1
00:00:07,110 --> 00:00:03,030
station this is houston are you ready

2
00:00:10,310 --> 00:00:08,710
houston station we're ready for the

3
00:00:12,629 --> 00:00:10,320
event

4
00:00:15,030 --> 00:00:12,639
representative lamar smith this is

5
00:00:17,830 --> 00:00:15,040
mission control houston please call

6
00:00:20,470 --> 00:00:17,840
station for a voice check

7
00:00:22,870 --> 00:00:20,480
station this is congressman lamar smith

8
00:00:25,589 --> 00:00:22,880
i'm at fredericksburg high school with 1

9
00:00:30,790 --> 00:00:25,599
000 students in fredericksburg texas how

10
00:00:34,229 --> 00:00:32,630
congressman smith it's outstanding to be

11
00:00:37,030 --> 00:00:34,239
with you and be with the great folks

12
00:00:38,389 --> 00:00:37,040
from fredericksburg texas uh great to be

13
00:00:40,869 --> 00:00:38,399

with you today from the international

14
00:00:42,709 --> 00:00:40,879
space station and expedition 35. i hear

15
00:00:44,310 --> 00:00:42,719
you loud and clear

16
00:00:46,709 --> 00:00:44,320
this is great thank you for being with

17
00:00:48,790 --> 00:00:46,719
us and i'm going to turn the program uh

18
00:00:51,590 --> 00:00:48,800
over to the students who are going to

19
00:00:53,830 --> 00:00:51,600
have questions for you and

20
00:00:55,990 --> 00:00:53,840
that will occur right now again i'm with

21
00:00:57,990 --> 00:00:56,000
a thousand students and i hope you

22
00:01:00,630 --> 00:00:58,000
appreciate all the support you have from

23
00:01:01,990 --> 00:01:00,640
us you are our hero and uh we just

24
00:01:03,750 --> 00:01:02,000
appreciate everything you're doing for

25
00:01:05,509 --> 00:01:03,760
our country

26
00:01:11,429 --> 00:01:05,519
and brett williams if you'll come up

27
00:01:15,270 --> 00:01:13,590
good morning astronaut cassidy it's real

28
00:01:18,149 --> 00:01:15,280
privilege to speak with an american

29
00:01:19,910 --> 00:01:18,159
traveling at over 1700 miles per hour i

30
00:01:22,149 --> 00:01:19,920
also want to thank you for the services

31
00:01:23,749 --> 00:01:22,159
you've provided to this country at this

32
00:01:25,109 --> 00:01:23,759
time i'm not going to take any more time

33
00:01:26,550 --> 00:01:25,119
on our schedule i'm going to go ahead

34
00:01:28,149 --> 00:01:26,560
and introduce you to students from

35
00:01:30,630 --> 00:01:28,159
fredericksburg high school's stem

36
00:01:36,069 --> 00:01:32,230
hi my name is cole reynolds thank you

37
00:01:40,310 --> 00:01:38,550
my my question for you was what steps

38
00:01:45,350 --> 00:01:40,320

are needed to become an astronaut like

39
00:01:48,950 --> 00:01:47,270
yeah cole great question so

40
00:01:50,870 --> 00:01:48,960
first and foremost my opinion you need

41
00:01:52,710 --> 00:01:50,880
to be a nice person we want to fly in

42
00:01:54,069 --> 00:01:52,720
space with folks that we enjoy being

43
00:01:57,270 --> 00:01:54,079
with but

44
00:01:59,109 --> 00:01:57,280
that simply isn't enough to get you here

45
00:02:00,469 --> 00:01:59,119
what you need to start out doing is

46
00:02:02,149 --> 00:02:00,479
probably what you're doing right now by

47
00:02:03,590 --> 00:02:02,159
being part of the stem academy studying

48
00:02:04,950 --> 00:02:03,600
hard

49
00:02:07,510 --> 00:02:04,960
learning lessons

50
00:02:10,070 --> 00:02:07,520
both academically and lessons in life

51
00:02:12,309 --> 00:02:10,080
that other other mentors around you

52
00:02:13,990 --> 00:02:12,319
teach and then you do need to have a

53
00:02:16,470 --> 00:02:14,000
bachelor at least a bachelor's degree in

54
00:02:18,949 --> 00:02:16,480
a technical field

55
00:02:21,750 --> 00:02:18,959
many astronauts have a master's degree

56
00:02:23,670 --> 00:02:21,760
or some folks were in military aviation

57
00:02:25,750 --> 00:02:23,680
those are sort of the key tracks to go

58
00:02:29,190 --> 00:02:25,760
to get to the astronaut core however we

59
00:02:32,630 --> 00:02:29,200
have folks from all professions in life

60
00:02:35,030 --> 00:02:32,640
doctors a veterinarian school teachers

61
00:02:37,270 --> 00:02:35,040
navy folks like myself other services so

62
00:02:38,550 --> 00:02:37,280
it's really what i like to tell folks is

63
00:02:40,869 --> 00:02:38,560

do what you

64
00:02:42,949 --> 00:02:40,879
enjoy doing and what because when you do

65
00:02:44,949 --> 00:02:42,959
something that you enjoy you do it well

66
00:02:46,869 --> 00:02:44,959
and that's the first cut at becoming an

67
00:02:48,790 --> 00:02:46,879
astronaut is we'll take people that are

68
00:02:50,869 --> 00:02:48,800
successful and do things well in their

69
00:02:56,470 --> 00:02:50,879
chosen field and then we want nice

70
00:03:00,790 --> 00:02:58,869
hello my name is hunter freeze i'm a

71
00:03:03,270 --> 00:03:00,800
senior and i'm a member of the freight

72
00:03:05,270 --> 00:03:03,280
spree high school stem academy

73
00:03:07,430 --> 00:03:05,280
and i was wondering what is the hardest

74
00:03:12,470 --> 00:03:07,440
issue to adjust to while being gone for

75
00:03:17,750 --> 00:03:15,030
you know that's an interesting question

76
00:03:19,830 --> 00:03:17,760
there's the the human part about it

77
00:03:21,750 --> 00:03:19,840
we're we're regular uh people and we

78
00:03:23,509 --> 00:03:21,760
have families and i have a wife and kids

79
00:03:26,630 --> 00:03:23,519
that are that are there in houston and i

80
00:03:29,110 --> 00:03:26,640
miss them a lot um so that's one

81
00:03:30,949 --> 00:03:29,120
challenge when you're gone uh for a long

82
00:03:33,990 --> 00:03:30,959
time whether it be in space or in the

83
00:03:35,589 --> 00:03:34,000
military or if you work in

84
00:03:37,430 --> 00:03:35,599
oil production and you're off in the

85
00:03:38,869 --> 00:03:37,440
middle of nowhere trying to find oil any

86
00:03:41,110 --> 00:03:38,879
any long period of time away from your

87
00:03:43,430 --> 00:03:41,120
loved ones is hard

88
00:03:45,110 --> 00:03:43,440

and then the other adaptation that's

89
00:03:47,110 --> 00:03:45,120
probably a little difficult when you're

90
00:03:49,670 --> 00:03:47,120
away like this

91
00:03:51,830 --> 00:03:49,680
is you live at your workplace and that

92
00:03:53,910 --> 00:03:51,840
takes some getting used to uh just in

93
00:03:55,830 --> 00:03:53,920
terms of when you you need to have a

94
00:03:57,509 --> 00:03:55,840
place to get away on the weekends and

95
00:03:59,350 --> 00:03:57,519
just kind of relax and have some private

96
00:04:00,949 --> 00:03:59,360
time and we do that at the window or

97
00:04:02,630 --> 00:04:00,959
list watching movies and things like

98
00:04:04,789 --> 00:04:02,640
this so so those are probably the two

99
00:04:06,949 --> 00:04:04,799
hardest things getting uh you're missing

100
00:04:13,270 --> 00:04:06,959
your loved ones and living at your

101
00:04:18,069 --> 00:04:15,910
hi i'm seth studebaker i'm a senior here

102
00:04:19,909 --> 00:04:18,079
at the high school i was wondering if

103
00:04:21,909 --> 00:04:19,919
you could tell us about some of the

104
00:04:26,070 --> 00:04:21,919
research that is being done on the space

105
00:04:30,790 --> 00:04:29,430
hi seth yeah sure be glad to um it's

106
00:04:33,430 --> 00:04:30,800
interesting there's

107
00:04:35,990 --> 00:04:33,440
many many many experiments going on

108
00:04:38,310 --> 00:04:36,000
probably in the over 100 130 or so

109
00:04:40,469 --> 00:04:38,320
there's an actual number but it varies

110
00:04:41,990 --> 00:04:40,479
from time to time

111
00:04:43,749 --> 00:04:42,000
largely to a large degree those

112
00:04:45,590 --> 00:04:43,759
experiments are going on without much

113
00:04:47,590 --> 00:04:45,600

astronaut intervention they're on the

114
00:04:49,430 --> 00:04:47,600
outside of the space station or in racks

115
00:04:52,710 --> 00:04:49,440
or some things like this that are just

116
00:04:55,030 --> 00:04:52,720
continuing on many of those we have to

117
00:04:56,870 --> 00:04:55,040
initiate ourselves and by by the

118
00:04:58,629 --> 00:04:56,880
astronauts and then they continue and

119
00:05:00,950 --> 00:04:58,639
some of which we're a part of ourselves

120
00:05:04,070 --> 00:05:00,960
where the subjects for instance er

121
00:05:06,710 --> 00:05:04,080
er yesterday tom marshburn and myself

122
00:05:09,430 --> 00:05:06,720
were doing ultrasounds of of spine

123
00:05:11,830 --> 00:05:09,440
spinal ultrasounds to see about bone

124
00:05:13,430 --> 00:05:11,840
it's all part of a bone uh study that's

125
00:05:16,469 --> 00:05:13,440
ongoing with many different experiments

126
00:05:18,950 --> 00:05:16,479
we have we eat certain diets and

127
00:05:21,830 --> 00:05:18,960
take our our urine and blood samples to

128
00:05:24,710 --> 00:05:21,840
see how the different diets affect

129
00:05:26,150 --> 00:05:24,720
ourselves and things like this

130
00:05:27,749 --> 00:05:26,160
material science there's several

131
00:05:29,590 --> 00:05:27,759
material science experiments going on

132
00:05:32,230 --> 00:05:29,600
outside as well as earlier today just

133
00:05:35,189 --> 00:05:32,240
right before this conference i was doing

134
00:05:37,990 --> 00:05:35,199
a an experiment called bass in which

135
00:05:40,629 --> 00:05:38,000
we're testing the combustion properties

136
00:05:43,830 --> 00:05:40,639
and flammability properties of different

137
00:05:46,310 --> 00:05:43,840
substances with various conditions so

138
00:05:48,550 --> 00:05:46,320

many many many things going on and on

139
00:05:49,830 --> 00:05:48,560
any given day that's a fun part about

140
00:05:55,670 --> 00:05:49,840
our job we could be doing any one of

141
00:06:01,110 --> 00:05:58,550
hello i'm jacob ditmer i'm a senior

142
00:06:02,990 --> 00:06:01,120
a senior in the stem academy my question

143
00:06:05,270 --> 00:06:03,000
is what is the extent of the

144
00:06:10,309 --> 00:06:05,280
demineralization of human bones during a

145
00:06:14,469 --> 00:06:12,309
you know that's that's a really

146
00:06:16,150 --> 00:06:14,479
important question for for those of us

147
00:06:17,830 --> 00:06:16,160
that fly in space because it's our

148
00:06:20,150 --> 00:06:17,840
personal health that we care about long

149
00:06:23,270 --> 00:06:20,160
term and we have a team of doctors that

150
00:06:25,510 --> 00:06:23,280
also care about that a lot as well and

151
00:06:28,070 --> 00:06:25,520
if what we've learned is if you do

152
00:06:30,230 --> 00:06:28,080
nothing if you do no exercise and and

153
00:06:32,270 --> 00:06:30,240
just sit back and and let the six months

154
00:06:33,909 --> 00:06:32,280
pass in zero gravity you'll have a

155
00:06:35,909 --> 00:06:33,919
significant

156
00:06:37,909 --> 00:06:35,919
bone density loss those numbers vary

157
00:06:39,990 --> 00:06:37,919
from person to person and what your diet

158
00:06:41,749 --> 00:06:40,000
is and what your exact activity level

159
00:06:43,909 --> 00:06:41,759
has been

160
00:06:45,990 --> 00:06:43,919
but the fact is you would have a

161
00:06:47,430 --> 00:06:46,000
significant loss so what do we do to

162
00:06:49,510 --> 00:06:47,440
prevent that

163
00:06:50,950 --> 00:06:49,520

basically strength turning resistive

164
00:06:52,950 --> 00:06:50,960
exercise training is the number one

165
00:06:55,749 --> 00:06:52,960
thing we can do and we need to put load

166
00:06:58,629 --> 00:06:55,759
on our bone structure every single day

167
00:07:01,430 --> 00:06:58,639
and the large large kind of hip down to

168
00:07:03,510 --> 00:07:01,440
your thigh you really need to put

169
00:07:05,909 --> 00:07:03,520
some load in there so that the bones get

170
00:07:08,390 --> 00:07:05,919
used to have don't get too accustomed to

171
00:07:11,189 --> 00:07:08,400
zero gravity and get used to having that

172
00:07:13,589 --> 00:07:11,199
normal stresses that they have

173
00:07:15,350 --> 00:07:13,599
and that if you do that right in eat

174
00:07:17,990 --> 00:07:15,360
well we've learned that you can really

175
00:07:19,589 --> 00:07:18,000
mitigate the bone density loss uh almost

176
00:07:21,510 --> 00:07:19,599
to nothing some folks have come back

177
00:07:23,510 --> 00:07:21,520
with node loss and others just very

178
00:07:25,510 --> 00:07:23,520
minor so i think we're converging on a

179
00:07:30,309 --> 00:07:25,520
solution to keep our bones healthy in

180
00:07:34,230 --> 00:07:32,150
hi i'm sierra dreyer and i'm another

181
00:07:36,070 --> 00:07:34,240
senior here in the rocket program and i

182
00:07:38,309 --> 00:07:36,080
want to know when you're not busy

183
00:07:39,430 --> 00:07:38,319
working or finding figuring out big

184
00:07:44,150 --> 00:07:39,440
discoveries what do you do for

185
00:07:48,710 --> 00:07:47,189
well sierra just like what we do our

186
00:07:50,550 --> 00:07:48,720
interests up here are pretty much the

187
00:07:52,550 --> 00:07:50,560
same as what what we have on earth

188
00:07:54,869 --> 00:07:52,560

except there's one big difference

189
00:07:56,869 --> 00:07:54,879
looking out the window

190
00:07:59,350 --> 00:07:56,879
we have this place called the cupola

191
00:08:02,469 --> 00:07:59,360
which is this magnificent 360 degree

192
00:08:04,710 --> 00:08:02,479
window that's in our node 3. looks right

193
00:08:07,189 --> 00:08:04,720
down at the planet that's probably the

194
00:08:09,909 --> 00:08:07,199
number one thing that we

195
00:08:11,510 --> 00:08:09,919
as a crew enjoy doing is spend time in

196
00:08:13,430 --> 00:08:11,520
the cupola and just look at the earth

197
00:08:14,469 --> 00:08:13,440
and look at the cities at night and you

198
00:08:17,749 --> 00:08:14,479
can see

199
00:08:20,309 --> 00:08:17,759
i-10 for instance connecting san antonio

200
00:08:21,990 --> 00:08:20,319
and houston and the fun part is think

201
00:08:23,749 --> 00:08:22,000
about how many of you have probably

202
00:08:26,150 --> 00:08:23,759
driven from san antonio to houston and

203
00:08:28,390 --> 00:08:26,160
that in that three-hour-ish time frame

204
00:08:30,230 --> 00:08:28,400
we've gone around the world two times

205
00:08:33,269 --> 00:08:30,240
and so that gives us an opportunity to

206
00:08:35,589 --> 00:08:33,279
see a lot of the planet uh and then of

207
00:08:37,670 --> 00:08:35,599
course we also do the normal things

208
00:08:39,029 --> 00:08:37,680
watch movies read a book talk to each

209
00:08:40,630 --> 00:08:39,039
other enjoy

210
00:08:41,990 --> 00:08:40,640
meals um

211
00:08:43,350 --> 00:08:42,000
international meals with our russian

212
00:08:45,590 --> 00:08:43,360
crewmates down on the russians in

213
00:08:47,190 --> 00:08:45,600

russian end of the space station so it's

214
00:08:48,389 --> 00:08:47,200
uh it's those type of things that we do

215
00:08:54,470 --> 00:08:48,399
but they're looking out the window you

216
00:08:59,030 --> 00:08:56,230
my name is jonathan ivers and i'm a

217
00:09:00,949 --> 00:08:59,040
junior here at fhs and my question

218
00:09:06,550 --> 00:09:00,959
is what is the importance of space

219
00:09:11,030 --> 00:09:08,710
that's a big question um

220
00:09:12,550 --> 00:09:11,040
jonathan i think that uh

221
00:09:14,710 --> 00:09:12,560
you know the

222
00:09:17,750 --> 00:09:14,720
humans as a whole

223
00:09:20,070 --> 00:09:17,760
are by nature explorers that's how come

224
00:09:22,630 --> 00:09:20,080
we live in the united in america and

225
00:09:25,030 --> 00:09:22,640
we're not stuck in europe uh bold

226
00:09:27,670 --> 00:09:25,040
explorers set out to go search for

227
00:09:28,949 --> 00:09:27,680
another part of the world and

228
00:09:30,710 --> 00:09:28,959
eventually

229
00:09:33,590 --> 00:09:30,720
we are going to do the same thing with

230
00:09:35,269 --> 00:09:33,600
space exploration it probably in in my

231
00:09:37,430 --> 00:09:35,279
time as an active astronaut we're not

232
00:09:39,350 --> 00:09:37,440
going to be marching around with

233
00:09:41,030 --> 00:09:39,360
colonies of people on another planet and

234
00:09:44,150 --> 00:09:41,040
maybe not even when you guys are

235
00:09:46,150 --> 00:09:44,160
astronauts but your children perhaps

236
00:09:48,949 --> 00:09:46,160
in another generation who knows how long

237
00:09:52,150 --> 00:09:48,959
but there'll be other people

238
00:09:53,350 --> 00:09:52,160

living in on in other place besides the

239
00:09:55,350 --> 00:09:53,360
planet earth

240
00:09:58,550 --> 00:09:55,360
and um it's the lessons that we're

241
00:10:01,030 --> 00:09:58,560
learning right now on how to design

242
00:10:03,509 --> 00:10:01,040
build construct the critical systems it

243
00:10:05,509 --> 00:10:03,519
takes to sustain life in those locations

244
00:10:12,230 --> 00:10:05,519
that will allow us to do that in

245
00:10:15,509 --> 00:10:13,910
hi my name is daniel nguyen and i'm a

246
00:10:16,790 --> 00:10:15,519
junior at the stem academy and my

247
00:10:23,670 --> 00:10:16,800
question is

248
00:10:28,230 --> 00:10:26,389
i hate to tell you daniel but we don't

249
00:10:30,150 --> 00:10:28,240
shower on the iss it's a good thing that

250
00:10:31,030 --> 00:10:30,160
this is video only and you can't smell

251
00:10:32,949 --> 00:10:31,040
us but

252
00:10:35,110 --> 00:10:32,959
you know i'm somewhat joking we don't

253
00:10:38,949 --> 00:10:35,120
have a shower but we stay remarkably

254
00:10:40,790 --> 00:10:38,959
clean um we use baby wipes uh for most

255
00:10:42,550 --> 00:10:40,800
of uh you know just cleaning ourselves

256
00:10:44,550 --> 00:10:42,560
and we do have some

257
00:10:46,710 --> 00:10:44,560
we can take hot water and get a bar of

258
00:10:48,790 --> 00:10:46,720
soap and kind of rub it around a little

259
00:10:50,710 --> 00:10:48,800
bit it's you don't want to use too much

260
00:10:52,630 --> 00:10:50,720
soap because it's difficult to get it

261
00:10:55,269 --> 00:10:52,640
off there's no running water to wash it

262
00:10:58,470 --> 00:10:55,279
all away but cleaning our teeth and

263
00:11:00,550 --> 00:10:58,480

flossing that's all normal so i i'd feel

264
00:11:02,949 --> 00:11:00,560
pretty clean each day so we

265
00:11:08,949 --> 00:11:02,959
remarkably without a shower

266
00:11:12,389 --> 00:11:10,870
hello my name is brian hefner i'm a

267
00:11:14,630 --> 00:11:12,399
junior in my third year in the stem

268
00:11:16,230 --> 00:11:14,640
academy and my question for you is what

269
00:11:17,509 --> 00:11:16,240
is the highest stressful situation

270
00:11:22,870 --> 00:11:17,519
you've experienced

271
00:11:26,790 --> 00:11:25,190
well i think three years as a junior

272
00:11:29,110 --> 00:11:26,800
would be pretty stressful

273
00:11:31,990 --> 00:11:29,120
no i'm just kidding um

274
00:11:34,949 --> 00:11:32,000
you know that's an interesting question

275
00:11:37,750 --> 00:11:34,959
because it's such a fun place to be

276
00:11:40,150 --> 00:11:37,760
and my crewmates are so delightful to be

277
00:11:41,110 --> 00:11:40,160
around that it's really a stretch

278
00:11:43,670 --> 00:11:41,120
to

279
00:11:46,230 --> 00:11:43,680
define a stressful thing but the one

280
00:11:49,030 --> 00:11:46,240
thing we do know is that we are one

281
00:11:50,949 --> 00:11:49,040
failure away in some

282
00:11:52,949 --> 00:11:50,959
system on the space station from having

283
00:11:55,750 --> 00:11:52,959
a stressful day and we have a lot of

284
00:11:57,750 --> 00:11:55,760
training in houston and russia and other

285
00:11:58,870 --> 00:11:57,760
parts of the world that participate in

286
00:12:01,910 --> 00:11:58,880
our training

287
00:12:05,110 --> 00:12:01,920
where we know how to react in the event

288
00:12:07,750 --> 00:12:05,120

of a problem the biggest ones are a fire

289
00:12:09,190 --> 00:12:07,760
a depressurization or we have some

290
00:12:11,590 --> 00:12:09,200
ammonia fluid

291
00:12:14,069 --> 00:12:11,600
that helps keep the thermal systems in

292
00:12:16,550 --> 00:12:14,079
equilibrium if ammonia leaks that could

293
00:12:18,310 --> 00:12:16,560
be bad as well so so we know how to

294
00:12:21,030 --> 00:12:18,320
respond to that

295
00:12:21,829 --> 00:12:21,040
i think that there is one mantra that we

296
00:12:23,509 --> 00:12:21,839
have

297
00:12:25,829 --> 00:12:23,519
on the space station and that is that

298
00:12:27,829 --> 00:12:25,839
there's no nothing more important than

299
00:12:30,470 --> 00:12:27,839
what you're doing right now

300
00:12:32,069 --> 00:12:30,480
because at that any moment we could do

301
00:12:33,430 --> 00:12:32,079
something that could impact a system

302
00:12:35,430 --> 00:12:33,440
that could then

303
00:12:37,509 --> 00:12:35,440
either cause a problem right away or

304
00:12:39,350 --> 00:12:37,519
have follow-on effects to another

305
00:12:41,269 --> 00:12:39,360
problem that we would ultimately have to

306
00:12:43,590 --> 00:12:41,279
deal with an emergency so

307
00:12:45,509 --> 00:12:43,600
um i think the most to answer your

308
00:12:48,230 --> 00:12:45,519
question more specifically

309
00:12:50,230 --> 00:12:48,240
the most stressful thing is knowing that

310
00:12:51,910 --> 00:12:50,240
every minute of every day you could do

311
00:12:54,550 --> 00:12:51,920
something that could hurt the space

312
00:12:56,230 --> 00:12:54,560
station and uh and that in and of itself

313
00:12:58,069 --> 00:12:56,240

is a little stressful but we have a

314
00:12:59,990 --> 00:12:58,079
really great ground team

315
00:13:01,350 --> 00:13:00,000
in mission control that that supports

316
00:13:03,190 --> 00:13:01,360
all that and they write fantastic

317
00:13:04,790 --> 00:13:03,200
procedures and it's our job just to

318
00:13:10,629 --> 00:13:04,800
execute those procedures that are really

319
00:13:14,710 --> 00:13:13,190
hi i'm kate atmers and i'm a junior here

320
00:13:16,870 --> 00:13:14,720
at the stem academy

321
00:13:18,870 --> 00:13:16,880
and the question i would like to ask is

322
00:13:21,110 --> 00:13:18,880
what are your experiences with living so

323
00:13:26,389 --> 00:13:21,120
closely with people from different

324
00:13:29,670 --> 00:13:27,910
you know it's actually a real treat to

325
00:13:32,069 --> 00:13:29,680
do that and i highly recommend it

326
00:13:35,590 --> 00:13:32,079
because with that comes the learning of

327
00:13:37,670 --> 00:13:35,600
other cultures and

328
00:13:39,670 --> 00:13:37,680
english is the language

329
00:13:41,750 --> 00:13:39,680
that we communicate with to the ground

330
00:13:43,750 --> 00:13:41,760
but with amongst each other

331
00:13:46,230 --> 00:13:43,760
it's a mix of russian and english we all

332
00:13:47,590 --> 00:13:46,240
study russian uh for a long time before

333
00:13:49,350 --> 00:13:47,600
we fly in space and same with our

334
00:13:50,870 --> 00:13:49,360
russian cosmonauts they

335
00:13:53,110 --> 00:13:50,880
study english

336
00:13:54,550 --> 00:13:53,120
but neither of us are perfect in either

337
00:13:58,389 --> 00:13:54,560
language so

338
00:14:00,790 --> 00:13:58,399

heck i'm hardly perfect in english so

339
00:14:02,389 --> 00:14:00,800
we have this really mix of english and

340
00:14:05,110 --> 00:14:02,399
russian as we communicate

341
00:14:06,470 --> 00:14:05,120
and we learn about their cultures and

342
00:14:07,829 --> 00:14:06,480
traditions

343
00:14:09,509 --> 00:14:07,839
mostly around

344
00:14:10,629 --> 00:14:09,519
food and getting together and this sort

345
00:14:13,030 --> 00:14:10,639
of thing

346
00:14:14,790 --> 00:14:13,040
as they learn about ours

347
00:14:16,949 --> 00:14:14,800
that's one of the real treats about

348
00:14:17,829 --> 00:14:16,959
about space flight in fact anything in

349
00:14:18,790 --> 00:14:17,839
life

350
00:14:21,350 --> 00:14:18,800
fun

351
00:14:23,509 --> 00:14:21,360
is not it's not so much

352
00:14:25,189 --> 00:14:23,519
the event itself that's significant but

353
00:14:28,069 --> 00:14:25,199
it's really who you experience that

354
00:14:30,629 --> 00:14:28,079
amazing memorable fun thing with and

355
00:14:32,470 --> 00:14:30,639
that's how i describe this time up here

356
00:14:34,870 --> 00:14:32,480
on the space station is with just

357
00:14:37,430 --> 00:14:34,880
enjoying my crewmates from from canada

358
00:14:39,269 --> 00:14:37,440
the u.s and uh and

359
00:14:44,069 --> 00:14:39,279
in russia it's just been a fantastic

360
00:14:48,629 --> 00:14:46,230
my name is anissa canazi and i am a

361
00:14:50,310 --> 00:14:48,639
junior in the stem academy and i was

362
00:14:56,069 --> 00:14:50,320
wondering what is the most unique

363
00:14:58,550 --> 00:14:57,430

ah

364
00:15:00,310 --> 00:14:58,560
well

365
00:15:02,310 --> 00:15:00,320
um

366
00:15:05,269 --> 00:15:02,320
let's see i've been to the space station

367
00:15:08,069 --> 00:15:05,279
before in three years ago or in a little

368
00:15:10,150 --> 00:15:08,079
over three years ago in 2009

369
00:15:12,550 --> 00:15:10,160
but it's changed since then

370
00:15:14,550 --> 00:15:12,560
we've added this note 3 and cupola that

371
00:15:17,910 --> 00:15:14,560
i mentioned earlier

372
00:15:20,710 --> 00:15:17,920
so i would say the most significant

373
00:15:23,030 --> 00:15:20,720
event is having the opportunity to sit

374
00:15:25,030 --> 00:15:23,040
in the cupola and watch and and just

375
00:15:27,350 --> 00:15:25,040
watch the earth go by and along the same

376
00:15:30,790 --> 00:15:27,360
lines we had the russians had a

377
00:15:33,110 --> 00:15:30,800
spacewalk a week or two or weeks ago and

378
00:15:35,509 --> 00:15:33,120
because of where the hatches are and

379
00:15:37,350 --> 00:15:35,519
where their airlock is myself and sasha

380
00:15:38,629 --> 00:15:37,360
misurkin had to spend

381
00:15:42,230 --> 00:15:38,639
the ball the whole time of that

382
00:15:44,949 --> 00:15:42,240
spacewalk inside our soyuz module and

383
00:15:45,910 --> 00:15:44,959
and that was a really neat time for me

384
00:15:48,069 --> 00:15:45,920
there was

385
00:15:49,670 --> 00:15:48,079
we were forced to sit still and just

386
00:15:52,629 --> 00:15:49,680
look out the window

387
00:15:54,790 --> 00:15:52,639
talk to each other and enjoy the time

388
00:15:57,189 --> 00:15:54,800

without the pressures of uh of work to

389
00:16:00,310 --> 00:15:57,199
be done so that stands out in my mind as

390
00:16:07,509 --> 00:16:00,320
a really memorable uh event too is is

391
00:16:12,550 --> 00:16:10,230
hi my name is dot walt i'm a sophomore

392
00:16:15,829 --> 00:16:12,560
in the stem academy and i was going to

393
00:16:20,150 --> 00:16:15,839
ask how is the iss impacted by orbital

394
00:16:24,150 --> 00:16:23,030
well that's a fantastic question um

395
00:16:25,590 --> 00:16:24,160
so

396
00:16:27,269 --> 00:16:25,600
it's a big sky

397
00:16:29,990 --> 00:16:27,279
and so you'd think how can you possibly

398
00:16:31,670 --> 00:16:30,000
run into anything up here but in fact

399
00:16:33,350 --> 00:16:31,680
there's orbital debris all over the

400
00:16:34,310 --> 00:16:33,360
place as you well know by asking this

401
00:16:36,790 --> 00:16:34,320
question

402
00:16:38,949 --> 00:16:36,800
and there's there's different places on

403
00:16:41,350 --> 00:16:38,959
the ground that can keep track of to a

404
00:16:42,470 --> 00:16:41,360
certain size particle

405
00:16:43,910 --> 00:16:42,480
um

406
00:16:45,269 --> 00:16:43,920
on the different

407
00:16:47,670 --> 00:16:45,279
things that we

408
00:16:49,509 --> 00:16:47,680
might be in danger by and when they get

409
00:16:52,310 --> 00:16:49,519
within a certain range

410
00:16:54,629 --> 00:16:52,320
we'll do a maneuver to adjust our orbit

411
00:16:56,870 --> 00:16:54,639
altitude so to put us in a place that

412
00:16:59,030 --> 00:16:56,880
has less of a probability of impacting

413
00:17:01,030 --> 00:16:59,040

that item but there's some things that

414
00:17:09,189 --> 00:17:01,040
that perhaps the people can't track or

415
00:17:12,870 --> 00:17:10,949
and then there you know that would be a

416
00:17:14,309 --> 00:17:12,880
bad day if we had to deal with that and

417
00:17:15,429 --> 00:17:14,319
that's why we go through that emergency

418
00:17:17,669 --> 00:17:15,439
training

419
00:17:18,949 --> 00:17:17,679
but the space station is quite capable

420
00:17:48,630 --> 00:17:18,959
of

421
00:17:53,430 --> 00:17:51,350
hi i'm joseph mohan a sophomore in the

422
00:18:01,029 --> 00:17:53,440
stem academy

423
00:18:05,990 --> 00:18:02,789
i i didn't hear you joseph can you say

424
00:18:11,669 --> 00:18:07,669
i said we'd like to see you do a front

425
00:18:11,679 --> 00:18:21,830
oh no problem here you go

426
00:18:29,270 --> 00:18:23,510
good thing the tough russian judges are

427
00:18:32,710 --> 00:18:30,630
uh

428
00:18:35,190 --> 00:18:32,720
chris that was the last question thank

429
00:18:40,070 --> 00:18:35,200
you again for your time today and thank

430
00:18:43,270 --> 00:18:41,669
thank you very much for your time and

431
00:18:45,110 --> 00:18:43,280
maybe sometime when i get back to the

432
00:18:46,870 --> 00:18:45,120
planet i can come visit fredericksburg

433
00:18:48,230 --> 00:18:46,880
in person and share my experiences with

434
00:19:04,870 --> 00:18:48,240
you thank you very much congressman

435
00:19:10,070 --> 00:19:07,510
station this is houston acr thank you

436
00:19:11,669 --> 00:19:10,080
that concludes our event thank you that

437
00:19:13,510 --> 00:19:11,679
concludes our event

438
00:19:16,150 --> 00:19:13,520

thank you representative smith and

439
00:19:18,549 --> 00:19:16,160
fredericksburg high school station we