

A promotional poster for the STS-134 mission. The central figure is Mark Kelly, the mission commander, wearing an orange flight suit with a US flag patch on the right chest. He is bald with a mustache and is looking directly at the camera. The background is a blue-tinted scene of a space shuttle launching, with a large plume of white smoke and fire. On the left side, there is a vertical panel with a starry space background and a reddish-orange glow at the bottom. The mission number 'STS-134' is written vertically in white on the starry background.

STS-134

MARK KELLY
Commander

1
00:00:12,310 --> 00:00:03,270
mesa verde elementary school space

2
00:00:18,870 --> 00:00:15,589
endeavor this is genie khan

3
00:00:19,990 --> 00:00:18,880
representing mesa verde do you how do

4
00:00:21,990 --> 00:00:20,000
you read

5
00:00:23,990 --> 00:00:22,000
yeah we we've got you

6
00:00:26,230 --> 00:00:24,000
loud and clear i think there might be a

7
00:00:27,990 --> 00:00:26,240
little bit of a delay it's great to have

8
00:00:29,429 --> 00:00:28,000
you here on board space shuttle

9
00:00:30,630 --> 00:00:29,439
endeavour

10
00:00:31,669 --> 00:00:30,640
with us

11
00:00:34,709 --> 00:00:31,679
um

12
00:00:36,630 --> 00:00:34,719
it's a beautiful day here in space as

13
00:00:38,470 --> 00:00:36,640

always the earth looks

14

00:00:40,709 --> 00:00:38,480

great and i'm glad you guys could get

15

00:00:42,790 --> 00:00:40,719

together to talk to us today

16

00:00:46,310 --> 00:00:42,800

this is foster hepler the principal of

17

00:00:48,150 --> 00:00:46,320

mesa verde we are ready to begin

18

00:00:49,910 --> 00:00:48,160

all right why don't we start off with uh

19

00:00:51,670 --> 00:00:49,920

some some questions i

20

00:00:53,270 --> 00:00:51,680

uh we got a little bit of a preview and

21

00:00:55,670 --> 00:00:53,280

you guys lined up some good questions

22

00:00:58,150 --> 00:00:55,680

for us

23

00:01:01,349 --> 00:00:58,160

hi my name is sydney enos and my

24

00:01:02,069 --> 00:01:01,359

question is how long does it take to get

25

00:01:08,390 --> 00:01:02,079

in

26

00:01:10,870 --> 00:01:08,400

well we go from zero to seventeen

27

00:01:13,830 --> 00:01:10,880

thousand five hundred miles an hour

28

00:01:16,469 --> 00:01:13,840

in just eight minutes and 20 seconds

29

00:01:17,350 --> 00:01:16,479

and when those main engines start it's

30

00:01:21,830 --> 00:01:17,360

like

31

00:01:23,830 --> 00:01:21,840

going a thousand miles an hour

32

00:01:25,670 --> 00:01:23,840

and it's incredible the amount of thrust

33

00:01:28,149 --> 00:01:25,680

and then we get into orbit pretty

34

00:01:31,510 --> 00:01:28,159

quickly and we're hundreds of miles up

35

00:01:33,429 --> 00:01:31,520

into space going really really fast

36

00:01:35,190 --> 00:01:33,439

hi my name is katie

37

00:01:38,069 --> 00:01:35,200

and my question is

38

00:01:40,950 --> 00:01:38,079

what is the most interesting or exciting

39

00:01:42,550 --> 00:01:40,960

thing you've ever seen in space

40

00:01:44,389 --> 00:01:42,560

oh hey katie

41

00:01:46,230 --> 00:01:44,399

and

42

00:01:48,710 --> 00:01:46,240

yes just yesterday i was outside the

43

00:01:50,950 --> 00:01:48,720

space station and i could see stars i

44

00:01:54,149 --> 00:01:50,960

could see the moon but the most exciting

45

00:01:56,469 --> 00:01:54,159

thing i i've seen while i was up here is

46

00:01:59,270 --> 00:01:56,479

planet earth we have such a beautiful

47

00:02:01,109 --> 00:01:59,280

amazing wonderful planet from space we

48

00:02:04,230 --> 00:02:01,119

can see all the continents we can see

49

00:02:06,069 --> 00:02:04,240

rivers we can even see cities and roads

50

00:02:08,790 --> 00:02:06,079

it's really amazing

51
00:02:11,830 --> 00:02:08,800
hi my name is jake rocky and my question

52
00:02:14,229 --> 00:02:11,840
is do you need any type of military

53
00:02:17,350 --> 00:02:14,239
training to go up in space

54
00:02:20,309 --> 00:02:17,360
hi jake i'm in the united states navy

55
00:02:21,430 --> 00:02:20,319
and mike here is in the u.s air force

56
00:02:23,910 --> 00:02:21,440
but

57
00:02:25,110 --> 00:02:23,920
um the rest of our crew

58
00:02:26,710 --> 00:02:25,120
well we're about

59
00:02:28,550 --> 00:02:26,720
half about half of us are in the

60
00:02:31,110 --> 00:02:28,560
military and half are not so to answer

61
00:02:32,869 --> 00:02:31,120
your question absolutely not you do not

62
00:02:35,350 --> 00:02:32,879
need to be in the military to be an

63
00:02:38,470 --> 00:02:35,360

astronaut though in my case and in

64

00:02:40,390 --> 00:02:38,480

mike's that that worked out well for us

65

00:02:43,110 --> 00:02:40,400

thank you for your question

66

00:02:45,190 --> 00:02:43,120

hello my name is ashley jake and my

67

00:02:48,949 --> 00:02:45,200

question is why do you have to wear the

68

00:02:51,110 --> 00:02:48,959

whole spacesuit not just a helmet

69

00:02:52,150 --> 00:02:51,120

all right it sounds like ashley ashley

70

00:02:55,750 --> 00:02:52,160

uh

71

00:02:57,110 --> 00:02:55,760

it turns out there's no air in space

72

00:02:58,710 --> 00:02:57,120

and uh

73

00:03:00,630 --> 00:02:58,720

that's why you need air to breathe but

74

00:03:03,670 --> 00:03:00,640

did you know that the atmosphere also

75

00:03:05,830 --> 00:03:03,680

puts pressure on our bodies and uh if we

76
00:03:07,750 --> 00:03:05,840
go out into space without a spacesuit on

77
00:03:09,670 --> 00:03:07,760
we blow up like a balloon

78
00:03:12,229 --> 00:03:09,680
and uh that would not be very good for

79
00:03:14,070 --> 00:03:12,239
us so we have to wear an entire we have

80
00:03:16,309 --> 00:03:14,080
to wear an entire spacesuit when we go

81
00:03:20,710 --> 00:03:16,319
outside not just a helmet like you might

82
00:03:24,470 --> 00:03:23,270
hello my name is damon brightman and my

83
00:03:27,350 --> 00:03:24,480
question is

84
00:03:28,309 --> 00:03:27,360
who decides the destination of the space

85
00:03:37,509 --> 00:03:28,319
shuttle

86
00:03:39,190 --> 00:03:37,519
in space and where has it all been

87
00:03:41,350 --> 00:03:39,200
well the space shuttle was designed to

88
00:03:43,110 --> 00:03:41,360

bring satellites and payloads up and

89

00:03:45,589 --> 00:03:43,120

down into earth orbit and sometimes

90

00:03:47,190 --> 00:03:45,599

bring them home

91

00:03:48,789 --> 00:03:47,200

we currently are at the international

92

00:03:50,710 --> 00:03:48,799

space station which is where the space

93

00:03:53,110 --> 00:03:50,720

shuttle visits most of the time it's

94

00:03:55,110 --> 00:03:53,120

also been to the hubble space telescope

95

00:03:56,710 --> 00:03:55,120

it's retrieved satellites in orbit and

96

00:03:58,949 --> 00:03:56,720

delivered others but as far as

97

00:04:00,789 --> 00:03:58,959

destinations are concerned i'd say

98

00:04:05,110 --> 00:04:00,799

pretty much the international space

99

00:04:08,789 --> 00:04:07,429

hello my name is owen bakker and my

100

00:04:11,030 --> 00:04:08,799

question is

101
00:04:14,710 --> 00:04:11,040
how do you stay in one place on the

102
00:04:16,789 --> 00:04:14,720
space station without blowing away

103
00:04:20,310 --> 00:04:16,799
well owen that's actually uh really

104
00:04:23,270 --> 00:04:20,320
tricky if you're in space and weightless

105
00:04:25,590 --> 00:04:23,280
and uh you're you want to float away you

106
00:04:27,189 --> 00:04:25,600
really do so what we do is we have some

107
00:04:29,030 --> 00:04:27,199
special

108
00:04:29,990 --> 00:04:29,040
techniques you know where we learn how

109
00:04:35,830 --> 00:04:30,000
to

110
00:04:37,749 --> 00:04:35,840
stay in one place we also have these

111
00:04:40,230 --> 00:04:37,759
things all throughout the shuttle and

112
00:04:42,070 --> 00:04:40,240
the space station and they we call them

113
00:04:44,629 --> 00:04:42,080

handrails but we usually use them for

114

00:04:47,110 --> 00:04:44,639

our feet so right now you can't see it

115

00:04:48,629 --> 00:04:47,120

but i'm standing under two stirrups

116

00:04:50,230 --> 00:04:48,639

on the ground

117

00:04:52,550 --> 00:04:50,240

so that it looks like i'm standing up

118

00:04:54,390 --> 00:04:52,560

normally but as soon as i let go i float

119

00:04:56,550 --> 00:04:54,400

up

120

00:04:58,710 --> 00:04:56,560

my name is sophia sanchez and my

121

00:05:01,189 --> 00:04:58,720

question is how fast does the space

122

00:05:03,590 --> 00:05:01,199

shuttle go

123

00:05:05,430 --> 00:05:03,600

hi sophia that's a very good question

124

00:05:07,830 --> 00:05:05,440

right now

125

00:05:10,230 --> 00:05:07,840

we are going 17

126
00:05:12,870 --> 00:05:10,240
500 miles an hour around the planet we

127
00:05:15,670 --> 00:05:12,880
see a sunrise or a sunset

128
00:05:17,029 --> 00:05:15,680
about every 45 minutes that's really

129
00:05:17,990 --> 00:05:17,039
really fast

130
00:05:19,270 --> 00:05:18,000
um

131
00:05:20,790 --> 00:05:19,280
it's uh

132
00:05:22,870 --> 00:05:20,800
it's interesting though if you go

133
00:05:25,990 --> 00:05:22,880
outside during a spacewalk like mike did

134
00:05:27,909 --> 00:05:26,000
yesterday it's in the vacuum of space so

135
00:05:29,909 --> 00:05:27,919
there's no air flowing by so even though

136
00:05:31,510 --> 00:05:29,919
you're really going fast it's not like

137
00:05:32,950 --> 00:05:31,520
sticking your arm out the window of the

138
00:05:35,749 --> 00:05:32,960

car

139

00:05:37,510 --> 00:05:35,759

hi my name is brenna loving and my

140

00:05:42,390 --> 00:05:37,520

question is

141

00:05:48,550 --> 00:05:44,550

what is the longest amount of time

142

00:05:52,310 --> 00:05:50,469

i've had the chance to fly aboard the

143

00:05:54,230 --> 00:05:52,320

international space station twice for

144

00:05:55,990 --> 00:05:54,240

two six months missions so i've been in

145

00:05:58,309 --> 00:05:56,000

space for about a year

146

00:06:00,070 --> 00:05:58,319

but uh our space shuttle mission so far

147

00:06:01,430 --> 00:06:00,080

we've been up in space for about a week

148

00:06:07,270 --> 00:06:01,440

you know i have to tell you it's been a

149

00:06:14,629 --> 00:06:09,430

my question is

150

00:06:19,029 --> 00:06:16,790

well we've got

151
00:06:24,309 --> 00:06:19,039
some m ms right here this tastes pretty

152
00:06:30,150 --> 00:06:27,749
my my name is mayonna mosey and my

153
00:06:31,749 --> 00:06:30,160
question is how do you brush your teeth

154
00:06:36,710 --> 00:06:31,759
in space

155
00:06:38,870 --> 00:06:36,720
is one of the few things that we do just

156
00:06:40,230 --> 00:06:38,880
like we do back at home the only thing

157
00:06:42,070 --> 00:06:40,240
that's different is that we don't really

158
00:06:44,150 --> 00:06:42,080
have running water

159
00:06:46,469 --> 00:06:44,160
so we just brush our teeth and we spit

160
00:06:48,469 --> 00:06:46,479
it out into like a napkin or like a

161
00:06:50,309 --> 00:06:48,479
kleenex and then we throw the kleenex

162
00:06:52,629 --> 00:06:50,319
away other than that brushing teeth is

163
00:06:54,870 --> 00:06:52,639

just the same and brushing teeth is

164

00:06:58,150 --> 00:06:54,880

important for you guys as well for as

165

00:07:00,710 --> 00:06:58,160

for astronauts up in space

166

00:07:04,710 --> 00:07:00,720

hello my name is brayden matazawa and

167

00:07:07,189 --> 00:07:04,720

what inspired you to become an astronaut

168

00:07:10,309 --> 00:07:07,199

you know over the last four months i've

169

00:07:12,230 --> 00:07:10,319

come to admire your classmate christina

170

00:07:14,230 --> 00:07:12,240

green very much i've learned a lot about

171

00:07:16,950 --> 00:07:14,240

her and when i was

172

00:07:18,230 --> 00:07:16,960

christina's age it's when apollo

173

00:07:19,270 --> 00:07:18,240

astronauts

174

00:07:21,430 --> 00:07:19,280

were

175

00:07:22,870 --> 00:07:21,440

first walking on the moon or actually

176
00:07:24,710 --> 00:07:22,880
was towards the end of the program and i

177
00:07:26,710 --> 00:07:24,720
remember watching that on tv

178
00:07:28,629 --> 00:07:26,720
and thinking you know if i worked really

179
00:07:30,469 --> 00:07:28,639
hard in school

180
00:07:32,629 --> 00:07:30,479
and really really focused and

181
00:07:33,430 --> 00:07:32,639
concentrated maybe someday i would have

182
00:07:34,950 --> 00:07:33,440
the

183
00:07:36,710 --> 00:07:34,960
opportunity to

184
00:07:39,589 --> 00:07:36,720
fly in space

185
00:07:42,230 --> 00:07:39,599
and i did work hard and and it did work

186
00:07:44,469 --> 00:07:42,240
out but i i would say it was um you know

187
00:07:47,510 --> 00:07:44,479
was those early apollo astronauts like

188
00:07:51,990 --> 00:07:47,520

neil armstrong and gene cernan and

189

00:07:57,350 --> 00:07:55,029

my name is noah and

190

00:07:59,350 --> 00:07:57,360

this is my question um

191

00:08:01,589 --> 00:07:59,360

do you see old

192

00:08:04,230 --> 00:08:01,599

things floating around in space like

193

00:08:06,869 --> 00:08:04,240

space junk

194

00:08:09,189 --> 00:08:06,879

i think the question was that do i see

195

00:08:11,430 --> 00:08:09,199

anything strange or odd flying around in

196

00:08:14,230 --> 00:08:11,440

space or old things like space junk and

197

00:08:16,390 --> 00:08:14,240

uh we are in a really low orbit even

198

00:08:18,309 --> 00:08:16,400

though we're flying really fast and

199

00:08:20,629 --> 00:08:18,319

we're you know hundreds of miles above

200

00:08:23,670 --> 00:08:20,639

the planet there are things that are

201
00:08:25,430 --> 00:08:23,680
going even faster above us and we really

202
00:08:27,189 --> 00:08:25,440
don't see them now and then we might see

203
00:08:29,189 --> 00:08:27,199
a small flash but they're so small

204
00:08:31,110 --> 00:08:29,199
compared to the rest of the the universe

205
00:08:33,670 --> 00:08:31,120
and the planet it's really hard to see

206
00:08:35,430 --> 00:08:33,680
them so up here we don't think there's

207
00:08:37,029 --> 00:08:35,440
any you know we don't see anything

208
00:08:39,589 --> 00:08:37,039
that's out there around us but

209
00:08:41,350 --> 00:08:39,599
fortunately uh or unfortunately there's

210
00:08:43,269 --> 00:08:41,360
some things that are out there but we

211
00:08:45,269 --> 00:08:43,279
have people on the ground that can track

212
00:08:48,470 --> 00:08:45,279
any objects that might come near us so

213
00:08:53,750 --> 00:08:51,829

i run in gyro and my question

214

00:08:55,430 --> 00:08:53,760

is

215

00:08:57,670 --> 00:08:55,440

what happens

216

00:09:00,710 --> 00:08:57,680

to you if you become sick or injured

217

00:09:04,310 --> 00:09:02,389

well that's a good question we have we

218

00:09:06,070 --> 00:09:04,320

have a medical kit on board the space

219

00:09:07,269 --> 00:09:06,080

shuttle we have one on the space station

220

00:09:10,070 --> 00:09:07,279

and we have

221

00:09:12,070 --> 00:09:10,080

a couple of my crew members are trained

222

00:09:15,269 --> 00:09:12,080

in some pretty advanced

223

00:09:19,590 --> 00:09:15,279

medical procedures we don't have

224

00:09:21,670 --> 00:09:19,600

any doctors on board i understand

225

00:09:23,670 --> 00:09:21,680

one of my colleagues dr lee morin is

226

00:09:25,509 --> 00:09:23,680

there with you today but we don't have a

227

00:09:26,870 --> 00:09:25,519

doctor on board this mission but we we

228

00:09:29,110 --> 00:09:26,880

could do pretty well we could talk to

229

00:09:33,829 --> 00:09:29,120

doctors on the ground immediately if we

230

00:09:40,230 --> 00:09:37,670

hi my name is nolan and my question is

231

00:09:42,630 --> 00:09:40,240

what does it feel like in your seat

232

00:09:45,110 --> 00:09:42,640

during blast off and landing compared to

233

00:09:47,350 --> 00:09:45,120

an airplane

234

00:09:49,030 --> 00:09:47,360

hey nolan the

235

00:09:50,949 --> 00:09:49,040

one of the main differences is that

236

00:09:53,190 --> 00:09:50,959

you're sitting in a spacesuit you're

237

00:09:55,910 --> 00:09:53,200

lying on your back for launch

238

00:09:57,910 --> 00:09:55,920

and you have gloves and a helmet on so

239

00:09:59,670 --> 00:09:57,920

it feels a lot different and then

240

00:10:01,670 --> 00:09:59,680

then the

241

00:10:03,910 --> 00:10:01,680

rockets light and you're pushed back in

242

00:10:05,430 --> 00:10:03,920

your seat you start going really fast

243

00:10:07,750 --> 00:10:05,440

and then you have a lot of things to do

244

00:10:09,829 --> 00:10:07,760

while you're sitting in the rocket to

245

00:10:11,509 --> 00:10:09,839

make sure that uh everything's going

246

00:10:13,350 --> 00:10:11,519

fine so that's all different but the

247

00:10:15,829 --> 00:10:13,360

main difference

248

00:10:17,350 --> 00:10:15,839

about the launch and landing

249

00:10:19,509 --> 00:10:17,360

compared to an airplane is that it's

250

00:10:21,670 --> 00:10:19,519

really super exciting i mean every time

251
00:10:23,590 --> 00:10:21,680
i launch into space i'm just so excited

252
00:10:28,310 --> 00:10:23,600
it's just a happy happy moment to

253
00:10:32,710 --> 00:10:30,710
hello my name is trevor crabb

254
00:10:35,750 --> 00:10:32,720
my question is who decides who gets to

255
00:10:39,269 --> 00:10:37,670
well mike and i have a

256
00:10:42,310 --> 00:10:39,279
boss named

257
00:10:43,990 --> 00:10:42,320
dr peggy whitson is the chief astronaut

258
00:10:46,870 --> 00:10:44,000
and she

259
00:10:49,430 --> 00:10:46,880
along with um

260
00:10:50,790 --> 00:10:49,440
the the people above her actually you

261
00:10:52,630 --> 00:10:50,800
know make that decision pretty much

262
00:10:54,790 --> 00:10:52,640
peggy decides who's gonna go on which

263
00:10:59,190 --> 00:10:54,800

mission uh whether it's a space shuttle

264

00:11:05,350 --> 00:11:01,190

um my name is

265

00:11:11,110 --> 00:11:08,550

have you ever seen anything strange in

266

00:11:12,870 --> 00:11:11,120

space

267

00:11:14,630 --> 00:11:12,880

hello diego

268

00:11:16,710 --> 00:11:14,640

we did not uh

269

00:11:18,870 --> 00:11:16,720

at least i've been up here you know i've

270

00:11:21,670 --> 00:11:18,880

been in space in my career for over a

271

00:11:23,590 --> 00:11:21,680

year and i look out the window a lot

272

00:11:25,190 --> 00:11:23,600

and uh i can't say that i've ever seen

273

00:11:26,870 --> 00:11:25,200

anything strange but that's a good

274

00:11:28,790 --> 00:11:26,880

question i mean one of the reasons why

275

00:11:31,030 --> 00:11:28,800

we're up here is to explore and define

276

00:11:33,190 --> 00:11:31,040

new things and i haven't seen anything

277

00:11:36,069 --> 00:11:33,200

strange personally i don't think anybody

278

00:11:40,389 --> 00:11:36,079

up here has ever seen a ufo or an alien

279

00:11:45,350 --> 00:11:42,710

hi my name is sophie mahias and my

280

00:11:48,790 --> 00:11:45,360

question is what do you hope to learn on

281

00:11:54,470 --> 00:11:52,069

a few days ago we installed a 2 billion

282

00:11:57,190 --> 00:11:54,480

cosmic particle detector called the

283

00:11:59,509 --> 00:11:57,200

alpha magnetic spectrometer

284

00:12:01,030 --> 00:11:59,519

and after we installed it on the outside

285

00:12:03,110 --> 00:12:01,040

of the space station it started

286

00:12:05,750 --> 00:12:03,120

collecting data it's already collected

287

00:12:07,509 --> 00:12:05,760

50 million particles stayed on 50

288

00:12:10,550 --> 00:12:07,519

million particles

289

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

and it is hoping to learn

290

00:12:14,790 --> 00:12:12,880

what is the makeup of the universe what

291

00:12:16,550 --> 00:12:14,800

the cosmic rays

292

00:12:18,069 --> 00:12:16,560

consist of

293

00:12:19,670 --> 00:12:18,079

where do they come from and it's

294

00:12:21,030 --> 00:12:19,680

searching for things like

295

00:12:22,949 --> 00:12:21,040

antimatter

296

00:12:26,069 --> 00:12:22,959

dark matter

297

00:12:28,710 --> 00:12:26,079

so we're hoping to learn after a number

298

00:12:29,990 --> 00:12:28,720

of years with this experiment operating

299

00:12:31,829 --> 00:12:30,000

on the space station we're hoping to

300

00:12:34,710 --> 00:12:31,839

learn a lot about the origin of the

301

00:12:40,069 --> 00:12:37,590

my my name is kaylen hoff

302

00:12:42,150 --> 00:12:40,079

and my question is can you tell which

303

00:12:45,430 --> 00:12:42,160

country or continent has the most air

304

00:12:50,870 --> 00:12:48,389

hey caitlin the

305

00:12:53,190 --> 00:12:50,880

space program has been really helpful

306

00:12:55,829 --> 00:12:53,200

for human beings to understand what uh

307

00:12:58,069 --> 00:12:55,839

what's going on with our own planet

308

00:12:59,829 --> 00:12:58,079

that means that uh not just the space

309

00:13:01,670 --> 00:12:59,839

station and the space shuttle but other

310

00:13:03,350 --> 00:13:01,680

satellites have been able to tell us

311

00:13:06,310 --> 00:13:03,360

what's going on with our rivers and our

312

00:13:08,230 --> 00:13:06,320

oceans and our land maps aboard the

313

00:13:12,629 --> 00:13:08,240

space station and the space shuttle

314

00:13:16,629 --> 00:13:14,629

things like wildfires and things like

315

00:13:18,550 --> 00:13:16,639

that so it's pretty amazing what you can

316

00:13:20,470 --> 00:13:18,560

see up here and when you know about

317

00:13:24,550 --> 00:13:20,480

something then you can do things to help

318

00:13:29,350 --> 00:13:25,509

hi

319

00:13:33,350 --> 00:13:29,360

my name is tessa my question is how can

320

00:13:37,269 --> 00:13:35,430

well astronaut it's great that you it

321

00:13:40,629 --> 00:13:37,279

sounds like you want to be an astronaut

322

00:13:43,430 --> 00:13:40,639

and the best thing you could do

323

00:13:44,949 --> 00:13:43,440

school felt mike and i paid attention

324

00:13:47,350 --> 00:13:44,959

while we were in class and did our

325

00:13:49,430 --> 00:13:47,360

homework and worked really hard and

326

00:13:51,509 --> 00:13:49,440

tried to go to the best university that

327

00:13:53,910 --> 00:13:51,519

we could he even went to mit and

328

00:13:55,590 --> 00:13:53,920

stanford but i you don't have to do that

329

00:13:59,350 --> 00:13:55,600

i didn't i didn't go to

330

00:14:01,590 --> 00:13:59,360

a school like that but it really

331

00:14:04,150 --> 00:14:01,600

is worth your time

332

00:14:08,310 --> 00:14:04,160

to work really really hard and do your

333

00:14:14,230 --> 00:14:11,590

hello my name is michael gunderson and

334

00:14:17,030 --> 00:14:14,240

can you see or study a black hole from

335

00:14:21,350 --> 00:14:17,040

the space station

336

00:14:23,670 --> 00:14:21,360

hey michael and a really good question

337

00:14:25,509 --> 00:14:23,680

from the space station uh thank goodness

338

00:14:27,829 --> 00:14:25,519

we really can't see black holes because

339

00:14:29,350 --> 00:14:27,839

that means we'd be too close and we run

340

00:14:31,350 --> 00:14:29,360

into a lot of trouble

341

00:14:34,310 --> 00:14:31,360

so uh what i think

342

00:14:35,990 --> 00:14:34,320

what we can do though is with the

343

00:14:37,750 --> 00:14:36,000

things like the alpha magnetic

344

00:14:39,990 --> 00:14:37,760

spectrometer which is a really neat

345

00:14:42,230 --> 00:14:40,000

particle detector we can

346

00:14:44,470 --> 00:14:42,240

learn things about black holes and the

347

00:14:46,470 --> 00:14:44,480

rest of the universe the hubble space

348

00:14:49,030 --> 00:14:46,480

telescope which was delivered by the

349

00:14:50,790 --> 00:14:49,040

space shuttle it also uh was able to

350

00:14:53,590 --> 00:14:50,800

help us understand black holes a lot

351
00:14:55,189 --> 00:14:53,600
better because even 50 or 60 years ago

352
00:14:56,949 --> 00:14:55,199
we just knew that there should be black

353
00:14:58,870 --> 00:14:56,959
holes but we had no idea if they really

354
00:15:02,710 --> 00:14:58,880
existed so there's a whole bunch of new

355
00:15:07,910 --> 00:15:05,110
well mesa verde it was a great for me to

356
00:15:10,389 --> 00:15:07,920
have this opportunity to be with you

357
00:15:11,269 --> 00:15:10,399
today and answer your questions

358
00:15:14,230 --> 00:15:11,279
since

359
00:15:16,310 --> 00:15:14,240
my wife congresswoman giffords is from

360
00:15:18,389 --> 00:15:16,320
tucson arizona i spend a lot a lot of

361
00:15:20,710 --> 00:15:18,399
time there and i'm a big fan of tucson i

362
00:15:22,550 --> 00:15:20,720
have the arizona wildcat shirt i didn't

363
00:15:25,509 --> 00:15:22,560

have a mesa verde elementary school

364

00:15:27,829 --> 00:15:25,519

shirt but what i do have is

365

00:15:30,710 --> 00:15:27,839

i have your yearbook

366

00:15:32,870 --> 00:15:30,720

uh the mesa verde mountain lions 2010

367

00:15:35,030 --> 00:15:32,880

2011 with me here in space and i'll get

368

00:15:37,269 --> 00:15:35,040

a picture of this with the earth in the

369

00:15:39,590 --> 00:15:37,279

background and hopefully i can bring it

370

00:15:41,030 --> 00:15:39,600

back and hand deliver it to your school

371

00:15:43,110 --> 00:15:41,040

just opening up

372

00:15:44,310 --> 00:15:43,120

the page here to

373

00:15:45,110 --> 00:15:44,320

um

374

00:15:46,550 --> 00:15:45,120

the

375

00:15:49,030 --> 00:15:46,560

pages

376

00:15:51,110 --> 00:15:49,040

honoring christina green and it's a very

377

00:15:53,110 --> 00:15:51,120

nice yearbook and mike and i

378

00:15:54,629 --> 00:15:53,120

just signed it in the back and i'll get

379

00:15:56,310 --> 00:15:54,639

my other crew members and the space

380

00:15:58,870 --> 00:15:56,320

station crew members to sign it and then

381

00:16:02,389 --> 00:15:58,880

we'll we'll send it back to you

382

00:16:05,430 --> 00:16:02,399

again it was really great to be with you

383

00:16:06,710 --> 00:16:05,440

uh at mesa verde today and i hope to see

384

00:16:18,550 --> 00:16:06,720

you soon

385

00:16:22,470 --> 00:16:20,710

endeavor this is houston acr that

386

00:16:24,550 --> 00:16:22,480

concludes the event

387

00:16:26,629 --> 00:16:24,560

thank you mesa verde elementary school

388

00:16:28,790 --> 00:16:26,639

endeavor we are now resuming operational

389

00:16:30,550 --> 00:16:28,800

audio communications thanks for taking