

HERA CREW ANSWER YOUR QUESTIONS!

Campaign 6 | Mission 4



1
00:00:02,820 --> 00:00:09,850
foreign

2
00:00:16,369 --> 00:00:13,310
and this is Katie we're at NASA Johnson

3
00:00:19,130 --> 00:00:16,379
Space Center inside Hera the human

4
00:00:22,250 --> 00:00:19,140
exploration research analog

5
00:00:25,250 --> 00:00:22,260
we're on campaign six Mission four

6
00:00:28,790 --> 00:00:25,260
our mission is to simulate a trip to the

7
00:00:30,950 --> 00:00:28,800
Mars Moon Phobos as we travel we're

8
00:00:34,430 --> 00:00:30,960
helping scientists learn more about

9
00:00:37,490 --> 00:00:34,440
isolation confinement and remote

10
00:00:40,330 --> 00:00:37,500
conditions that could influence how

11
00:00:43,670 --> 00:00:40,340
astronauts live and work in deep space

12
00:00:47,389 --> 00:00:43,680
all without even leaving Earth we're

13
00:00:52,010 --> 00:00:50,090

hi I'm Ria Ferris and I'm a fourth

14

00:00:53,930 --> 00:00:52,020
grader at Cascadia Elementary School

15

00:00:56,029 --> 00:00:53,940
Seattle Washington

16

00:00:58,490 --> 00:00:56,039
I was wondering

17

00:01:00,770 --> 00:00:58,500
what's it like on the habitat

18

00:01:04,609 --> 00:01:00,780
could you give me a little tour I'm

19

00:01:08,630 --> 00:01:04,619
really interested in how you eat sleep

20

00:01:11,450 --> 00:01:08,640
and work in such a small space thank you

21

00:01:15,050 --> 00:01:11,460
that's a great question Ria

22

00:01:16,850 --> 00:01:15,060
and it is a challenge to live work and

23

00:01:19,670 --> 00:01:16,860
eat in such a small place with four

24

00:01:22,370 --> 00:01:19,680
people when you first enter here through

25

00:01:24,770 --> 00:01:22,380
the airlock you're gonna see our

26

00:01:26,929 --> 00:01:24,780

scientific workspace this is where we do

27

00:01:30,170 --> 00:01:26,939

the majority of our tasks during the day

28

00:01:33,530 --> 00:01:30,180

it's where the four of us work

29

00:01:34,910 --> 00:01:33,540

um and do various maintenance repair and

30

00:01:37,310 --> 00:01:34,920

science tasks

31

00:01:39,950 --> 00:01:37,320

in addition we have what is known as our

32

00:01:42,469 --> 00:01:39,960

hygiene module this is where

33

00:01:44,030 --> 00:01:42,479

um we might use the bathroom go and take

34

00:01:46,130 --> 00:01:44,040

a shower

35

00:01:48,109 --> 00:01:46,140

um or just brush our teeth

36

00:01:50,389 --> 00:01:48,119

it's awesome we'll do our laundry you

37

00:01:51,710 --> 00:01:50,399

don't have a laundry machine here

38

00:01:54,530 --> 00:01:51,720

um so we have to wash all of our clothes

39

00:01:57,469 --> 00:01:54,540

by hands to keep everything clean

40

00:02:00,469 --> 00:01:57,479

if we go up to the second story of our

41

00:02:04,370 --> 00:02:00,479

habitat which we can use this lovely

42

00:02:08,089 --> 00:02:04,380

lift so to achieve you'll see the area

43

00:02:11,150 --> 00:02:08,099

where we can hang out eat in our Galley

44

00:02:13,850 --> 00:02:11,160

and rehydrate some food and where we'll

45

00:02:16,970 --> 00:02:13,860

exercise we have a bike that we're all

46

00:02:20,270 --> 00:02:16,980

very fond of and enjoy using

47

00:02:22,369 --> 00:02:20,280

um as well as a couple of points and

48

00:02:25,190 --> 00:02:22,379

some mats where we might do some

49

00:02:29,449 --> 00:02:25,200

strength and resistance training or

50

00:02:35,330 --> 00:02:32,869

then on our third level you'll see our

51
00:02:37,369 --> 00:02:35,340
crew quarters this is where each of us

52
00:02:39,229 --> 00:02:37,379
has a bump to sleep you'll note that

53
00:02:41,270 --> 00:02:39,239
it's pretty sparse and we still won't

54
00:02:43,190 --> 00:02:41,280
get a ton of privacy

55
00:02:44,809 --> 00:02:43,200
um we have some mesh Nets but we can all

56
00:02:47,630 --> 00:02:44,819
see each other and it's much like you

57
00:02:49,670 --> 00:02:47,640
might go if you went to a summer camp or

58
00:02:51,770 --> 00:02:49,680
have a bunk bed in your room

59
00:02:54,770 --> 00:02:51,780
um we're all still very much in the same

60
00:02:57,229 --> 00:02:54,780
space sleeping together but that is a

61
00:02:59,630 --> 00:02:57,239
space that is all ours everybody can

62
00:03:02,930 --> 00:02:59,640
imagine when you're home and the average

63
00:03:05,210 --> 00:03:02,940

size of an American household is 2 000

64

00:03:08,930 --> 00:03:05,220

square foot and that's a big space

65

00:03:11,809 --> 00:03:08,940

compared to that we have 640 feet so

66

00:03:14,809 --> 00:03:11,819

square feet and that's quite a

67

00:03:17,930 --> 00:03:14,819

difference but we make it work we are

68

00:03:21,710 --> 00:03:17,940

scheduling our workouts and the hygiene

69

00:03:24,410 --> 00:03:21,720

after that well nicely staggered so we

70

00:03:27,110 --> 00:03:24,420

can all have our own space and our own

71

00:03:29,690 --> 00:03:27,120

time in the hygiene module and shower

72

00:03:32,330 --> 00:03:29,700

our shower teeth have some privacy while

73

00:03:34,490 --> 00:03:32,340

we do all that and once one person is

74

00:03:38,449 --> 00:03:34,500

out the other person is ready to go in

75

00:03:40,729 --> 00:03:38,459

and we keep that pretty sacred where we

76

00:03:43,369 --> 00:03:40,739

love our time in our hygiene module and

77

00:03:47,030 --> 00:03:43,379

get a nice warm shower don't we yeah for

78

00:03:49,130 --> 00:03:47,040

sure it's been really nice to eat

79

00:03:51,289 --> 00:03:49,140

together as well

80

00:03:53,630 --> 00:03:51,299

you know it's such a small space we're

81

00:03:55,309 --> 00:03:53,640

all able to come together maybe from the

82

00:03:58,250 --> 00:03:55,319

several floors that we have in our

83

00:04:01,369 --> 00:03:58,260

habitat and have a nice meal together

84

00:04:03,589 --> 00:04:01,379

um but lunch and breakfast we each have

85

00:04:05,690 --> 00:04:03,599

you know a couple of minutes maybe 45

86

00:04:07,610 --> 00:04:05,700

minutes maybe half an hour to come

87

00:04:08,869 --> 00:04:07,620

together and eat and just talk about how

88

00:04:11,210 --> 00:04:08,879

our day is going

89

00:04:13,309 --> 00:04:11,220

um and really reconnect as a team and

90

00:04:16,370 --> 00:04:13,319

we're growing together like that really

91

00:04:20,810 --> 00:04:16,380

nicely and it's it feels good

92

00:04:23,510 --> 00:04:20,820

hi my name is I'm in 10th grade at osdv

93

00:04:26,030 --> 00:04:23,520

Public School in India I was wondering

94

00:04:28,550 --> 00:04:26,040

what happens when something inside era

95

00:04:30,830 --> 00:04:28,560

breaks while you're on your mission I

96

00:04:33,890 --> 00:04:30,840

will prepared for that what happens if

97

00:04:36,890 --> 00:04:33,900

power or water or any other system feels

98

00:04:39,249 --> 00:04:36,900

that is needed for your survival or for

99

00:04:42,710 --> 00:04:39,259

the success of your mission

100

00:04:45,469 --> 00:04:42,720

that is an excellent question

101
00:04:48,290 --> 00:04:45,479
throughout era our ability to be

102
00:04:51,170 --> 00:04:48,300
self-sufficient is put to the test that

103
00:04:52,850 --> 00:04:51,180
is one of the research topics and as

104
00:04:55,189 --> 00:04:52,860
researchers want to know when we come

105
00:04:58,010 --> 00:04:55,199
together they also want to know how we

106
00:04:59,810 --> 00:04:58,020
troubleshoot and so there are several

107
00:05:00,590 --> 00:04:59,820
different drills that we're going

108
00:05:02,870 --> 00:05:00,600
through

109
00:05:06,170 --> 00:05:02,880
there are procedures and protocols for

110
00:05:09,170 --> 00:05:06,180
all of that and we are following those

111
00:05:11,450 --> 00:05:09,180
to the point as you never know what

112
00:05:13,430 --> 00:05:11,460
would happen in space which we're

113
00:05:15,590 --> 00:05:13,440

simulating if you don't follow protocol

114

00:05:19,310 --> 00:05:15,600

so it is very important to follow the

115

00:05:22,070 --> 00:05:19,320

procedures that we were given and

116

00:05:24,830 --> 00:05:22,080

another point on that topic is if there

117

00:05:28,610 --> 00:05:24,840

is a real emergency we're consistently

118

00:05:32,270 --> 00:05:28,620

in contact with our mission control and

119

00:05:36,050 --> 00:05:32,280

if there is something that is putting

120

00:05:38,270 --> 00:05:36,060

the experiment error into danger like

121

00:05:41,150 --> 00:05:38,280

hurricane since we are based in Houston

122

00:05:43,730 --> 00:05:41,160

which can have hurricanes they will get

123

00:05:45,770 --> 00:05:43,740

us out in time and they would break up

124

00:05:48,469 --> 00:05:45,780

the experiment to keep everybody safe

125

00:05:49,610 --> 00:05:48,479

based on NASA procedures and um

126

00:05:51,950 --> 00:05:49,620

guidelines

127

00:05:55,909 --> 00:05:51,960

so we are not worried about the outside

128

00:05:58,249 --> 00:05:55,919

so we have an amazing team looking over

129

00:06:00,830 --> 00:05:58,259

us on the outside and on the inside

130

00:06:03,290 --> 00:06:00,840

we're going with the drills and we're

131

00:06:05,629 --> 00:06:03,300

practicing that and it is working out

132

00:06:07,909 --> 00:06:05,639

well right Katie yeah it's working out

133

00:06:11,150 --> 00:06:07,919

great and in addition to all of our

134

00:06:12,770 --> 00:06:11,160

amazing teachers we also had a good deal

135

00:06:15,050 --> 00:06:12,780

of training before coming into the

136

00:06:17,029 --> 00:06:15,060

habitat to make sure that we were well

137

00:06:18,710 --> 00:06:17,039

prepared for any emergencies why we

138

00:06:22,550 --> 00:06:18,720

might have either with the habitat

139

00:06:24,710 --> 00:06:22,560

itself or medically so we're very well

140

00:06:26,870 --> 00:06:24,720

prepared for anything that might come

141

00:06:30,350 --> 00:06:26,880

our way

142

00:06:34,730 --> 00:06:30,360

my name is Marion and my name is Devin

143

00:06:37,550 --> 00:06:34,740

and we're in Scout Pack 2019 Texas

144

00:06:40,010 --> 00:06:37,560

my question is what kind of food do you

145

00:06:41,390 --> 00:06:40,020

eat but how do you know how much food to

146

00:06:43,129 --> 00:06:41,400

bring

147

00:06:45,710 --> 00:06:43,139

I'm really glad you asked that question

148

00:06:48,770 --> 00:06:45,720

Marion and Devin

149

00:06:51,950 --> 00:06:48,780

um you know we have a lot of the food

150

00:06:54,770 --> 00:06:51,960

available for us for 45 whole days and

151

00:06:56,150 --> 00:06:54,780

none of that's fresh so

152

00:06:57,890 --> 00:06:56,160

um but some of it that we are eating

153

00:07:00,830 --> 00:06:57,900

every day might be similar to the food

154

00:07:04,090 --> 00:07:00,840

that you eat when you go camping

155

00:07:07,969 --> 00:07:04,100

um we have nuts we have

156

00:07:10,730 --> 00:07:07,979

canned fruits we might have a couple of

157

00:07:12,650 --> 00:07:10,740

tortillas which are a fan favorite I

158

00:07:14,930 --> 00:07:12,660

think most of the crew is a big fan and

159

00:07:16,670 --> 00:07:14,940

then we have dehydrated Foods we can get

160

00:07:18,290 --> 00:07:16,680

our proteins our fruits and our

161

00:07:21,730 --> 00:07:18,300

vegetables

162

00:07:26,089 --> 00:07:21,740

um all of our food was specifically

163

00:07:28,610 --> 00:07:26,099

signed for US based on our weight how

164

00:07:32,029 --> 00:07:28,620

much activity we're doing and how many

165

00:07:33,589 --> 00:07:32,039

um calories grams of protein grams of

166

00:07:37,010 --> 00:07:33,599

carbohydrates and all of that that we

167

00:07:40,270 --> 00:07:37,020

might need so the nutritionists at Nasa

168

00:07:44,390 --> 00:07:40,280

did a really good job designing healthy

169

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

nutrient-filled meals to allow us to

170

00:07:48,650 --> 00:07:46,560

successfully complete our mission and we

171

00:07:50,689 --> 00:07:48,660

don't have any issues there the food's

172

00:07:53,150 --> 00:07:50,699

been pretty good I think everyone has

173

00:07:56,150 --> 00:07:53,160

some fan favorites

174

00:07:58,670 --> 00:07:56,160

my personal favorite is probably the

175

00:08:00,830 --> 00:07:58,680

pasta primavera it's really tasty okay

176

00:08:03,710 --> 00:08:00,840

what do you miss that you can get in

177

00:08:04,370 --> 00:08:03,720

here I definitely miss eggs

178

00:08:07,129 --> 00:08:04,380

um

179

00:08:12,589 --> 00:08:07,139

yeah I think we as a crew are pretty

180

00:08:16,129 --> 00:08:12,599

excited to have a nice omelet or maybe a

181

00:08:19,850 --> 00:08:16,139

over easy egg when we get out so I miss

182

00:08:22,249 --> 00:08:19,860

Tomatoes The Fresh smell and the

183

00:08:25,430 --> 00:08:22,259

crunch or the crunchiness and the

184

00:08:28,249 --> 00:08:25,440

softness I can't wait to have a fresh

185

00:08:30,950 --> 00:08:28,259

tomato when I get out

186

00:08:34,790 --> 00:08:30,960

hi my name is kirana a sixth grader at

187

00:08:37,430 --> 00:08:34,800

BHS bring Texas I was curious how do you

188

00:08:40,550 --> 00:08:37,440

have your privacy in such a small space

189

00:08:44,449 --> 00:08:40,560

such as sleeping changing your clothes

190

00:08:47,150 --> 00:08:44,459

using the toilet and showering thank you

191

00:08:49,310 --> 00:08:47,160

kirana that's a great question

192

00:08:52,310 --> 00:08:49,320

making sure that we're working together

193

00:08:55,790 --> 00:08:52,320

as a team while we're still maintaining

194

00:08:57,650 --> 00:08:55,800

personal space is a vital part of long

195

00:09:01,370 --> 00:08:57,660

duration space flight

196

00:09:04,009 --> 00:09:01,380

and it is hard sometimes to have no

197

00:09:06,290 --> 00:09:04,019

privacy but with the crew that's already

198

00:09:09,650 --> 00:09:06,300

grown together it is quite all right

199

00:09:12,470 --> 00:09:09,660

when you change that's kind of a hard

200

00:09:15,350 --> 00:09:12,480

thing to do without all the Privacy that

201
00:09:18,290 --> 00:09:15,360
that we don't have body we make it work

202
00:09:20,870 --> 00:09:18,300
because it's easy enough to gather you

203
00:09:23,630 --> 00:09:20,880
things and go down to the bathroom and

204
00:09:26,329 --> 00:09:23,640
close the garden and change and then you

205
00:09:28,850 --> 00:09:26,339
come out nice and fresh and happy and

206
00:09:31,730 --> 00:09:28,860
ready to interact with your crew again

207
00:09:33,710 --> 00:09:31,740
when we take a shower you have the

208
00:09:36,290 --> 00:09:33,720
hygiene module to yourself

209
00:09:39,050 --> 00:09:36,300
you can close the curtain you can get

210
00:09:41,449 --> 00:09:39,060
undressed you go into the shower you

211
00:09:43,730 --> 00:09:41,459
enjoy your nice warm hot shower that you

212
00:09:46,790 --> 00:09:43,740
get once a day and you can wash your

213
00:09:48,590 --> 00:09:46,800

hair and do your hygiene and when you

214

00:09:52,009 --> 00:09:48,600

come out you can close the curtain

215

00:09:54,230 --> 00:09:52,019

behind you again and apply your lotion

216

00:09:56,630 --> 00:09:54,240

and do your regular things that you do

217

00:09:58,130 --> 00:09:56,640

during your hygiene get dressed and when

218

00:10:01,250 --> 00:09:58,140

you're ready you can come out from

219

00:10:04,190 --> 00:10:01,260

behind the curtain and that is a really

220

00:10:06,350 --> 00:10:04,200

nice privacy and evenings we have our

221

00:10:08,210 --> 00:10:06,360

own bunk bed we don't have to sleep in

222

00:10:10,430 --> 00:10:08,220

the same bunk bed all together so that's

223

00:10:13,370 --> 00:10:10,440

a nice little space that we also have to

224

00:10:15,410 --> 00:10:13,380

ourselves and everybody has a little

225

00:10:18,290 --> 00:10:15,420

picture or two of their family up there

226

00:10:20,990 --> 00:10:18,300

so just before the lights go out that's

227

00:10:25,670 --> 00:10:21,000

something that you can look at and pull

228

00:10:27,590 --> 00:10:25,680

some energy from nice too hello my name

229

00:10:31,670 --> 00:10:27,600

is Charles and I go in the sixth grade

230

00:10:34,550 --> 00:10:31,680

at tal Crogan School in Stockholm Sweden

231

00:10:37,550 --> 00:10:34,560

I am wondering what do you miss most

232

00:10:39,829 --> 00:10:37,560

about the life outside your habitat like

233

00:10:40,970 --> 00:10:39,839

how does it feel to not be able to touch

234

00:10:44,870 --> 00:10:40,980

grass

235

00:10:46,730 --> 00:10:44,880

a refresher or see the Sun for 45 days

236

00:10:50,630 --> 00:10:46,740

thanks

237

00:10:52,550 --> 00:10:50,640

missing home is definitely a

238

00:10:55,069 --> 00:10:52,560

consideration for long-term space fight

239

00:10:56,810 --> 00:10:55,079

and we're really glad that you asked I

240

00:11:00,230 --> 00:10:56,820

think the thing that I certainly miss

241

00:11:02,210 --> 00:11:00,240

the most is my family and I think that's

242

00:11:04,610 --> 00:11:02,220

probably the same for most of our crew

243

00:11:06,170 --> 00:11:04,620

members you know we all really miss can

244

00:11:07,910 --> 00:11:06,180

you almost just pick up the phone and

245

00:11:09,769 --> 00:11:07,920

talk to our family or see them at the

246

00:11:13,009 --> 00:11:09,779

end of a work day and that's really been

247

00:11:15,170 --> 00:11:13,019

an adjustment in addition to that I

248

00:11:17,930 --> 00:11:15,180

personally really miss going outside and

249

00:11:20,210 --> 00:11:17,940

running and the Sunshine

250

00:11:23,269 --> 00:11:20,220

um kind of smelling the grass as I move

251

00:11:25,490 --> 00:11:23,279

along but I have been really grateful

252

00:11:27,949 --> 00:11:25,500

here and still get some exercise in and

253

00:11:29,810 --> 00:11:27,959

to have pictures of my family and to get

254

00:11:31,910 --> 00:11:29,820

to talk to them for an allotted amount

255

00:11:33,829 --> 00:11:31,920

of time each week and they're really

256

00:11:35,569 --> 00:11:33,839

supportive and understanding

257

00:11:38,150 --> 00:11:35,579

um that this research is very important

258

00:11:40,370 --> 00:11:38,160

so that's been a good motivator for

259

00:11:42,290 --> 00:11:40,380

keeping Spirits high and knowing that in

260

00:11:44,090 --> 00:11:42,300

45 days you know the sun will still be

261

00:11:45,829 --> 00:11:44,100

there in solar families and we're really

262

00:11:47,630 --> 00:11:45,839

excited to get back to both

263

00:11:49,130 --> 00:11:47,640

Sandra do you have anything that you

264

00:11:50,990 --> 00:11:49,140

missed the most and what are some of

265

00:11:56,090 --> 00:11:51,000

your

266

00:11:58,009 --> 00:11:56,100

coping with uh the isolation and the

267

00:12:00,829 --> 00:11:58,019

things that you do Miss that's a good

268

00:12:02,030 --> 00:12:00,839

question Katie so for me I missed the

269

00:12:04,310 --> 00:12:02,040

most

270

00:12:06,889 --> 00:12:04,320

theme that you're on

271

00:12:09,889 --> 00:12:06,899

about walking along the lake

272

00:12:12,949 --> 00:12:09,899

see the grass that you smell the the

273

00:12:15,889 --> 00:12:12,959

soil and you see the birds flying over

274

00:12:18,889 --> 00:12:15,899

and the blue sky and there's puffy

275

00:12:22,430 --> 00:12:18,899

clouds drifting over you but you know

276

00:12:25,850 --> 00:12:22,440

it's only 45 days yes it sounds a lot

277

00:12:29,590 --> 00:12:25,860

but if you compare 45 days to a year or

278

00:12:33,590 --> 00:12:29,600

two or three 45 days it's really

279

00:12:35,530 --> 00:12:33,600

and oh if you take it day by day and you

280

00:12:38,210 --> 00:12:35,540

remember that your family outside

281

00:12:41,030 --> 00:12:38,220

supports you and thinks that this is a

282

00:12:43,129 --> 00:12:41,040

very important mission to accomplish and

283

00:12:44,990 --> 00:12:43,139

we feel certainly the same way because

284

00:12:49,129 --> 00:12:45,000

we are here

285

00:12:51,769 --> 00:12:49,139

um it is not that hard to

286

00:12:54,050 --> 00:12:51,779

look forward to it and knowing that it's

287

00:12:56,690 --> 00:12:54,060

happening soon again and to keep the

288

00:12:59,030 --> 00:12:56,700

spirits high and we know Earth is out

289

00:13:01,850 --> 00:12:59,040

there and we'll see it soon again and

290

00:13:03,889 --> 00:13:01,860

the Sunshine will be out and spring is

291

00:13:06,590 --> 00:13:03,899

coming when we come out so that's

292

00:13:08,329 --> 00:13:06,600

something to look forward to hello my

293

00:13:10,190 --> 00:13:08,339

name is Tawana and I'm a 9th grade

294

00:13:11,930 --> 00:13:10,200

student at Lakecrest Independent School

295

00:13:14,030 --> 00:13:11,940

in St John's Canada

296

00:13:15,650 --> 00:13:14,040

my question for you is have you

297

00:13:17,629 --> 00:13:15,660

deliberately made or noticed any

298

00:13:19,550 --> 00:13:17,639

personality changes during a stay on the

299

00:13:21,470 --> 00:13:19,560

mission and will those personality

300

00:13:22,610 --> 00:13:21,480

changes be kept after the mission is

301
00:13:24,530 --> 00:13:22,620
completed

302
00:13:29,870 --> 00:13:24,540
thank you and good luck

303
00:13:32,509 --> 00:13:29,880
oh very insightful question Tawana it's

304
00:13:35,269 --> 00:13:32,519
it's very important question how

305
00:13:37,850 --> 00:13:35,279
different personalities deal and adapt

306
00:13:39,230 --> 00:13:37,860
with working together that's a key part

307
00:13:42,650 --> 00:13:39,240
of Hera

308
00:13:45,530 --> 00:13:42,660
for me the biggest adjustment is that I

309
00:13:48,769 --> 00:13:45,540
am taking it in more deeply that I'm

310
00:13:51,650 --> 00:13:48,779
realizing where I am and that this is a

311
00:13:54,530 --> 00:13:51,660
big deal to be here and to be part of

312
00:13:56,449 --> 00:13:54,540
this hero Mission and to be part of C6

313
00:14:00,769 --> 00:13:56,459

M4

314

00:14:04,310 --> 00:14:00,779

it's an honor to be here and be part of

315

00:14:06,590 --> 00:14:04,320

NASA making progress to deep space

316

00:14:10,009 --> 00:14:06,600

missions and playing My Little part in

317

00:14:11,990 --> 00:14:10,019

it so I'm very happy about that and I

318

00:14:13,090 --> 00:14:12,000

think I will come out of here with a lot

319

00:14:16,850 --> 00:14:13,100

of gratitude

320

00:14:17,870 --> 00:14:16,860

and I will see the world in a different

321

00:14:20,509 --> 00:14:17,880

way

322

00:14:25,490 --> 00:14:20,519

and all the opportunities that present

323

00:14:28,550 --> 00:14:25,500

itself and also I'm in here with a

324

00:14:30,829 --> 00:14:28,560

member of our crew who's Spanish and I

325

00:14:32,569 --> 00:14:30,839

learned what uh bless you means in

326

00:14:35,629 --> 00:14:32,579

Spanish and I will take that out because

327

00:14:37,009 --> 00:14:35,639

salute sounds really cute and that will

328

00:14:39,470 --> 00:14:37,019

be something that I will use for the

329

00:14:42,889 --> 00:14:39,480

rest of my life what about you Katie

330

00:14:44,810 --> 00:14:42,899

yeah has Sandra alluded to this is a

331

00:14:46,910 --> 00:14:44,820

very International crew we have members

332

00:14:48,889 --> 00:14:46,920

from Germany members from Spain members

333

00:14:51,110 --> 00:14:48,899

from the northern us as well as the

334

00:14:52,730 --> 00:14:51,120

southern us and it's been really great

335

00:14:56,509 --> 00:14:52,740

to live and work with such an

336

00:14:57,590 --> 00:14:56,519

international and such a talented team

337

00:15:00,050 --> 00:14:57,600

um I think

338

00:15:03,290 --> 00:15:00,060

you know being flexible with each other

339

00:15:05,269 --> 00:15:03,300

and really communicating clearly and

340

00:15:08,090 --> 00:15:05,279

being open to these different customs

341

00:15:10,009 --> 00:15:08,100

and these different mannerisms is key to

342

00:15:12,290 --> 00:15:10,019

all of us getting along and enjoying

343

00:15:13,730 --> 00:15:12,300

each other's company and I think that

344

00:15:15,050 --> 00:15:13,740

we've been really successful in that

345

00:15:18,650 --> 00:15:15,060

I've been learning a little bit of

346

00:15:20,210 --> 00:15:18,660

German a little bit of Spanish as well

347

00:15:23,569 --> 00:15:20,220

um and it's been a lot of fun I think

348

00:15:28,009 --> 00:15:26,449

hi my name is Laura I'm in grade 8 at

349

00:15:29,870 --> 00:15:28,019

the United Nations International School

350

00:15:32,569 --> 00:15:29,880

Hanoi Vietnam

351

00:15:33,949 --> 00:15:32,579

I was wondering what information is this

352

00:15:36,290 --> 00:15:33,959

Mission providing that you can't already

353

00:15:38,329 --> 00:15:36,300

get from the ISS and to flip that

354

00:15:40,189 --> 00:15:38,339

question around a bit what living

355

00:15:42,470 --> 00:15:40,199

conditions are difficult to simulate

356

00:15:44,509 --> 00:15:42,480

thank you

357

00:15:47,750 --> 00:15:44,519

Laura that's a really important point

358

00:15:49,910 --> 00:15:47,760

about ground analogs here on Earth Hera

359

00:15:51,410 --> 00:15:49,920

and other grand grand analogs like it

360

00:15:52,850 --> 00:15:51,420

are not meant to replace the

361

00:15:55,009 --> 00:15:52,860

international station which has been

362

00:15:57,290 --> 00:15:55,019

providing exceptional information about

363

00:15:59,870 --> 00:15:57,300

how humans live and work in space for

364

00:16:02,629 --> 00:15:59,880

decades we're really meant to supplement

365

00:16:05,389 --> 00:16:02,639

some of these larger questions about

366

00:16:08,269 --> 00:16:05,399

um how behaviors about astronauts and

367

00:16:09,949 --> 00:16:08,279

teams might form and what some of the

368

00:16:12,230 --> 00:16:09,959

effects of isolation and confinement

369

00:16:14,329 --> 00:16:12,240

might be when it kind of pulled back

370

00:16:17,509 --> 00:16:14,339

from some of the other complicating

371

00:16:20,329 --> 00:16:17,519

factors on the ISS are such as the

372

00:16:22,009 --> 00:16:20,339

effects of microgravity or the effects

373

00:16:24,769 --> 00:16:22,019

of bone loss you really have to

374

00:16:27,410 --> 00:16:24,779

understand that para is a much smaller

375

00:16:29,449 --> 00:16:27,420

space than the ISS it's only about 600

376

00:16:31,610 --> 00:16:29,459

square feet whereas the ISS is the much

377

00:16:33,889 --> 00:16:31,620

bigger space for our astronauts to be

378

00:16:35,509 --> 00:16:33,899

working in and before we take that leap

379

00:16:38,150 --> 00:16:35,519

and it's an astronauts into deep space

380

00:16:40,610 --> 00:16:38,160

in such a small and confined area we

381

00:16:42,350 --> 00:16:40,620

need to understand what are some methods

382

00:16:45,350 --> 00:16:42,360

for communicating and what are some

383

00:16:47,810 --> 00:16:45,360

methods for adapting and designing for

384

00:16:50,449 --> 00:16:47,820

these longer duration space missions and

385

00:16:53,389 --> 00:16:50,459

much smaller spaces than the ISS but

386

00:16:55,850 --> 00:16:53,399

with Hera we can really trial many more

387

00:16:58,970 --> 00:16:55,860

experiments and look at methods for

388

00:17:01,310 --> 00:16:58,980

creating a long duration environment or

389

00:17:03,110 --> 00:17:01,320

high autonomy environment here on Earth

390

00:17:04,549 --> 00:17:03,120

and get those results before we decide

391

00:17:07,429 --> 00:17:04,559

to launch something to the international

392

00:17:09,770 --> 00:17:07,439

station for further testing thank you

393

00:17:17,780 --> 00:17:09,780

for all of your amazing questions you