



1  
00:00:09,590 --> 00:00:03,320  
station this is Houston are you ready

2  
00:00:13,100 --> 00:00:09,600  
for the event Houston stations ready for

3  
00:00:14,690 --> 00:00:13,110  
the event center for research on stem

4  
00:00:16,790 --> 00:00:14,700  
teaching and learning this is Mission

5  
00:00:22,400 --> 00:00:16,800  
Control Houston please call station for

6  
00:00:24,140 --> 00:00:22,410  
moisture station this is still water

7  
00:00:26,540 --> 00:00:24,150  
middle school media specialist Quinn

8  
00:00:31,910 --> 00:00:26,550  
Baldwin Oklahoma State University how do

9  
00:00:33,889 --> 00:00:31,920  
you hear me I hear your lad and Claire

10  
00:00:35,599 --> 00:00:33,899  
all the way from the home of the Cowboys

11  
00:00:46,020 --> 00:00:35,609  
welcome aboard the International Space

12  
00:00:50,349 --> 00:00:48,700  
my name is Kate and my question is do

13  
00:00:55,290 --> 00:00:50,359

you ever have fears or get nervous about

14

00:01:00,520 --> 00:00:57,939

well day to day I don't think about it

15

00:01:03,490 --> 00:01:00,530

very much all of us who fly up here into

16

00:01:05,740 --> 00:01:03,500

space we study a lot about getting to

17

00:01:08,620 --> 00:01:05,750

space and coming home from space and and

18

00:01:10,530 --> 00:01:08,630

the the factors the safety in space and

19

00:01:13,180 --> 00:01:10,540

there's a lot to it it's a complicated

20

00:01:14,950 --> 00:01:13,190

program there are certainly risks

21

00:01:16,480 --> 00:01:14,960

associated with writing a rocket up here

22

00:01:19,180 --> 00:01:16,490

and writing the spacecraft back into the

23

00:01:22,090 --> 00:01:19,190

atmosphere and being in space for this

24

00:01:23,740 --> 00:01:22,100

long but we have a lot of mission

25

00:01:26,740 --> 00:01:23,750

support on the ground who watches out

26

00:01:28,600 --> 00:01:26,750

for things like micro meteorites and

27

00:01:32,230 --> 00:01:28,610

orbital debris and stuff to try to keep

28

00:01:34,990 --> 00:01:32,240

us safe and do so thorough analysis of

29

00:01:37,330 --> 00:01:35,000

all of our flight dynamics that we

30

00:01:39,399 --> 00:01:37,340

really we really have a good safety

31

00:01:41,469 --> 00:01:39,409

record and I don't think about it on a

32

00:01:43,419 --> 00:01:41,479

day-to-day basis but I appreciate that

33

00:01:48,690 --> 00:01:43,429

it's it is a little bit out of the

34

00:01:59,010 --> 00:01:52,050

I'm saying I wondered what what's the

35

00:02:01,109 --> 00:01:59,020

best thing about being in space well I

36

00:02:04,080 --> 00:02:01,119

think the very best thing about being in

37

00:02:07,740 --> 00:02:04,090

space is being far enough away from the

38

00:02:10,350 --> 00:02:07,750

earth that you can see how how it's

39

00:02:12,270 --> 00:02:10,360

really a big sphere you can see the

40

00:02:14,970 --> 00:02:12,280

blackness of the universe you can see

41

00:02:16,559 --> 00:02:14,980

how thin the atmosphere is and you get

42

00:02:19,650 --> 00:02:16,569

to go around the earth once every 90

43

00:02:22,979 --> 00:02:19,660

minutes and see all of the earth in the

44

00:02:25,110 --> 00:02:22,989

course of just a few days and so that's

45

00:02:27,150 --> 00:02:25,120

really a magnificent thing there are a

46

00:02:29,670 --> 00:02:27,160

lot of other things about being up here

47

00:02:31,350 --> 00:02:29,680

it's really fun to be in this working

48

00:02:33,420 --> 00:02:31,360

environment in this research environment

49

00:02:35,339 --> 00:02:33,430

and then it's also of course very fun to

50

00:02:37,170 --> 00:02:35,349

be in microgravity and float around

51  
00:02:39,390 --> 00:02:37,180  
that's a very unusual thing to get to do

52  
00:02:41,250 --> 00:02:39,400  
too so those are all kind of toss ups

53  
00:02:48,040 --> 00:02:41,260  
it's just a great all-around job that

54  
00:02:55,860 --> 00:02:50,680  
hi I'm Carson what happens if somebody

55  
00:03:01,840 --> 00:02:58,870  
well that's a great question we're up

56  
00:03:04,300 --> 00:03:01,850  
here right now I'm up here with two

57  
00:03:06,580 --> 00:03:04,310  
cosmonaut crewmates all of us have

58  
00:03:09,880 --> 00:03:06,590  
operational military backgrounds none of

59  
00:03:12,130 --> 00:03:09,890  
us are really doctors so we get a lot of

60  
00:03:14,710 --> 00:03:12,140  
training before we come on medical

61  
00:03:18,150 --> 00:03:14,720  
procedures right behind me here we have

62  
00:03:20,110 --> 00:03:18,160  
a board should somebody need to get

63  
00:03:23,080 --> 00:03:20,120

resuscitated or something like that we

64

00:03:24,760 --> 00:03:23,090

have kits we have a defibrillator in the

65

00:03:27,190 --> 00:03:24,770

floor here that we can get to in

66

00:03:30,400 --> 00:03:27,200

ambulatory packs and a lot of medical

67

00:03:32,170 --> 00:03:30,410

packs to take care of any kinds of

68

00:03:34,330 --> 00:03:32,180

problems we think might come up on board

69

00:03:36,790 --> 00:03:34,340

and then of course we also have one call

70

00:03:39,010 --> 00:03:36,800

all the time instantly surgeons on the

71

00:03:40,900 --> 00:03:39,020

ground flight surgeons who can come to

72

00:03:42,940 --> 00:03:40,910

our aid and help us with video and talk

73

00:03:44,890 --> 00:03:42,950

us through what might need to be done in

74

00:03:46,450 --> 00:03:44,900

worst-case situation we end up we might

75

00:03:49,600 --> 00:03:46,460

need to bring somebody home in a hurry

76

00:03:51,340 --> 00:03:49,610

and we have a Soyuz lifeboat that we can

77

00:03:53,680 --> 00:03:51,350

come home just about at any time we need

78

00:03:55,210 --> 00:03:53,690

to so we're fortunately pretty lucky we

79

00:03:56,500 --> 00:03:55,220

have a pretty good safety record up here

80

00:04:02,420 --> 00:03:56,510

and the specialists on the ground makes

81

00:04:06,259 --> 00:04:04,729

hi my name is Maci and I wanted to know

82

00:04:13,220 --> 00:04:06,269

what made you want to take this

83

00:04:15,860 --> 00:04:13,230

opportunity well I just kind of evolved

84

00:04:18,469 --> 00:04:15,870

into the job of an astronaut because I

85

00:04:20,840 --> 00:04:18,479

started out being an engineer and a

86

00:04:23,029 --> 00:04:20,850

pilot in the Air Force and I became a

87

00:04:27,260 --> 00:04:23,039

test pilot and I was really interested

88

00:04:30,140 --> 00:04:27,270

in how the very very most intricate

89

00:04:33,469 --> 00:04:30,150

nuances of what made aircraft fly and at

90

00:04:35,839 --> 00:04:33,479

after being a test pilot for many years

91

00:04:38,180 --> 00:04:35,849

a half a decade or so the Space Shuttle

92

00:04:39,230 --> 00:04:38,190

opportunity was there so I really

93

00:04:41,089 --> 00:04:39,240

thought the Space Shuttle was a

94

00:04:43,189 --> 00:04:41,099

fantastic machine and wanted to fly it

95

00:04:45,770 --> 00:04:43,199

so I came to NASA first to be a space

96

00:04:48,080 --> 00:04:45,780

shuttle pilot and then this opportunity

97

00:04:50,089 --> 00:04:48,090

to do a long-duration mission presented

98

00:04:52,610 --> 00:04:50,099

itself after that and I got to tell you

99

00:04:54,200 --> 00:04:52,620

it's a fantastic it's so much more

100

00:04:55,909 --> 00:04:54,210

fantastic than I imagined getting to

101  
00:05:03,930 --> 00:04:55,919  
spend a long time up here and enjoying

102  
00:05:13,830 --> 00:05:06,450  
what made you want to work with NASA and

103  
00:05:15,960 --> 00:05:13,840  
why well almost anywhere I go in the

104  
00:05:17,580 --> 00:05:15,970  
world people know who NASA is it doesn't

105  
00:05:20,700 --> 00:05:17,590  
matter what country I've been to some 40

106  
00:05:23,160 --> 00:05:20,710  
foreign countries and they all know NASA

107  
00:05:25,890 --> 00:05:23,170  
very well of course because of the great

108  
00:05:28,460 --> 00:05:25,900  
reputation we've had and in the past

109  
00:05:32,340 --> 00:05:28,470  
well before I came along for sure and

110  
00:05:35,160 --> 00:05:32,350  
there there's just so many so many

111  
00:05:37,230 --> 00:05:35,170  
intricacies with exploration that NASA

112  
00:05:40,920 --> 00:05:37,240  
takes care of for us they're all about

113  
00:05:44,250 --> 00:05:40,930

our future and pushing out into a to a

114

00:05:46,710 --> 00:05:44,260

region that you know we wouldn't have to

115

00:05:48,390 --> 00:05:46,720

do it's not essential but it's essential

116

00:05:51,060 --> 00:05:48,400

to our future I think so it's really

117

00:05:53,310 --> 00:05:51,070

great to be part of this exploration and

118

00:05:55,530 --> 00:05:53,320

doing something special for the future

119

00:06:01,460 --> 00:05:55,540

of humankind so I love NASA for that

120

00:06:09,590 --> 00:06:03,140

do you ever goof off and flew around

121

00:06:12,200 --> 00:06:09,600

sometimes I goof around all the time I

122

00:06:16,790 --> 00:06:12,210

like to go through the modules upside

123

00:06:18,860 --> 00:06:16,800

down when I can in sideways and we get

124

00:06:21,350 --> 00:06:18,870

the opportunity sometimes in the evening

125

00:06:23,060 --> 00:06:21,360

just just to float maybe we'll the

126

00:06:24,500 --> 00:06:23,070

crewmates my crewmates and I will go

127

00:06:26,690 --> 00:06:24,510

meet up at the window and just spend

128

00:06:29,090 --> 00:06:26,700

some time looking out and and talking

129

00:06:30,650 --> 00:06:29,100

and there's some places the nodes where

130

00:06:32,180 --> 00:06:30,660

some of the modules come together that

131

00:06:33,680 --> 00:06:32,190

have big volumes and we'll get in there

132

00:06:35,450 --> 00:06:33,690

and spin around one of my favorite

133

00:06:37,100 --> 00:06:35,460

things is in the middle of the night

134

00:06:39,140 --> 00:06:37,110

when all the lights are out in the space

135

00:06:41,210 --> 00:06:39,150

station just to float around in here

136

00:06:42,710 --> 00:06:41,220

just really quietly I don't have to

137

00:06:45,290 --> 00:06:42,720

worry about Mission Control calling me

138

00:06:47,630 --> 00:06:45,300

because they think I'm a slave and I can

139

00:06:49,580 --> 00:06:47,640

just enjoy peace and quiet and floating

140

00:06:56,399 --> 00:06:49,590

it's just a surreal experience to be

141

00:07:00,659 --> 00:06:58,859

my name is alex and i want to know as

142

00:07:03,389 --> 00:07:00,669

future educators what should we be doing

143

00:07:08,600 --> 00:07:03,399

to inspire our students to pursue stem

144

00:07:14,010 --> 00:07:11,100

well of course introduced them to as

145

00:07:15,510 --> 00:07:14,020

many subjects as you can all people find

146

00:07:17,520 --> 00:07:15,520

different things interesting and you

147

00:07:22,050 --> 00:07:17,530

never know what might spark a student's

148

00:07:24,270 --> 00:07:22,060

interest I have always felt when since

149

00:07:27,840 --> 00:07:24,280

I'm so interested in flying and space

150

00:07:31,080 --> 00:07:27,850

that we could do more in our curricula

151  
00:07:36,180 --> 00:07:31,090  
in schools for example teaching a little

152  
00:07:38,040 --> 00:07:36,190  
bit about flying and aerodynamics for at

153  
00:07:41,939 --> 00:07:38,050  
the current time almost everybody

154  
00:07:44,070 --> 00:07:41,949  
travels on aircraft and as far as i know

155  
00:07:45,750 --> 00:07:44,080  
most schools don't have a program to

156  
00:07:47,159 --> 00:07:45,760  
teach people about how aircraft really

157  
00:07:48,810 --> 00:07:47,169  
work what really keeps them up there

158  
00:07:50,939 --> 00:07:48,820  
it's not the engines it's the wings that

159  
00:07:52,560 --> 00:07:50,949  
keeps them up and the airspeed and those

160  
00:07:54,060 --> 00:07:52,570  
kinds of things that i think should be

161  
00:07:56,610 --> 00:07:54,070  
learned at a basic level to spark

162  
00:07:58,830 --> 00:07:56,620  
interest and then maybe perhaps in in

163  
00:08:00,689 --> 00:07:58,840

the astronomical field too because it's

164

00:08:03,029 --> 00:08:00,699

very interesting it's not super hard to

165

00:08:04,589 --> 00:08:03,039

understand it's just that you have to

166

00:08:06,180 --> 00:08:04,599

spend some time looking at it and try to

167

00:08:08,730 --> 00:08:06,190

understand it to spark an interest but

168

00:08:15,950 --> 00:08:08,740

all kinds of fields are worth looking at

169

00:08:21,140 --> 00:08:19,550

hot hi I'm Ali and I was wondering do

170

00:08:22,909 --> 00:08:21,150

you believe NASA will soon create

171

00:08:24,980 --> 00:08:22,919

technology that will allow us to go to

172

00:08:31,000 --> 00:08:24,990

different solar systems and different

173

00:08:37,490 --> 00:08:33,710

well I certainly believe that someday

174

00:08:41,240 --> 00:08:37,500

we'll do it because we have a long long

175

00:08:45,170 --> 00:08:41,250

future ahead of us and what we're doing

176

00:08:47,480 --> 00:08:45,180

at NASA is so unique we can look at new

177

00:08:51,950 --> 00:08:47,490

propulsion technology as new material

178

00:08:55,730 --> 00:08:51,960

technologies human presence in space how

179

00:08:57,620 --> 00:08:55,740

to do environmental control for human

180

00:09:00,980 --> 00:08:57,630

life support in space so what we're

181

00:09:02,660 --> 00:09:00,990

doing is exactly trying to look at how

182

00:09:05,450 --> 00:09:02,670

to do those kinds of things now those

183

00:09:07,610 --> 00:09:05,460

places are really far away right now

184

00:09:10,280 --> 00:09:07,620

it's anema Matt it's unimaginable that

185

00:09:13,010 --> 00:09:10,290

we we might do it someday but the same

186

00:09:15,680 --> 00:09:13,020

can be said for you know 150 years ago

187

00:09:17,510 --> 00:09:15,690

that about flying just flying an

188

00:09:25,580 --> 00:09:17,520

airplane so things can change very fast

189

00:09:29,930 --> 00:09:28,190

my name is Emma and I'd like to know if

190

00:09:35,930 --> 00:09:29,940

it's more difficult to sleep in space

191

00:09:38,000 --> 00:09:35,940

and what does your bed look like to be

192

00:09:40,010 --> 00:09:38,010

honest it's much easier for me to sleep

193

00:09:41,690 --> 00:09:40,020

in space than it is to back home there's

194

00:09:44,150 --> 00:09:41,700

no point in rolling over you're not

195

00:09:47,600 --> 00:09:44,160

really touching anything what we have to

196

00:09:49,460 --> 00:09:47,610

sleep in is a is a cabin in this it's

197

00:09:51,170 --> 00:09:49,470

not in this particular module but the

198

00:09:54,380 --> 00:09:51,180

cabin is about the size of one of these

199

00:09:56,360 --> 00:09:54,390

walls some little doors you float inside

200

00:09:58,520 --> 00:09:56,370

inside we have really nice of insulation

201  
00:10:00,650 --> 00:09:58,530  
lighting we have a computer that we can

202  
00:10:02,990 --> 00:10:00,660  
use and we have a sleeping bag that's

203  
00:10:04,670 --> 00:10:03,000  
tied to the wall and I just put my feet

204  
00:10:07,520 --> 00:10:04,680  
up and go down into the sleeping bag and

205  
00:10:09,740 --> 00:10:07,530  
zip it up I put my arms inside my face

206  
00:10:11,660 --> 00:10:09,750  
is well ventilated and I just float to

207  
00:10:13,190 --> 00:10:11,670  
sleep almost touching nothing and that's

208  
00:10:20,220 --> 00:10:13,200  
the way I woke at wake up every morning

209  
00:10:23,070 --> 00:10:21,810  
my name is Molly and I would like to

210  
00:10:24,930 --> 00:10:23,080  
know what is the hardest thing about

211  
00:10:26,310 --> 00:10:24,940  
adjusting to the astronaut diet and what

212  
00:10:30,900 --> 00:10:26,320  
will you eat first when you get back to

213  
00:10:37,960 --> 00:10:36,070

well we don't get a lot of cold foods we

214

00:10:40,240 --> 00:10:37,970

so that the temperature is either kind

215

00:10:43,030 --> 00:10:40,250

of hot out of an oven that we have to

216

00:10:44,770 --> 00:10:43,040

heat things up or a room temperature we

217

00:10:46,600 --> 00:10:44,780

don't have a lot of refrigeration we

218

00:10:48,940 --> 00:10:46,610

have one small refrigerator that we use

219

00:10:52,480 --> 00:10:48,950

for science and food so not a lot of

220

00:10:54,340 --> 00:10:52,490

food in there but we the drinks are

221

00:10:56,620 --> 00:10:54,350

pretty good nothing carbonated because

222

00:10:58,660 --> 00:10:56,630

it's too fizzy and you could make messes

223

00:10:59,830 --> 00:10:58,670

inside the laboratory and inside the

224

00:11:04,090 --> 00:10:59,840

space station we don't want to do that

225

00:11:05,800 --> 00:11:04,100

and the diet is as all thermo stabilized

226

00:11:07,420 --> 00:11:05,810

food something that has to have a really

227

00:11:09,460 --> 00:11:07,430

long shelf life at room temperature

228

00:11:11,350 --> 00:11:09,470

because it has to be launched well ahead

229

00:11:13,420 --> 00:11:11,360

of time and stowed for a long time or

230

00:11:15,190 --> 00:11:13,430

something that's rehydrate able we can

231

00:11:18,010 --> 00:11:15,200

add hot water to it and let it sit for

232

00:11:19,930 --> 00:11:18,020

15 or 20 minutes and then eat it so the

233

00:11:22,000 --> 00:11:19,940

people who design the food have a lot of

234

00:11:24,070 --> 00:11:22,010

things to consider will a change color

235

00:11:25,660 --> 00:11:24,080

will still be tasty in that long a time

236

00:11:28,240 --> 00:11:25,670

so there's somewhat a limited variety

237

00:11:29,980 --> 00:11:28,250

but it's all it's all very good and very

238

00:11:31,810 --> 00:11:29,990

edible and you would enjoy eating it too

239

00:11:35,050 --> 00:11:31,820

when I get home I'm probably going to

240

00:11:36,700 --> 00:11:35,060

have something carbonated and something

241

00:11:38,410 --> 00:11:36,710

hot something with fresh vegetables

242

00:11:45,260 --> 00:11:38,420

maybe like a big pizza or something like

243

00:11:50,180 --> 00:11:48,260

my name is Alissa and as a future in

244

00:11:51,980 --> 00:11:50,190

aerospace engineer we're learning to

245

00:11:53,780 --> 00:11:51,990

develop the next generation of space

246

00:11:55,490 --> 00:11:53,790

habitats if there is one thing you could

247

00:12:01,550 --> 00:11:55,500

change about the ISS what would it be

248

00:12:07,350 --> 00:12:04,380

well we all would like to have more

249

00:12:08,970 --> 00:12:07,360

windows windows are good we have we have

250

00:12:10,830 --> 00:12:08,980

some earth facing windows we have a

251

00:12:13,680 --> 00:12:10,840

cupola that's this absolutely

252

00:12:16,350 --> 00:12:13,690

magnificent we don't have anything that

253

00:12:17,760 --> 00:12:16,360

really looks toward the sky side and you

254

00:12:19,920 --> 00:12:17,770

know it's nice to be able to look all

255

00:12:22,670 --> 00:12:19,930

directions and have have a lot of good

256

00:12:25,080 --> 00:12:22,680

views I guess that might be one thing

257

00:12:26,940 --> 00:12:25,090

one thing I always I always dream about

258

00:12:28,500 --> 00:12:26,950

would be as if I could come up here on

259

00:12:30,480 --> 00:12:28,510

Monday morning and work all week and

260

00:12:32,040 --> 00:12:30,490

then come home on Friday night spend the

261

00:12:33,630 --> 00:12:32,050

weekend with my friends and family and

262

00:12:35,850 --> 00:12:33,640

come back up on monday so maybe the

263

00:12:38,100 --> 00:12:35,860

future will have that in it so you don't

264

00:12:41,420 --> 00:12:38,110

have to stay in all your leisure time

265

00:12:44,070 --> 00:12:41,430

just be up here when you want to be and

266

00:12:47,640 --> 00:12:44,080

otherwise the space station is really a

267

00:12:50,100 --> 00:12:47,650

fantastic place to live and work and I'm

268

00:12:52,110 --> 00:12:50,110

really really enjoying it sleeping and

269

00:12:53,850 --> 00:12:52,120

eating and socializing with my friends

270

00:12:55,050 --> 00:12:53,860

so other than that I can't think of

271

00:13:01,430 --> 00:12:55,060

anything right off and it's a great

272

00:13:06,800 --> 00:13:05,030

my name is Bryce how do you get supplies

273

00:13:13,160 --> 00:13:06,810

and natural resources to the

274

00:13:15,590 --> 00:13:13,170

International Space Station oh that is

275

00:13:17,840 --> 00:13:15,600

an excellent question because we're in a

276

00:13:20,690 --> 00:13:17,850

vacuum up here well away from Earth so

277

00:13:24,380 --> 00:13:20,700

nothing can get to us except by rockets

278

00:13:27,350 --> 00:13:24,390

few people have to launch them so in the

279

00:13:30,020 --> 00:13:27,360

u.s. we have a resupply commercial

280

00:13:31,190 --> 00:13:30,030

resupply system now called dragon and

281

00:13:34,310 --> 00:13:31,200

we're going to have one called the

282

00:13:36,680 --> 00:13:34,320

Cygnus upcoming as well that will bring

283

00:13:39,530 --> 00:13:36,690

up supplies to the space station and

284

00:13:41,240 --> 00:13:39,540

then in some ways in a limited way we

285

00:13:43,010 --> 00:13:41,250

can bring some stuff back to because if

286

00:13:44,840 --> 00:13:43,020

we bring experiments up here and we do

287

00:13:46,460 --> 00:13:44,850

do something maybe we'd like to bring it

288

00:13:48,290 --> 00:13:46,470

back to earth to look at it or bring

289

00:13:50,720 --> 00:13:48,300

back a broken part because we don't know

290

00:13:52,550 --> 00:13:50,730

why it failed so on the Russian side

291

00:13:54,500 --> 00:13:52,560

they have a progress spacecraft that

292

00:13:58,040 --> 00:13:54,510

comes every few months and bring

293

00:14:00,290 --> 00:13:58,050

supplies brings food and gases for us

294

00:14:01,850 --> 00:14:00,300

like oxygen if we need it and those

295

00:14:04,250 --> 00:14:01,860

kinds of things that we need in water

296

00:14:05,930 --> 00:14:04,260

and more fuel for our space station too

297

00:14:12,950 --> 00:14:05,940

so that's how we get resupplied through

298

00:14:17,990 --> 00:14:15,290

hi my name is taylor and i was wondering

299

00:14:20,300 --> 00:14:18,000

and has anything ever gone wrong on the

300

00:14:26,200 --> 00:14:20,310

International Space Station and if it

301  
00:14:33,380 --> 00:14:29,510  
this is a very complex system so I could

302  
00:14:35,120 --> 00:14:33,390  
say something goes wrong maybe not every

303  
00:14:37,190 --> 00:14:35,130  
day but pretty close there's a little

304  
00:14:40,370 --> 00:14:37,200  
malfunctions we use a lot of computers

305  
00:14:43,910 --> 00:14:40,380  
we have really we push the edge on

306  
00:14:46,100 --> 00:14:43,920  
technology up here so we really want

307  
00:14:48,770 --> 00:14:46,110  
things to go wrong because we put stuff

308  
00:14:52,910 --> 00:14:48,780  
up here to test it and to experiment and

309  
00:14:55,040 --> 00:14:52,920  
so that's the way you learn by trial and

310  
00:14:57,290 --> 00:14:55,050  
error so when things go wrong we can

311  
00:15:00,470 --> 00:14:57,300  
analyze them figure out what it is and

312  
00:15:02,240 --> 00:15:00,480  
go on to to fix them and make the

313  
00:15:04,190 --> 00:15:02,250

systems better for those explorations

314

00:15:05,930 --> 00:15:04,200

since I've been here we've had some

315

00:15:07,940 --> 00:15:05,940

trouble with our toilet we've had some

316

00:15:11,030 --> 00:15:07,950

trouble with our treadmill we've had

317

00:15:13,250 --> 00:15:11,040

some pretty significant trouble with

318

00:15:14,870 --> 00:15:13,260

some of the computers but specialists on

319

00:15:17,390 --> 00:15:14,880

the ground have analyzed them and fixed

320

00:15:19,250 --> 00:15:17,400

them all up so it's on a daily basis for

321

00:15:27,240 --> 00:15:19,260

troubleshooting something up here but

322

00:15:32,310 --> 00:15:30,360

what life support hi I'm court and I was

323

00:15:34,950 --> 00:15:32,320

wondering what life support technologies

324

00:15:40,170 --> 00:15:34,960

does the ISS have and how long do they

325

00:15:46,690 --> 00:15:44,890

well we we kind of recycle through the

326

00:15:50,800 --> 00:15:46,700

different resources for example we can

327

00:15:55,720 --> 00:15:50,810

use water to make oxygen again and we

328

00:15:58,210 --> 00:15:55,730

can scrub co2 out of the air and mix it

329

00:16:00,910 --> 00:15:58,220

with water to reclaim some of the oxygen

330

00:16:03,130 --> 00:16:00,920

out of the co2 because co2 has has

331

00:16:06,460 --> 00:16:03,140

oxygen in it as the name implies and

332

00:16:08,350 --> 00:16:06,470

then we can turn co2 and water into a

333

00:16:10,030 --> 00:16:08,360

combination of carbon and hydrogen and

334

00:16:11,550 --> 00:16:10,040

make methane and we can dump that

335

00:16:14,320 --> 00:16:11,560

overboard we don't really need that

336

00:16:16,390 --> 00:16:14,330

another thing we do is we just recycle

337

00:16:18,460 --> 00:16:16,400

water on board we take the water that we

338

00:16:20,110 --> 00:16:18,470

collect out of the air because there's

339

00:16:21,970 --> 00:16:20,120

always humidity in the air astronauts

340

00:16:23,980 --> 00:16:21,980

breathing and systems and so forth and

341

00:16:26,050 --> 00:16:23,990

there's a collection of water and the

342

00:16:28,630 --> 00:16:26,060

condensate collectors as we cool the air

343

00:16:30,760 --> 00:16:28,640

and also we collect our urine and then

344

00:16:32,860 --> 00:16:30,770

we reprocess it and take everything out

345

00:16:34,810 --> 00:16:32,870

of it except the h<sub>2</sub>o and then we send it

346

00:16:36,850 --> 00:16:34,820

right back up here to my spigot so I can

347

00:16:38,530 --> 00:16:36,860

drink it again so we claim the water so

348

00:16:41,170 --> 00:16:38,540

those are all things that are being

349

00:16:47,859 --> 00:16:41,180

tested up here and they work great we we

350

00:16:56,559 --> 00:16:50,659

my name is Juan Z and what is the most

351  
00:17:01,999 --> 00:17:00,229  
the most exciting machine i use well the

352  
00:17:04,449 --> 00:17:02,009  
space station i like to think of it as a

353  
00:17:08,929 --> 00:17:04,459  
really big machine it's got thrusters

354  
00:17:12,319 --> 00:17:08,939  
solar arrays control moment gyros that

355  
00:17:14,840 --> 00:17:12,329  
help us control our attitude all lots of

356  
00:17:17,179 --> 00:17:14,850  
experiments on the outside a robotic arm

357  
00:17:18,949 --> 00:17:17,189  
to move things around it's got an

358  
00:17:21,889 --> 00:17:18,959  
airlock that allows us to go out and do

359  
00:17:23,360 --> 00:17:21,899  
spacewalks but that's what I love about

360  
00:17:25,220 --> 00:17:23,370  
this business is there are so many

361  
00:17:27,289 --> 00:17:25,230  
machines so maybe some of the coolest

362  
00:17:30,230 --> 00:17:27,299  
site I just had the opportunity to fly

363  
00:17:32,090 --> 00:17:30,240

the big robotic arm today it's set some

364

00:17:33,950 --> 00:17:32,100

50 feet long and it's got all these

365

00:17:36,350 --> 00:17:33,960

joints and we can move it all around the

366

00:17:38,120 --> 00:17:36,360

space station like an inchworm a space

367

00:17:39,379 --> 00:17:38,130

suit is really a cool thing that we have

368

00:17:42,110 --> 00:17:39,389

up here it's its own little spacecraft

369

00:17:44,360 --> 00:17:42,120

if you will it's got communication and a

370

00:17:46,879 --> 00:17:44,370

cooling system electrical power system

371

00:17:49,009 --> 00:17:46,889

and systems to allow you to get work

372

00:17:50,509 --> 00:17:49,019

done outside so we have a lot of really

373

00:17:52,250 --> 00:17:50,519

cool systems it would be hard to pick my

374

00:17:53,930 --> 00:17:52,260

favorite i love the Rockets so the

375

00:17:56,000 --> 00:17:53,940

spacecraft getting up and down so that's

376

00:18:02,350 --> 00:17:56,010

that's probably one of them mice most

377

00:18:09,340 --> 00:18:07,060

my name is Zack and my question is what

378

00:18:14,460 --> 00:18:09,350

are some tasks or jobs that you have a

379

00:18:20,170 --> 00:18:18,580

well the the job that we we want to

380

00:18:22,150 --> 00:18:20,180

spend the most time doing and then I

381

00:18:23,710 --> 00:18:22,160

spend right now I spend probably a

382

00:18:26,740 --> 00:18:23,720

little less than half of my time because

383

00:18:28,510 --> 00:18:26,750

them I'm the only u.s. astronaut on

384

00:18:30,220 --> 00:18:28,520

board right now I'm waiting for a couple

385

00:18:31,930 --> 00:18:30,230

more crew members to get here but our

386

00:18:34,540 --> 00:18:31,940

most important job is to do the science

387

00:18:37,660 --> 00:18:34,550

and we have all kinds of science racks

388

00:18:39,400 --> 00:18:37,670

all around the we help set them up and

389

00:18:41,410 --> 00:18:39,410

then the ground can remotely do some of

390

00:18:44,800 --> 00:18:41,420

the science so we have hundreds of

391

00:18:46,750 --> 00:18:44,810

experiments going on all the time but my

392

00:18:49,570 --> 00:18:46,760

work also includes maintaining things

393

00:18:51,820 --> 00:18:49,580

taking care of myself keeping the space

394

00:18:53,740 --> 00:18:51,830

station clean and right now I probably

395

00:18:55,690 --> 00:18:53,750

spend a little over my half half of my

396

00:18:57,940 --> 00:18:55,700

time doing those kinds of things when I

397

00:19:00,010 --> 00:18:57,950

have two more astronauts on board then

398

00:19:01,930 --> 00:19:00,020

we'll have two extra bodies to get all

399

00:19:04,240 --> 00:19:01,940

that science done so we'll be back up to

400

00:19:07,000 --> 00:19:04,250

a complement of three u.s. OS astronauts

401  
00:19:13,200 --> 00:19:07,010  
three Russian and we'll have lots of

402  
00:19:21,380 --> 00:19:16,169  
hi I'm Brennan and I was wondering what

403  
00:19:26,820 --> 00:19:24,150  
well we spend some of it communicating

404  
00:19:28,350 --> 00:19:26,830  
with friends we spend some of it just

405  
00:19:30,240 --> 00:19:28,360  
taking care of little things around the

406  
00:19:33,090 --> 00:19:30,250  
spaceship just like you would would at

407  
00:19:36,450 --> 00:19:33,100  
home we get together and socialize in

408  
00:19:38,520 --> 00:19:36,460  
the evening when we can and we now have

409  
00:19:40,110 --> 00:19:38,530  
technology they can send a little TV up

410  
00:19:42,390 --> 00:19:40,120  
so I get to watch a little bit of

411  
00:19:44,490 --> 00:19:42,400  
college football and professional

412  
00:19:48,390 --> 00:19:44,500  
football if I want to and whatever else

413  
00:19:50,460 --> 00:19:48,400

happens to be on so people take care of

414

00:19:53,220 --> 00:19:50,470

us so we have we always have something

415

00:19:55,230 --> 00:19:53,230

to do in our off time if if we want to a

416

00:19:56,760 --> 00:19:55,240

very favorite pastime though is of

417

00:19:58,470 --> 00:19:56,770

course going in looking out the windows

418

00:20:01,440 --> 00:19:58,480

trying to take pictures of your hometown

419

00:20:03,240 --> 00:20:01,450

and places you've been before and that

420

00:20:05,160 --> 00:20:03,250

sort of thing so that that's what we do

421

00:20:06,720 --> 00:20:05,170

in our spare time here knowing that we

422

00:20:11,139 --> 00:20:06,730

only have a limited time here and then

423

00:20:11,149 --> 00:20:19,139

Thank You mr. Ford

424

00:20:23,639 --> 00:20:21,779

well you're very welcome i think i heard

425

00:20:29,219 --> 00:20:23,649

a thank you does that mean we're going

426

00:20:30,899 --> 00:20:29,229

to have to conclude today yes that was

427

00:20:33,239 --> 00:20:30,909

our last question thank you so much for

428

00:20:37,049 --> 00:20:33,249

answering our questions and good luck on

429

00:20:38,969 --> 00:20:37,059

the International Space Station okay

430

00:20:40,739 --> 00:20:38,979

well thank you very much just just to

431

00:20:42,629 --> 00:20:40,749

prove I'm going to play a strange place

432

00:20:46,609 --> 00:20:42,639

here I'll just do a just do a little

433

00:20:50,599 --> 00:20:46,619

somersault for you and say goodbye and

434

00:20:52,409 --> 00:20:50,609

have a have a great holiday season and

435

00:20:53,729 --> 00:20:52,419

thanks for coming on board the

436

00:20:58,759 --> 00:20:53,739

International Space Station bye-bye

437

00:21:05,669 --> 00:21:01,709

station this is Houston ACR thank you

438

00:21:07,649 --> 00:21:05,679

that concludes the event thank you and

439

00:21:09,419 --> 00:21:07,659

thank you Center for Research on stem

440

00:21:11,339 --> 00:21:09,429

teaching and learning and students