
HD

1
00:00:05,349 --> 00:00:03,110
station this is dean emily allen of cal

2
00:00:09,350 --> 00:00:05,359
state los angeles

3
00:00:09,360 --> 00:00:19,029
we hear you loud and clear

4
00:00:22,870 --> 00:00:21,109
hello my name is maria munguia i am a

5
00:00:26,070 --> 00:00:22,880
sophomore at cal state la in mechanical

6
00:00:27,429 --> 00:00:26,080
engineering my question is from mike

7
00:00:29,189 --> 00:00:27,439
becoming an astronaut is one of the

8
00:00:32,150 --> 00:00:29,199
greatest endeavors of our lifetime as

9
00:00:33,510 --> 00:00:32,160
well as one of the most challenging

10
00:00:34,950 --> 00:00:33,520
how did you overcome your greatest

11
00:00:39,270 --> 00:00:34,960
obstacle on the road to becoming an

12
00:00:42,069 --> 00:00:40,869
yeah that's a that's a very interesting

13
00:00:43,190 --> 00:00:42,079

question

14
00:00:45,990 --> 00:00:43,200
you know i think one of the biggest

15
00:00:47,830 --> 00:00:46,000
obstacles is is being patient

16
00:00:49,910 --> 00:00:47,840
and it can take a lot of time to gain

17
00:00:51,590 --> 00:00:49,920
the right education the right experience

18
00:00:53,590 --> 00:00:51,600
to to even have a chance to become an

19
00:00:55,590 --> 00:00:53,600
astronaut i know for myself

20
00:00:57,430 --> 00:00:55,600
i applied four times before i was

21
00:00:59,990 --> 00:00:57,440
selected over the course of 12 years i

22
00:01:02,630 --> 00:01:00,000
think rick was probably very yeah over

23
00:01:04,950 --> 00:01:02,640
nine years same kind of scenario so it

24
00:01:07,750 --> 00:01:04,960
can take a long time and so you just

25
00:01:14,469 --> 00:01:07,760
have to be patient

26
00:01:18,950 --> 00:01:16,710
uh hi my name is alberto lamia and i'm a

27
00:01:20,710 --> 00:01:18,960
12th grader at stern mass high school

28
00:01:22,070 --> 00:01:20,720
um rick what first part you're

29
00:01:23,749 --> 00:01:22,080
interested in exploring outer space and

30
00:01:32,710 --> 00:01:23,759
how did it influence your academic

31
00:01:37,109 --> 00:01:35,350
i was always interested in space and

32
00:01:38,789 --> 00:01:37,119
science when i was even when i was back

33
00:01:40,230 --> 00:01:38,799
i could remember as far back as fifth or

34
00:01:41,590 --> 00:01:40,240
sixth grade i remember being very

35
00:01:43,109 --> 00:01:41,600
interested when the teacher would talk

36
00:01:46,230 --> 00:01:43,119
about anything related to science

37
00:01:47,990 --> 00:01:46,240
especially space related or or airplanes

38
00:01:49,510 --> 00:01:48,000

anything related to airplanes or flying

39
00:01:50,710 --> 00:01:49,520
so all that stuff has just always

40
00:01:52,630 --> 00:01:50,720
interested me

41
00:01:54,310 --> 00:01:52,640
and obviously

42
00:01:56,310 --> 00:01:54,320
when i got into high school i would talk

43
00:01:57,590 --> 00:01:56,320
to my guidance counselors and they they

44
00:01:59,270 --> 00:01:57,600
heard what my interests were and they

45
00:02:01,510 --> 00:01:59,280
told me to go into engineering so that

46
00:02:03,910 --> 00:02:01,520
affected obviously what the choice of

47
00:02:05,270 --> 00:02:03,920
career i chose just based on my interest

48
00:02:06,709 --> 00:02:05,280
and then when i was an engineer at the

49
00:02:08,869 --> 00:02:06,719
university of connecticut and got out of

50
00:02:10,550 --> 00:02:08,879
there and graduated from there i went

51
00:02:12,070 --> 00:02:10,560
got a master's degree got a job as an

52
00:02:13,750 --> 00:02:12,080
engineer and eventually applied as an

53
00:02:15,430 --> 00:02:13,760
astronaut so i think my interest in

54
00:02:17,670 --> 00:02:15,440
space and science and my abilities in

55
00:02:32,710 --> 00:02:17,680
mathematics had a direct

56
00:02:39,589 --> 00:02:34,710
my name is arnold alvarez i'm a junior

57
00:02:43,670 --> 00:02:41,589
the international space station plays a

58
00:02:44,710 --> 00:02:43,680
huge role in investigating many trends

59
00:02:46,309 --> 00:02:44,720
on earth

60
00:02:48,869 --> 00:02:46,319
how do you think the future of our

61
00:02:55,190 --> 00:02:48,879
planet looks for us living under the

62
00:02:59,670 --> 00:02:57,589
yeah that's a really a good question and

63
00:03:02,710 --> 00:02:59,680

a tough question

64
00:03:05,750 --> 00:03:02,720
the earth has experienced a series of

65
00:03:08,949 --> 00:03:05,760
very drastic climate changes in history

66
00:03:09,750 --> 00:03:08,959
and uh that's why it's very important to

67
00:03:12,149 --> 00:03:09,760
uh

68
00:03:14,550 --> 00:03:12,159
to understand and to keep monitoring

69
00:03:17,350 --> 00:03:14,560
precisely what's happening on the earth

70
00:03:19,190 --> 00:03:17,360
and iss is playing a key role in there

71
00:03:22,070 --> 00:03:19,200
and we have wonderful equipment to

72
00:03:24,550 --> 00:03:22,080
observe that namely the what's happening

73
00:03:26,949 --> 00:03:24,560
on land the ocean and also in the

74
00:03:29,350 --> 00:03:26,959
atmosphere and we have to work in

75
00:03:31,910 --> 00:03:29,360
conjunction with the other space assets

76
00:03:33,589 --> 00:03:31,920
like satellites so by monitoring

77
00:03:37,509 --> 00:03:33,599
precisely what's happening we will be

78
00:03:50,789 --> 00:03:37,519
able to predict the future trend

79
00:03:54,470 --> 00:03:52,869
my name is audrey perez i am a 10th

80
00:03:55,350 --> 00:03:54,480
grader at la county high school for the

81
00:03:57,030 --> 00:03:55,360
arts

82
00:04:02,630 --> 00:03:57,040
mike what view from space made the

83
00:04:07,030 --> 00:04:04,550
well that's a that's a tough question as

84
00:04:08,949 --> 00:04:07,040
well because uh there's a lot of just

85
00:04:10,390 --> 00:04:08,959
amazing views

86
00:04:12,550 --> 00:04:10,400
from space

87
00:04:14,630 --> 00:04:12,560
looking out the cupola window down at

88
00:04:15,910 --> 00:04:14,640

down at the earth is is truly amazing

89
00:04:17,509 --> 00:04:15,920
but i have to say

90
00:04:19,990 --> 00:04:17,519
probably the biggest impression for me

91
00:04:21,430 --> 00:04:20,000
was going out the hatch the first time

92
00:04:23,030 --> 00:04:21,440
for my eva

93
00:04:24,150 --> 00:04:23,040
and when you finally get to see the

94
00:04:25,749 --> 00:04:24,160
earth

95
00:04:27,909 --> 00:04:25,759
in all its glory without any

96
00:04:29,830 --> 00:04:27,919
obstructions around you just just

97
00:04:33,430 --> 00:04:29,840
through your your visor

98
00:04:42,550 --> 00:04:33,440
that that leaves a pretty big impression

99
00:04:46,629 --> 00:04:45,030
hello my name is virginia mejia i am a

100
00:04:49,030 --> 00:04:46,639
senior in cal state la majoring in

101
00:04:51,189 --> 00:04:49,040
industrial technology rick as an

102
00:04:53,590 --> 00:04:51,199
astronaut you undergo difficult training

103
00:04:55,590 --> 00:04:53,600
and simulations meant to represent space

104
00:04:57,830 --> 00:04:55,600
conditions can you describe the training

105
00:04:59,350 --> 00:04:57,840
to us and do you feel it has truly

106
00:05:04,070 --> 00:04:59,360
prepared you for the for the extreme

107
00:05:08,550 --> 00:05:06,629
yeah that's true we do a lot of training

108
00:05:11,110 --> 00:05:08,560
as an astronaut years and years and

109
00:05:13,029 --> 00:05:11,120
years and years of training just for

110
00:05:15,350 --> 00:05:13,039
this mission alone we trained i trained

111
00:05:16,629 --> 00:05:15,360
two and a half three years

112
00:05:18,870 --> 00:05:16,639
so the different types of training we

113
00:05:20,150 --> 00:05:18,880

have it's a lot of classroom training

114
00:05:22,390 --> 00:05:20,160
we're just learning about different

115
00:05:24,469 --> 00:05:22,400
things about space station systems about

116
00:05:26,150 --> 00:05:24,479
vehicle systems and about payloads

117
00:05:28,390 --> 00:05:26,160
and then we also have simulators like

118
00:05:30,070 --> 00:05:28,400
you said we have uh we have the soyuz

119
00:05:31,270 --> 00:05:30,080
simulator that we train for of course i

120
00:05:32,790 --> 00:05:31,280
used to train in the space shuttle

121
00:05:34,150 --> 00:05:32,800
simulator we have space station

122
00:05:35,909 --> 00:05:34,160
simulators some of them are different

123
00:05:37,670 --> 00:05:35,919
fidelity some of them are high fidelity

124
00:05:40,390 --> 00:05:37,680
some of them are low fidelity we have

125
00:05:42,710 --> 00:05:40,400
the payload simulators where sometimes

126
00:05:45,350 --> 00:05:42,720
it's actual hardware and then of course

127
00:05:47,029 --> 00:05:45,360
we have the nbl the neutral buoyancy

128
00:05:49,110 --> 00:05:47,039
laboratory which is just basically a

129
00:05:51,350 --> 00:05:49,120
large large swimming pool where we

130
00:05:53,189 --> 00:05:51,360
practice our space walks and we they

131
00:05:55,270 --> 00:05:53,199
make us neutrally buoyant so we don't

132
00:05:56,710 --> 00:05:55,280
float and we don't sink and it's like

133
00:05:57,990 --> 00:05:56,720
where it kind of simulates that we're in

134
00:05:59,270 --> 00:05:58,000
space and that's how we practice our

135
00:06:02,950 --> 00:05:59,280
space walks

136
00:06:04,790 --> 00:06:02,960
but this training is all very very um

137
00:06:06,230 --> 00:06:04,800
not it's not very continuous it's like

138
00:06:07,990 --> 00:06:06,240

it's like pieces of a puzzle and all

139
00:06:09,029 --> 00:06:08,000
these pieces are all jumbled up and you

140
00:06:10,309 --> 00:06:09,039
don't really get to put them all

141
00:06:12,469 --> 00:06:10,319
together until you actually do the

142
00:06:14,550 --> 00:06:12,479
mission but the training works very very

143
00:06:16,309 --> 00:06:14,560
well we train very very hard for a very

144
00:06:17,909 --> 00:06:16,319
long time but it all comes together on

145
00:06:19,749 --> 00:06:17,919
the mission and that's why things that's

146
00:06:21,830 --> 00:06:19,759
why nasa is so successful because we

147
00:06:32,870 --> 00:06:21,840
trained so hard

148
00:06:36,230 --> 00:06:34,710
hello my name is marcos gonzalez i'm a

149
00:06:38,469 --> 00:06:36,240
10th grader at college ready academy

150
00:06:40,070 --> 00:06:38,479
high school number five uh guichi do you

151
00:06:41,670 --> 00:06:40,080
have laws you have to follow on the

152
00:06:43,110 --> 00:06:41,680
space station and if so who is the

153
00:06:49,670 --> 00:06:43,120
governing body and what are the

154
00:06:53,189 --> 00:06:50,950
i think rick

155
00:06:54,469 --> 00:06:53,199
thinks he governs the space station but

156
00:06:57,670 --> 00:06:54,479
the uh

157
00:06:59,589 --> 00:06:57,680
we have uh treaties and agreements among

158
00:07:00,950 --> 00:06:59,599
the partner nations of the international

159
00:07:05,110 --> 00:07:00,960
space station

160
00:07:06,550 --> 00:07:05,120
and that defines or that governs how the

161
00:07:09,589 --> 00:07:06,560
space station operation will be

162
00:07:11,589 --> 00:07:09,599
conducted and also we have a crew code

163
00:07:13,350 --> 00:07:11,599

of conduct that applies to all

164
00:07:16,469 --> 00:07:13,360
astronauts to follow

165
00:07:19,830 --> 00:07:16,479
and uh but as far as the law uh to an

166
00:07:22,710 --> 00:07:19,840
individual astronaut flying in space uh

167
00:07:25,350 --> 00:07:22,720
the country the uh from from which the

168
00:07:27,110 --> 00:07:25,360
astronaut is from its domestic

169
00:07:35,909 --> 00:07:27,120
law will apply to the individual

170
00:07:39,830 --> 00:07:38,070
hello my name is raymond olivares i'm a

171
00:07:41,830 --> 00:07:39,840
freshman here at cal state lake studying

172
00:07:43,189 --> 00:07:41,840
civil engineering mike what advice would

173
00:07:44,950 --> 00:07:43,199
you give someone passionate about the

174
00:07:46,230 --> 00:07:44,960
wonders of space wants to become an

175
00:07:54,230 --> 00:07:46,240
astronaut but doesn't feel like he's

176
00:07:57,830 --> 00:07:55,670
yeah you know this kind of goes along

177
00:07:59,909 --> 00:07:57,840
with the first question that i was asked

178
00:08:02,309 --> 00:07:59,919
and uh and that's one you need to be

179
00:08:03,990 --> 00:08:02,319
patient but i think just as important is

180
00:08:05,029 --> 00:08:04,000
you need to find something that you love

181
00:08:06,869 --> 00:08:05,039
and

182
00:08:08,390 --> 00:08:06,879
no matter what then if if you don't get

183
00:08:09,430 --> 00:08:08,400
selected as an astronaut at least you're

184
00:08:10,790 --> 00:08:09,440
doing something that you're very

185
00:08:12,629 --> 00:08:10,800
passionate about that you want to be

186
00:08:13,909 --> 00:08:12,639
doing and that you're excited about

187
00:08:15,670 --> 00:08:13,919
every morning when you get up and go to

188
00:08:29,430 --> 00:08:15,680

work and that's probably the best advice

189
00:08:33,829 --> 00:08:31,589
my name is esmeralda navarro i'm an 11th

190
00:08:35,430 --> 00:08:33,839
grader at stern mass high school rick if

191
00:08:37,190 --> 00:08:35,440
you could choose between living in space

192
00:08:38,790 --> 00:08:37,200
or on earth what would you choose and do

193
00:08:43,990 --> 00:08:38,800
you think one day people will be living

194
00:08:49,910 --> 00:08:46,389
well i think i choose to live on the

195
00:08:52,070 --> 00:08:49,920
earth but i would love i enjoy visiting

196
00:08:54,070 --> 00:08:52,080
space it's a great place to visit and

197
00:08:55,590 --> 00:08:54,080
it's a great place to live for uh

198
00:08:57,350 --> 00:08:55,600
periods of time

199
00:08:59,509 --> 00:08:57,360
uh but of course you know my family and

200
00:09:01,430 --> 00:08:59,519
my friends and uh lots of other things

201
00:09:03,190 --> 00:09:01,440
that i enjoy are back down on earth and

202
00:09:05,590 --> 00:09:03,200
just you know enjoying the weather

203
00:09:06,949 --> 00:09:05,600
enjoying the grass enjoying nature is is

204
00:09:08,630 --> 00:09:06,959
something you really miss when you're up

205
00:09:11,590 --> 00:09:08,640
here so i would choose to live on the

206
00:09:13,350 --> 00:09:11,600
earth but visit space as much as i can

207
00:09:15,190 --> 00:09:13,360
i think yes someday we will live in

208
00:09:18,230 --> 00:09:15,200
space we've been living in space since

209
00:09:19,829 --> 00:09:18,240
2000 and 2000 basically uh the first

210
00:09:21,670 --> 00:09:19,839
folks moved up here to the space station

211
00:09:23,750 --> 00:09:21,680
has been permanently manned since then

212
00:09:25,350 --> 00:09:23,760
now will folks move up into space and

213
00:09:27,269 --> 00:09:25,360

spend their whole lives from birth to

214
00:09:29,990 --> 00:09:27,279
death well maybe someday but that's

215
00:09:36,150 --> 00:09:30,000
probably far in the future

216
00:09:40,230 --> 00:09:38,550
my name is sarah robison i'm a sophomore

217
00:09:42,230 --> 00:09:40,240
at cal state la in mechanical

218
00:09:44,230 --> 00:09:42,240
engineering

219
00:09:46,230 --> 00:09:44,240
koichi what is the most difficult

220
00:09:51,750 --> 00:09:46,240
experiment you have conducted in space

221
00:09:56,710 --> 00:09:54,389
well that's a tough question actually

222
00:09:58,150 --> 00:09:56,720
we conducted a lot of experiments some

223
00:10:00,230 --> 00:09:58,160
of the experiments require very

224
00:10:02,630 --> 00:10:00,240
complicated preparation

225
00:10:04,790 --> 00:10:02,640
but we have really good procedures and

226
00:10:06,550 --> 00:10:04,800
also when we conduct experiments we have

227
00:10:09,670 --> 00:10:06,560
real-time support from the ground

228
00:10:11,990 --> 00:10:09,680
support team so we usually can perform

229
00:10:14,389 --> 00:10:12,000
those experiments without any problem

230
00:10:16,550 --> 00:10:14,399
but some of the experiments require a

231
00:10:18,310 --> 00:10:16,560
high level of i don't know

232
00:10:19,430 --> 00:10:18,320
maybe attention by the crew members for

233
00:10:22,150 --> 00:10:19,440
example

234
00:10:24,310 --> 00:10:22,160
uh marangoni experiment that has been

235
00:10:26,389 --> 00:10:24,320
conduct been conducting here with a

236
00:10:27,990 --> 00:10:26,399
remote control from the ground

237
00:10:30,550 --> 00:10:28,000
scientist

238
00:10:33,430 --> 00:10:30,560

that's done usually at night and that

239
00:10:35,430 --> 00:10:33,440
experiment is to study the uh the

240
00:10:37,590 --> 00:10:35,440
convection of marangoni which is caused

241
00:10:40,550 --> 00:10:37,600
by a gradient of a surface tension of a

242
00:10:43,190 --> 00:10:40,560
fluid and we have to be very quiet for

243
00:10:45,030 --> 00:10:43,200
this experiment to be conducted so we

244
00:10:47,670 --> 00:10:45,040
have to be very careful when we close

245
00:10:49,030 --> 00:10:47,680
open the toilet door and then you know

246
00:10:50,870 --> 00:10:49,040
opening clothes in the crew quarters

247
00:10:52,870 --> 00:10:50,880
door and something like that so some of

248
00:10:54,790 --> 00:10:52,880
the experiment really needs attention

249
00:10:56,710 --> 00:10:54,800
such as to be very quiet and those are

250
00:10:59,190 --> 00:10:56,720
the kind of tough questions tough

251
00:11:09,350 --> 00:10:59,200
experiments

252
00:11:12,870 --> 00:11:11,110
my name is melissa la trisa and i'm a

253
00:11:15,110 --> 00:11:12,880
junior at california in mechanical

254
00:11:17,190 --> 00:11:15,120
engineering mike how does your knowledge

255
00:11:18,949 --> 00:11:17,200
of everyday life on earth affect the way

256
00:11:23,750 --> 00:11:18,959
you interpret scientifically what you

257
00:11:26,790 --> 00:11:25,269
that's a that's a very interesting

258
00:11:28,389 --> 00:11:26,800
question

259
00:11:30,790 --> 00:11:28,399
you know it certainly impacts everything

260
00:11:32,550 --> 00:11:30,800
that that we do up here and

261
00:11:34,470 --> 00:11:32,560
you know we've got uh there's there's

262
00:11:37,190 --> 00:11:34,480
things down on earth uh problems down on

263
00:11:38,790 --> 00:11:37,200

earth such as for example uh bacteria

264
00:11:40,870 --> 00:11:38,800
that are becoming resistant to

265
00:11:42,389 --> 00:11:40,880
antibiotics and we just did an

266
00:11:44,870 --> 00:11:42,399
experiment up here

267
00:11:47,509 --> 00:11:44,880
uh that we were looking at that very

268
00:11:49,590 --> 00:11:47,519
same problem that helps us on station in

269
00:11:51,350 --> 00:11:49,600
space exploration but it's also

270
00:11:53,509 --> 00:11:51,360
something that's that's very valuable

271
00:11:55,509 --> 00:11:53,519
for for people down on earth so it's

272
00:11:57,190 --> 00:11:55,519
certainly uh you you apply all of that

273
00:11:58,870 --> 00:11:57,200
knowledge to to the experiments that

274
00:12:00,870 --> 00:11:58,880
you're you're doing up here and it kind

275
00:12:15,030 --> 00:12:00,880
of opens your eyes to the benefits of

276
00:12:18,230 --> 00:12:16,710
my name is johnny cortez i'm a 10th

277
00:12:19,750 --> 00:12:18,240
grader at college ready academy high

278
00:12:22,230 --> 00:12:19,760
school number five

279
00:12:29,430 --> 00:12:22,240
rick what is your daily hygienic routine

280
00:12:32,230 --> 00:12:31,030
that's a personal question no i'm just

281
00:12:34,150 --> 00:12:32,240
kidding

282
00:12:35,829 --> 00:12:34,160
yeah the uh you know i i like to say

283
00:12:38,629 --> 00:12:35,839
that space is the place where the

284
00:12:40,310 --> 00:12:38,639
impossible is easy

285
00:12:42,470 --> 00:12:40,320
and the things that are used to be easy

286
00:12:43,990 --> 00:12:42,480
are now difficult so things like simply

287
00:12:45,670 --> 00:12:44,000
brushing your teeth and washing your

288
00:12:47,590 --> 00:12:45,680

face and shaving are much more difficult

289
00:12:49,829 --> 00:12:47,600
you know we don't have running water up

290
00:12:52,389 --> 00:12:49,839
here so basically we just fill up small

291
00:12:54,230 --> 00:12:52,399
bags of water i squirt some water on my

292
00:12:55,750 --> 00:12:54,240
face a little bit of shaving cream and i

293
00:12:58,069 --> 00:12:55,760
shave but there's no way to rinse the

294
00:13:00,150 --> 00:12:58,079
blade so basically i have to use up a

295
00:13:02,069 --> 00:13:00,160
whole blade every day

296
00:13:04,629 --> 00:13:02,079
and luckily nasa provides me a new blade

297
00:13:16,150 --> 00:13:04,639
every day so it's not much different but

298
00:13:20,710 --> 00:13:17,910
my name is luis carmona i am a senior at

299
00:13:22,470 --> 00:13:20,720
cal state la civil engineering

300
00:13:28,150 --> 00:13:22,480
koichi how do you and your family feel

301
00:13:31,910 --> 00:13:30,069
that's a good question

302
00:13:35,430 --> 00:13:31,920
as rick said space is a wonderful place

303
00:13:37,910 --> 00:13:35,440
to live and work but i do really

304
00:13:40,230 --> 00:13:37,920
miss my family and

305
00:13:42,470 --> 00:13:40,240
long duration space flight and also long

306
00:13:44,870 --> 00:13:42,480
training and we have training in not

307
00:13:46,629 --> 00:13:44,880
only in the states japan russia europe

308
00:13:48,550 --> 00:13:46,639
and canada so

309
00:13:51,030 --> 00:13:48,560
this experience puts some additional

310
00:13:53,110 --> 00:13:51,040
stress to the family but we have really

311
00:13:55,350 --> 00:13:53,120
wonderful family support team on the

312
00:13:56,310 --> 00:13:55,360
ground and the communication tools that

313
00:14:01,269 --> 00:13:56,320

we have

314
00:14:03,509 --> 00:14:01,279
video conference with our family

315
00:14:05,509 --> 00:14:03,519
usually on a weekend these communication

316
00:14:08,870 --> 00:14:05,519
tools are very huge

317
00:14:19,350 --> 00:14:08,880
psychological support for all of us

318
00:14:23,189 --> 00:14:21,750
hi oh hi my name is caitlin peralta and

319
00:14:25,350 --> 00:14:23,199
i am a 10th grader at college ready

320
00:14:27,269 --> 00:14:25,360
academy high school number five mike can

321
00:14:28,550 --> 00:14:27,279
you describe a time in space or during

322
00:14:34,629 --> 00:14:28,560
your training when you've had a close

323
00:14:38,470 --> 00:14:36,550
you know that's a that's a good question

324
00:14:40,389 --> 00:14:38,480
and i i would uh i guess i'm going to

325
00:14:42,310 --> 00:14:40,399
answer that by saying you know rick

326
00:14:44,069 --> 00:14:42,320
talked about all the training we do and

327
00:14:45,110 --> 00:14:44,079
a lot of that training is focused around

328
00:14:46,629 --> 00:14:45,120
safety

329
00:14:49,030 --> 00:14:46,639
and so

330
00:14:51,030 --> 00:14:49,040
what happens with that when you train so

331
00:14:53,509 --> 00:14:51,040
much or you focus on

332
00:14:55,189 --> 00:14:53,519
on keeping things safe that that a lot

333
00:14:57,269 --> 00:14:55,199
of times you may have a close call but

334
00:14:59,030 --> 00:14:57,279
you may not feel like it's a close call

335
00:15:02,310 --> 00:14:59,040
because your training kicks in

336
00:15:04,389 --> 00:15:02,320
and you react to the situation and uh

337
00:15:05,990 --> 00:15:04,399
and and get get through the problem

338
00:15:09,110 --> 00:15:06,000

whatever it may be

339
00:15:10,870 --> 00:15:09,120
so i've i've been very fortunate that

340
00:15:13,670 --> 00:15:10,880
you know from a close call perspective i

341
00:15:15,030 --> 00:15:13,680
don't recall really having any that are

342
00:15:17,030 --> 00:15:15,040
that bad of course you know we've had

343
00:15:19,189 --> 00:15:17,040
some problems outside the station and

344
00:15:21,269 --> 00:15:19,199
you know for example in december we had

345
00:15:22,710 --> 00:15:21,279
a a problem with the ammonia cooling

346
00:15:24,790 --> 00:15:22,720
system and so we had to go out and

347
00:15:26,629 --> 00:15:24,800
repair it but again the training kicked

348
00:15:28,949 --> 00:15:26,639
in and you've got this wonderful support

349
00:15:30,389 --> 00:15:28,959
team on on the ground that helps you out

350
00:15:39,509 --> 00:15:30,399
and everything went very smooth and

351
00:15:44,389 --> 00:15:41,990
hi my name is phoebe stillson and i am a

352
00:15:47,350 --> 00:15:44,399
senior at cal state la in mechanical

353
00:15:49,590 --> 00:15:47,360
engineering my question is for rick what

354
00:15:51,110 --> 00:15:49,600
one piece of technology would you most

355
00:15:52,150 --> 00:15:51,120
like to see improved on the space

356
00:15:54,069 --> 00:15:52,160
station

357
00:16:00,949 --> 00:15:54,079
in order to make your living conditions

358
00:16:05,829 --> 00:16:03,030
yeah we might say in a pizza oven might

359
00:16:07,269 --> 00:16:05,839
be a great one but

360
00:16:09,749 --> 00:16:07,279
you know we have a lot of good food up

361
00:16:11,110 --> 00:16:09,759
here obviously but uh in the variety i

362
00:16:12,790 --> 00:16:11,120
thought was pretty good but now i've

363
00:16:14,150 --> 00:16:12,800

been up here for three months and it's

364
00:16:16,550 --> 00:16:14,160
it seems to start to get a little bit

365
00:16:18,230 --> 00:16:16,560
repetitive so obviously a more uh a

366
00:16:20,470 --> 00:16:18,240
wider variety of food would also would

367
00:16:22,710 --> 00:16:20,480
definitely make life better but i think

368
00:16:24,150 --> 00:16:22,720
uh there's no one piece of technology i

369
00:16:25,430 --> 00:16:24,160
think it's just a question of of

370
00:16:27,269 --> 00:16:25,440
integrating everything and thinking

371
00:16:28,470 --> 00:16:27,279
about how the how we live up here a

372
00:16:30,790 --> 00:16:28,480
little bit more you know when we build

373
00:16:32,470 --> 00:16:30,800
these space stations we we uh have to

374
00:16:34,150 --> 00:16:32,480
solve a lot of problems to build these

375
00:16:36,069 --> 00:16:34,160
things and it costs a lot of money and

376
00:16:39,430 --> 00:16:36,079
sometimes the creature comforts don't

377
00:16:41,350 --> 00:16:39,440
get uh taken care of uh completely like

378
00:16:42,629 --> 00:16:41,360
i but let me say that we do live very

379
00:16:44,629 --> 00:16:42,639
comfortably up here but there's always

380
00:16:46,310 --> 00:16:44,639
room for improvement uh but

381
00:16:48,069 --> 00:16:46,320
uh i can't think of any one thing other

382
00:16:50,629 --> 00:16:48,079
than maybe a little better food and a

383
00:16:52,150 --> 00:16:50,639
little better uh hygienic preparation

384
00:17:00,629 --> 00:16:52,160
area

385
00:17:04,549 --> 00:17:02,790
hello my name is jeremy bellaire i'm a

386
00:17:07,350 --> 00:17:04,559
senior at cal state la in electrical

387
00:17:08,949 --> 00:17:07,360
engineering and my question is for cochi

388
00:17:10,230 --> 00:17:08,959

how does the space station deal with

389
00:17:15,189 --> 00:17:10,240
vibration

390
00:17:20,069 --> 00:17:17,669
yeah a good question

391
00:17:22,390 --> 00:17:20,079
as for the vibration

392
00:17:24,710 --> 00:17:22,400
some of the experiments for example like

393
00:17:26,789 --> 00:17:24,720
a fluid dynamics and also like a

394
00:17:30,070 --> 00:17:26,799
material processing type experiments

395
00:17:32,070 --> 00:17:30,080
requires high level of microgravity so

396
00:17:35,270 --> 00:17:32,080
we're in the u.s laboratory now but we

397
00:17:38,390 --> 00:17:35,280
have payload racks that have uh

398
00:17:41,029 --> 00:17:38,400
active or passive uh vibration isolation

399
00:17:43,029 --> 00:17:41,039
system to uh to minimize the vibration

400
00:17:45,270 --> 00:17:43,039
and also we do exercise a lot the

401
00:17:48,310 --> 00:17:45,280
running machine resistive exercise

402
00:17:50,870 --> 00:17:48,320
device those exercise devices also have

403
00:17:52,789 --> 00:17:50,880
vibration isolation system to minimize

404
00:17:55,669 --> 00:17:52,799
or to mitigate those vibrations that is

405
00:17:57,350 --> 00:17:55,679
unfavorable for experiments and as far

406
00:18:00,230 --> 00:17:57,360
as thermal conditioning

407
00:18:01,830 --> 00:18:00,240
we have active and thermal conditioning

408
00:18:04,549 --> 00:18:01,840
thermal control system throughout the

409
00:18:05,990 --> 00:18:04,559
space station and that gives us the

410
00:18:07,590 --> 00:18:06,000
comfortable temperature and the

411
00:18:09,430 --> 00:18:07,600
comfortable temperature for the for the

412
00:18:11,990 --> 00:18:09,440
computers and other equipment throughout

413
00:18:24,789 --> 00:18:12,000

the space station

414
00:18:28,470 --> 00:18:26,710
my name is ben galletta i am a sophomore

415
00:18:31,669 --> 00:18:28,480
at cal state la and majoring in computer

416
00:18:33,190 --> 00:18:31,679
science and my question is for mike mike

417
00:18:35,270 --> 00:18:33,200
is there any down time aboard the

418
00:18:38,470 --> 00:18:35,280
station and if so how do you use this

419
00:18:42,630 --> 00:18:40,710
yeah fortunately there there is uh some

420
00:18:44,470 --> 00:18:42,640
downtime we have pretty long days during

421
00:18:46,390 --> 00:18:44,480
the week we actually uh probably work

422
00:18:48,150 --> 00:18:46,400
about 12 hours during the day and then

423
00:18:49,510 --> 00:18:48,160
once things are done around 7 30 8

424
00:18:51,270 --> 00:18:49,520
o'clock at night

425
00:18:53,510 --> 00:18:51,280
you know it's time to catch up on emails

426
00:18:55,830 --> 00:18:53,520
and make some phone calls to the family

427
00:18:57,909 --> 00:18:55,840
and friends but we also take a lot of

428
00:18:59,590 --> 00:18:57,919
pictures the cupola is actually

429
00:19:00,950 --> 00:18:59,600
fantastic views of the earth and so you

430
00:19:03,190 --> 00:19:00,960
want to try and capture that and share

431
00:19:04,710 --> 00:19:03,200
as much of that as you can and then you

432
00:19:06,630 --> 00:19:04,720
know the other great thing about up here

433
00:19:08,150 --> 00:19:06,640
is we're floating and so it never gets

434
00:19:20,710 --> 00:19:08,160
old and it's always fun to try new

435
00:19:24,630 --> 00:19:22,549
hi my name is alex cabrera and i'm a

436
00:19:26,390 --> 00:19:24,640
senior at casterly

437
00:19:28,549 --> 00:19:26,400
my question is for rick now that he

438
00:19:30,470 --> 00:19:28,559

reached space and seen firsthand what

439
00:19:38,390 --> 00:19:30,480
billions of people will never experience

440
00:19:42,870 --> 00:19:40,150
yeah that's a good question this is my

441
00:19:45,270 --> 00:19:42,880
fourth mission so i've got to uh

442
00:19:47,590 --> 00:19:45,280
experience this many many times

443
00:19:49,029 --> 00:19:47,600
i think my next step is i'm going to get

444
00:19:50,950 --> 00:19:49,039
i want to get involved in some of the

445
00:19:52,549 --> 00:19:50,960
new vehicles nasa is designing a new

446
00:19:53,990 --> 00:19:52,559
vehicle called orion

447
00:19:55,750 --> 00:19:54,000
and we also have several commercial

448
00:19:57,029 --> 00:19:55,760
companies designing vehicles i'd like to

449
00:19:58,870 --> 00:19:57,039
get involved with some of these new

450
00:20:00,070 --> 00:19:58,880
vehicles to help design them and use my

451
00:20:02,230 --> 00:20:00,080
experience

452
00:20:07,669 --> 00:20:02,240
to to help make those vehicles maybe

453
00:20:10,710 --> 00:20:09,430
all right and that was our last question

454
00:20:12,149 --> 00:20:10,720
for today so we just want to say thank

455
00:20:25,190 --> 00:20:12,159
you so if everyone in the audience will