



1  
00:00:08,470 --> 00:00:02,790  
all right gentlemen the time is here are

2  
00:00:11,749 --> 00:00:10,390  
we are ready for the event

3  
00:00:13,910 --> 00:00:11,759  
all right outstanding boy scouts of

4  
00:00:15,509 --> 00:00:13,920  
america northern star council this is

5  
00:00:20,310 --> 00:00:15,519  
mission control houston

6  
00:00:24,390 --> 00:00:22,070  
station this is the boy scouts of

7  
00:00:26,790 --> 00:00:24,400  
america northern style northern star

8  
00:00:31,589 --> 00:00:26,800  
council council

9  
00:00:35,830 --> 00:00:33,750  
boy scouts of america northern star

10  
00:00:49,110 --> 00:00:35,840  
council the international space station

11  
00:00:54,310 --> 00:00:51,830  
hi i'm ben johnston from henry sibley

12  
00:00:56,310 --> 00:00:54,320  
high school this question is for mike

13  
00:00:58,150 --> 00:00:56,320

were any of you scouts and do you feel

14

00:01:03,510 --> 00:00:58,160

that anything in your scouting career

15

00:01:09,670 --> 00:01:06,950

oh absolutely i'm i am a

16

00:01:11,510 --> 00:01:09,680

i'm an eagle scout

17

00:01:13,910 --> 00:01:11,520

and i'm a scout master

18

00:01:15,830 --> 00:01:13,920

so yeah there's a lot of scouting and i

19

00:01:18,630 --> 00:01:15,840

believe there's a lot of scouting in

20

00:01:20,550 --> 00:01:18,640

what we do here as you just like

21

00:01:22,550 --> 00:01:20,560

for uh scouts you meet weekly and you

22

00:01:23,910 --> 00:01:22,560

train for the monthly campouts and get

23

00:01:25,749 --> 00:01:23,920

ready for the big adventures in the

24

00:01:26,469 --> 00:01:25,759

summertime the high adventure camps for

25

00:01:28,630 --> 00:01:26,479

the

26

00:01:31,109 --> 00:01:28,640

older scouts well this is like one six

27

00:01:33,190 --> 00:01:31,119

month long super high adventure

28

00:01:34,630 --> 00:01:33,200

expedition here where it's taking all of

29

00:01:36,950 --> 00:01:34,640

the training and all the stuff i've

30

00:01:38,870 --> 00:01:36,960

learned for many many years beginning as

31

00:01:41,350 --> 00:01:38,880

a scout all the way through my air force

32

00:01:47,749 --> 00:01:41,360

days and nasa training to today and now

33

00:01:51,830 --> 00:01:50,069

hi this is thomas rooney from academy of

34

00:01:53,270 --> 00:01:51,840

holy angels high school this question is

35

00:01:54,630 --> 00:01:53,280

for ron

36

00:02:00,069 --> 00:01:54,640

why did you decide to become an

37

00:02:04,469 --> 00:02:01,749

well thomas um

38

00:02:05,910 --> 00:02:04,479

you know i remember back when i was uh

39

00:02:09,190 --> 00:02:05,920

young watching

40

00:02:11,670 --> 00:02:09,200

the first moon landing uh back in 1969

41

00:02:13,270 --> 00:02:11,680

and that was something that really um

42

00:02:15,510 --> 00:02:13,280

inspired me and motivated me i just

43

00:02:18,070 --> 00:02:15,520

could not believe that we had people

44

00:02:21,030 --> 00:02:18,080

walking on the moon and and that really

45

00:02:22,229 --> 00:02:21,040

woke up a spirit of exploration in me

46

00:02:24,390 --> 00:02:22,239

and and i realized that that's what i

47

00:02:26,790 --> 00:02:24,400

wanted to do and uh you know i think we

48

00:02:28,229 --> 00:02:26,800

still have that and we still have uh

49

00:02:30,229 --> 00:02:28,239

this desire to see what's beyond the

50

00:02:31,750 --> 00:02:30,239

next hill and uh and see what's out

51  
00:02:33,750 --> 00:02:31,760  
there so i think that's one of the big

52  
00:02:38,710 --> 00:02:33,760  
reasons why i was motivated to become an

53  
00:02:43,030 --> 00:02:40,710  
hi this is jackson armstrong from

54  
00:02:45,670 --> 00:02:43,040  
harvest preparatory school this question

55  
00:02:51,670 --> 00:02:45,680  
is for mike what it what was it like

56  
00:02:55,030 --> 00:02:53,589  
hey zach that's a great question my

57  
00:02:57,589 --> 00:02:55,040  
first time was three years ago on a

58  
00:03:00,070 --> 00:02:57,599  
space shuttle mission and for me the

59  
00:03:02,229 --> 00:03:00,080  
most several things really stand out and

60  
00:03:04,070 --> 00:03:02,239  
the first was the first time i jumped up

61  
00:03:05,990 --> 00:03:04,080  
out of my seat we've gone through launch

62  
00:03:07,750 --> 00:03:06,000  
eight and a half minutes in eight and a

63  
00:03:09,350 --> 00:03:07,760

half minutes we went from sitting still

64

00:03:10,710 --> 00:03:09,360  
on the coast of florida to being in

65

00:03:13,270 --> 00:03:10,720  
space and all of a sudden we're

66

00:03:14,869 --> 00:03:13,280  
weightless i unstrap i jumped up and

67

00:03:17,030 --> 00:03:14,879  
grabbed some cameras to go to the window

68

00:03:18,949 --> 00:03:17,040  
to take pictures of our fuel tank

69

00:03:22,309 --> 00:03:18,959  
and as i looked out of that window at

70

00:03:24,070 --> 00:03:22,319  
the north atlantic ocean down below

71

00:03:26,070 --> 00:03:24,080  
blue ocean little dappling of white

72

00:03:28,309 --> 00:03:26,080  
clouds and i realized the horizon was

73

00:03:30,229 --> 00:03:28,319  
curved big curve of the earth and a

74

00:03:32,470 --> 00:03:30,239  
totally black sky up above with this

75

00:03:34,550 --> 00:03:32,480  
little thin band of atmosphere there it

76

00:03:36,630 --> 00:03:34,560

was just breathtaking

77

00:03:38,390 --> 00:03:36,640

i had this just this feeling that i was

78

00:03:40,789 --> 00:03:38,400

looking at the world the way god looks

79

00:03:47,430 --> 00:03:40,799

at the world from outside and what a

80

00:03:51,110 --> 00:03:49,030

hi this is mark dodge from henry sibley

81

00:03:52,470 --> 00:03:51,120

high school with questions for ron

82

00:03:54,149 --> 00:03:52,480

what did you study in college that

83

00:03:56,229 --> 00:03:54,159

prepares you for space travel do you

84

00:04:00,949 --> 00:03:56,239

have to study at astronomy to become an

85

00:04:05,589 --> 00:04:03,670

well mark um we've we've got

86

00:04:06,949 --> 00:04:05,599

astronauts from almost every background

87

00:04:09,429 --> 00:04:06,959

after we've got

88

00:04:12,149 --> 00:04:09,439

obviously pilots scientists engineers

89

00:04:14,630 --> 00:04:12,159

teachers veterinarians um

90

00:04:16,229 --> 00:04:14,640

there's many many different uh paths to

91

00:04:18,150 --> 00:04:16,239

to become an astronaut i actually

92

00:04:20,229 --> 00:04:18,160

studied business in college but i

93

00:04:21,909 --> 00:04:20,239

studied uh aerospace engineering and

94

00:04:24,469 --> 00:04:21,919

aeronautical science and in graduate

95

00:04:27,189 --> 00:04:24,479

school so i think what uh what all those

96

00:04:29,030 --> 00:04:27,199

fields have in common though are

97

00:04:30,870 --> 00:04:29,040

you know a technical aspect heavy in

98

00:04:32,469 --> 00:04:30,880

math and science and i think those are

99

00:04:38,550 --> 00:04:32,479

some of the important fields to really

100

00:04:42,790 --> 00:04:40,710

hi this is conor o'leary from henry

101  
00:04:43,990 --> 00:04:42,800  
sibley high school this question is for

102  
00:04:46,469 --> 00:04:44,000  
mike

103  
00:04:48,950 --> 00:04:46,479  
we are studying disability awareness are

104  
00:04:51,350 --> 00:04:48,960  
you doing microgravity research that

105  
00:04:58,070 --> 00:04:51,360  
will help people with diseases or

106  
00:05:02,710 --> 00:04:59,909  
the the work that we're doing here does

107  
00:05:05,029 --> 00:05:02,720  
not address those completely indirectly

108  
00:05:07,909 --> 00:05:05,039  
but there are some aspects of it part of

109  
00:05:10,950 --> 00:05:07,919  
it is like remote control or telecontrol

110  
00:05:12,790 --> 00:05:10,960  
of robots outside perhaps a person with

111  
00:05:15,510 --> 00:05:12,800  
a disability doesn't have the ability

112  
00:05:18,070 --> 00:05:15,520  
can't move heavy things or do some tasks

113  
00:05:20,070 --> 00:05:18,080

but they can control it remotely

114

00:05:21,830 --> 00:05:20,080

and have a tools that will do things for

115

00:05:23,749 --> 00:05:21,840

them so we're learning more about those

116

00:05:26,230 --> 00:05:23,759

kind of things actually the the ground

117

00:05:28,390 --> 00:05:26,240

is doing remote control of robot robotic

118

00:05:30,550 --> 00:05:28,400

systems outside the space station you

119

00:05:32,469 --> 00:05:30,560

know right now we're also studying the

120

00:05:33,430 --> 00:05:32,479

effects of microgravity on the human

121

00:05:35,749 --> 00:05:33,440

body

122

00:05:38,230 --> 00:05:35,759

its impact on bone strength muscle

123

00:05:40,230 --> 00:05:38,240

strength and trying to find ways to stay

124

00:05:42,070 --> 00:05:40,240

healthy in an environment that does not

125

00:05:45,029 --> 00:05:42,080

give us the kind of exercise that you

126

00:05:52,310 --> 00:05:45,039

get by being able to go outside and and

127

00:05:55,670 --> 00:05:54,469

hi this is matt bachman from heritage

128

00:05:57,590 --> 00:05:55,680

middle school

129

00:06:00,070 --> 00:05:57,600

this question is for ron

130

00:06:06,710 --> 00:06:00,080

how much exercise do you do a day while

131

00:06:10,390 --> 00:06:08,390

hey matt that's a that's a really good

132

00:06:12,790 --> 00:06:10,400

question because uh you know the human

133

00:06:14,629 --> 00:06:12,800

body is an amazing thing and

134

00:06:16,070 --> 00:06:14,639

um you know when we get into this new

135

00:06:18,550 --> 00:06:16,080

environment up here this weightless

136

00:06:20,870 --> 00:06:18,560

environment the human body adapts very

137

00:06:23,510 --> 00:06:20,880

quickly unfortunately not all of that

138

00:06:25,189 --> 00:06:23,520

adaptation is is beneficial to us for

139

00:06:27,270 --> 00:06:25,199

instance the body realizes it doesn't

140

00:06:28,950 --> 00:06:27,280

need a skeleton anymore it doesn't need

141

00:06:32,070 --> 00:06:28,960

strong muscles in your legs your heart

142

00:06:33,749 --> 00:06:32,080

doesn't have to be as is hard and so you

143

00:06:34,950 --> 00:06:33,759

know we start to see some of those

144

00:06:39,350 --> 00:06:34,960

effects

145

00:06:40,950 --> 00:06:39,360

exercise two hours a day we have uh

146

00:06:43,350 --> 00:06:40,960

treadmills on board where we bungee

147

00:06:45,670 --> 00:06:43,360

ourselves down to the treadmill we have

148

00:06:47,749 --> 00:06:45,680

stationary bikes again that we kind of

149

00:06:49,350 --> 00:06:47,759

secure ourselves to and we also have

150

00:06:51,430 --> 00:06:49,360

resistance

151

00:06:54,150 --> 00:06:51,440

equipment that we do weight lifting on

152

00:06:55,909 --> 00:06:54,160

and so we're able to to counteract bone

153

00:06:57,670 --> 00:06:55,919

loss we're able to to

154

00:06:58,629 --> 00:06:57,680

counteract some of the

155

00:07:00,550 --> 00:06:58,639

muscle

156

00:07:02,390 --> 00:07:00,560

weakness that we would normally see from

157

00:07:04,469 --> 00:07:02,400

being up here so it's something that we

158

00:07:06,070 --> 00:07:04,479

really need to get get a handle on and

159

00:07:08,150 --> 00:07:06,080

understand if we're going to go further

160

00:07:12,070 --> 00:07:08,160

and further in space exploration great

161

00:07:16,150 --> 00:07:14,070

hi this is graham smith from henry

162

00:07:17,270 --> 00:07:16,160

sibley high school this question is for

163

00:07:19,350 --> 00:07:17,280

mike

164

00:07:25,749 --> 00:07:19,360

what's it like to be in a confined space

165

00:07:30,790 --> 00:07:27,830

hi graham you mean a confined space with

166

00:07:33,990 --> 00:07:30,800

ronnie

167

00:07:35,909 --> 00:07:34,000

you know this the it uh

168

00:07:38,070 --> 00:07:35,919

this is actually a fairly big place

169

00:07:40,150 --> 00:07:38,080

we're very fortunate there uh it's it's

170

00:07:42,230 --> 00:07:40,160

it's not a small little capsule that

171

00:07:44,390 --> 00:07:42,240

we're spending so much time in uh what

172

00:07:46,550 --> 00:07:44,400

you see here behind us is just a small

173

00:07:48,150 --> 00:07:46,560

fraction of what the space station is we

174

00:07:51,990 --> 00:07:48,160

have about the same amount of room in

175

00:07:54,469 --> 00:07:52,000

here i think is about two uh 737

176

00:07:57,270 --> 00:07:54,479

airliners maybe two and a half

177

00:07:59,510 --> 00:07:57,280

that's just my quick guess uh and so we

178

00:08:01,430 --> 00:07:59,520

we all can work and we can we work

179

00:08:03,270 --> 00:08:01,440

together a lot but there's also time

180

00:08:05,029 --> 00:08:03,280

there's a little bit of room to get away

181

00:08:07,510 --> 00:08:05,039

when it's time to kind of get away from

182

00:08:09,189 --> 00:08:07,520

other people and there's windows there's

183

00:08:11,110 --> 00:08:09,199

two windows right behind us that we can

184

00:08:12,469 --> 00:08:11,120

look out of to enjoy the earth and we

185

00:08:14,869 --> 00:08:12,479

have some other windows in the space

186

00:08:23,110 --> 00:08:14,879

station that that help make us you know

187

00:08:27,350 --> 00:08:24,950

hi this is matt kinney from henry sibley

188

00:08:29,029 --> 00:08:27,360

high school this question is for ron

189

00:08:30,790 --> 00:08:29,039

what is the estimated weight for the

190

00:08:36,149 --> 00:08:30,800

international international space

191

00:08:39,829 --> 00:08:38,070

well yeah good good part of that

192

00:08:41,190 --> 00:08:39,839

question if it was down on earth because

193

00:08:43,269 --> 00:08:41,200

you know obviously right now it doesn't

194

00:08:45,509 --> 00:08:43,279

weigh anything it's uh it's weightless

195

00:08:48,230 --> 00:08:45,519

uh but but it's approximately a million

196

00:08:50,389 --> 00:08:48,240

pounds so we've been constructing uh

197

00:08:52,389 --> 00:08:50,399

this space station

198

00:08:53,670 --> 00:08:52,399

the first the first part of it uh of

199

00:08:55,910 --> 00:08:53,680

course human

200

00:08:57,829 --> 00:08:55,920

came on board in the year 2000 so we've

201  
00:09:00,310 --> 00:08:57,839  
had a continuous human presence up here

202  
00:09:01,269 --> 00:09:00,320  
for over 10 years and during that time

203  
00:09:02,949 --> 00:09:01,279  
frame

204  
00:09:04,389 --> 00:09:02,959  
we were constructing the station and

205  
00:09:06,310 --> 00:09:04,399  
getting it bigger and bigger more and

206  
00:09:08,949 --> 00:09:06,320  
more modules more and more capability

207  
00:09:10,870 --> 00:09:08,959  
airlocks and robotic arms and and you

208  
00:09:12,949 --> 00:09:10,880  
know it is this massive massive

209  
00:09:15,269 --> 00:09:12,959  
structure right now uh and like i said

210  
00:09:17,030 --> 00:09:15,279  
it's uh it's almost a million pounds

211  
00:09:19,990 --> 00:09:17,040  
it's it's bigger than football field

212  
00:09:21,430 --> 00:09:20,000  
it's uh it's a very large uh

213  
00:09:26,949 --> 00:09:21,440

structure and a very very amazing

214

00:09:31,430 --> 00:09:29,110

hi this is joe coyle from heritage

215

00:09:33,829 --> 00:09:31,440

middle school this question is for mike

216

00:09:39,110 --> 00:09:33,839

what language do you speak on the space

217

00:09:43,350 --> 00:09:41,190

hey joel good question it's actually

218

00:09:45,670 --> 00:09:43,360

kind of a mix english is the official

219

00:09:47,670 --> 00:09:45,680

language of the space station but we

220

00:09:49,030 --> 00:09:47,680

also speak russian with our russian

221

00:09:52,070 --> 00:09:49,040

crewmates and the russian mission

222

00:09:54,550 --> 00:09:52,080

control center uh and uh these days with

223

00:09:57,670 --> 00:09:54,560

satoshi furukawa our crewmate from japan

224

00:09:59,269 --> 00:09:57,680

on board he communicates mostly in

225

00:10:01,350 --> 00:09:59,279

english certainly with us because our

226

00:10:03,269 --> 00:10:01,360

japanese is pretty poor

227

00:10:05,350 --> 00:10:03,279

but every once in a while

228

00:10:07,509 --> 00:10:05,360

to get into really technical detailed

229

00:10:11,350 --> 00:10:07,519

discussions with the mission control in

230

00:10:13,190 --> 00:10:11,360

japan they will use japanese also

231

00:10:15,590 --> 00:10:13,200

so that it is an international space

232

00:10:18,150 --> 00:10:15,600

station with 15 countries involved the

233

00:10:20,630 --> 00:10:18,160

emphasis is really english and and

234

00:10:22,550 --> 00:10:20,640

russian but sometimes you hear other

235

00:10:28,710 --> 00:10:22,560

languages as well makes it a very

236

00:10:32,790 --> 00:10:31,110

hi this is dylan o'leary from st joseph

237

00:10:34,630 --> 00:10:32,800

elementary school

238

00:10:36,230 --> 00:10:34,640

this question is for ron

239

00:10:42,230 --> 00:10:36,240

what is next for manned space

240

00:10:44,790 --> 00:10:43,829

yeah that's a that's a really good

241

00:10:46,150 --> 00:10:44,800

question

242

00:10:49,350 --> 00:10:46,160

you know we just saw the end of the

243

00:10:50,710 --> 00:10:49,360

space space shuttle era um and that uh

244

00:10:52,389 --> 00:10:50,720

meant the closing of a chapter of our

245

00:10:54,550 --> 00:10:52,399

history but i think what it what it also

246

00:10:57,350 --> 00:10:54,560

means is an opening of a new chapter a

247

00:10:59,350 --> 00:10:57,360

chapter that that'll see us going beyond

248

00:11:01,030 --> 00:10:59,360

low earth orbit and uh you know

249

00:11:02,790 --> 00:11:01,040

exploring the rest of the solar system

250

00:11:05,350 --> 00:11:02,800

and so uh the international space

251

00:11:07,670 --> 00:11:05,360

station is a big step in that it's a big

252

00:11:09,670 --> 00:11:07,680

enabler for us to be able to do that to

253

00:11:11,670 --> 00:11:09,680

go further and further into into space

254

00:11:17,670 --> 00:11:11,680

and to learn more and more about the

255

00:11:21,670 --> 00:11:19,750

hi this is ben johnston from henry

256

00:11:23,670 --> 00:11:21,680

sibley high school this question is for

257

00:11:28,870 --> 00:11:23,680

mike do the constellations look

258

00:11:32,550 --> 00:11:31,110

hey ben i it you know that's a really

259

00:11:34,550 --> 00:11:32,560

interesting question

260

00:11:36,630 --> 00:11:34,560

last night uh it was

261

00:11:38,230 --> 00:11:36,640

before i went to bed it was we have a

262

00:11:40,870 --> 00:11:38,240

night and a day

263

00:11:43,190 --> 00:11:40,880

each every 90 minutes so about 45

264

00:11:45,990 --> 00:11:43,200  
minutes a night and 45 minutes a day and

265

00:11:48,389 --> 00:11:46,000  
yesterday evening i went to the uh to

266

00:11:49,910 --> 00:11:48,399  
one of our window groups for the for the

267

00:11:51,750 --> 00:11:49,920  
night pass if you will and i was

268

00:11:53,829 --> 00:11:51,760  
watching the stars i got some really

269

00:11:55,750 --> 00:11:53,839  
neat pictures of scorpio

270

00:11:56,629 --> 00:11:55,760  
the constellations do look the same up

271

00:11:58,790 --> 00:11:56,639  
here

272

00:12:01,350 --> 00:11:58,800  
but what's different is you could see so

273

00:12:03,670 --> 00:12:01,360  
many more stars that it's actually a

274

00:12:06,150 --> 00:12:03,680  
little bit hard to recognize the ones

275

00:12:07,910 --> 00:12:06,160  
that you know and love and i i

276

00:12:09,990 --> 00:12:07,920

experienced that first as a scout used

277

00:12:11,590 --> 00:12:10,000

to looking at the stars from my hometown

278

00:12:13,269 --> 00:12:11,600

area and then when i went to philmont

279

00:12:15,110 --> 00:12:13,279

scout ranch in the rocky mountains and i

280

00:12:17,430 --> 00:12:15,120

went outside the first night excited to

281

00:12:19,190 --> 00:12:17,440

see the stars and i couldn't find them i

282

00:12:20,629 --> 00:12:19,200

taught the astronomy merit badge and i

283

00:12:22,550 --> 00:12:20,639

couldn't find the stars that i loved

284

00:12:28,470 --> 00:12:22,560

because there were so many of them i get

285

00:12:33,430 --> 00:12:30,550

hi this is thomas rooney from academy of

286

00:12:35,430 --> 00:12:33,440

holy angels this question is for ron can

287

00:12:41,030 --> 00:12:35,440

you check your facebook or tweet from

288

00:12:44,629 --> 00:12:41,750

well

289

00:12:46,550 --> 00:12:44,639

yes we can uh but you know what i want

290

00:12:48,629 --> 00:12:46,560

to say about that is is we are real you

291

00:12:49,910 --> 00:12:48,639

know since since mike and i were scouts

292

00:12:51,910 --> 00:12:49,920

you know the world has changed a lot and

293

00:12:54,069 --> 00:12:51,920

we've become a lot more interconnected

294

00:12:56,949 --> 00:12:54,079

the world has world has become a smaller

295

00:12:59,030 --> 00:12:56,959

place uh and which is which is good

296

00:13:01,590 --> 00:12:59,040

because you know we realize that we're

297

00:13:04,069 --> 00:13:01,600

all in this together and so we use those

298

00:13:07,430 --> 00:13:04,079

type of things both of us are on twitter

299

00:13:09,829 --> 00:13:07,440

and and other ways that we can share

300

00:13:10,790 --> 00:13:09,839

this perspective this perspective of of

301  
00:13:15,350 --> 00:13:10,800  
life

302  
00:13:17,190 --> 00:13:15,360  
the planet from orbit

303  
00:13:18,949 --> 00:13:17,200  
these are these are tools that we can

304  
00:13:21,430 --> 00:13:18,959  
use to better

305  
00:13:23,990 --> 00:13:21,440  
allow people to share this with us as

306  
00:13:25,509 --> 00:13:24,000  
best we can because um you know it would

307  
00:13:27,430 --> 00:13:25,519  
really be wonderful if everybody could

308  
00:13:29,030 --> 00:13:27,440  
see this because you know i think the

309  
00:13:30,550 --> 00:13:29,040  
world would be a better place and we'd

310  
00:13:32,310 --> 00:13:30,560  
have a lot less problems in the world if

311  
00:13:33,990 --> 00:13:32,320  
everybody could could look at the earth

312  
00:13:36,069 --> 00:13:34,000  
and see it the way we are able to see it

313  
00:13:38,069 --> 00:13:36,079

up here and to realize that we're all in

314

00:13:39,110 --> 00:13:38,079

this together uh i think

315

00:13:41,269 --> 00:13:39,120

you know that's one of the things that

316

00:13:43,509 --> 00:13:41,279

we're trying to do with uh this social

317

00:13:45,430 --> 00:13:43,519

media type of tools that we have on

318

00:13:46,870 --> 00:13:45,440

board so it's it's you want to say

319

00:13:48,949 --> 00:13:46,880

something okay

320

00:13:49,910 --> 00:13:48,959

so it's a you know it's a it's a great

321

00:13:52,550 --> 00:13:49,920

tool

322

00:13:54,629 --> 00:13:52,560

so how does he find you on twitter well

323

00:13:56,389 --> 00:13:54,639

don't go to astro underscore aggie

324

00:13:57,910 --> 00:13:56,399

because then

325

00:13:59,990 --> 00:13:57,920

mike has asked your underscore aggie and

326

00:14:05,910 --> 00:14:00,000

i'm asked to underscore ron so that's

327

00:14:09,829 --> 00:14:07,910

hi this is connor o'leary from henry

328

00:14:11,030 --> 00:14:09,839

sibley high school this question is for

329

00:14:13,509 --> 00:14:11,040

mike

330

00:14:15,750 --> 00:14:13,519

how do you protect yourself your eyes

331

00:14:21,750 --> 00:14:15,760

and the international space station from

332

00:14:25,750 --> 00:14:23,910

oh that's a really good question all of

333

00:14:28,150 --> 00:14:25,760

our windows are treated with an

334

00:14:29,430 --> 00:14:28,160

ultraviolet uh film that blocks the

335

00:14:31,829 --> 00:14:29,440

ultraviolet because that would be the

336

00:14:34,069 --> 00:14:31,839

most most dangerous thing

337

00:14:36,150 --> 00:14:34,079

at times we have had windows in space

338

00:14:38,230 --> 00:14:36,160

where that that covering could be

339

00:14:41,030 --> 00:14:38,240

removed and we've had some people get

340

00:14:43,030 --> 00:14:41,040

some pretty significant sunburn in a

341

00:14:45,110 --> 00:14:43,040

very short period of time without the

342

00:14:47,430 --> 00:14:45,120

earth's atmosphere helping protect us

343

00:14:50,150 --> 00:14:47,440

the sun is intense and i have done

344

00:14:52,870 --> 00:14:50,160

four space walks together and the visor

345

00:14:54,550 --> 00:14:52,880

of our helmet there is covered

346

00:14:56,150 --> 00:14:54,560

with actually it's a silver film it

347

00:14:57,990 --> 00:14:56,160

looks gold

348

00:14:59,750 --> 00:14:58,000

that helps block out that that

349

00:15:01,430 --> 00:14:59,760

ultraviolet also

350

00:15:03,829 --> 00:15:01,440

so that's the main thing there there's

351

00:15:05,910 --> 00:15:03,839

other forms of radiation of course

352

00:15:08,870 --> 00:15:05,920

and uh the space station has some amount

353

00:15:11,030 --> 00:15:08,880

of shielding for some of them uh and uh

354

00:15:13,030 --> 00:15:11,040

you know it and and not as much for

355

00:15:15,110 --> 00:15:13,040

others so we're actually watching some

356

00:15:17,110 --> 00:15:15,120

of the the solar weather if you will

357

00:15:19,430 --> 00:15:17,120

some of the we've heard the reports of

358

00:15:21,509 --> 00:15:19,440

big storms on the sun that might be uh

359

00:15:23,189 --> 00:15:21,519

throwing some radiation our way uh we

360

00:15:25,269 --> 00:15:23,199

hope to see some of that in the form of

361

00:15:32,790 --> 00:15:25,279

the northern and southern lights

362

00:15:36,550 --> 00:15:34,470

hi this is mark dos from henry civilly

363

00:15:38,550 --> 00:15:36,560

high school this question is for ron

364

00:15:40,069 --> 00:15:38,560

if water clumps together in space what

365

00:15:45,030 --> 00:15:40,079

happens when you release something like

366

00:15:48,790 --> 00:15:46,710

that's a good question i'm going to try

367

00:15:50,470 --> 00:15:48,800

and take a minute here i've got i happen

368

00:15:52,710 --> 00:15:50,480

to have a bag of water here if you could

369

00:15:54,389 --> 00:15:52,720

be my trusted assistant here so we're

370

00:15:56,310 --> 00:15:54,399

going to move a little closer

371

00:15:57,829 --> 00:15:56,320

so you're you know what it's not going

372

00:15:59,749 --> 00:15:57,839

to do it's not going to rise to the top

373

00:16:01,350 --> 00:15:59,759

because you don't have um

374

00:16:03,350 --> 00:16:01,360

convection and

375

00:16:04,069 --> 00:16:03,360

other effects up here

376

00:16:06,629 --> 00:16:04,079

so

377

00:16:08,150 --> 00:16:06,639

aren't you yeah

378

00:16:10,470 --> 00:16:08,160

all right so i don't know if you can see

379

00:16:12,629 --> 00:16:10,480

this but when we release water in this

380

00:16:14,710 --> 00:16:12,639

uh microgravity environment it clumps

381

00:16:16,870 --> 00:16:14,720

together into a bubble and that's caused

382

00:16:21,590 --> 00:16:16,880

by surface tension so here we have our

383

00:16:25,110 --> 00:16:23,670

he's he's blowing on it to help push it

384

00:16:26,870 --> 00:16:25,120

back up into the field of view if it

385

00:16:29,110 --> 00:16:26,880

gets out of control he's just gonna have

386

00:16:31,350 --> 00:16:29,120

to eat it yeah

387

00:16:33,350 --> 00:16:31,360

so we'll uh we'll use this uh little

388

00:16:34,870 --> 00:16:33,360

green thing here to simulate oil and

389

00:16:37,030 --> 00:16:34,880

we'll see if we could uh

390

00:16:45,030 --> 00:16:37,040

get it inside so there you have it i'm

391

00:16:48,870 --> 00:16:46,710

so basically the

392

00:16:51,509 --> 00:16:48,880

water bubble has

393

00:16:54,470 --> 00:16:51,519

encompassed this little piece of uh

394

00:16:55,430 --> 00:16:54,480

green food like substance

395

00:16:57,030 --> 00:16:55,440

and

396

00:16:59,749 --> 00:16:57,040

you know again the surface tension is

397

00:17:02,790 --> 00:16:59,759

what's keeping this uh as a bubble and a

398

00:17:04,470 --> 00:17:02,800

sphere so

399

00:17:06,069 --> 00:17:04,480

i hope that answers the question it was

400

00:17:09,909 --> 00:17:06,079

it was fun to try who's gonna eat that

401  
00:17:09,919 --> 00:17:22,789  
okay you guys cheers

402  
00:17:26,870 --> 00:17:24,789  
hi this is jackson armstrong from

403  
00:17:28,710 --> 00:17:26,880  
robert's preparatory school this

404  
00:17:36,390 --> 00:17:28,720  
question is from mike

405  
00:17:39,510 --> 00:17:37,990  
hey jackson

406  
00:17:41,750 --> 00:17:39,520  
that's a good question

407  
00:17:44,789 --> 00:17:41,760  
we rode up here on a russian uh two

408  
00:17:47,270 --> 00:17:44,799  
different russian soyuz rockets

409  
00:17:50,230 --> 00:17:47,280  
launching out of uh kazakhstan place

410  
00:17:52,310 --> 00:17:50,240  
called baikonur cosmodrome a very exotic

411  
00:17:54,710 --> 00:17:52,320  
place very historic place the first

412  
00:17:57,750 --> 00:17:54,720  
human to launch into space yuri gagarin

413  
00:18:01,430 --> 00:17:57,760

did so you know in april

414

00:18:03,430 --> 00:18:01,440  
of 1961 50 years ago and we launched off

415

00:18:04,950 --> 00:18:03,440  
the exact same launch pad as him so it's

416

00:18:08,070 --> 00:18:04,960  
a really cool thing to be part of that

417

00:18:11,270 --> 00:18:08,080  
history our ride home is that same

418

00:18:13,430 --> 00:18:11,280  
uh same soyuz spaceship so ron's leaving

419

00:18:20,789 --> 00:18:13,440  
in what four and a half weeks or so and

420

00:18:25,510 --> 00:18:23,029  
hi this is matt bachman from heritage

421

00:18:28,150 --> 00:18:25,520  
middle school this question is for ron

422

00:18:36,789 --> 00:18:28,160  
how do you avoid stress extreme

423

00:18:40,390 --> 00:18:37,750  
yeah

424

00:18:41,990 --> 00:18:40,400  
well as mike said you know we've done

425

00:18:43,270 --> 00:18:42,000  
four spacewalks together so i've the

426

00:18:46,390 --> 00:18:43,280

only one i've ever been out on a

427

00:18:48,470 --> 00:18:46,400

spacewalk uh with is mike and on all the

428

00:18:50,070 --> 00:18:48,480

spacewalks he would always say as as i

429

00:18:52,070 --> 00:18:50,080

was coming out of the hatch hey ron

430

00:18:54,070 --> 00:18:52,080

don't look down but on the last

431

00:18:56,710 --> 00:18:54,080

spacewalk that we just did a few weeks

432

00:18:59,270 --> 00:18:56,720

ago when when i climbed out of the hatch

433

00:19:01,990 --> 00:18:59,280

uh the bahamas were beneath us and it

434

00:19:04,549 --> 00:19:02,000

was just absolutely spectacular to see

435

00:19:06,870 --> 00:19:04,559

that and so i beat mike to the punch and

436

00:19:08,310 --> 00:19:06,880

i said hey mike look down look at this

437

00:19:10,630 --> 00:19:08,320

look at this beautiful look at this

438

00:19:12,630 --> 00:19:10,640

beautiful planet we have here but um you

439

00:19:14,070 --> 00:19:12,640

know we we when we are doing spacewalks

440

00:19:16,710 --> 00:19:14,080

we have a lot of work to do and we have

441

00:19:18,549 --> 00:19:16,720

a lot of tasks to perform and so just

442

00:19:21,190 --> 00:19:18,559

staying focused on those and getting the

443

00:19:30,950 --> 00:19:21,200

job done is uh is really how we overcome

444

00:19:33,350 --> 00:19:31,909

oh

445

00:19:34,710 --> 00:19:33,360

thank you very much on behalf of the boy

446

00:19:36,230 --> 00:19:34,720

scouts of america and northern star

447

00:19:55,190 --> 00:19:36,240

council we really appreciate you being

448

00:19:58,549 --> 00:19:57,270

hey guys

449

00:20:00,310 --> 00:19:58,559

yeah that's okay

450

00:20:02,390 --> 00:20:00,320

guys thank you very much it's uh it's

451

00:20:03,830 --> 00:20:02,400

great to talk to the to all the scouts

452

00:20:06,630 --> 00:20:03,840

there it sounds like you've got a huge

453

00:20:08,230 --> 00:20:06,640

crowd and a and a great program we've

454

00:20:10,549 --> 00:20:08,240

heard about it and it sounds like a

455

00:20:13,029 --> 00:20:10,559

wonderful thing if you guys enjoy all

456

00:20:15,029 --> 00:20:13,039

that scouting has to offer it's about

457

00:20:16,630 --> 00:20:15,039

fun friends and adventure and a whole

458

00:20:18,230 --> 00:20:16,640

lot more but don't worry about that you

459

00:20:21,190 --> 00:20:18,240

guys concentrate on the fun friends and

460

00:20:23,190 --> 00:20:21,200

adventure have a great summer and enjoy

461

00:20:40,470 --> 00:20:23,200

the ride it's a it's quite a trail you