



1  
00:00:06,630 --> 00:00:02,790  
station this is houston are you ready

2  
00:00:06,640 --> 00:00:10,470  
ready for the event

3  
00:00:14,390 --> 00:00:12,230  
jenks public schools this is mission

4  
00:00:16,390 --> 00:00:14,400  
control houston please call station for

5  
00:00:18,790 --> 00:00:16,400  
a voice check

6  
00:00:21,109 --> 00:00:18,800  
station this is superintendent dr stacy

7  
00:00:25,509 --> 00:00:21,119  
butterfield here with students how do

8  
00:00:28,550 --> 00:00:26,950  
hey i hear you loud and clear good

9  
00:00:31,830 --> 00:00:28,560  
morning

10  
00:00:34,150 --> 00:00:31,840  
we are proud to represent our school

11  
00:00:35,910 --> 00:00:34,160  
district and the great state of oklahoma

12  
00:00:38,470 --> 00:00:35,920  
this morning we look forward to learning

13  
00:00:41,270 --> 00:00:38,480

more about your life experiences in

14

00:00:42,790 --> 00:00:41,280

space and with me this morning on stage

15

00:00:44,790 --> 00:00:42,800

are our emcees

16

00:00:45,990 --> 00:00:44,800

we have director of communications mr

17

00:00:48,790 --> 00:00:46,000

rob labor

18

00:00:55,830 --> 00:00:48,800

and we have lieutenant colonel dwayne

19

00:00:55,840 --> 00:01:00,310

good morning shane how you doing

20

00:01:05,590 --> 00:01:03,430

doing well great to talk to you

21

00:01:07,350 --> 00:01:05,600

yeah you're looking good uh you guys

22

00:01:08,870 --> 00:01:07,360

been real busy this month i heard you've

23

00:01:10,630 --> 00:01:08,880

been on a couple spacewalks and you're

24

00:01:14,710 --> 00:01:10,640

getting rid of a cargo module tomorrow

25

00:01:18,230 --> 00:01:16,710

yeah mixed mixed in with all that that

26

00:01:19,670 --> 00:01:18,240

you mentioned is a bunch of science and

27

00:01:21,749 --> 00:01:19,680

research we're doing as well so it's

28

00:01:23,270 --> 00:01:21,759

been a great month up here another great

29

00:01:26,070 --> 00:01:23,280

month i should say

30

00:01:27,749 --> 00:01:26,080

i go i go to 100 day mark tomorrow so

31

00:01:30,469 --> 00:01:27,759

that'll be a nice little

32

00:01:32,630 --> 00:01:30,479

event to celebrate

33

00:01:34,870 --> 00:01:32,640

very good glad to hear it and uh we've

34

00:01:36,789 --> 00:01:34,880

got a we've got a real tough mission for

35

00:01:38,870 --> 00:01:36,799

you this morning we've got

36

00:01:40,390 --> 00:01:38,880

we've got 20 people here with 20

37

00:01:41,429 --> 00:01:40,400

questions and we're going to try to get

38

00:01:42,469 --> 00:01:41,439

through that

39

00:01:45,350 --> 00:01:42,479

and

40

00:01:49,350 --> 00:01:45,360

you'll get on with yours how's that

41

00:01:53,270 --> 00:01:50,870

that sounds great i'm looking forward to

42

00:01:55,270 --> 00:01:53,280

hearing the questions

43

00:02:02,550 --> 00:01:55,280

all right

44

00:02:02,560 --> 00:02:12,070

hello my name is

45

00:02:18,630 --> 00:02:13,430

what is your favorite thing to do in

46

00:02:21,589 --> 00:02:19,990

well i think the number one thing is

47

00:02:23,270 --> 00:02:21,599

flying around that's something obviously

48

00:02:24,949 --> 00:02:23,280

you can't do on earth but up here that's

49

00:02:27,190 --> 00:02:24,959

how we get around you have to fly

50

00:02:28,630 --> 00:02:27,200

there's you can't walk around up here so

51  
00:02:30,630 --> 00:02:28,640  
that's something really cool that we get

52  
00:02:34,070 --> 00:02:30,640  
to experience in the environment of

53  
00:02:34,080 --> 00:02:37,670  
thank you

54  
00:02:41,910 --> 00:02:40,229  
okay shane next up we have uh ashley

55  
00:02:44,309 --> 00:02:41,920  
ashley's got a question good morning

56  
00:02:46,869 --> 00:02:44,319  
ashley here's the camera

57  
00:02:48,550 --> 00:02:46,879  
hi my name is ash do you think that

58  
00:02:50,390 --> 00:02:48,560  
space flight is something that will be

59  
00:02:54,869 --> 00:02:50,400  
accessible to the masses within our

60  
00:02:58,149 --> 00:02:56,470  
well i certainly hope so it's such an

61  
00:02:59,509 --> 00:02:58,159  
incredible experience and it's something

62  
00:03:01,110 --> 00:02:59,519  
that i that i wish i could bring my

63  
00:03:03,030 --> 00:03:01,120

family up here of course for them to

64

00:03:05,430 --> 00:03:03,040

experience and friends as well

65

00:03:07,350 --> 00:03:05,440

so i do hope in your generation uh you

66

00:03:09,910 --> 00:03:07,360

know when you get old like we are

67

00:03:11,910 --> 00:03:09,920

um that you'll be actually you know this

68

00:03:12,869 --> 00:03:11,920

will be a commonplace thing i'm not sure

69

00:03:14,470 --> 00:03:12,879

we're going to quite be there we're

70

00:03:15,750 --> 00:03:14,480

going to be heading to mars as you you

71

00:03:16,790 --> 00:03:15,760

probably know here in the next few

72

00:03:18,470 --> 00:03:16,800

decades

73

00:03:20,470 --> 00:03:18,480

that's going to be a really big push for

74

00:03:23,509 --> 00:03:20,480

our nation and a bunch of nations as we

75

00:03:25,430 --> 00:03:23,519

do this is an international partnership

76

00:03:26,949 --> 00:03:25,440

but your generation also will be the

77

00:03:28,470 --> 00:03:26,959

ones that are going to be going to mars

78

00:03:31,990 --> 00:03:28,480

for the first time as human beings so

79

00:03:32,000 --> 00:03:35,030

thank you

80

00:03:39,670 --> 00:03:36,869

next question shane is going to be from

81

00:03:43,670 --> 00:03:41,990

hi my name is colton i understand you

82

00:03:45,589 --> 00:03:43,680

played baseball at west point my

83

00:03:47,350 --> 00:03:45,599

question is how does the microgravity

84

00:03:51,830 --> 00:03:47,360

environment affect your ability to throw

85

00:03:55,589 --> 00:03:53,910

well that's that's a great question up

86

00:03:57,110 --> 00:03:55,599

here if you throw anything i actually

87

00:03:58,550 --> 00:03:57,120

don't have a baseball but i do have a

88

00:04:01,350 --> 00:03:58,560

basketball so i'm sure there's some

89

00:04:03,190 --> 00:04:01,360

thunder fans in the house there

90

00:04:05,589 --> 00:04:03,200

so i'll try to show the spin that i

91

00:04:07,589 --> 00:04:05,599

would you know use on a curveball so

92

00:04:08,550 --> 00:04:07,599

you're looking for that 12 to 6 spin

93

00:04:10,550 --> 00:04:08,560

right

94

00:04:12,149 --> 00:04:10,560

hopefully if you throw a really nice one

95

00:04:14,229 --> 00:04:12,159

all right and as it gets to the batter

96

00:04:16,229 --> 00:04:14,239

it's going to drop well up here in space

97

00:04:18,229 --> 00:04:16,239

it won't drop unless you push it down

98

00:04:19,909 --> 00:04:18,239

physically like that otherwise it's just

99

00:04:21,030 --> 00:04:19,919

going to go in the same direction that i

100

00:04:22,710 --> 00:04:21,040

pushed it

101  
00:04:24,390 --> 00:04:22,720  
so it's kind of it's obviously a unique

102  
00:04:26,310 --> 00:04:24,400  
environment and the ball is just going

103  
00:04:27,350 --> 00:04:26,320  
to travel that way forever until it hits

104  
00:04:29,990 --> 00:04:27,360  
something

105  
00:04:31,990 --> 00:04:30,000  
and we don't have that that uh luxury i

106  
00:04:33,590 --> 00:04:32,000  
guess on earth but a curveball breaks a

107  
00:04:35,590 --> 00:04:33,600  
lot better and the slider breaks a lot

108  
00:04:37,110 --> 00:04:35,600  
better on the earth because of gravity

109  
00:04:39,990 --> 00:04:37,120  
that's what you know helps pull it down

110  
00:04:41,670 --> 00:04:40,000  
as it gets towards the better

111  
00:04:43,350 --> 00:04:41,680  
thank you shane

112  
00:04:44,710 --> 00:04:43,360  
hey shane that was that was a great

113  
00:04:46,790 --> 00:04:44,720

answer but i was wondering how you're

114

00:04:51,909 --> 00:04:46,800

going to handle that one next up we got

115

00:04:56,390 --> 00:04:54,390

hi my name is gage my question is has

116

00:04:57,830 --> 00:04:56,400

moving in space been easier harder or

117

00:04:59,189 --> 00:04:57,840

different and have you felt noticeable

118

00:05:03,270 --> 00:04:59,199

changes in your strength and how you

119

00:05:06,550 --> 00:05:04,710

i haven't felt any difference in our

120

00:05:08,310 --> 00:05:06,560

strength and that's really due to the

121

00:05:10,469 --> 00:05:08,320

exercise regimen that we're all on up

122

00:05:13,270 --> 00:05:10,479

here we exercise about two hours a day

123

00:05:15,350 --> 00:05:13,280

an hour of that being cardio on either a

124

00:05:16,469 --> 00:05:15,360

treadmill or a stationary bike they're a

125

00:05:18,550 --> 00:05:16,479

little bit different obviously than the

126  
00:05:20,790 --> 00:05:18,560  
ones on earth but that's what we use for

127  
00:05:21,909 --> 00:05:20,800  
our cardio and getting our heart rate up

128  
00:05:23,270 --> 00:05:21,919  
and then we have a weight lifting

129  
00:05:24,790 --> 00:05:23,280  
machine of course nothing weighs

130  
00:05:27,270 --> 00:05:24,800  
anything up here but it's a resistive

131  
00:05:29,430 --> 00:05:27,280  
machine that really is fantastic and we

132  
00:05:30,629 --> 00:05:29,440  
can do bench press shoulder press

133  
00:05:32,469 --> 00:05:30,639  
curls

134  
00:05:33,749 --> 00:05:32,479  
squats anything that you can really

135  
00:05:35,830 --> 00:05:33,759  
pretty much do on earth you can do up

136  
00:05:37,510 --> 00:05:35,840  
here on that machine so that keeps our

137  
00:05:39,350 --> 00:05:37,520  
muscle mass

138  
00:05:41,749 --> 00:05:39,360

intact which is great it also keeps our

139

00:05:43,110 --> 00:05:41,759

bone density and bone mass intact which

140

00:05:45,909 --> 00:05:43,120

is something that decays up here in

141

00:05:47,990 --> 00:05:45,919

space if you're not doing the exercise

142

00:05:49,830 --> 00:05:48,000

all of us up here are feeling great

143

00:05:52,070 --> 00:05:49,840

the exercise i think is really helping

144

00:05:54,469 --> 00:05:52,080

us just our mood our attitudes and our

145

00:05:57,909 --> 00:05:54,479

bodies physically so i haven't noticed

146

00:06:00,550 --> 00:05:57,919

any mental changes or physical changes

147

00:06:04,950 --> 00:06:02,870

hey shane before we get the next student

148

00:06:06,950 --> 00:06:04,960

up here i got a quick give me a ten word

149

00:06:08,390 --> 00:06:06,960

answer you've just been out the door for

150

00:06:09,590 --> 00:06:08,400

a couple of space walks did you feel

151

00:06:13,670 --> 00:06:09,600

like you're in pretty good shape when

152

00:06:17,350 --> 00:06:15,510

i did it's uh very physically and

153

00:06:18,950 --> 00:06:17,360

mentally challenging of course outside

154

00:06:21,270 --> 00:06:18,960

and when you get back in you're you're

155

00:06:23,110 --> 00:06:21,280

just exhausted but i felt like i was

156

00:06:24,710 --> 00:06:23,120

ready peggy and i went out the first

157

00:06:26,390 --> 00:06:24,720

time and then tomo and i went out the

158

00:06:28,070 --> 00:06:26,400

second time i was just lucky enough to

159

00:06:30,150 --> 00:06:28,080

go out both times and we may have a few

160

00:06:33,430 --> 00:06:30,160

more coming up here in march so we're

161

00:06:38,870 --> 00:06:35,830

awesome next question from macy

162

00:06:40,870 --> 00:06:38,880

hi my name is macy and my question is

163

00:06:45,270 --> 00:06:40,880

what did you do to prepare in the months

164

00:06:48,790 --> 00:06:46,870

well the last few months before a

165

00:06:50,629 --> 00:06:48,800

mission like this are actually spent in

166

00:06:52,629 --> 00:06:50,639

russia which is where we do a lot of our

167

00:06:54,070 --> 00:06:52,639

training i would say maybe 40 to 50

168

00:06:55,830 --> 00:06:54,080

percent of our training is done in

169

00:06:57,430 --> 00:06:55,840

russia because we fly on a russian

170

00:06:59,589 --> 00:06:57,440

spacecraft to get here to the space

171

00:07:01,270 --> 00:06:59,599

station and we also return on a russian

172

00:07:03,670 --> 00:07:01,280

spacecraft so

173

00:07:05,430 --> 00:07:03,680

about two months prior to launching we

174

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

go to star city russia which is where

175

00:07:09,749 --> 00:07:07,520

the russians have their training center

176  
00:07:10,469 --> 00:07:09,759  
for their cosmonauts and we join them

177  
00:07:12,230 --> 00:07:10,479  
there

178  
00:07:14,469 --> 00:07:12,240  
as we train as a crew in the last couple

179  
00:07:15,909 --> 00:07:14,479  
months we have final exams in the

180  
00:07:17,670 --> 00:07:15,919  
simulators to make sure that we're

181  
00:07:19,589 --> 00:07:17,680  
qualified and ready to go

182  
00:07:21,430 --> 00:07:19,599  
and then a couple weeks before launch we

183  
00:07:24,070 --> 00:07:21,440  
actually head down to kazakhstan which

184  
00:07:25,589 --> 00:07:24,080  
is uh south of russia and that's where

185  
00:07:27,990 --> 00:07:25,599  
the russians launched their their

186  
00:07:29,350 --> 00:07:28,000  
rockets from with with the crews on it

187  
00:07:31,110 --> 00:07:29,360  
so we go down there for a couple weeks

188  
00:07:32,309 --> 00:07:31,120

and we're in quarantine

189

00:07:34,230 --> 00:07:32,319

that's just to get us away from the

190

00:07:36,309 --> 00:07:34,240

general public so that we don't get sick

191

00:07:39,029 --> 00:07:36,319

or take any illnesses with us

192

00:07:41,990 --> 00:07:39,039

up here to the space station

193

00:07:42,000 --> 00:07:46,950

next up jared with a question

194

00:07:50,869 --> 00:07:49,430

hi my name is jared uh do you still feel

195

00:07:52,869 --> 00:07:50,879

the same way about the earth after

196

00:07:54,390 --> 00:07:52,879

you've seen it from so far away how has

197

00:07:59,189 --> 00:07:54,400

being an astronaut changed your

198

00:08:02,790 --> 00:08:00,950

that's a really good question uh we do

199

00:08:04,390 --> 00:08:02,800

have a unique perspective up here of

200

00:08:05,909 --> 00:08:04,400

course and

201  
00:08:07,589 --> 00:08:05,919  
one that when you look down at our

202  
00:08:09,270 --> 00:08:07,599  
planet you don't see

203  
00:08:11,189 --> 00:08:09,280  
stress you don't see conflict you don't

204  
00:08:13,909 --> 00:08:11,199  
see wars going on you don't see borders

205  
00:08:16,150 --> 00:08:13,919  
even so it's a pretty unique perspective

206  
00:08:17,749 --> 00:08:16,160  
and obviously if we could somehow get

207  
00:08:20,070 --> 00:08:17,759  
that peaceful

208  
00:08:21,749 --> 00:08:20,080  
serene feeling that we see from up here

209  
00:08:25,510 --> 00:08:21,759  
to actually take place on earth i think

210  
00:08:25,520 --> 00:08:29,909  
thank you

211  
00:08:35,589 --> 00:08:33,430  
next up jonathan has a question

212  
00:08:37,110 --> 00:08:35,599  
hi my name is jonathan what did you do

213  
00:08:38,550 --> 00:08:37,120

in your everyday

214

00:08:43,829 --> 00:08:38,560

life to get where you are now and how

215

00:08:47,829 --> 00:08:46,630

well ever since i was your age i'm sure

216

00:08:50,070 --> 00:08:47,839

you know in high school and middle

217

00:08:51,829 --> 00:08:50,080

school i started working really hard i

218

00:08:53,590 --> 00:08:51,839

studied very hard i wasn't ever the

219

00:08:54,949 --> 00:08:53,600

smartest kid or the best athlete or

220

00:08:57,030 --> 00:08:54,959

anything like that but i just worked

221

00:08:58,790 --> 00:08:57,040

really hard at whatever i was doing

222

00:09:00,230 --> 00:08:58,800

that that seemed to pay off for me as i

223

00:09:02,230 --> 00:09:00,240

went through college

224

00:09:03,750 --> 00:09:02,240

uh played sports in college and then as

225

00:09:05,509 --> 00:09:03,760

i went into the military i went to the

226

00:09:06,550 --> 00:09:05,519

united states army after graduating at

227

00:09:08,230 --> 00:09:06,560

west point

228

00:09:10,070 --> 00:09:08,240

and i just kept working really hard at

229

00:09:11,670 --> 00:09:10,080

whatever job i was given uh didn't

230

00:09:14,550 --> 00:09:11,680

matter what it was i was lucky enough to

231

00:09:16,070 --> 00:09:14,560

fly apache helicopters in the army um

232

00:09:17,590 --> 00:09:16,080

worked with some incredible people

233

00:09:20,150 --> 00:09:17,600

learned a lot about leadership and a lot

234

00:09:22,389 --> 00:09:20,160

about people through that experience

235

00:09:24,310 --> 00:09:22,399

and it kind of led me eventually

236

00:09:26,230 --> 00:09:24,320

um to coming to nasa and working as an

237

00:09:28,470 --> 00:09:26,240

astronaut so i've been very blessed i've

238

00:09:30,550 --> 00:09:28,480

always worked very hard and tried to

239

00:09:32,070 --> 00:09:30,560

instill that and certainly my children

240

00:09:34,630 --> 00:09:32,080

as well as any other folks that i come

241

00:09:36,389 --> 00:09:34,640

in contact with

242

00:09:40,070 --> 00:09:36,399

thank you

243

00:09:43,750 --> 00:09:42,710

hi i'm connor and i have two questions

244

00:09:45,190 --> 00:09:43,760

um

245

00:09:46,550 --> 00:09:45,200

what is the most difficult challenge

246

00:09:50,949 --> 00:09:46,560

that you faced in your life and how did

247

00:09:55,030 --> 00:09:52,550

well that's a good one and a very tough

248

00:09:56,790 --> 00:09:55,040

question uh challenges you know as you

249

00:09:59,190 --> 00:09:56,800

go through life you'll see you have

250

00:10:01,110 --> 00:09:59,200

challenges i won't say all the time but

251  
00:10:02,069 --> 00:10:01,120  
you know every few months or every year

252  
00:10:04,069 --> 00:10:02,079  
you're going to have some major

253  
00:10:05,670 --> 00:10:04,079  
challenges so i think the one that's

254  
00:10:07,350 --> 00:10:05,680  
kind of the most important or whatever

255  
00:10:09,350 --> 00:10:07,360  
is the one you're kind of going through

256  
00:10:10,949 --> 00:10:09,360  
currently so i've been through a lot to

257  
00:10:13,829 --> 00:10:10,959  
get to kind of this point where i am

258  
00:10:15,590 --> 00:10:13,839  
with family and with friends um and with

259  
00:10:17,590 --> 00:10:15,600  
just other situations in my life the

260  
00:10:19,110 --> 00:10:17,600  
current one which is kind of on my mind

261  
00:10:20,949 --> 00:10:19,120  
the most right now is the challenge of

262  
00:10:23,110 --> 00:10:20,959  
being separated from my family for six

263  
00:10:24,470 --> 00:10:23,120

months um it's not easy a lot of you

264

00:10:26,790 --> 00:10:24,480

know everybody does it that comes up

265

00:10:29,110 --> 00:10:26,800

here just something that uh is is more

266

00:10:30,389 --> 00:10:29,120

difficult to some than others and my

267

00:10:32,069 --> 00:10:30,399

family and i are working through it but

268

00:10:34,069 --> 00:10:32,079

it's you know i hate missing my kids

269

00:10:35,509 --> 00:10:34,079

games and and all their activities and

270

00:10:37,190 --> 00:10:35,519

things that they're doing as they're

271

00:10:38,870 --> 00:10:37,200

going through their life but it's just

272

00:10:40,230 --> 00:10:38,880

something that we have to deal with and

273

00:10:41,829 --> 00:10:40,240

i think it's a big challenge for the

274

00:10:44,949 --> 00:10:41,839

space station and expedition crews in

275

00:10:48,150 --> 00:10:46,870

thank you and my second question is what

276

00:10:52,310 --> 00:10:48,160

kind of experiments are you doing in

277

00:10:56,389 --> 00:10:53,910

we have a lot going on i think we're

278

00:10:58,069 --> 00:10:56,399

doing about 200 total over the six

279

00:11:00,230 --> 00:10:58,079

months that i'm up here

280

00:11:02,710 --> 00:11:00,240

as a crew so we've got a lot going on we

281

00:11:04,389 --> 00:11:02,720

have fluid shifts experiments going on

282

00:11:06,310 --> 00:11:04,399

on on some of the astronauts and

283

00:11:07,910 --> 00:11:06,320

cosmonauts which is a pretty neat thing

284

00:11:09,590 --> 00:11:07,920

when you come up to space the fluid in

285

00:11:10,630 --> 00:11:09,600

your body actually shifts up towards

286

00:11:12,150 --> 00:11:10,640

your head

287

00:11:13,910 --> 00:11:12,160

and it kind of puffs your face out at

288

00:11:16,069 --> 00:11:13,920

least initially when you get up here so

289

00:11:17,990 --> 00:11:16,079

we're trying to study why that happens

290

00:11:20,069 --> 00:11:18,000

we also are doing some capillary flow

291

00:11:21,590 --> 00:11:20,079

experiments uh we're doing some

292

00:11:23,110 --> 00:11:21,600

combustion experiments which we're going

293

00:11:25,110 --> 00:11:23,120

to start next week

294

00:11:26,949 --> 00:11:25,120

in this rack to my right here that's

295

00:11:28,710 --> 00:11:26,959

going to be exciting and i even got to

296

00:11:30,150 --> 00:11:28,720

grow some lettuce up here in space so i

297

00:11:32,710 --> 00:11:30,160

kind of felt like matt damon on the

298

00:11:34,630 --> 00:11:32,720

martian growing things uh away from

299

00:11:36,069 --> 00:11:34,640

earth but we the lettuce came out

300

00:11:39,110 --> 00:11:36,079

beautifully and we got to actually eat

301  
00:11:45,509 --> 00:11:39,120  
it up here a few weeks ago

302  
00:11:49,509 --> 00:11:48,069  
hi my name is tyler if the mars trip is

303  
00:11:55,269 --> 00:11:49,519  
successful what do you believe is in

304  
00:12:00,230 --> 00:11:57,509  
well that's a few decades away

305  
00:12:01,750 --> 00:12:00,240  
sending people to mars i think

306  
00:12:03,750 --> 00:12:01,760  
but it's going to be fantastic i mean

307  
00:12:06,790 --> 00:12:03,760  
it's going to be it's a very tough

308  
00:12:08,550 --> 00:12:06,800  
problem to solve to get a human there

309  
00:12:09,990 --> 00:12:08,560  
because of the systems that are involved

310  
00:12:12,069 --> 00:12:10,000  
and we're testing a lot of those systems

311  
00:12:14,629 --> 00:12:12,079  
out now here on the space station

312  
00:12:15,750 --> 00:12:14,639  
where it's not so far away from earth so

313  
00:12:17,829 --> 00:12:15,760

you know when we make that next

314

00:12:18,870 --> 00:12:17,839

spacecraft to go to mars all these

315

00:12:21,030 --> 00:12:18,880

systems are going to have in the

316

00:12:22,230 --> 00:12:21,040

technology we develop over the lifetime

317

00:12:23,990 --> 00:12:22,240

of the space station here are going to

318

00:12:25,910 --> 00:12:24,000

come into play as we help develop that

319

00:12:27,829 --> 00:12:25,920

vehicle so that the humans can stay

320

00:12:29,990 --> 00:12:27,839

alive and stay healthy

321

00:12:33,990 --> 00:12:30,000

can get to mars do their mission and

322

00:12:39,269 --> 00:12:34,000

return safely back to earth

323

00:12:43,350 --> 00:12:41,670

hi my name is noah and obviously you

324

00:12:44,470 --> 00:12:43,360

guys undergo years of training and i was

325

00:12:45,750 --> 00:12:44,480

wondering was there anything in

326

00:12:51,110 --> 00:12:45,760

particular that that training really

327

00:12:55,269 --> 00:12:52,949

we do get trained quite a bit it was

328

00:12:57,030 --> 00:12:55,279

about a two and a half a year training

329

00:12:58,710 --> 00:12:57,040

program just for this launch and this

330

00:13:00,470 --> 00:12:58,720

mission specifically but even before

331

00:13:02,949 --> 00:13:00,480

that i trained probably 10 years as an

332

00:13:05,509 --> 00:13:02,959

astronaut so a lot of training

333

00:13:07,670 --> 00:13:05,519

what you can't prepare for at all is the

334

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

environment of microgravity and in

335

00:13:11,670 --> 00:13:09,839

trying to do a task or trying to change

336

00:13:13,269 --> 00:13:11,680

something out while you're floating and

337

00:13:15,829 --> 00:13:13,279

while everything around you is floating

338

00:13:17,750 --> 00:13:15,839

so we can train you know and be book

339

00:13:19,030 --> 00:13:17,760

smart so to speak on the ground but

340

00:13:21,750 --> 00:13:19,040

until you get up here and actually do

341

00:13:23,430 --> 00:13:21,760

some activities and figure things out in

342

00:13:27,430 --> 00:13:23,440

this microgravity environment you'll

343

00:13:29,750 --> 00:13:27,440

never really understand it completely

344

00:13:31,829 --> 00:13:29,760

thank you

345

00:13:33,509 --> 00:13:31,839

okay shane i'm the next capcom so i can

346

00:13:35,829 --> 00:13:33,519

say this we're doing good but we got

347

00:13:39,590 --> 00:13:35,839

seven minutes and nine questions left

348

00:13:39,600 --> 00:13:43,590

all right digger we'll get through

349

00:13:50,069 --> 00:13:45,030

hi my name is jackson what is your

350

00:13:53,509 --> 00:13:51,990

my favorite thing up here is got to be

351  
00:13:55,030 --> 00:13:53,519  
looking out the window we have a module

352  
00:13:56,949 --> 00:13:55,040  
called the cupola which is full of

353  
00:13:59,269 --> 00:13:56,959  
windows and it points directly at earth

354  
00:14:00,790 --> 00:13:59,279  
all the time so i think most astronauts

355  
00:14:03,590 --> 00:14:00,800  
just enjoy hanging out on there and

356  
00:14:09,110 --> 00:14:03,600  
looking at our beautiful planet

357  
00:14:13,990 --> 00:14:12,150  
hi my name is lizzy with the increasing

358  
00:14:16,389 --> 00:14:14,000  
ability of robots such as nasa's

359  
00:14:18,470 --> 00:14:16,399  
robonaut why do you think manned space

360  
00:14:23,430 --> 00:14:18,480  
flight is still a crucial part of space

361  
00:14:27,430 --> 00:14:25,910  
great question i think really if we work

362  
00:14:30,150 --> 00:14:27,440  
together it's kind of the optimal

363  
00:14:31,269 --> 00:14:30,160

situation we do have robots robonaut

364

00:14:33,110 --> 00:14:31,279

that you mentioned i'm actually going to

365

00:14:34,870 --> 00:14:33,120

work on that next week robonaut's not

366

00:14:36,389 --> 00:14:34,880

feeling too well right now he's a little

367

00:14:37,829 --> 00:14:36,399

bit sick so we're going to try to fix

368

00:14:38,949 --> 00:14:37,839

them next week and get them back working

369

00:14:41,509 --> 00:14:38,959

again

370

00:14:42,710 --> 00:14:41,519

but if we do have you know robots to do

371

00:14:44,790 --> 00:14:42,720

some tasks

372

00:14:45,750 --> 00:14:44,800

the human brings a lot to the table that

373

00:14:47,670 --> 00:14:45,760

a robot

374

00:14:49,430 --> 00:14:47,680

robot or robonaut can't bring and that's

375

00:14:50,870 --> 00:14:49,440

the critical thinking if you come to a

376

00:14:52,389 --> 00:14:50,880

situation

377

00:14:54,550 --> 00:14:52,399

and things aren't going exactly as

378

00:14:56,710 --> 00:14:54,560

planned or they're going really wrong i

379

00:14:58,550 --> 00:14:56,720

think you need a human there to solve

380

00:15:00,150 --> 00:14:58,560

the problem think about what's going on

381

00:15:01,990 --> 00:15:00,160

take all the factors

382

00:15:04,710 --> 00:15:02,000

involved in the situation and help solve

383

00:15:04,720 --> 00:15:10,790

thank you

384

00:15:14,870 --> 00:15:12,949

hi my name is carla and i have two

385

00:15:20,069 --> 00:15:14,880

questions today what is your favorite

386

00:15:22,710 --> 00:15:21,829

my favorite type of space food is

387

00:15:24,710 --> 00:15:22,720

probably

388

00:15:26,389 --> 00:15:24,720

chicken strips and salsa things come in

389

00:15:28,550 --> 00:15:26,399

pouches most of our food comes in

390

00:15:29,910 --> 00:15:28,560

pouches like this and this happens to be

391

00:15:32,150 --> 00:15:29,920

chicken strips and salsa we have

392

00:15:34,230 --> 00:15:32,160

everything from beef to turkey to

393

00:15:36,150 --> 00:15:34,240

crawfish to we have a pretty wide

394

00:15:39,430 --> 00:15:36,160

variety of things that come in those

395

00:15:46,710 --> 00:15:41,910

and what duties do you perform on the

396

00:15:49,910 --> 00:15:47,990

can you repeat that i missed the first

397

00:15:52,629 --> 00:15:49,920

part of the question

398

00:15:57,509 --> 00:15:52,639

what duties do you perform under on the

399

00:16:01,670 --> 00:15:59,749

so we're all kind of trained on

400

00:16:03,350 --> 00:16:01,680

a lot of different things so we're all

401  
00:16:05,269 --> 00:16:03,360  
scientists some days we're engineers

402  
00:16:07,509 --> 00:16:05,279  
some days we're plumbers some days we're

403  
00:16:08,790 --> 00:16:07,519  
electricians other days some of us are

404  
00:16:11,030 --> 00:16:08,800  
uh have gotten the pleasure of going

405  
00:16:13,350 --> 00:16:11,040  
outside and doing spacewalks tomorrow

406  
00:16:15,030 --> 00:16:13,360  
like mr kerry mentioned we're going to

407  
00:16:17,590 --> 00:16:15,040  
be working with the robotic arm to

408  
00:16:19,430 --> 00:16:17,600  
release a japanese cargo vehicle so we

409  
00:16:21,590 --> 00:16:19,440  
kind of have to be trained and ready to

410  
00:16:23,509 --> 00:16:21,600  
do about everything up here great

411  
00:16:34,069 --> 00:16:23,519  
question

412  
00:16:35,990 --> 00:16:34,079  
you could go back in time to any space

413  
00:16:40,710 --> 00:16:36,000

expedition from any country where would

414

00:16:45,269 --> 00:16:42,389

well really good question i think i

415

00:16:47,430 --> 00:16:45,279

would uh go back to the late 1960s early

416

00:16:49,189 --> 00:16:47,440

1970s and be on one of the apollo

417

00:16:51,910 --> 00:16:49,199

missions to go to the moon and walk on

418

00:16:51,920 --> 00:16:58,389

thank you

419

00:17:02,389 --> 00:17:00,550

hello my name is jake and i was

420

00:17:04,789 --> 00:17:02,399

wondering how have the conditions of

421

00:17:09,270 --> 00:17:04,799

space affected you physically and

422

00:17:12,069 --> 00:17:10,470

well i think we talked a little bit

423

00:17:13,429 --> 00:17:12,079

before about it but physically i think

424

00:17:15,590 --> 00:17:13,439

we're all doing great because of the

425

00:17:16,949 --> 00:17:15,600

exercise that we do and mentally we all

426  
00:17:18,230 --> 00:17:16,959  
keep an eye on each other to make sure

427  
00:17:19,909 --> 00:17:18,240  
we can kind of tell when people are

428  
00:17:21,669 --> 00:17:19,919  
getting tired or when they need a break

429  
00:17:23,669 --> 00:17:21,679  
and that's just something that we're all

430  
00:17:25,750 --> 00:17:23,679  
kind of managing each other

431  
00:17:27,750 --> 00:17:25,760  
as a crew so we're working great as a

432  
00:17:29,990 --> 00:17:27,760  
team and so far

433  
00:17:32,950 --> 00:17:30,000  
no mental or physical deficiencies that

434  
00:17:40,070 --> 00:17:32,960  
i've noticed

435  
00:17:44,710 --> 00:17:43,029  
hi my name is alex and my question is

436  
00:17:46,549 --> 00:17:44,720  
knowing that you will lose muscle mass

437  
00:17:51,270 --> 00:17:46,559  
in space what adjustments are made to

438  
00:17:54,310 --> 00:17:52,710

diet wise

439

00:17:56,230 --> 00:17:54,320

they put us on kind of a program to eat

440

00:17:58,230 --> 00:17:56,240

a certain number of calories a day

441

00:18:00,549 --> 00:17:58,240

it's really hard to achieve that but

442

00:18:02,070 --> 00:18:00,559

we're working hard at it i never get

443

00:18:04,390 --> 00:18:02,080

really to the full amount but i get

444

00:18:05,350 --> 00:18:04,400

probably 70 to 75 of the calories every

445

00:18:06,549 --> 00:18:05,360

day

446

00:18:08,630 --> 00:18:06,559

and they're needed especially with all

447

00:18:10,549 --> 00:18:08,640

the working out we're doing and like you

448

00:18:12,310 --> 00:18:10,559

mentioned you would lose muscle mass if

449

00:18:13,590 --> 00:18:12,320

you weren't working out all the time so

450

00:18:15,350 --> 00:18:13,600

since we're doing all those we're eating

451

00:18:19,110 --> 00:18:15,360

a lot and we're working out a lot most

452

00:18:19,120 --> 00:18:22,870

thank you

453

00:18:27,270 --> 00:18:24,950

hi commander my name is bailey siegfried

454

00:18:29,669 --> 00:18:27,280

with nordam in flight night space week

455

00:18:30,950 --> 00:18:29,679

i'm standing in for a jinx student with

456

00:18:33,110 --> 00:18:30,960

his question

457

00:18:37,350 --> 00:18:33,120

what kind of entertainment activities do

458

00:18:41,830 --> 00:18:39,270

we actually have quite a bit we can get

459

00:18:43,510 --> 00:18:41,840

tv shows or movies anything that we

460

00:18:44,870 --> 00:18:43,520

prefer or that are up there's tons of

461

00:18:47,190 --> 00:18:44,880

movies and things already up here on our

462

00:18:49,270 --> 00:18:47,200

computers which is nice i'm a big sports

463

00:18:50,470 --> 00:18:49,280

fan so i get a lot of games sent up to

464

00:18:51,830 --> 00:18:50,480

me

465

00:18:54,789 --> 00:18:51,840

and that's been pretty nice especially

466

00:18:57,110 --> 00:18:54,799

through the playoffs here in the nfl

467

00:18:59,029 --> 00:18:57,120

and it'll soon be march madness so we'll

468

00:19:01,990 --> 00:18:59,039

be watching a bunch of that stuff

469

00:19:04,310 --> 00:19:02,000

as we kind of close out my mission

470

00:19:06,390 --> 00:19:04,320

thank you

471

00:19:08,789 --> 00:19:06,400

hey shane awesome job before we turn you

472

00:19:10,630 --> 00:19:08,799

over to the mc here question from digger

473

00:19:13,110 --> 00:19:10,640

and this is inside joke alert for the

474

00:19:20,789 --> 00:19:13,120

audience i want to hear what comes after

475

00:19:24,230 --> 00:19:22,630

wow you're taking me back there i've

476

00:19:26,390 --> 00:19:24,240

already probably forgotten that part of

477

00:19:29,669 --> 00:19:26,400

my brains already dropped that so you'll

478

00:19:32,390 --> 00:19:29,679

have to you'll have to finish that

479

00:19:34,310 --> 00:19:32,400

for the audience here shane had a big

480

00:19:36,630 --> 00:19:34,320

part to do in teaching astronauts how to

481

00:19:38,950 --> 00:19:36,640

land the space shuttle back before

482

00:19:40,630 --> 00:19:38,960

he went to station

483

00:19:41,990 --> 00:19:40,640

thanks shane this has been great bud and

484

00:19:45,110 --> 00:19:42,000

you're doing a great job you're making

485

00:19:47,669 --> 00:19:46,390

thanks tigger and thanks to all the

486

00:19:50,680 --> 00:19:47,679

students it was great being with you

487

00:20:01,350 --> 00:19:50,690

today have an awesome

488

00:20:04,870 --> 00:20:03,190

shane if you can still hear us we've got

489

00:20:07,190 --> 00:20:04,880

just a couple minutes left in our in our

490

00:20:08,789 --> 00:20:07,200

window here

491

00:20:10,070 --> 00:20:08,799

can you take the opportunity just to

492

00:20:14,149 --> 00:20:10,080

tell us a little bit more about the

493

00:20:18,149 --> 00:20:15,590

yeah absolutely this is the us

494

00:20:20,070 --> 00:20:18,159

laboratory and this is where we do a lot

495

00:20:22,149 --> 00:20:20,080

of our research and science here that

496

00:20:23,029 --> 00:20:22,159

i'm kind of showing on this side of the

497

00:20:25,029 --> 00:20:23,039

lab

498

00:20:27,510 --> 00:20:25,039

we have racks all over a cool thing

499

00:20:29,270 --> 00:20:27,520

about space is we can use the ceiling

500

00:20:31,830 --> 00:20:29,280

the the floor as you would think of the

501

00:20:33,350 --> 00:20:31,840

floor and all the walls the same so i

502

00:20:36,310 --> 00:20:33,360

can have a drawer here i can have

503

00:20:38,390 --> 00:20:36,320

drawers up here we can use the complete

504

00:20:40,230 --> 00:20:38,400

volume so that's pretty nice and so you

505

00:20:41,590 --> 00:20:40,240

may be working upside down or right side

506

00:20:43,669 --> 00:20:41,600

up and you really don't know because

507

00:20:46,230 --> 00:20:43,679

there's no up or down in space this is a

508

00:20:47,590 --> 00:20:46,240

great module to my left here you

509

00:20:50,870 --> 00:20:47,600

probably can't see it but this is our

510

00:20:53,590 --> 00:20:50,880

stationary bike it uh it's on its own uh

511

00:20:55,590 --> 00:20:53,600

isolation system so it's i equate it to

512

00:20:57,350 --> 00:20:55,600

riding a unicycle on a trampoline it

513

00:20:58,870 --> 00:20:57,360

kind of balances and it's very hard to

514

00:21:00,710 --> 00:20:58,880

keep your balance but once you get the

515

00:21:02,310 --> 00:21:00,720

hang of it you get a great workout on

516

00:21:05,350 --> 00:21:02,320

that

517

00:21:06,950 --> 00:21:05,360

behind me is the robotic workstation so

518

00:21:08,710 --> 00:21:06,960

what we're doing now is using the one

519

00:21:10,549 --> 00:21:08,720

behind me as a backup

520

00:21:12,630 --> 00:21:10,559

in case the one in the cupola with all

521

00:21:14,630 --> 00:21:12,640

the windows fails tomorrow then we'll

522

00:21:16,870 --> 00:21:14,640

come over here and finish the release of

523

00:21:19,029 --> 00:21:16,880

that japanese vehicle right behind me

524

00:21:20,630 --> 00:21:19,039

here on the robotic workstation

525

00:21:22,950 --> 00:21:20,640

and then our command post is kind of

526

00:21:24,789 --> 00:21:22,960

just beyond that um and that's kind of

527

00:21:26,470 --> 00:21:24,799

where we have all emergency books there

528

00:21:28,470 --> 00:21:26,480

we have a computer there and we're doing

529

00:21:30,070 --> 00:21:28,480

our our daily conferences with the

530

00:21:32,070 --> 00:21:30,080

ground teams all around the world that's

531

00:21:35,590 --> 00:21:32,080

where we kind of hang out to do those

532

00:21:39,909 --> 00:21:37,669

thank you shane well as we as we come to

533

00:21:42,390 --> 00:21:39,919

a close here today just want to say that

534

00:21:43,510 --> 00:21:42,400

on behalf of our students our staff

535

00:21:45,110 --> 00:21:43,520

members

536

00:21:46,789 --> 00:21:45,120

and all of our administrators here at

537

00:21:48,710 --> 00:21:46,799

jinx public schools thank you so much

538

00:21:50,070 --> 00:21:48,720

for taking the time to speak with our

539

00:21:53,850 --> 00:21:50,080

students today it's it's been an

540

00:21:59,110 --> 00:21:53,860

absolute pleasure and and our honor

541

00:21:59,120 --> 00:22:02,710

thank you

542

00:22:06,870 --> 00:22:04,470

commander thanks for all that you do to

543

00:22:08,070 --> 00:22:06,880

inspire the next generation of

544

00:22:10,070 --> 00:22:08,080

our space

545

00:22:11,990 --> 00:22:10,080

explorers right behind me

546

00:22:14,070 --> 00:22:12,000

thanks for everything that you've done

547

00:22:16,149 --> 00:22:14,080

for our country our students and

548

00:22:17,430 --> 00:22:16,159

inspiring on behalf of flight night

549

00:22:21,029 --> 00:22:17,440

space week

550

00:22:22,950 --> 00:22:21,039

nordham and great oklahoma space loving

551

00:22:26,230 --> 00:22:22,960

state thank you for all you do

552

00:22:28,350 --> 00:22:26,240

appreciate you

553

00:22:30,710 --> 00:22:28,360

oh you're welcome

554

00:22:34,710 --> 00:22:30,720

[Applause]