



1
00:00:01,590 --> 00:00:06,000
>> NA1SS, NA1SS, W6SRJ calling.

2
00:00:06,000 --> 00:00:09,850
>> W6SRJ, NA1SS, read
you loud and clear.

3
00:00:09,850 --> 00:00:10,520
>> Terrific.

4
00:00:10,520 --> 00:00:13,100
We'll turn you right over
to the students right now.

5
00:00:13,100 --> 00:00:15,590
So if we could have the
first question, please?

6
00:00:15,590 --> 00:00:18,680
>> Does going into space change
your view of everyday life?

7
00:00:18,680 --> 00:00:19,610
Over.

8
00:00:19,610 --> 00:00:20,490
>> Joe Acaba: That's
a good question.

9
00:00:20,490 --> 00:00:23,900
You know, I've always
appreciated the earth

10
00:00:23,900 --> 00:00:27,780
and everything, but when
you see it from space,

11
00:00:27,780 --> 00:00:30,130
you learn to appreciate

it even more.

12

00:00:30,130 --> 00:00:32,750

And I'm just really privileged
and honored to be up here.

13

00:00:32,750 --> 00:00:33,160

Over.

14

00:00:33,160 --> 00:00:37,130

>> When did you first plan
on becoming an astronaut?

15

00:00:37,130 --> 00:00:38,060

Over.

16

00:00:38,060 --> 00:00:39,690

>> Joe Acaba: Well,
when I was a kid I used

17

00:00:39,690 --> 00:00:42,730

to watch the Apollo
missions on film.

18

00:00:42,730 --> 00:00:44,650

And so that kind of
got me, you know,

19

00:00:44,650 --> 00:00:46,070

thinking I wanted
to be an astronaut.

20

00:00:46,070 --> 00:00:47,810

But never thought
it would happen

21

00:00:47,810 --> 00:00:50,600

until I was a school
teacher and saw

22

00:00:50,600 --> 00:00:52,870

that NASA was looking
for astronauts.

23

00:00:52,870 --> 00:00:53,960

So then I applied.

24

00:00:53,960 --> 00:00:54,410

Over.

25

00:00:54,410 --> 00:00:56,420

>> What was your
greatest challenge

26

00:00:56,420 --> 00:00:57,590

in becoming an astronaut?

27

00:00:57,590 --> 00:00:58,810

Over.

28

00:00:58,810 --> 00:01:00,570

>> Joe Acaba: Well I think
if you ask any of us, the --

29

00:01:00,570 --> 00:01:04,400

the hardest part is
really getting accepted.

30

00:01:04,400 --> 00:01:07,560

I know it's a -- maybe a
weak answer, but, you know,

31

00:01:07,560 --> 00:01:08,930

you can do all the right things.

32

00:01:08,930 --> 00:01:11,900

Of course you need to
have the right education,

33

00:01:11,900 --> 00:01:15,110
and some of the skills that they
want, but it's still just very,

34

00:01:15,110 --> 00:01:17,710
very difficult to get accepted.

35

00:01:17,710 --> 00:01:21,070
So really getting through the
application process is probably

36

00:01:21,070 --> 00:01:21,780
the most difficult.

37

00:01:21,780 --> 00:01:22,470
Over.

38

00:01:22,470 --> 00:01:24,500
>> How emotionally

39

00:01:24,500 --> 00:01:26,680
and physically intensive
was your training?

40

00:01:26,680 --> 00:01:27,880
Over.

41

00:01:27,880 --> 00:01:30,220
>> Joe Acaba: It -- I
think it's both emotionally

42

00:01:30,220 --> 00:01:33,940
and physically intensive for --

43

00:01:33,940 --> 00:01:36,100
you know, we spend
18 months just

44

00:01:36,100 --> 00:01:38,690
to become astronaut
candidates, and be ready

45

00:01:38,690 --> 00:01:42,000
for a flight assignment, and
then I was training for 2

46

00:01:42,000 --> 00:01:44,190
and a half years
for this flight.

47

00:01:44,190 --> 00:01:44,930
So it's tiring.

48

00:01:44,930 --> 00:01:46,510
You're traveling all
around the world,

49

00:01:46,510 --> 00:01:48,940
and you're studying every day.

50

00:01:48,940 --> 00:01:50,950
So it -- it's -- it wears
you out pretty good.

51

00:01:50,950 --> 00:01:51,380
Over.

52

00:01:51,380 --> 00:01:54,290
>> How has being an
astronaut affected your life?

53

00:01:54,290 --> 00:01:55,330
Over.

54

00:01:55,330 --> 00:01:57,340
>> Joe Acaba: Well, the
cool thing is is I'm up here

55

00:01:57,340 --> 00:01:59,000

in space now, so
that's something I --

56

00:01:59,000 --> 00:02:01,300

I wouldn't have had
an opportunity to do

57

00:02:01,300 --> 00:02:03,490

if I hadn't become an astronaut.

58

00:02:03,490 --> 00:02:05,370

But other than that, you know,

59

00:02:05,370 --> 00:02:09,460

I'm just same old Joe living my
life, going to work every day.

60

00:02:09,460 --> 00:02:09,750

Over.

61

00:02:09,750 --> 00:02:13,120

>> Do you think there are
gender personality differences

62

00:02:13,120 --> 00:02:15,830

that might affect astronauts'
decisions on a mission?

63

00:02:15,830 --> 00:02:16,710

Over.

64

00:02:16,710 --> 00:02:18,550

>> Joe Acaba: That's a
very interesting question.

65

00:02:18,550 --> 00:02:21,990

And I, you know, I would
say that there probably is.

66

00:02:21,990 --> 00:02:23,850

And -- but not only gender.

67

00:02:23,850 --> 00:02:27,600

I think if you look at --
maybe racial differences,

68

00:02:27,600 --> 00:02:32,640

ethnic backgrounds, all of that
affects how we make decisions

69

00:02:32,640 --> 00:02:33,260

in life.

70

00:02:33,260 --> 00:02:36,480

And that's why, you know, we
work as a team both up here

71

00:02:36,480 --> 00:02:39,150

on the station and also
with the group on ground

72

00:02:39,150 --> 00:02:40,800

so that we have these
different views

73

00:02:40,800 --> 00:02:42,510

to help us make smart decisions.

74

00:02:42,510 --> 00:02:43,250

Over.

75

00:02:43,250 --> 00:02:46,390

>> Who or what inspired
you to be an astronaut?

76

00:02:46,390 --> 00:02:47,540

Over.

77

00:02:47,540 --> 00:02:50,470

>> Joe Acaba: Well, you know, I
-- I -- I thank my grandparents

78

00:02:50,470 --> 00:02:52,950

and my -- my parents for kind

79

00:02:52,950 --> 00:02:56,560

of sparking the imagination
of coming into space.

80

00:02:56,560 --> 00:02:59,670

But I guess it was those --
the first group of astronauts

81

00:02:59,670 --> 00:03:01,060

that -- that went to the moon.

82

00:03:01,060 --> 00:03:03,570

It was pretty awesome,
and it looked

83

00:03:03,570 --> 00:03:05,590

like something I would
dream to do someday.

84

00:03:05,590 --> 00:03:06,900

Over.

85

00:03:06,900 --> 00:03:08,360

>> What is most personally
rewarding

86

00:03:08,360 --> 00:03:09,640

about you being an astronaut?

87

00:03:09,640 --> 00:03:11,180

Over.

88

00:03:11,180 --> 00:03:13,840

>> Joe Acaba: Wow, it's
all very rewarding.

89

00:03:13,840 --> 00:03:15,970

And being up here
though, I think it's --

90

00:03:15,970 --> 00:03:20,060

it's just being able to
be a small part of a team,

91

00:03:20,060 --> 00:03:22,160

and being able to
take part in some

92

00:03:22,160 --> 00:03:23,870

of the science that's going on.

93

00:03:23,870 --> 00:03:26,620

It's -- it's really rewarding
when you see the results

94

00:03:26,620 --> 00:03:27,950

of the work that you do.

95

00:03:27,950 --> 00:03:28,420

Over.

96

00:03:28,420 --> 00:03:31,680

>> Do you have any input on
planning mission objectives?

97

00:03:31,680 --> 00:03:32,750

Over.

98

00:03:32,750 --> 00:03:33,440

>> Joe Acaba: Well we don't --

99

00:03:33,440 --> 00:03:38,750
we're not super involved in
coming up with the objectives.

100

00:03:38,750 --> 00:03:40,540
But when it comes
time to planning,

101

00:03:40,540 --> 00:03:43,050
they definitely ask our opinion.

102

00:03:43,050 --> 00:03:45,820
Since we're up here, we have
an insight that the people

103

00:03:45,820 --> 00:03:47,970
on the ground might not have.

104

00:03:47,970 --> 00:03:50,440
And again, and I hate
to keep saying it,

105

00:03:50,440 --> 00:03:52,520
but it's really a team effort.

106

00:03:52,520 --> 00:03:55,450
And so they'll kind of let us
know what they think they want

107

00:03:55,450 --> 00:03:57,630
to do, and we'll
give them input,

108

00:03:57,630 --> 00:03:59,900
and they make modifications
as necessary.

109

00:03:59,900 --> 00:04:00,380

Over.

110

00:04:00,380 --> 00:04:03,420

>> How have you dealt with
your toughest challenge

111

00:04:03,420 --> 00:04:05,240

of weightlessness?

112

00:04:05,240 --> 00:04:05,340

Over.

113

00:04:05,340 --> 00:04:07,520

>> Joe Acaba: Yeah, you know,
working in weightlessness is --

114

00:04:07,520 --> 00:04:12,080

it's difficult, and you're, you
know, it's easy to lose things.

115

00:04:12,080 --> 00:04:15,730

And so what I've had to do
is really stay focused all

116

00:04:15,730 --> 00:04:16,600

day long.

117

00:04:16,600 --> 00:04:18,800

As long as I'm working, you
really need to stay focused,

118

00:04:18,800 --> 00:04:20,070

and that's what really
tires you out.

119

00:04:20,070 --> 00:04:21,570

Over.

120

00:04:21,570 --> 00:04:23,510

>> What is the most serious physical problem

121
00:04:23,510 --> 00:04:25,090
that living in space poses?

122
00:04:25,090 --> 00:04:26,150
Over.

123
00:04:26,150 --> 00:04:29,560
>> Joe Acaba: Well I think that the two big ones are, you know,

124
00:04:29,560 --> 00:04:34,080
muscle atrophy and muscles getting weaker, and bone loss.

125
00:04:34,080 --> 00:04:38,910
But again, we're also looking at some -- some issues with vision.

126
00:04:38,910 --> 00:04:41,770
I know my eyesight has changed since I've been here,

127
00:04:41,770 --> 00:04:42,880
but I'm a little bit older.

128
00:04:42,880 --> 00:04:45,770
So you look at the -- the bones, the muscle,

129
00:04:45,770 --> 00:04:48,780
and I think this vision is a -- is going to be -- is --

130
00:04:48,780 --> 00:04:53,430
is an issue, as well as the radiation that we might have

131
00:04:53,430 --> 00:04:54,460
if we're going further.

132
00:04:54,460 --> 00:04:54,830
Over.

133
00:04:54,830 --> 00:04:58,030
>> What is the most
practical scholastic route

134
00:04:58,030 --> 00:04:59,840
to becoming an astronaut?

135
00:04:59,840 --> 00:05:00,970
Over.

136
00:05:00,970 --> 00:05:03,720
>> Joe Acaba: Well I wish I had
a -- an easy answer for you.

137
00:05:03,720 --> 00:05:05,170
You know, we have a --

138
00:05:05,170 --> 00:05:08,200
a wide variety of people
that have become astronauts.

139
00:05:08,200 --> 00:05:10,440
My background's in geology.

140
00:05:10,440 --> 00:05:14,160
You know, we have physicists,
engineers, we have doctors.

141
00:05:14,160 --> 00:05:16,690
So really I would say, you
know, anything of course

142

00:05:16,690 --> 00:05:21,050
in the sciences or mathematics
is required, engineering.

143
00:05:21,050 --> 00:05:23,140
But other than that, just pick
something you really like to do.

144
00:05:23,140 --> 00:05:24,630
Over.

145
00:05:24,630 --> 00:05:25,920
>> What was running
through your mind

146
00:05:25,920 --> 00:05:27,580
when you first launched
into space?

147
00:05:27,580 --> 00:05:28,920
Over.

148
00:05:28,920 --> 00:05:32,120
>> Joe Acaba: I was thinking
what the heck am I doing?

149
00:05:32,120 --> 00:05:34,580
No, it was -- it
was pretty cool.

150
00:05:34,580 --> 00:05:36,130
And, you know, my
first launch was

151
00:05:36,130 --> 00:05:38,370
on a shuttle a couple years ago.

152
00:05:38,370 --> 00:05:39,340
And I remember looking

153

00:05:39,340 --> 00:05:41,390
at my crewmate [inaudible]
sitting next to me,

154

00:05:41,390 --> 00:05:44,130
and we were just
smiling, the thumbs up.

155

00:05:44,130 --> 00:05:47,680
It was just kind of unbelievable
that here I was sitting on a,

156

00:05:47,680 --> 00:05:49,630
you know, shuttle getting
ready to go into space.

157

00:05:49,630 --> 00:05:50,510
Over.

158

00:05:50,510 --> 00:05:51,930
>> When you look at
earth from space,

159

00:05:51,930 --> 00:05:54,090
what do you think or feel about?

160

00:05:54,090 --> 00:05:56,070
>> Joe Acaba: Wow, that's a
-- an interesting question.

161

00:05:56,070 --> 00:06:01,380
It's just -- it's so cool
when you look at the earth

162

00:06:01,380 --> 00:06:03,820
from up here, that, you
know, depending, you know,

163

00:06:03,820 --> 00:06:06,540

sometimes the music's on and
I'm not thinking about anything,

164

00:06:06,540 --> 00:06:09,390

other times I'm thinking
about how fragile it is.

165

00:06:09,390 --> 00:06:11,620

So really it depends
on the mood.

166

00:06:11,620 --> 00:06:13,910

And I bet you, you know, when
you see a beautiful sight

167

00:06:13,910 --> 00:06:16,190

on earth, it's probably
a very similar feeling.

168

00:06:16,190 --> 00:06:16,560

Over.

169

00:06:16,560 --> 00:06:20,110

>> Have unexpected situations
during your mission taught you

170

00:06:20,110 --> 00:06:21,220

new lessons?

171

00:06:21,220 --> 00:06:22,270

Over.

172

00:06:22,270 --> 00:06:24,490

>> Joe Acaba: Well we always
have unexpected situations,

173

00:06:24,490 --> 00:06:27,510

and yeah, they do
teach you lessons.

174

00:06:27,510 --> 00:06:29,450

You know, I've learned
that again,

175

00:06:29,450 --> 00:06:32,640

to be focused is the number
one thing you can do up here.

176

00:06:32,640 --> 00:06:34,960

Because things are
going to happen

177

00:06:34,960 --> 00:06:36,880

that you're not expecting,
and you need to be ready

178

00:06:36,880 --> 00:06:39,080

to handle 'em, and you
also need to be flexible.

179

00:06:39,080 --> 00:06:39,450

Over.

180

00:06:39,450 --> 00:06:41,190

>> How can a girl going

181

00:06:41,190 --> 00:06:44,090

into aerospace avoid some
pitfalls you have had?

182

00:06:44,090 --> 00:06:45,140

Over.

183

00:06:45,140 --> 00:06:47,250

>> Joe Acaba: Well I -- I
think, you know, a girl, a boy,

184

00:06:47,250 --> 00:06:51,060

whoever's going into aerospace,

you know, it's a tough field.

185

00:06:51,060 --> 00:06:54,070

And it -- it does
take a lot of work.

186

00:06:54,070 --> 00:06:56,970

And so I -- again, I
would say, you know,

187

00:06:56,970 --> 00:06:58,950

only do it if you
really love it.

188

00:06:58,950 --> 00:07:01,730

Because, you know, you never
know where you're going to go.

189

00:07:01,730 --> 00:07:05,080

So if you enjoy it and you work
hard, I think you're going to --

190

00:07:05,080 --> 00:07:06,360

you're going to have
smooth sailing.

191

00:07:06,360 --> 00:07:07,440

Over.

192

00:07:07,440 --> 00:07:10,400

>> What examples of advanced
technology have helped you live

193

00:07:10,400 --> 00:07:11,650

and work in space?

194

00:07:11,650 --> 00:07:12,480

Over.

195

00:07:12,480 --> 00:07:14,700
>> Joe Acaba: Well pretty much everything we have up here is --

196
00:07:14,700 --> 00:07:16,920
well some things are old,
but a lot of what we need

197
00:07:16,920 --> 00:07:19,520
to live every day is
the advanced technology.

198
00:07:19,520 --> 00:07:25,390
You know, we recycle all of our
air, so we do a lot, you know,

199
00:07:25,390 --> 00:07:30,170
solar energy, dealing with,
you know, small equipment.

200
00:07:30,170 --> 00:07:32,770
So this place is just full
of advanced technology.

201
00:07:32,770 --> 00:07:33,620
Over.

202
00:07:33,620 --> 00:07:36,240
>> What is the most difficult
part of returning to earth?

203
00:07:36,240 --> 00:07:37,260
Over.

204
00:07:37,260 --> 00:07:39,940
>> Joe Acaba: For me
it's kind of that --

205
00:07:39,940 --> 00:07:42,680
that feeling in your head

of, you know, maybe --

206

00:07:42,680 --> 00:07:43,690

almost like being seasick,

207

00:07:43,690 --> 00:07:46,030

and then getting muscle

-- muscle strength back.

208

00:07:46,030 --> 00:07:47,170

Over.

209

00:07:47,170 --> 00:07:48,080

>> What have you learned

210

00:07:48,080 --> 00:07:50,250

from the Typologia

[phonetic] experiment?

211

00:07:50,250 --> 00:07:51,110

Over.

212

00:07:51,110 --> 00:07:52,660

>> Joe Acaba: You know,

you stumped me on that one.

213

00:07:52,660 --> 00:07:54,610

I didn't know what it was,

214

00:07:54,610 --> 00:07:56,660

and I found out it's

a Russian experiment.

215

00:07:56,660 --> 00:07:59,030

So now I have a homework

assignment to figure out more

216

00:07:59,030 --> 00:08:02,100

about it, and hopefully I can

get you an answer the next time

217

00:08:02,100 --> 00:08:02,450

we talk.

218

00:08:02,450 --> 00:08:02,980

Over.

219

00:08:02,980 --> 00:08:05,380

>> Has Robonaut 2 been helpful?

220

00:08:05,380 --> 00:08:06,560

Over.

221

00:08:06,560 --> 00:08:08,240

>> Joe Acaba: Well right now, Robonaut 2's in the --

222

00:08:08,240 --> 00:08:09,880

kind of the practice phase.

223

00:08:09,880 --> 00:08:12,100

So we haven't done anything practical for it yet,

224

00:08:12,100 --> 00:08:14,780

but I think we're learning a lot from watching him work.

225

00:08:14,780 --> 00:08:14,990

Over.

226

00:08:14,990 --> 00:08:18,510

>> Are tortillas useful for long duration flights?

227

00:08:18,510 --> 00:08:19,500

Over.

228

00:08:19,500 --> 00:08:21,440

>> Joe Acaba: Tortillas
are awesome,

229

00:08:21,440 --> 00:08:24,230

and actually I had some
last night with my chicken.

230

00:08:24,230 --> 00:08:26,520

They're just -- they're compact,

231

00:08:26,520 --> 00:08:28,520

they don't make a mess,
and they taste good.

232

00:08:28,520 --> 00:08:28,870

Over.

233

00:08:28,870 --> 00:08:32,350

>> Do you use HAM radio
for personal contacts?

234

00:08:32,350 --> 00:08:33,500

Over.

235

00:08:33,500 --> 00:08:35,360

>> Joe Acaba: You know, I
haven't done too many yet,

236

00:08:35,360 --> 00:08:38,910

because this radio's
on the Russian segment.

237

00:08:38,910 --> 00:08:41,850

But it's something I hope I can
do more as my mission goes on.

238

00:08:41,850 --> 00:08:43,920

It's -- it's a neat

way to communicate

239

00:08:43,920 --> 00:08:45,310
with people all over the world.

240

00:08:45,310 --> 00:08:46,000
Over.

241

00:08:46,000 --> 00:08:48,510
>> Suzie [phonetic], do you
have any standby questions?

242

00:08:48,510 --> 00:08:52,850
>> How have you dealt with
being away from your family?

243

00:08:52,850 --> 00:08:53,940
Over.

244

00:08:53,940 --> 00:08:55,580
>> Joe Acaba: Good question.

245

00:08:55,580 --> 00:08:58,380
You know, it's -- we're
away from our family a lot

246

00:08:58,380 --> 00:08:59,850
when we train, probably half

247

00:08:59,850 --> 00:09:02,270
of my time I was sent
out of the country.

248

00:09:02,270 --> 00:09:03,530
But we're pretty lucky up here.

249

00:09:03,530 --> 00:09:07,280
We do have email, I do have
video conference with my folks

250

00:09:07,280 --> 00:09:10,640
out in California every
week, there's a telephone.

251

00:09:10,640 --> 00:09:13,640
So there's a lot we can do to
stay in touch with our family.

252

00:09:13,640 --> 00:09:14,450
Over.

253

00:09:14,450 --> 00:09:15,550
>> Bill, take it over, please.

254

00:09:15,550 --> 00:09:16,850
>> Yeah, we're starting
to lose it.

255

00:09:16,850 --> 00:09:18,490
So everybody say
thank you very much.

256

00:09:18,490 --> 00:09:22,420
>> Thank you very much.

257

00:09:22,420 --> 00:09:23,910
>> Okay, and we're done.

258

00:09:23,910 --> 00:09:25,470
NA1SS, W6SRJ.

259

00:09:25,470 --> 00:09:27,790
Great contact, thank
you very much.

260

00:09:27,790 --> 00:09:28,960
Good flight.

261

00:09:28,960 --> 00:09:30,150

>> Great contact,
thank you, Bill.

262

00:09:30,150 --> 00:09:32,290

Ladies and gentlemen,
we're [inaudible] share

263

00:09:32,290 --> 00:09:33,720

in a moment of history.

264

00:09:33,720 --> 00:09:35,930

Amateur radio station W6SRJ

265

00:09:35,930 --> 00:09:39,560

in California made a
successful radio contact

266

00:09:39,560 --> 00:09:42,720

with Astronaut Joe
Acaba, KE5BAR,