,830 --> 00:06:10,080
it's a bit like being underwater you can

132
00:06:13,590 --> 00:06:11,840
imagine if you're in a pool and you're

133
00:06:15,830 --> 00:06:13,600
floating underwater you don't touch

134
00:06:19,029 --> 00:06:15,840
anything so it's a bit comparable with

135
00:06:20,870 --> 00:06:19,039
that if you want to experience it a bit

136
00:06:22,790 --> 00:06:20,880
of course you have to adjust to that uh

137
00:06:24,390 --> 00:06:22,800
because underwater you can swim well

138
00:06:25,909 --> 00:06:24,400

that's something you don't want to do in

139

00:06:27,749 --> 00:06:25,919

the space station because you might kick

140

00:06:29,990 --> 00:06:27,759

off all kinds of sensitive equipment off

141

00:06:32,230 --> 00:06:30,000

the walls so you have to learn how to

142

00:06:34,390 --> 00:06:32,240

move around when you're weightless and

143

00:06:37,189 --> 00:06:34,400

of course that that takes some time

144

00:06:39,270 --> 00:06:37,199

so it's it's a fantastic feeling um but

145

00:06:42,070 --> 00:06:39,280

you have to you have to learn how to do

146

00:06:46,830 --> 00:06:44,150

thank you

147

00:06:49,430 --> 00:06:46,840

my name is avery and my question is for

148

00:06:51,830 --> 00:06:49,440

dan when you look out of the

149

00:06:57,029 --> 00:06:51,840

international space station what do you

150

00:07:00,150 --> 00:06:58,390

okay well the first thing you see in the

151
00:07:03,430 --> 00:07:00,160
foreground is the international space

152
00:07:05,430 --> 00:07:03,440
station itself which is huge it is

153
00:07:07,350 --> 00:07:05,440
it's big it's beautiful it's nearly a

154
00:07:08,790 --> 00:07:07,360
million pounds and you see that all

155
00:07:09,909 --> 00:07:08,800
around you when you look out the cupola

156
00:07:11,749 --> 00:07:09,919
for example

157
00:07:13,430 --> 00:07:11,759
um the other things that you see is you

158
00:07:16,710 --> 00:07:13,440
see the sun you see the you know the

159
00:07:18,550 --> 00:07:16,720
moon planets you see stars thousands and

160
00:07:20,230 --> 00:07:18,560
thousands of stars like

161
00:07:21,749 --> 00:07:20,240
more stars you would see in the darkest

162
00:07:23,990 --> 00:07:21,759
night when you're way way out in the

163
00:07:27,029 --> 00:07:24,000

country and the stars here don't twinkle

164

00:07:29,430 --> 00:07:27,039

they are just steady steady piercing

165

00:07:31,270 --> 00:07:29,440

points of light and but the thing that's

166

00:07:34,150 --> 00:07:31,280

most notable is you see our planet earth

167

00:07:35,589 --> 00:07:34,160

from from space and it is spectacular

168

00:07:37,670 --> 00:07:35,599

whether you're looking at the solid part

169

00:07:41,270 --> 00:07:37,680

of earth the continents mountains uh

170

00:07:43,670 --> 00:07:41,280

islands uh the liquid uh the oceans and

171

00:07:46,550 --> 00:07:43,680

so forth or seeing evidence of the gas

172

00:07:49,110 --> 00:07:46,560

and that is uh the clouds and uh in the

173

00:07:51,189 --> 00:07:49,120

earth's atmosphere at sunrise and sunset

174

00:07:53,589 --> 00:07:51,199

or the interaction of charged particles

175

00:07:55,670 --> 00:07:53,599

from the sun as they create spectacular

176
00:07:57,350 --> 00:07:55,680
auroras those are things you never get

177
00:08:00,390 --> 00:07:57,360
tired of and it is one of the neatest

178
00:08:02,710 --> 00:08:00,400
things about being in space

179
00:08:05,029 --> 00:08:02,720
thank you

180
00:08:06,469 --> 00:08:05,039
my name is ian my question is for don

181
00:08:08,070 --> 00:08:06,479
what kind of data are you collecting

182
00:08:13,510 --> 00:08:08,080
while you're up there and where do you

183
00:08:16,550 --> 00:08:14,469
okay

184
00:08:18,070 --> 00:08:16,560
data can come in all forms it could come

185
00:08:19,990 --> 00:08:18,080
from just picking up your pencil and

186
00:08:21,830 --> 00:08:20,000
writing something in your knee board

187
00:08:24,790 --> 00:08:21,840
which i have right here

188
00:08:27,029 --> 00:08:24,800

or uh or it could come

189

00:08:29,189 --> 00:08:27,039

it could come from from data that is

190

00:08:31,670 --> 00:08:29,199

collected on a computer and this again

191

00:08:33,829 --> 00:08:31,680

can be data that that you type in on a

192

00:08:36,389 --> 00:08:33,839

keyboard a lot of the data that we

193

00:08:37,110 --> 00:08:36,399

collect comes in to a computer through

194

00:08:43,190 --> 00:08:37,120

the

195

00:08:45,750 --> 00:08:43,200

or even through

196

00:08:48,630 --> 00:08:45,760

ethernet ports and these ports are

197

00:08:50,630 --> 00:08:48,640

hooked up to the experiments themselves

198

00:08:52,710 --> 00:08:50,640

and the data gets collected from the

199

00:08:56,870 --> 00:08:52,720

experiment and goes into the computer

200

00:08:59,910 --> 00:08:56,880

and from there we use our radio system

201
00:09:02,790 --> 00:08:59,920
to relay the data back to earth and then

202
00:09:04,949 --> 00:09:02,800
we also have a digital imagery that we

203
00:09:07,750 --> 00:09:04,959
can take which is also another form of

204
00:09:10,710 --> 00:09:07,760
data and again that gets placed on our

205
00:09:15,190 --> 00:09:10,720
computers and gets relayed back to earth

206
00:09:19,269 --> 00:09:17,430
thank you

207
00:09:20,630 --> 00:09:19,279
my name is matthew and my question is

208
00:09:22,230 --> 00:09:20,640
for andre

209
00:09:28,230 --> 00:09:22,240
what are some of the biggest challenges

210
00:09:33,110 --> 00:09:30,870
well one of the biggest challenges is

211
00:09:36,310 --> 00:09:33,120
not to lose items

212
00:09:38,070 --> 00:09:36,320
because we'd be really working here in a

213
00:09:39,750 --> 00:09:38,080

three-dimensional environment we use

214

00:09:42,470 --> 00:09:39,760

everything the ceiling the walls the

215

00:09:44,389 --> 00:09:42,480

floors uh behind the panels so there's a

216

00:09:45,750 --> 00:09:44,399

lot of places where you can put

217

00:09:49,030 --> 00:09:45,760

something and you don't know where it is

218

00:09:51,509 --> 00:09:49,040

anymore and if something is not attached

219

00:09:53,430 --> 00:09:51,519

with with velcro or with uh with a

220

00:09:54,949 --> 00:09:53,440

bungee or with tape

221

00:09:56,710 --> 00:09:54,959

and it floats off

222

00:09:58,790 --> 00:09:56,720

it can go everywhere normally things

223

00:10:01,190 --> 00:09:58,800

fall down you know more or less where it

224

00:10:03,910 --> 00:10:01,200

where it should be but in space

225

00:10:05,430 --> 00:10:03,920

you you you just lose things very easily

226

00:10:07,110 --> 00:10:05,440

so this is one of the things that you

227

00:10:09,430 --> 00:10:07,120

really pay attention to in the beginning

228

00:10:11,670 --> 00:10:09,440

and actually during the whole mission

229

00:10:13,350 --> 00:10:11,680

always stick it to something because

230

00:10:19,350 --> 00:10:13,360

otherwise it's gone that is one of the

231

00:10:24,630 --> 00:10:22,150

hi my name is sam and my question is for

232

00:10:28,389 --> 00:10:26,150

when do you think it'll be possible to

233

00:10:33,910 --> 00:10:28,399

go to mars and what do you think the

234

00:10:37,509 --> 00:10:35,590

i i think for people like us that that

235

00:10:38,870 --> 00:10:37,519

fly in space and have dreamed about it

236

00:10:40,870 --> 00:10:38,880

all our lives

237

00:10:43,430 --> 00:10:40,880

we almost could not go to mars soon

238

00:10:45,910 --> 00:10:43,440

enough for us the fact is it's an awful

239

00:10:47,910 --> 00:10:45,920

awful long ways away and in order to be

240

00:10:49,430 --> 00:10:47,920

sure that we keep people safe we have a

241

00:10:52,069 --> 00:10:49,440

lot more work to do to be able to do

242

00:10:54,150 --> 00:10:52,079

that so it'll be decades but it'll be by

243

00:10:56,389 --> 00:10:54,160

the time that you grow up by the time

244

00:10:58,710 --> 00:10:56,399

that you kids are certainly our age i

245

00:11:00,310 --> 00:10:58,720

believe that we will have been there and

246

00:11:02,230 --> 00:11:00,320

we'll be there on a hopefully

247

00:11:03,269 --> 00:11:02,240

semi-permanent basis and i hope will

248

00:11:05,750 --> 00:11:03,279

also

249

00:11:08,630 --> 00:11:05,760

be on the moon and on asteroids there's

250

00:11:10,710 --> 00:11:08,640

outer space is a an incredibly expansive

251

00:11:13,430 --> 00:11:10,720

wonderful place and i think it's

252

00:11:15,670 --> 00:11:13,440

humanity's destination or destiny to do

253

00:11:18,790 --> 00:11:15,680

to do that kind of exploration and we

254

00:11:20,790 --> 00:11:18,800

need a lot of smart and energetic folks

255

00:11:22,630 --> 00:11:20,800

like you to help pave the way and

256

00:11:25,590 --> 00:11:22,640

provide the rocket fuel for that kind of

257

00:11:29,670 --> 00:11:28,710

thank you

258

00:11:31,829 --> 00:11:29,680

um

259

00:11:32,949 --> 00:11:31,839

my name is joe and my question is for

260

00:11:35,190 --> 00:11:32,959

don

261

00:11:37,590 --> 00:11:35,200

can you send a text message in space and

262

00:11:41,990 --> 00:11:37,600

if so is your cell phone service any

263

00:11:47,990 --> 00:11:44,710

uh all right we we don't have cell

264

00:11:51,030 --> 00:11:48,000

phones or our iphones or any phones like

265

00:11:53,030 --> 00:11:51,040

that in space we do have this com system

266

00:11:55,110 --> 00:11:53,040

which i'm talking to you through right

267

00:11:57,190 --> 00:11:55,120

now works off of s band that's a

268

00:12:00,470 --> 00:11:57,200

particular wavelength range of radio

269

00:12:02,230 --> 00:12:00,480

communication and ku band which is in

270

00:12:04,230 --> 00:12:02,240

the microwave region

271

00:12:07,190 --> 00:12:04,240

and and these things go through the tdrs

272

00:12:09,430 --> 00:12:07,200

satellite system and then back to earth

273

00:12:10,790 --> 00:12:09,440

and so we can we can talk through those

274

00:12:14,710 --> 00:12:10,800

we can also

275

00:12:17,430 --> 00:12:14,720

do emails and send other uh text type

276

00:12:20,949 --> 00:12:17,440

messages through the the com system

277

00:12:23,590 --> 00:12:20,959

that's designed in the space station

278

00:12:32,230 --> 00:12:25,829

my name is olivia and my question is for

279

00:12:37,190 --> 00:12:35,030

oh that's a good question uh

280

00:12:40,230 --> 00:12:37,200

even on earth i don't remember probably

281

00:12:42,790 --> 00:12:40,240

when i ate last night but it's but uh

282

00:12:44,949 --> 00:12:42,800

well actually uh what i ate i know i

283

00:12:47,269 --> 00:12:44,959

know uh there was a mixed vegetables

284

00:12:48,710 --> 00:12:47,279

sweet potatoes that's my one of my

285

00:12:51,030 --> 00:12:48,720

favorites

286

00:12:53,430 --> 00:12:51,040

and i think i had some

287

00:12:55,829 --> 00:12:53,440

some beef with mushrooms but i'm not

288

00:12:57,750 --> 00:12:55,839

sure about that cause anymore so you

289

00:13:00,310 --> 00:12:57,760

hear there's a lot of different uh

290

00:13:03,509 --> 00:13:00,320

choices we have we can choose from a lot

291

00:13:05,829 --> 00:13:03,519

of different foods both on the u.s side

292

00:13:07,670 --> 00:13:05,839

and on the russian side and we even have

293

00:13:09,829 --> 00:13:07,680

our bonus food

294

00:13:11,990 --> 00:13:09,839

and in my case it means that i also have

295

00:13:16,310 --> 00:13:12,000

some some dutch products

296

00:13:20,310 --> 00:13:16,320

on board so we have a lot of choice

297

00:13:24,310 --> 00:13:22,389

my name is annelisia and my question is

298

00:13:26,150 --> 00:13:24,320

for them how do you get water

299

00:13:30,790 --> 00:13:26,160

electricity and auctioning up the space

300

00:13:34,870 --> 00:13:32,790

okay that's really important the water

301

00:13:36,470 --> 00:13:34,880

and the oxygen

302

00:13:38,710 --> 00:13:36,480

at least initially we bring it up via

303

00:13:40,389 --> 00:13:38,720

cargo vehicles and when the shuttle was

304

00:13:42,550 --> 00:13:40,399

coming to space station

305

00:13:44,470 --> 00:13:42,560

the shuttle would ship a lot of water

306

00:13:46,470 --> 00:13:44,480

that it generated as a byproduct of

307

00:13:49,269 --> 00:13:46,480

making electricity and it would give it

308

00:13:51,430 --> 00:13:49,279

to space station we have we preserve as

309

00:13:53,750 --> 00:13:51,440

much of the water as possible up here so

310

00:13:56,870 --> 00:13:53,760

like don was describing to you before

311

00:13:59,110 --> 00:13:56,880

we try our best to close most of the of

312

00:14:00,949 --> 00:13:59,120

the water cycle or the environmental

313

00:14:03,030 --> 00:14:00,959

control loop so we preserve it because

314

00:14:05,350 --> 00:14:03,040

it's very expensive and difficult to get

315

00:14:07,269 --> 00:14:05,360

any kind of cargo be it

316

00:14:10,150 --> 00:14:07,279

be it food or water or science

317

00:14:11,670 --> 00:14:10,160

experiments up to space space station

318

00:14:13,509 --> 00:14:11,680

the electricity is a little bit easier

319

00:14:16,230 --> 00:14:13,519

as it turns out and we've got almost an

320

00:14:18,230 --> 00:14:16,240

acre worth of solar rays and those solar

321

00:14:20,389 --> 00:14:18,240

panels we keep pointed at the sun and we

322

00:14:24,790 --> 00:14:20,399

basically use those in electrical system

323

00:14:24,800 --> 00:14:28,470

thank you

324

00:14:31,509 --> 00:14:30,710

my name is jamel and my question is for

325

00:14:34,069 --> 00:14:31,519

don

326

00:14:39,590 --> 00:14:34,079

how do you avoid hitting things in space

327

00:14:43,590 --> 00:14:41,509

well there's there's two levels of that

328

00:14:45,509 --> 00:14:43,600

question one is when we're flying around

329

00:14:46,870 --> 00:14:45,519

inside a space station you have to avoid

330

00:14:49,110 --> 00:14:46,880

hitting things because if you do hit

331

00:14:52,069 --> 00:14:49,120

something it's probably with your head

332

00:14:55,030 --> 00:14:52,079

and and so you you just need to watch

333

00:14:57,030 --> 00:14:55,040

out it's just like uh on on earth you

334

00:14:58,870 --> 00:14:57,040

could you could trip and fall down and

335

00:15:01,430 --> 00:14:58,880

skin your knee well here on space

336

00:15:03,110 --> 00:15:01,440

station you basically don't watch what

337

00:15:04,389 --> 00:15:03,120

you're doing and you bang your head on

338

00:15:07,030 --> 00:15:04,399

something

339

00:15:09,829 --> 00:15:07,040

and what i think you probably really are

340

00:15:13,590 --> 00:15:09,839

referring to is the space station run

341

00:15:15,509 --> 00:15:13,600

into other things in orbit and uh

342

00:15:17,590 --> 00:15:15,519

one thing it's it's

343

00:15:19,509 --> 00:15:17,600

space is big and the probability of

344

00:15:23,110 --> 00:15:19,519

running into something is really really

345

00:15:25,030 --> 00:15:23,120

small however on occasion uh our orbit

346

00:15:27,189 --> 00:15:25,040

could get close to a piece of space

347

00:15:29,749 --> 00:15:27,199

debris and

348

00:15:33,189 --> 00:15:29,759

and in that case we either change the

349

00:15:35,350 --> 00:15:33,199

orbit of space station or we we go into

350

00:15:37,430 --> 00:15:35,360

our soyuz capsules and get ready for an

351

00:15:39,030 --> 00:15:37,440

emergency deorbit if we were to strike

352

00:15:44,870 --> 00:15:39,040

something and we did that a couple

353

00:15:49,110 --> 00:15:47,910

my name is yay me and my question is for

354

00:15:51,350 --> 00:15:49,120

andre

355

00:15:56,629 --> 00:15:51,360

how do you sleep in space and do you

356

00:15:59,670 --> 00:15:58,790

i sleep very well in space

357

00:16:00,949 --> 00:15:59,680

well

358

00:16:02,949 --> 00:16:00,959

we float

359

00:16:04,470 --> 00:16:02,959

so that means that it doesn't matter

360

00:16:07,430 --> 00:16:04,480

where you sleep you can't sleep on the

361

00:16:09,509 --> 00:16:07,440

ceiling you can sleep upright and of

362

00:16:12,629 --> 00:16:09,519

course on the floor if you can call it

363

00:16:14,069 --> 00:16:12,639

the floor uh so uh it's it's it's a bit

364

00:16:15,749 --> 00:16:14,079

strange because you don't feel a

365

00:16:16,790 --> 00:16:15,759

mattress you don't you don't have a

366

00:16:19,110 --> 00:16:16,800

pillow

367

00:16:22,150 --> 00:16:19,120

so those aspects of sleeping uh you're

368

00:16:24,069 --> 00:16:22,160

missing but we work hard here and uh we

369

00:16:26,790 --> 00:16:24,079

sleep very well as soon as we close our

370

00:16:28,790 --> 00:16:26,800

eyes uh and we have indeed our own

371

00:16:31,030 --> 00:16:28,800

sleeping cabins and that's a nice place

372

00:16:32,790 --> 00:16:31,040

because this is your home you have the

373

00:16:35,030 --> 00:16:32,800

pictures of the family on the wall we

374

00:16:37,990 --> 00:16:35,040

have our laptops we uh this is really

375

00:16:42,470 --> 00:16:38,000

our our private place and that's that's

376

00:16:45,430 --> 00:16:42,480

very pleasant so we sleep well on board

377

00:16:49,509 --> 00:16:48,470

my name is isaiah and my question is for

378

00:16:51,030 --> 00:16:49,519

don

379

00:16:57,189 --> 00:16:51,040

what is a robo

380

00:17:02,870 --> 00:16:59,509

well robonaut like the name

381

00:17:05,750 --> 00:17:02,880

implies is a robot and it's a human-like

382

00:17:08,630 --> 00:17:05,760

robot from its configuration in that

383

00:17:11,110 --> 00:17:08,640

it's got arms with hands and fingers and

384

00:17:14,710 --> 00:17:11,120

and a head with uh cameras in place of

385

00:17:16,390 --> 00:17:14,720

eyes and and it's the first

386

00:17:18,949 --> 00:17:16,400

little baby step

387

00:17:21,350 --> 00:17:18,959

towards making a human-like robot that

388

00:17:27,350 --> 00:17:21,360

could do human-like tasks either on

389

00:17:32,710 --> 00:17:29,909

my name is giselle and my question is

390

00:17:36,070 --> 00:17:32,720

for don do you miss your home when you

391

00:17:44,830 --> 00:17:36,080

are gone and what kind of things do you

392

00:17:49,029 --> 00:17:47,909

you okay and and i'll go ahead and take

393

00:17:51,110 --> 00:17:49,039

that question

394

00:17:53,270 --> 00:17:51,120

and the question was do we miss

395

00:17:55,270 --> 00:17:53,280

our families uh i think the thing that

396

00:17:57,590 --> 00:17:55,280

yeah the thing that we miss most uh when

397

00:17:59,190 --> 00:17:57,600

we come to space is uh being close to

398

00:18:01,830 --> 00:17:59,200

our families physically close and be

399

00:18:05,110 --> 00:18:01,840

able to uh to see them to to hug our

400

00:18:06,310 --> 00:18:05,120

kids to kiss our spouses and that's

401
00:18:08,150 --> 00:18:06,320
something you certainly can't do when

402
00:18:10,950 --> 00:18:08,160
you're on space station but we can

403
00:18:13,110 --> 00:18:10,960
actually see our families and uh and be

404
00:18:14,470 --> 00:18:13,120
close to them in a virtual sense

405
00:18:16,630 --> 00:18:14,480
through the communication system that

406
00:18:18,710 --> 00:18:16,640
don talked about and we can actually see

407
00:18:20,950 --> 00:18:18,720
them and do uh

408
00:18:22,950 --> 00:18:20,960
essentially a video phone call at least

409
00:18:24,789 --> 00:18:22,960
once a week and we can talk to them

410
00:18:27,029 --> 00:18:24,799
essentially over what would be very

411
00:18:29,590 --> 00:18:27,039
similar to a phone call or a cell phone

412
00:18:31,750 --> 00:18:29,600
a cell phone call from planet earth most

413
00:18:34,470 --> 00:18:31,760

any time that we're free like every day

414

00:18:35,750 --> 00:18:34,480

or so um and uh but it's still one of

415

00:18:37,669 --> 00:18:35,760

the things that we'll very much look

416

00:18:38,950 --> 00:18:37,679

forward to when we get back get back

417

00:18:41,029 --> 00:18:38,960

home again

418

00:18:43,350 --> 00:18:41,039

apart from that there's there's probably

419

00:18:45,430 --> 00:18:43,360

a few other things you miss uh from uh

420

00:18:47,990 --> 00:18:45,440

from earth the things that we bring as

421

00:18:50,070 --> 00:18:48,000

reminders um like don like andre had

422

00:18:52,470 --> 00:18:50,080

mentioned was pictures of friends and

423

00:18:55,750 --> 00:18:52,480

family and uh we have a little bit of

424

00:18:57,909 --> 00:18:55,760

room to carry some small um

425

00:18:59,510 --> 00:18:57,919

mementos i guess things to to remember

426

00:19:01,750 --> 00:18:59,520

to help remember physically remember

427

00:19:03,669 --> 00:19:01,760

their our families and friends here and

428

00:19:05,270 --> 00:19:03,679

we can also bring some other things that

429

00:19:06,789 --> 00:19:05,280

we potentially can bring back with us

430

00:19:09,270 --> 00:19:06,799

our notes our notebooks and things like

431

00:19:10,710 --> 00:19:09,280

that so we can we can write about

432

00:19:12,310 --> 00:19:10,720

the experiences that we have and

433

00:19:14,549 --> 00:19:12,320

maintain a journal if you will and be

434

00:19:16,310 --> 00:19:14,559

able to bring that back and

435

00:19:18,310 --> 00:19:16,320

and essentially have

436

00:19:19,750 --> 00:19:18,320

a more personal day-to-day connection

437

00:19:22,150 --> 00:19:19,760

with our experiences that we had while

438

00:19:23,909 --> 00:19:22,160

we're up here it's a real precious time

439

00:19:25,669 --> 00:19:23,919

that you have here yeah we're very

440

00:19:27,909 --> 00:19:25,679

fortunate to be able to do this

441

00:19:30,150 --> 00:19:27,919

there's an awful lot of people that are

442

00:19:32,310 --> 00:19:30,160

in line to come up here and continue the

443

00:19:34,150 --> 00:19:32,320

the exploration and research on station

444

00:19:38,789 --> 00:19:34,160

and that line extends all the way back

445

00:19:43,669 --> 00:19:41,350

expedition 30 commander burbank

446

00:19:46,150 --> 00:19:43,679

flight engineers keepers and pettit my

447

00:19:47,830 --> 00:19:46,160

name is peter price i'm the principal at

448

00:19:50,390 --> 00:19:47,840

o'henry middle school we would like to

449

00:19:54,470 --> 00:19:50,400

thank you for your time for sharing your

450

00:19:57,510 --> 00:19:54,480

expertise your love of your job

451

00:20:03,110 --> 00:20:01,029

we we wish you we wish you the best

452

00:20:05,590 --> 00:20:03,120

in your future endeavors and again thank

453

00:20:08,470 --> 00:20:05,600

you so much for taking the time

454

00:20:10,549 --> 00:20:08,480

to learn about your lives and we

455

00:20:16,789 --> 00:20:10,559

appreciate all you do

456

00:20:29,350 --> 00:20:19,110

it was our pleasure and it was wonderful

457

00:20:35,430 --> 00:20:31,990

station this is houston acr thank you

458

00:20:37,909 --> 00:20:35,440

that concludes the event

459

00:20:40,070 --> 00:20:37,919

thank you oh henry middle school

460

00:20:42,390 --> 00:20:40,080

dan and don please stand by while we

461

00:20:44,950 --> 00:20:42,400

reconfigure video and audio for our next