



1  
00:00:06,869 --> 00:00:03,030  
station this is houston are you ready

2  
00:00:11,830 --> 00:00:09,830  
i am ready for the event

3  
00:00:13,749 --> 00:00:11,840  
henning school district this is mission

4  
00:00:18,310 --> 00:00:13,759  
control houston

5  
00:00:22,150 --> 00:00:20,230  
station this is dana dam with the

6  
00:00:25,910 --> 00:00:22,160  
henning school district how do you hear

7  
00:00:29,589 --> 00:00:27,830  
henning minnesota i hear you loud and

8  
00:00:33,590 --> 00:00:29,599  
clear welcome to the international space

9  
00:00:38,630 --> 00:00:36,310  
hello karen for the past few years you

10  
00:00:39,990 --> 00:00:38,640  
have been the subject of our thoughts of

11  
00:00:41,750 --> 00:00:40,000  
our prayers

12  
00:00:44,069 --> 00:00:41,760  
of our questions

13  
00:00:46,790 --> 00:00:44,079

most importantly our lesson plans and

14

00:00:49,590 --> 00:00:46,800

our inspiration and admiration

15

00:00:52,389 --> 00:00:49,600

thank you for taking time aboard the iss

16

00:00:55,189 --> 00:00:52,399

to continue to inspire and teach members

17

00:00:57,430 --> 00:00:55,199

of your hometown of your school

18

00:00:59,270 --> 00:00:57,440

of our student body we have some

19

00:01:03,750 --> 00:00:59,280

questions for you today if that's all

20

00:01:08,310 --> 00:01:06,149

absolutely uh it's my pleasure to be

21

00:01:10,390 --> 00:01:08,320

able to do this with you guys today

22

00:01:16,070 --> 00:01:10,400

excuse me a special hello to my mom and

23

00:01:16,080 --> 00:01:19,190

okay

24

00:01:24,950 --> 00:01:21,990

hello my name is tayden soma

25

00:01:26,710 --> 00:01:24,960

i'm in kindergarten my question is

26

00:01:32,390 --> 00:01:26,720

what does space flight ride from the

27

00:01:36,789 --> 00:01:35,270

well we are only 250 miles above the

28

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

surface of the earth so believe it or

29

00:01:40,950 --> 00:01:38,880

not space doesn't look all that

30

00:01:42,870 --> 00:01:40,960

different from here than it does from

31

00:01:44,469 --> 00:01:42,880

earth the difference is that when you

32

00:01:46,310 --> 00:01:44,479

guys look into space you have to look

33

00:01:48,389 --> 00:01:46,320

through earth's atmosphere and we don't

34

00:01:50,710 --> 00:01:48,399

have that to look through so it can look

35

00:01:52,550 --> 00:01:50,720

very very dark a lot darker probably

36

00:01:54,149 --> 00:01:52,560

than you see it and the stars you know

37

00:01:56,789 --> 00:01:54,159

how the stars kind of twinkle when you

38

00:01:58,630 --> 00:01:56,799

look at them here they're very solid and

39

00:02:00,550 --> 00:01:58,640

also the

40

00:02:01,990 --> 00:02:00,560

the aurora the northern lights i don't

41

00:02:03,429 --> 00:02:02,000

know if you've ever seen those but when

42

00:02:04,950 --> 00:02:03,439

we look at those they're beautiful and

43

00:02:07,749 --> 00:02:04,960

we see them along the surface of the

44

00:02:09,910 --> 00:02:07,759

earth so it's very similar to what you

45

00:02:15,110 --> 00:02:09,920

see from the earth just a little just a

46

00:02:19,589 --> 00:02:17,750

hello my name is carter kenyon

47

00:02:23,510 --> 00:02:19,599

i am

48

00:02:25,990 --> 00:02:23,520

in second grade my question is does

49

00:02:31,030 --> 00:02:26,000

being in space with no gravity feel like

50

00:02:34,869 --> 00:02:33,190

that's a very keen observation it

51  
00:02:38,229 --> 00:02:34,879  
actually does in a lot of ways in fact

52  
00:02:40,150 --> 00:02:38,239  
we use water to train for space walks

53  
00:02:41,509 --> 00:02:40,160  
because what we can do i don't know if

54  
00:02:43,990 --> 00:02:41,519  
you've noticed when you wear a life

55  
00:02:46,309 --> 00:02:44,000  
jacket you float if you wear if you tie

56  
00:02:48,070 --> 00:02:46,319  
a rock to you you would sink well we

57  
00:02:49,830 --> 00:02:48,080  
have something called neutral buoyancy

58  
00:02:52,070 --> 00:02:49,840  
where if you have an equal amount of

59  
00:02:53,990 --> 00:02:52,080  
that you will just kind of float in the

60  
00:02:56,390 --> 00:02:54,000  
water without moving and that's very

61  
00:02:59,030 --> 00:02:56,400  
similar to what it is so we use that a

62  
00:03:00,869 --> 00:02:59,040  
big pool to just train for space walks

63  
00:03:05,750 --> 00:03:00,879

so we can feel what it's like to move

64

00:03:11,190 --> 00:03:08,309

hello my name is melody justice and i am

65

00:03:12,710 --> 00:03:11,200

in third grade my question is how old

66

00:03:17,030 --> 00:03:12,720

were you when you decide to be an

67

00:03:20,470 --> 00:03:18,710

well if you're in the third grade i

68

00:03:24,229 --> 00:03:20,480

probably was about your age when i

69

00:03:26,470 --> 00:03:24,239

decided i was uh very young and i was

70

00:03:33,910 --> 00:03:26,480

probably going to school sitting in the

71

00:03:38,550 --> 00:03:36,229

hello my name is chloe winters and i am

72

00:03:40,390 --> 00:03:38,560

in fifth grade my question is what is

73

00:03:44,949 --> 00:03:40,400

your favorite thing to do aboard the

74

00:03:48,149 --> 00:03:46,309

well there are a lot of really cool

75

00:03:50,470 --> 00:03:48,159

things to do here looking out the window

76

00:03:52,390 --> 00:03:50,480

is of course one of the best but what i

77

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

also like to do i like zipping around

78

00:03:56,630 --> 00:03:54,400

you can get moving pretty fast we have

79

00:03:58,869 --> 00:03:56,640

hand rails on all the walls here and you

80

00:04:00,789 --> 00:03:58,879

can hold on with your feet or just push

81

00:04:03,910 --> 00:04:00,799

off with your hands and i like zipping

82

00:04:05,750 --> 00:04:03,920

around corners and flipping upside down

83

00:04:07,509 --> 00:04:05,760

because sometimes what you're doing the

84

00:04:09,270 --> 00:04:07,519

floor is actually what would seem like

85

00:04:11,350 --> 00:04:09,280

the floor and sometimes the floor can be

86

00:04:12,229 --> 00:04:11,360

one of the walls and so it's fun to just

87

00:04:13,750 --> 00:04:12,239

kind of

88

00:04:15,830 --> 00:04:13,760

zip around corners and change your

89

00:04:23,350 --> 00:04:15,840

orientation and just float all over the

90

00:04:27,510 --> 00:04:25,590

hello my name is tony killing and i am

91

00:04:33,749 --> 00:04:27,520

in ninth grade my question is is it

92

00:04:37,270 --> 00:04:35,830

well that's interesting i know there are

93

00:04:39,350 --> 00:04:37,280

a lot of difficulties in being an

94

00:04:41,670 --> 00:04:39,360

astronaut no matter who you are and i

95

00:04:43,830 --> 00:04:41,680

haven't noticed a lot different

96

00:04:46,469 --> 00:04:43,840

with the challenges that i face as being

97

00:04:48,390 --> 00:04:46,479

an astronaut as my male colleagues but

98

00:04:50,230 --> 00:04:48,400

not having been a male astronaut myself

99

00:04:51,990 --> 00:04:50,240

of course i can't compare but the

100

00:04:53,830 --> 00:04:52,000

difficulties that i've run into and the

101  
00:05:00,790 --> 00:04:53,840  
challenges i've had are very similar to

102  
00:05:05,590 --> 00:05:03,430  
hello my name is christy fink and my

103  
00:05:08,070 --> 00:05:05,600  
question to you karen is

104  
00:05:09,510 --> 00:05:08,080  
does it take your body a long time to

105  
00:05:13,909 --> 00:05:09,520  
get back to normal when you return to

106  
00:05:17,830 --> 00:05:15,510  
hi there christy

107  
00:05:19,830 --> 00:05:17,840  
actually it does our bodies are very

108  
00:05:22,150 --> 00:05:19,840  
very smart and they will adapt to

109  
00:05:24,469 --> 00:05:22,160  
whatever situation they're in and up

110  
00:05:26,469 --> 00:05:24,479  
here in space without gravity

111  
00:05:27,990 --> 00:05:26,479  
our bodies don't really need our bones

112  
00:05:29,590 --> 00:05:28,000  
and they don't need our muscles all that

113  
00:05:32,070 --> 00:05:29,600

much because we're not walking around

114

00:05:33,990 --> 00:05:32,080

all the time so without the exercise we

115

00:05:36,790 --> 00:05:34,000

do every day our bones and our muscles

116

00:05:39,029 --> 00:05:36,800

would degrade very very fast and so we

117

00:05:40,390 --> 00:05:39,039

exercise about two hours every day we do

118

00:05:43,270 --> 00:05:40,400

resistive training and also

119

00:05:44,950 --> 00:05:43,280

cardiovascular training and so hopefully

120

00:05:46,870 --> 00:05:44,960

that will mitigate some of the problems

121

00:05:48,550 --> 00:05:46,880

when we return to earth but even with

122

00:05:50,790 --> 00:05:48,560

that our bodies are just not used to

123

00:05:53,510 --> 00:05:50,800

that gravity and also our vestibular

124

00:05:54,950 --> 00:05:53,520

systems we get very used to the lack of

125

00:05:57,749 --> 00:05:54,960

gravity and

126

00:05:59,909 --> 00:05:57,759

the gravity gravity plays a big role in

127

00:06:02,070 --> 00:05:59,919

the way your your inner ears are working

128

00:06:03,590 --> 00:06:02,080

and all of that and so it takes a long

129

00:06:05,029 --> 00:06:03,600

time and there's quite a transition

130

00:06:06,950 --> 00:06:05,039

period i've heard

131

00:06:08,550 --> 00:06:06,960

like people that are runners it can take

132

00:06:16,070 --> 00:06:08,560

up to four or five months before you're

133

00:06:20,309 --> 00:06:17,990

hi my name

134

00:06:23,029 --> 00:06:20,319

is isabel guiding

135

00:06:29,110 --> 00:06:23,039

i am in kindergarten

136

00:06:33,590 --> 00:06:31,430

i absolutely love being in space and i

137

00:06:35,749 --> 00:06:33,600

think you would like it too like i said

138

00:06:37,430 --> 00:06:35,759

before floating around and zipping

139

00:06:40,469 --> 00:06:37,440

around as fast as you can without

140

00:06:41,990 --> 00:06:40,479

gravity and doing the flips it is really

141

00:06:43,830 --> 00:06:42,000

a lot of fun it's something that i

142

00:06:50,629 --> 00:06:43,840

really wish everybody could experience

143

00:06:55,830 --> 00:06:54,070

hello my name is rand hula

144

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

and i am

145

00:07:00,710 --> 00:06:57,440

in second grade

146

00:07:02,390 --> 00:07:00,720

my question is what is the closest thing

147

00:07:04,550 --> 00:07:02,400

you have seen

148

00:07:09,909 --> 00:07:04,560

looking out the

149

00:07:14,710 --> 00:07:12,629

i've actually seen a lot of cool things

150

00:07:16,469 --> 00:07:14,720

i've liked looking at the aurora that i

151  
00:07:18,309 --> 00:07:16,479  
mentioned which is the like the northern

152  
00:07:20,309 --> 00:07:18,319  
lights and the southern lights but one

153  
00:07:23,189 --> 00:07:20,319  
thing i've noticed the coolest thing

154  
00:07:25,589 --> 00:07:23,199  
this has been a big geography lesson for

155  
00:07:27,830 --> 00:07:25,599  
me i'll go out the window and look and

156  
00:07:29,749 --> 00:07:27,840  
take pictures and a lot of times i can't

157  
00:07:32,950 --> 00:07:29,759  
tell exactly where i am and i have to go

158  
00:07:35,430 --> 00:07:32,960  
to a map and i look at it and i

159  
00:07:37,990 --> 00:07:35,440  
recognize uh the names of countries that

160  
00:07:39,510 --> 00:07:38,000  
i learned when i was in school and now i

161  
00:07:42,469 --> 00:07:39,520  
can go out and look out the window and

162  
00:07:44,469 --> 00:07:42,479  
just by looking at the the the landscape

163  
00:07:47,430 --> 00:07:44,479

and the colors of the earth

164

00:07:50,070 --> 00:07:47,440

and the shapes of the of the coastlines

165

00:07:52,629 --> 00:07:50,080

i can i can tell where we are and so

166

00:07:59,990 --> 00:07:52,639

it's really a really really good

167

00:08:06,309 --> 00:08:03,830

my name is liam death spot i am in third

168

00:08:07,350 --> 00:08:06,319

third grade my question

169

00:08:12,790 --> 00:08:07,360

is

170

00:08:17,110 --> 00:08:14,869

well the vacuum of space outside of the

171

00:08:19,830 --> 00:08:17,120

space station it can be very cold and it

172

00:08:22,150 --> 00:08:19,840

also can be very hot and it depends on

173

00:08:24,869 --> 00:08:22,160

where the sun is if we're in the shade

174

00:08:26,390 --> 00:08:24,879

or in the sun it can vary about 500

175

00:08:27,990 --> 00:08:26,400

degrees fahrenheit

176

00:08:30,629 --> 00:08:28,000

whether you're

177

00:08:32,149 --> 00:08:30,639

shaded by the space station or if you're

178

00:08:34,550 --> 00:08:32,159

or the sun is on the other side of the

179

00:08:36,630 --> 00:08:34,560

earth and so when we do space walks

180

00:08:39,190 --> 00:08:36,640

that's why we wear those big white bulky

181

00:08:42,389 --> 00:08:39,200

suits not only to provide our air but to

182

00:08:44,310 --> 00:08:42,399

also keep our body temperature as close

183

00:08:46,070 --> 00:08:44,320

to constant as possible now here inside

184

00:08:53,110 --> 00:08:46,080

the space station it's room temperature

185

00:08:57,590 --> 00:08:55,110

hello my name is ethan halsewig and i'm

186

00:08:59,430 --> 00:08:57,600

in fifth grade my question is how is

187

00:09:04,230 --> 00:08:59,440

your research going to the international

188

00:09:09,430 --> 00:09:06,550

our research is going very well we have

189

00:09:11,110 --> 00:09:09,440

at any one time about 150 different

190

00:09:13,190 --> 00:09:11,120

experiments going on

191

00:09:14,870 --> 00:09:13,200

a lot of them we as astronauts are

192

00:09:17,350 --> 00:09:14,880

involved in personally and a lot of them

193

00:09:19,750 --> 00:09:17,360

were not some of them we just hook up

194

00:09:21,350 --> 00:09:19,760

experiments in some of these racks that

195

00:09:22,870 --> 00:09:21,360

you see on the walls here and then

196

00:09:25,430 --> 00:09:22,880

they're completely controlled by the

197

00:09:28,310 --> 00:09:25,440

ground some of the experiments we do on

198

00:09:29,990 --> 00:09:28,320

ourselves and so there's a lot going on

199

00:09:31,590 --> 00:09:30,000

and it's all going very well and i think

200

00:09:33,430 --> 00:09:31,600

the scientists that are on earth are

201  
00:09:41,190 --> 00:09:33,440  
learning a lot and pretty excited about

202  
00:09:45,190 --> 00:09:43,670  
hi my name is ashley rasmussen and i am

203  
00:09:47,430 --> 00:09:45,200  
in ninth grade and

204  
00:09:52,150 --> 00:09:47,440  
my question is do you use robotics in

205  
00:09:57,509 --> 00:09:55,590  
we absolutely do in fact we just use our

206  
00:10:00,150 --> 00:09:57,519  
robotic arm that's on the outside of the

207  
00:10:02,069 --> 00:10:00,160  
space station yesterday we had a cargo

208  
00:10:04,310 --> 00:10:02,079  
vehicle that brought us some supplies

209  
00:10:06,870 --> 00:10:04,320  
and some food and some other things a

210  
00:10:08,949 --> 00:10:06,880  
couple weeks ago and we used the robotic

211  
00:10:11,030 --> 00:10:08,959  
arm to reach out and grab it after it

212  
00:10:13,990 --> 00:10:11,040  
had come close to the space station well

213  
00:10:15,990 --> 00:10:14,000

yesterday we actually released it and

214

00:10:17,829 --> 00:10:16,000

that robotic arm was also used in

215

00:10:20,150 --> 00:10:17,839

building the space station the space

216

00:10:22,710 --> 00:10:20,160

shuttle also had a robotic arm and we

217

00:10:24,150 --> 00:10:22,720

would bring up all of these huge modules

218

00:10:27,110 --> 00:10:24,160

of the space station in the space

219

00:10:28,949 --> 00:10:27,120

shuttle and use those two robotic arms

220

00:10:37,350 --> 00:10:28,959

to link all the pieces of the space

221

00:10:42,630 --> 00:10:40,870

hello my name is destiny ceno and i am

222

00:10:44,949 --> 00:10:42,640

in third grade

223

00:10:47,829 --> 00:10:44,959

my question is what teacher influenced

224

00:10:53,509 --> 00:10:47,839

you the most to make your decision to

225

00:10:57,670 --> 00:10:55,110

well i've certainly had a lot of

226

00:10:59,350 --> 00:10:57,680

fantastic teachers through through

227

00:11:01,430 --> 00:10:59,360

elementary school high school and

228

00:11:03,509 --> 00:11:01,440

college i don't know if i can pinpoint

229

00:11:06,230 --> 00:11:03,519

just one i know

230

00:11:08,550 --> 00:11:06,240

that the teachers that demanded the most

231

00:11:10,310 --> 00:11:08,560

of me and expected the most of me are

232

00:11:12,550 --> 00:11:10,320

generally the ones that probably could

233

00:11:14,389 --> 00:11:12,560

be credited for making me helping me

234

00:11:16,310 --> 00:11:14,399

make the choices that i made i think

235

00:11:18,310 --> 00:11:16,320

it's a lot of teachers and a lot of them

236

00:11:20,550 --> 00:11:18,320

at the henning school district did that

237

00:11:21,670 --> 00:11:20,560

they made sure that they expected the

238

00:11:23,350 --> 00:11:21,680

most

239

00:11:25,670 --> 00:11:23,360

out of all of their students and if you

240

00:11:27,590 --> 00:11:25,680

weren't performing as well as they knew

241

00:11:29,910 --> 00:11:27,600

you could they tried to make you perform

242

00:11:30,949 --> 00:11:29,920

better and i think that that definitely

243

00:11:34,310 --> 00:11:30,959

helped me

244

00:11:35,910 --> 00:11:34,320

to um to become what i am and and

245

00:11:42,069 --> 00:11:35,920

actually make it in the career that i

246

00:11:47,030 --> 00:11:44,230

hello my name is megan rennicker and i

247

00:11:48,790 --> 00:11:47,040

am in fifth grade my question is what

248

00:11:54,389 --> 00:11:48,800

types of food do you eat aboard the

249

00:11:58,790 --> 00:11:56,550

we actually have a huge variety of food

250

00:12:00,389 --> 00:11:58,800

and i have a couple examples a lot of

251

00:12:02,389 --> 00:12:00,399

our food is packed

252

00:12:03,990 --> 00:12:02,399

in pouches like this this happens to be

253

00:12:06,389 --> 00:12:04,000

one of my favorites it's red beans and

254

00:12:08,550 --> 00:12:06,399

rice i like it because it's spicy

255

00:12:10,550 --> 00:12:08,560

and we also have a lot a lot of our

256

00:12:12,870 --> 00:12:10,560

meats are packed like this

257

00:12:16,470 --> 00:12:12,880

we have everything from steak to pork

258

00:12:18,150 --> 00:12:16,480

chops to fajitas and a lot of our fruit

259

00:12:19,750 --> 00:12:18,160

is packed like this as well we only get

260

00:12:22,069 --> 00:12:19,760

fresh fruit every so often when a

261

00:12:23,670 --> 00:12:22,079

vehicle comes up

262

00:12:25,590 --> 00:12:23,680

we also have a lot of food that's like

263

00:12:27,430 --> 00:12:25,600

this and this is dehydrated meaning we

264

00:12:29,110 --> 00:12:27,440

need to add water to it to hydrate it

265

00:12:31,670 --> 00:12:29,120

this is another one of my favorites it's

266

00:12:34,949 --> 00:12:31,680

creamed spinach it doesn't necessarily

267

00:12:36,870 --> 00:12:34,959

sound tasty but it is very very tasty

268

00:12:39,269 --> 00:12:36,880

and we also our drinks we have a lot of

269

00:12:40,470 --> 00:12:39,279

different drinks and we have those

270

00:12:46,470 --> 00:12:40,480

in

271

00:12:49,190 --> 00:12:46,480

this this happens to be an orange mango

272

00:12:50,949 --> 00:12:49,200

drink so we have a lot of food to choose

273

00:12:58,790 --> 00:12:50,959

from and

274

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

hello my name is mackenzie vorderbergen

275

00:13:04,629 --> 00:13:02,959

and i am in ninth grade my question is

276

00:13:09,430 --> 00:13:04,639

what does it feel like when you lift off

277

00:13:13,590 --> 00:13:11,350

it's actually an incredible feeling i've

278

00:13:15,750 --> 00:13:13,600

been fortunate enough now to ride on two

279

00:13:19,030 --> 00:13:15,760

different rockets i flew on the space

280

00:13:21,990 --> 00:13:19,040

shuttle back in 2008 and now the soyuz

281

00:13:23,910 --> 00:13:22,000

rocket just earlier in the year

282

00:13:25,670 --> 00:13:23,920

and the space shuttle is a lot bigger

283

00:13:27,590 --> 00:13:25,680

than the soyuz but they're very similar

284

00:13:29,590 --> 00:13:27,600

in how they feel

285

00:13:31,509 --> 00:13:29,600

usually the engines start a few seconds

286

00:13:33,829 --> 00:13:31,519

before you actually lift off the pad and

287

00:13:35,590 --> 00:13:33,839

you can feel the vibration

288

00:13:38,389 --> 00:13:35,600

you can you can tell that the vehicle's

289

00:13:39,509 --> 00:13:38,399

alive and fluid is pumping and then once

290

00:13:42,150 --> 00:13:39,519

you go

291

00:13:44,710 --> 00:13:42,160

it's um it's boom and you start feeling

292

00:13:46,550 --> 00:13:44,720

uh the gravity pull the the g's pulling

293

00:13:48,310 --> 00:13:46,560

as you're going faster and faster and

294

00:13:49,269 --> 00:13:48,320

you feel really really heavy in your

295

00:13:52,150 --> 00:13:49,279

seat

296

00:13:55,110 --> 00:13:52,160

and then at a certain point once part of

297

00:13:57,509 --> 00:13:55,120

the one of the engines has

298

00:13:59,829 --> 00:13:57,519

used all of its fuel that portion of the

299

00:14:01,910 --> 00:13:59,839

of the rocket will separate and then you

300

00:14:03,670 --> 00:14:01,920

kind of you feel like this almost like

301

00:14:05,269 --> 00:14:03,680

you're going over a roller coaster the

302

00:14:07,829 --> 00:14:05,279

top of a roller coaster for a second and

303

00:14:10,069 --> 00:14:07,839

then you start feeling very heavy again

304

00:14:11,430 --> 00:14:10,079

and uh it's quite an experience and

305

00:14:21,430 --> 00:14:11,440

again it's another one of those that i

306

00:14:25,509 --> 00:14:23,910

hello karen my name is marjorie quam and

307

00:14:28,230 --> 00:14:25,519

i was one of your former english

308

00:14:30,470 --> 00:14:28,240

teachers my question is

309

00:14:33,430 --> 00:14:30,480

how is what you are currently doing on

310

00:14:38,150 --> 00:14:33,440

this mission going to impact life on

311

00:14:42,550 --> 00:14:40,870

hi mrs kwamen you were one of those who

312

00:14:45,269 --> 00:14:42,560

definitely expected the most out of

313

00:14:47,110 --> 00:14:45,279

everybody so thank you

314

00:14:49,189 --> 00:14:47,120

a lot of the stuff we do

315

00:14:51,110 --> 00:14:49,199

a lot of the research we do one of the

316

00:14:52,629 --> 00:14:51,120

things about about doing the research

317

00:14:54,949 --> 00:14:52,639

here in space

318

00:14:56,870 --> 00:14:54,959

is that gravity is a very very strong

319

00:14:59,030 --> 00:14:56,880

component of how things work when we're

320

00:15:00,790 --> 00:14:59,040

on earth like you look at a fluid we're

321

00:15:02,629 --> 00:15:00,800

doing some experiments with fluids that

322

00:15:04,470 --> 00:15:02,639

have little particles in them well when

323

00:15:06,150 --> 00:15:04,480

you're on earth these particles are

324

00:15:08,470 --> 00:15:06,160

affected so much by gravity that it's

325

00:15:10,629 --> 00:15:08,480

hard to tell what's happening how

326

00:15:12,470 --> 00:15:10,639

they're interacting with each other so

327

00:15:15,110 --> 00:15:12,480

when you do the experiments here on the

328

00:15:16,949 --> 00:15:15,120

space station you can look at how they

329

00:15:18,870 --> 00:15:16,959

uh interact with each other and how they

330

00:15:21,110 --> 00:15:18,880

interact with the fluid and then you can

331

00:15:22,550 --> 00:15:21,120

optimize the way that they work on the

332

00:15:24,470 --> 00:15:22,560

ground and a lot of that work like

333

00:15:27,030 --> 00:15:24,480

stabilizers for some of how your

334

00:15:28,949 --> 00:15:27,040

household products shampoos and laundry

335

00:15:31,910 --> 00:15:28,959

detergents and things like that

336

00:15:33,910 --> 00:15:31,920

so that's one of the big things that how

337

00:15:37,110 --> 00:15:33,920

you know doing this research we do here

338

00:15:38,710 --> 00:15:37,120

can benefit and be used um on the earth

339

00:15:41,910 --> 00:15:38,720

and another big thing is the human

340

00:15:43,509 --> 00:15:41,920

research one example of that is

341

00:15:45,269 --> 00:15:43,519

here on the space station i talked about

342

00:15:49,110 --> 00:15:45,279

using your bones and muscles and losing

343

00:15:51,030 --> 00:15:49,120

them we lose bone mass at a rate 10

344

00:15:53,269 --> 00:15:51,040

times higher than an elderly woman with

345

00:15:55,910 --> 00:15:53,279

osteoporosis so this is the perfect

346

00:15:57,350 --> 00:15:55,920

place for us to study

347

00:15:59,269 --> 00:15:57,360

what kind of

348

00:16:00,949 --> 00:15:59,279

measures we can take to mitigate bone

349

00:16:03,829 --> 00:16:00,959

loss and hopefully some of the research

350

00:16:05,189 --> 00:16:03,839

we do then can be used for folks on the

351

00:16:13,110 --> 00:16:05,199

on the earth who are suffering with

352

00:16:19,189 --> 00:16:16,310

hello my name is jenna volkman and i am

353

00:16:21,749 --> 00:16:19,199

in third grade my question is are

354

00:16:26,870 --> 00:16:21,759

shooting stars prettier in space than

355

00:16:30,710 --> 00:16:28,310

well the interesting thing about

356

00:16:32,550 --> 00:16:30,720

shooting stars is when we see them we

357

00:16:34,389 --> 00:16:32,560

see them below us because the shooting

358

00:16:35,749 --> 00:16:34,399

star is actually a meteor that's coming

359

00:16:37,350 --> 00:16:35,759

through the earth's atmosphere and

360

00:16:39,189 --> 00:16:37,360

that's why it's burning as it's coming

361

00:16:41,189 --> 00:16:39,199

through the earth's atmosphere well we

362

00:16:43,350 --> 00:16:41,199

are above the earth's atmosphere so when

363

00:16:45,910 --> 00:16:43,360

we look down is when we would see

364

00:16:47,749 --> 00:16:45,920

shooting stars so in that way they're

365

00:16:48,870 --> 00:16:47,759

pretty in a different way than what you

366

00:16:55,430 --> 00:16:48,880

see when you're when you're on the

367

00:17:00,550 --> 00:16:57,910

hello my name is reed humula and i am in

368

00:17:07,110 --> 00:17:00,560

fifth grade my question is how long did

369

00:17:11,270 --> 00:17:10,150

it took us in the soyuz rocket about six

370

00:17:13,510 --> 00:17:11,280

hours

371

00:17:15,429 --> 00:17:13,520

and it took us once we launched from the

372

00:17:18,069 --> 00:17:15,439

earth it was about eight minutes or so

373

00:17:20,470 --> 00:17:18,079

before we were in orbit around the earth

374

00:17:22,870 --> 00:17:20,480

and then we orbited the earth doing uh

375

00:17:25,270 --> 00:17:22,880

during burns of our jets to get closer

376

00:17:27,350 --> 00:17:25,280

and closer to the space station and it

377

00:17:29,909 --> 00:17:27,360

was about four orbits around the earth

378

00:17:32,549 --> 00:17:29,919

and each one about 90 minutes so it was

379

00:17:35,029 --> 00:17:32,559

about six hours and we were here so it

380

00:17:42,150 --> 00:17:35,039

was a you know a trip to minneapolis and

381

00:17:46,870 --> 00:17:44,710

hello my name is amanda otto and i am in

382

00:17:53,430 --> 00:17:46,880

ninth grade my question is what is the

383

00:17:53,440 --> 00:17:56,950

i'm sorry can you say that one more time

384

00:18:02,230 --> 00:17:58,870

what is the scariest part of being in

385

00:18:05,190 --> 00:18:04,070

the scariest part of being in space well

386

00:18:07,190 --> 00:18:05,200

certainly

387

00:18:08,710 --> 00:18:07,200

um if you allow yourself to get scared

388

00:18:10,789 --> 00:18:08,720

there's a there's a lot that you could

389

00:18:13,110 --> 00:18:10,799

be scared of i think we are in a very

390

00:18:15,029 --> 00:18:13,120

dangerous environment and i know anytime

391

00:18:16,470 --> 00:18:15,039

you're you're facing any danger there's

392

00:18:19,190 --> 00:18:16,480

the reaction that you would like to get

393

00:18:23,029 --> 00:18:19,200

scared but we get prepared very very

394

00:18:24,950 --> 00:18:23,039

well for this and we have a lot of um

395

00:18:26,150 --> 00:18:24,960

preparations that we do

396

00:18:28,470 --> 00:18:26,160

that

397

00:18:30,390 --> 00:18:28,480

if if we happen to have a leak in the

398

00:18:32,070 --> 00:18:30,400

space station because this is protecting

399

00:18:34,150 --> 00:18:32,080

us from the vacuum of space where we

400

00:18:35,750 --> 00:18:34,160

could not survive without the space

401  
00:18:38,390 --> 00:18:35,760  
station around us

402  
00:18:40,630 --> 00:18:38,400  
but so i think the key to being prepared

403  
00:18:43,110 --> 00:18:40,640  
and not being or to not being scared is

404  
00:18:46,150 --> 00:18:43,120  
to be prepared and we go through a lot

405  
00:18:48,070 --> 00:18:46,160  
of emergency drills where we we look at

406  
00:18:49,669 --> 00:18:48,080  
what we're going to do if say there's a

407  
00:18:51,669 --> 00:18:49,679  
fire on board because we can't just

408  
00:18:52,710 --> 00:18:51,679  
leave the house like you would at home

409  
00:18:55,669 --> 00:18:52,720  
and so

410  
00:18:57,110 --> 00:18:55,679  
so the key is to be prepared and there's

411  
00:19:06,630 --> 00:18:57,120  
really if you're prepared there's not a

412  
00:19:11,590 --> 00:19:09,029  
hello my name is brett clard and i am in

413  
00:19:17,270 --> 00:19:11,600

third grade my question is is it worth

414

00:19:21,190 --> 00:19:19,430

that's a fantastic question and i

415

00:19:24,070 --> 00:19:21,200

personally think it is

416

00:19:25,990 --> 00:19:24,080

i think it's definitely worth it

417

00:19:28,150 --> 00:19:26,000

i think that the things that we will get

418

00:19:29,669 --> 00:19:28,160

out of this and not just the research

419

00:19:31,990 --> 00:19:29,679

that we're doing this is just the

420

00:19:34,070 --> 00:19:32,000

exploring and the going away from home

421

00:19:37,029 --> 00:19:34,080

and doing things

422

00:19:39,669 --> 00:19:37,039

doing things that make your mind sharper

423

00:19:42,870 --> 00:19:39,679

and definitely space exploration is

424

00:19:45,110 --> 00:19:42,880

something that we not only get out of it

425

00:19:48,150 --> 00:19:45,120

the scientific results but also for our

426  
00:19:49,990 --> 00:19:48,160  
own for our own human human nature of

427  
00:19:52,390 --> 00:19:50,000  
wanting to explore wanting to go further

428  
00:19:54,710 --> 00:19:52,400  
and wanting to do more so i personally

429  
00:19:58,150 --> 00:19:54,720  
think it is well worth the work that we

430  
00:20:02,070 --> 00:20:00,230  
thank you for taking the time to

431  
00:20:04,789 --> 00:20:02,080  
answer our questions karen do you have

432  
00:20:10,710 --> 00:20:04,799  
any closing remarks for any of your

433  
00:20:14,549 --> 00:20:12,630  
thank you so much for for joining me

434  
00:20:16,149 --> 00:20:14,559  
here i'm really excited i was excited

435  
00:20:18,549 --> 00:20:16,159  
when i saw this on the schedule that i

436  
00:20:19,430 --> 00:20:18,559  
was going to be able to join all of you

437  
00:20:21,270 --> 00:20:19,440  
and

438  
00:20:23,669 --> 00:20:21,280

you know hopefully hopefully what i'm

439

00:20:26,470 --> 00:20:23,679

doing here i i hope i can inspire you

440

00:20:29,510 --> 00:20:26,480

and the kids there um you know you guys

441

00:20:32,390 --> 00:20:29,520

are capable of so much and it really is

442

00:20:34,789 --> 00:20:32,400

a matter of working your hardest and

443

00:20:36,950 --> 00:20:34,799

showing people that that you have what

444

00:20:38,789 --> 00:20:36,960

it takes to do whatever your dream job

445

00:20:40,390 --> 00:20:38,799

is and it doesn't have to be astronaut

446

00:20:42,870 --> 00:20:40,400

it can be just about anything you want

447

00:20:44,470 --> 00:20:42,880

to do and if you work at it and let

448

00:20:46,310 --> 00:20:44,480

people know that you're willing to work

449

00:20:48,789 --> 00:20:46,320

at it you're going to go really far in

450

00:20:51,270 --> 00:20:48,799

your life i'm so glad i was able to join

451  
00:20:56,390 --> 00:20:51,280  
you guys today

452  
00:20:56,400 --> 00:21:00,149  
bye bye

453  
00:21:04,390 --> 00:21:01,669  
station this is houston acr that

454  
00:21:06,470 --> 00:21:04,400  
concludes the event thank you

455  
00:21:08,549 --> 00:21:06,480  
thank you heading school district