



1
00:00:01,250 --> 00:00:02,980
>> I am here with
a special guest.

2
00:00:02,980 --> 00:00:05,740
We are here for Digital
Learning Network

3
00:00:05,740 --> 00:00:08,530
with the Galena Park
School District.

4
00:00:08,530 --> 00:00:12,440
And I know we are talking with 6
to 8th grade students who are --

5
00:00:12,440 --> 00:00:14,830
the theme of their
studies are space camps,

6
00:00:14,830 --> 00:00:17,570
so I'm here with a guest
who goes to space camp.

7
00:00:17,570 --> 00:00:20,070
Astronaut Scott Kelly has
been to space three times.

8
00:00:20,070 --> 00:00:23,570
He flew once aboard the
Space Shuttle on STS-103,

9
00:00:23,570 --> 00:00:25,990
then he flew a second
time as a Commander

10
00:00:25,990 --> 00:00:28,030
of the Space Shuttle
during STS-118,

11
00:00:28,030 --> 00:00:31,160
and most recently he flew aboard
the International Space Station

12
00:00:31,160 --> 00:00:33,940
as the Commander
of expedition 26.

13
00:00:33,940 --> 00:00:38,410
And he was there for 159 days.

14
00:00:38,410 --> 00:00:40,260
Welcome, Scott, thank
you for coming.

15
00:00:40,260 --> 00:00:42,650
>> Scott Kelly: Oh
it's great to be here.

16
00:00:42,650 --> 00:00:44,400
>> Alright, and we're
ready to go ahead and go

17
00:00:44,400 --> 00:00:46,290
with your questions, so kids?

18
00:00:46,290 --> 00:00:47,500
>> Well here we have Jacob.

19
00:00:47,500 --> 00:00:48,820
Jacob, go ahead.

20
00:00:48,820 --> 00:00:50,250
>> What would happen
if [inaudible]

21
00:00:50,250 --> 00:00:54,910
or the Space Shuttle had
interior failure or a problem,

22

00:00:54,910 --> 00:00:59,390
and if you all weren't
docked at the Space Station?

23

00:00:59,390 --> 00:01:01,480
>> Scott Kelly: For the
-- the Space Shuttle,

24

00:01:01,480 --> 00:01:04,030
the Space Shuttle has
various ways of --

25

00:01:04,030 --> 00:01:06,190
of compensating if
an engine fails.

26

00:01:06,190 --> 00:01:10,320
If it was to fail on the
launch pad after liftoff --

27

00:01:10,320 --> 00:01:11,870
certainly before liftoff the --

28

00:01:11,870 --> 00:01:14,560
the shuttle wouldn't
actually lift off the pad.

29

00:01:14,560 --> 00:01:18,630
But if it was after liftoff, in
the first part of the ascent,

30

00:01:18,630 --> 00:01:22,160
you would come back to the
Kennedy Space Center and land.

31

00:01:22,160 --> 00:01:30,010
As you get faster and higher,
your options to abort improve,

32

00:01:30,010 --> 00:01:33,310
to where the next -- the next
option would be potentially

33

00:01:33,310 --> 00:01:36,910
landing in a -- at a
landing site in Africa.

34

00:01:36,910 --> 00:01:40,140
And later on in the 8
and a half minute ascent,

35

00:01:40,140 --> 00:01:43,090
you could actually do what's
called an abort to orbit,

36

00:01:43,090 --> 00:01:46,160
where you might get in a
-- into a lower orbit --

37

00:01:46,160 --> 00:01:48,380
not the one that you
intended to go into,

38

00:01:48,380 --> 00:01:49,880
but something that is safe.

39

00:01:49,880 --> 00:01:55,570
For the Soyuz, again
it depends on where

40

00:01:55,570 --> 00:01:58,280
that engine failure
happens, where in the --

41

00:01:58,280 --> 00:02:01,830
in the launch trajectory
it happens.

42

00:02:01,830 --> 00:02:03,550

In the most severe case,

43

00:02:03,550 --> 00:02:07,200

the Soyuz has an escape system
that'll basically rocket the

44

00:02:07,200 --> 00:02:10,930

capsule away from the
-- the larger rocket,

45

00:02:10,930 --> 00:02:14,600

and allow the crew to
land under the parachute.

46

00:02:14,600 --> 00:02:17,100

Of course, you know, as you get
-- just like the Space Shuttle,

47

00:02:17,100 --> 00:02:20,970

as you get faster and higher,
you have better options.

48

00:02:20,970 --> 00:02:25,300

And in some cases if the engine
fails very late in the --

49

00:02:25,300 --> 00:02:28,670

in the ascent, you don't have
to really do anything at all,

50

00:02:28,670 --> 00:02:32,170

you have enough capability in
the remaining engines to get

51

00:02:32,170 --> 00:02:33,510

to where you need to go.

52

00:02:33,510 --> 00:02:41,040

[Silence]

53

00:02:41,040 --> 00:02:42,970

>> Alrighty then, that's
a wonderful answer.

54

00:02:42,970 --> 00:02:43,780

Thank you, Scott Kelly.

55

00:02:43,780 --> 00:02:48,330

We're going to go ahead
and to the next question.

56

00:02:48,330 --> 00:02:50,770

Galena Park IC, if you can
just make sure you can speak

57

00:02:50,770 --> 00:02:52,460

as loudly and clearly
into the microphone

58

00:02:52,460 --> 00:02:54,650

as you can, we'd appreciate it.

59

00:02:54,650 --> 00:02:58,630

>> Okay. My name is
Daniel, and how is it --

60

00:02:58,630 --> 00:03:02,080

how is it like during
the launches?

61

00:03:02,080 --> 00:03:04,340

Like how'd you feel?

62

00:03:04,340 --> 00:03:05,980

>> Scott Kelly: You
know, it's interesting.

63

00:03:05,980 --> 00:03:10,210

On my -- on my first
flight on the Space Shuttle,

64

00:03:10,210 --> 00:03:13,490

the Space Shuttle on
the Launchpad weighs

65

00:03:13,490 --> 00:03:16,500

about 5 million pounds,
and has about 7

66

00:03:16,500 --> 00:03:18,680

and a half million
pounds of thrust

67

00:03:18,680 --> 00:03:21,110

that launches it into space.

68

00:03:21,110 --> 00:03:24,820

And on the first -- your
first flight into space,

69

00:03:24,820 --> 00:03:27,910

it really gets your attention.

70

00:03:27,910 --> 00:03:31,100

It feels like you feel
every pound of that 7

71

00:03:31,100 --> 00:03:32,710

and a half million
pounds of thrust.

72

00:03:32,710 --> 00:03:36,720

You -- you get the sense
that you're going somewhere,

73

00:03:36,720 --> 00:03:37,890

you're not sure where.

74

00:03:37,890 --> 00:03:39,810

You know you're going there
in a hurry, and you know,

75

00:03:39,810 --> 00:03:41,340

you're not coming
back to Florida.

76

00:03:41,340 --> 00:03:44,430

I mean it just -- it just
leaps off the Launchpad.

77

00:03:44,430 --> 00:03:49,210

The Soyuz is a little
bit different for --

78

00:03:49,210 --> 00:03:50,520

for a number of reasons.

79

00:03:50,520 --> 00:03:52,640

It doesn't have the
same amount of thrust,

80

00:03:52,640 --> 00:03:56,680

although it does have
a higher acceleration,

81

00:03:56,680 --> 00:04:01,450

so you feel higher G-forces
later in the -- in the ascent.

82

00:04:01,450 --> 00:04:04,580

And then the other
difference with the Soyuz is

83

00:04:04,580 --> 00:04:10,390

that when the second and
third stages of the --

84

00:04:10,390 --> 00:04:15,100
the Soyuz light -- when the
engines light, they do it,

85

00:04:15,100 --> 00:04:17,480
you know, after the
previous stage has -- has --

86

00:04:17,480 --> 00:04:21,530
has shut down, so --
at least in the case

87

00:04:21,530 --> 00:04:22,820
of the second and
the third stage.

88

00:04:22,820 --> 00:04:25,890
So you feel like
you're accelerating,

89

00:04:25,890 --> 00:04:29,880
and then you stop
accelerating, and you kind of go

90

00:04:29,880 --> 00:04:33,670
to like a 0 G kind of feeling,
and then the engines kick on,

91

00:04:33,670 --> 00:04:37,440
and it's really like a real
kick in the pants so to speak,

92

00:04:37,440 --> 00:04:39,860
that it starts accelerating
you out again.

93

00:04:39,860 --> 00:04:42,820
So there is some differences.

94

00:04:42,820 --> 00:04:47,130

You know, it's very exciting
time, certainly, and --

95

00:04:47,130 --> 00:04:50,330
and certainly a lot of fun too.

96

00:04:50,330 --> 00:04:51,510
>> Very good question.

97

00:04:51,510 --> 00:04:53,810
And also there's some
significant differences

98

00:04:53,810 --> 00:04:55,980
in the landing of those
two vehicles as well.

99

00:04:55,980 --> 00:04:57,390
You want to quickly --

100

00:04:57,390 --> 00:04:59,860
>> Scott Kelly: Yeah, the -- the
landing of the Soyuz and the --

101

00:04:59,860 --> 00:05:02,520
and the -- and the shuttle
are -- are much different.

102

00:05:02,520 --> 00:05:05,800
The shuttle lands kind
of like an airplane.

103

00:05:05,800 --> 00:05:11,160
It is much more gentle, and
it's because it was designed

104

00:05:11,160 --> 00:05:13,710
to be a reusable
vehicle that, you know,

105

00:05:13,710 --> 00:05:17,910

brought potentially sensitive
scientific experiments,

106

00:05:17,910 --> 00:05:20,910

and other -- and other
sensitive equipment home,

107

00:05:20,910 --> 00:05:23,250

not to mention the vehicle is
somewhat sensitive 'cause we

108

00:05:23,250 --> 00:05:25,030

needed to reuse it.

109

00:05:25,030 --> 00:05:28,180

So the -- the Soyuz
is much different.

110

00:05:28,180 --> 00:05:33,860

The Soyuz enters as a capsule,
it lands under a parachute,

111

00:05:33,860 --> 00:05:38,670

and lands -- and -- and lands
in the -- in the desert.

112

00:05:38,670 --> 00:05:42,640

The shuttle landing is
-- is much more gentle.

113

00:05:42,640 --> 00:05:45,310

It's actually flown
by the Commander.

114

00:05:45,310 --> 00:05:49,390

The Soyuz is generally
speaking all automatic,

115

00:05:49,390 --> 00:05:52,710
and is more like a -- whereas
the shuttle's like an airplane,

116

00:05:52,710 --> 00:05:56,300
the Soyuz is more like going
over Niagara Falls in a barrel.

117

00:05:56,300 --> 00:05:59,240
It's a -- it's a
very, very dynamic --

118

00:05:59,240 --> 00:06:02,930
we call it dynamic
ride, and very exciting.

119

00:06:02,930 --> 00:06:05,510
>> Next question.

120

00:06:05,510 --> 00:06:12,040
[Silence]

121

00:06:12,040 --> 00:06:15,570
>> I wanted to know how long
does it take to get into --

122

00:06:15,570 --> 00:06:19,340
to get out of the
atmosphere and get into space.

123

00:06:19,340 --> 00:06:20,870
>> Scott Kelly: Well,
you know, space is --

124

00:06:20,870 --> 00:06:24,900
is defined as this
like 50-mile barrier.

125

00:06:24,900 --> 00:06:29,270
And it takes several minutes

to get -- get to that altitude,

126

00:06:29,270 --> 00:06:32,720

both in the -- in the Space Shuttle and in the Soyuz.

127

00:06:32,720 --> 00:06:34,610

Doesn't actually feel like you're in space

128

00:06:34,610 --> 00:06:38,980

until the engines of -- of those vehicles cut off,

129

00:06:38,980 --> 00:06:43,660

and that's when you go from this acceleration getting you

130

00:06:43,660 --> 00:06:48,090

to a very fast speed to where you actually feel zero gravity.

131

00:06:48,090 --> 00:06:52,010

And that takes on the shuttle 8 and a half minutes,

132

00:06:52,010 --> 00:06:55,820

on the Soyuz a little over 9 minutes before it's --

133

00:06:55,820 --> 00:06:58,720

before you're, you know, not only are you in space,

134

00:06:58,720 --> 00:07:00,200

but you feel like you're in space

135

00:07:00,200 --> 00:07:02,250

because you're then floating.

136

00:07:05,270 --> 00:07:06,470

>> Okay, we're looking at now --

137

00:07:06,470 --> 00:07:08,970

that was just a video
clip of a Soyuz launch.

138

00:07:08,970 --> 00:07:10,510

Next question.

139

00:07:10,510 --> 00:07:18,060

[Silence]

140

00:07:18,060 --> 00:07:21,320

>> Do you ever get used to the
feeling of going into space

141

00:07:21,320 --> 00:07:25,200

and landing from coming back?

142

00:07:25,200 --> 00:07:28,200

>> Scott Kelly: You know,
having flown three times,

143

00:07:28,200 --> 00:07:32,630

I would say I haven't
gotten used to it.

144

00:07:32,630 --> 00:07:34,540

You know, there are
aspects of it that --

145

00:07:34,540 --> 00:07:37,220

that get more comfortable.

146

00:07:37,220 --> 00:07:39,780

You know, I flew twice
on the Soyuz and one --

147

00:07:39,780 --> 00:07:42,750
or twice on the -- the shuttle
and once on the Soyuz, so,

148

00:07:42,750 --> 00:07:44,950
you know, it's only -- only one

149

00:07:44,950 --> 00:07:46,990
of those vehicles
did I fly on twice.

150

00:07:46,990 --> 00:07:50,790
But I think it would
take me many,

151

00:07:50,790 --> 00:07:53,790
many flights before I got
completely comfortable

152

00:07:53,790 --> 00:07:56,410
with either the launch or
the landing of either the --

153

00:07:56,410 --> 00:07:58,410
the shuttle or the -- the Soyuz.

154

00:07:58,410 --> 00:08:00,030
>> So I don't think he's done.

155

00:08:00,030 --> 00:08:02,580
>> Scott Kelly: I'd like
to have the opportunity

156

00:08:02,580 --> 00:08:03,930
to get very comfortable.

157

00:08:03,930 --> 00:08:05,510
>> Next question.

158

00:08:05,510 --> 00:08:11,530

[Silence]

159

00:08:11,530 --> 00:08:14,930

>> What do you like
about being [inaudible]?

160

00:08:14,930 --> 00:08:17,340

>> Scott Kelly: Can you repeat
the question one more time?

161

00:08:17,340 --> 00:08:19,690

>> What do you like being --

162

00:08:19,690 --> 00:08:23,160

what do you like about
being an astronaut?

163

00:08:23,160 --> 00:08:25,500

>> Scott Kelly: What do I
like about being an astronaut?

164

00:08:25,500 --> 00:08:28,180

Well certainly, you know,
flying in space is a --

165

00:08:28,180 --> 00:08:31,630

is a great part of the job.

166

00:08:31,630 --> 00:08:37,660

But to me, the best part
about being an astronaut is

167

00:08:37,660 --> 00:08:41,450

that flying in space is
very, very challenging.

168

00:08:41,450 --> 00:08:47,950

It's -- it's very difficult, and
there's a lot of satisfaction

169
00:08:47,950 --> 00:08:51,540
to be had by being a part
of something that is very,

170
00:08:51,540 --> 00:08:54,390
very challenging, very
hard, working hard at it,

171
00:08:54,390 --> 00:08:59,190
working with a -- a team, and
then being successful and --

172
00:08:59,190 --> 00:09:00,430
and proud of your success.

173
00:09:00,430 --> 00:09:03,320
So, you know, it's not
the individual, you know,

174
00:09:03,320 --> 00:09:05,550
launching in space or landing,

175
00:09:05,550 --> 00:09:07,350
or looking at the
earth, or floating.

176
00:09:07,350 --> 00:09:09,930
It's -- it's being a part of
something that's much larger

177
00:09:09,930 --> 00:09:13,200
than yourself, something
that you consider important,

178
00:09:13,200 --> 00:09:18,030
something that you work with
a team, and then, you know,

179

00:09:18,030 --> 00:09:19,280
you're proud of your success.

180

00:09:19,280 --> 00:09:21,990
And when I go around the country
and talk about the space program

181

00:09:21,990 --> 00:09:25,380
and -- and talk to kids,
what I say is that same type

182

00:09:25,380 --> 00:09:28,780
of satisfaction and challenge
that, you know, we experience

183

00:09:28,780 --> 00:09:32,130
in the space program,
you can also experience

184

00:09:32,130 --> 00:09:35,980
in your own lives, whether it's
with your schoolwork, you know,

185

00:09:35,980 --> 00:09:39,400
if -- if it's, you know, if you
find something that's difficult

186

00:09:39,400 --> 00:09:41,900
and you work hard at it,
then you can be proud

187

00:09:41,900 --> 00:09:44,320
of your success, and you
can do that, you know,

188

00:09:44,320 --> 00:09:47,010
with your schoolwork, in
sports, and other careers

189

00:09:47,010 --> 00:09:48,840

that you may decide to pursue.

190

00:09:48,840 --> 00:09:50,780

You know, I encourage you

191

00:09:50,780 --> 00:09:53,160

to pursue something that's
challenging, something that's,

192

00:09:53,160 --> 00:09:56,220

you know, not necessarily
easy for you, you know,

193

00:09:56,220 --> 00:10:00,550

challenge yourself with your
schoolwork, with what you decide

194

00:10:00,550 --> 00:10:02,520

to do in your life, and
then be proud of yourselves

195

00:10:02,520 --> 00:10:03,510

when you're successful.

196

00:10:03,510 --> 00:10:13,300

[Silence]

197

00:10:13,300 --> 00:10:15,050

>> Hi, my name is
Marigold [phonetic].

198

00:10:15,050 --> 00:10:18,210

I'd like to know what type
of training do you have to go

199

00:10:18,210 --> 00:10:21,870

through to be an astronaut?

200

00:10:21,870 --> 00:10:24,710

>> Scott Kelly: It's, you
know, to become an astronaut,

201

00:10:24,710 --> 00:10:26,120

NASA looks for people

202

00:10:26,120 --> 00:10:30,110

that certainly have the
appropriate technical background

203

00:10:30,110 --> 00:10:32,330

in science or math
or engineering,

204

00:10:32,330 --> 00:10:35,020

some technical field,
but also, you know,

205

00:10:35,020 --> 00:10:36,710

people that have
proven themselves

206

00:10:36,710 --> 00:10:39,490

in whatever job they're
currently in.

207

00:10:39,490 --> 00:10:44,510

In my case I was a -- a
military test pilot prior

208

00:10:44,510 --> 00:10:47,310

to becoming an astronaut.

209

00:10:47,310 --> 00:10:51,650

The -- the selection
process is -- is pretty --

210

00:10:51,650 --> 00:10:55,220

it's pretty selective
because there's only

211
00:10:55,220 --> 00:10:57,050
so many people here,
and a lot of people

212
00:10:57,050 --> 00:10:58,330
that -- that want the job.

213
00:10:58,330 --> 00:11:00,960
But I wouldn't discourage
anyone from --

214
00:11:00,960 --> 00:11:05,800
from pursuing this as a -- as a
career just because, you know,

215
00:11:05,800 --> 00:11:08,140
there aren't a whole lot
of opportunities right now.

216
00:11:08,140 --> 00:11:10,430
Because obviously, you
know, somebody has to --

217
00:11:10,430 --> 00:11:14,580
has to do it, and, you
know, people that, you know,

218
00:11:14,580 --> 00:11:17,980
are very motivated and work hard
a lot of times have this kind

219
00:11:17,980 --> 00:11:22,680
of opportunity, so I wouldn't be
discouraging to anyone that --

220
00:11:22,680 --> 00:11:25,050
that wanted to do this

just because there's --

221

00:11:25,050 --> 00:11:26,660
there's only a, you know,

222

00:11:26,660 --> 00:11:28,280
limited opportunities
at this point.

223

00:11:28,280 --> 00:11:31,140
You never know what -- what
might be in the future.

224

00:11:31,140 --> 00:11:33,450
Once you become an
astronaut, the -- the --

225

00:11:33,450 --> 00:11:35,970
the training is pretty
extensive.

226

00:11:35,970 --> 00:11:39,400
And, you know, I've
been here for 16 years,

227

00:11:39,400 --> 00:11:41,810
and I still sometimes
say to my --

228

00:11:41,810 --> 00:11:44,960
my daughters that
I have a class.

229

00:11:44,960 --> 00:11:47,990
And my 8-year old looks at
me and she's like, you know,

230

00:11:47,990 --> 00:11:49,150
why do you have a class, dad?

231

00:11:49,150 --> 00:11:52,210

You're old, you shouldn't
be having a class.

232

00:11:52,210 --> 00:11:56,490

But, you know, as an
astronaut you train, you know,

233

00:11:56,490 --> 00:11:58,130

not every day, but all the time,

234

00:11:58,130 --> 00:12:00,990

and some of that training
is academic training,

235

00:12:00,990 --> 00:12:04,470

some of it's studying on
your own, some of it's doing,

236

00:12:04,470 --> 00:12:07,900

you know, robotic operations or
training for launch and landing

237

00:12:07,900 --> 00:12:10,660

in a simulator, or
training in a pool

238

00:12:10,660 --> 00:12:13,060

in a big bulky space
suit for a spacewalk.

239

00:12:13,060 --> 00:12:17,300

So, you know, I -- I
feel like I've been going

240

00:12:17,300 --> 00:12:21,380

to school continuously
since kindergarten, and,

241

00:12:21,380 --> 00:12:23,650
you know, that's over 40 years.

242

00:12:23,650 --> 00:12:27,840
So I guess the message
there is that, you know,

243

00:12:27,840 --> 00:12:30,990
if you want to be successful in
life, and you want to, you know,

244

00:12:30,990 --> 00:12:33,550
have a career that
challenges you, you never --

245

00:12:33,550 --> 00:12:35,460
you never stop learning,
you always need

246

00:12:35,460 --> 00:12:38,140
to consider yourself a
student of something,

247

00:12:38,140 --> 00:12:41,670
and that's the way you, you
know, continue to improve,

248

00:12:41,670 --> 00:12:46,620
and increases your chances
of being successful in life.

249

00:12:46,620 --> 00:12:48,660
>> That's also a very -- a
very good message that you talk

250

00:12:48,660 --> 00:12:51,250
about not to be discouraged
because of the opportunity,

251

00:12:51,250 --> 00:12:54,000

but also be, you know,
look at your background.

252

00:12:54,000 --> 00:13:00,550

I mean you were a son of two
police officers, and, you know,

253

00:13:00,550 --> 00:13:03,660

becoming an astronaut wasn't
necessarily, you know,

254

00:13:03,660 --> 00:13:06,660

something that was right
there laid out in the stars.

255

00:13:06,660 --> 00:13:09,350

I mean you actually
had to work for that.

256

00:13:09,350 --> 00:13:12,060

>> Scott Kelly: Yeah, I came
from a -- a blue collar family.

257

00:13:12,060 --> 00:13:16,940

You know, essentially my brother
and I were the first generations

258

00:13:16,940 --> 00:13:20,450

in our -- in our -- in our
family to go to college.

259

00:13:20,450 --> 00:13:24,240

And, you know, being a, you
know, an officer in the military

260

00:13:24,240 --> 00:13:27,950

and a pilot was not something
that people really did from,

261

00:13:27,950 --> 00:13:30,140

you know, where I was
from at that time.

262

00:13:30,140 --> 00:13:36,640

So it, you know, it was --
it was basically, you know,

263

00:13:36,640 --> 00:13:39,200

my brother and I becoming
astronauts, you know,

264

00:13:39,200 --> 00:13:43,120

we basically had the same
opportunity as many kids

265

00:13:43,120 --> 00:13:47,150

out there, which -- basically
I think what I'm trying

266

00:13:47,150 --> 00:13:51,110

to say is we didn't have any
extra special help to do this

267

00:13:51,110 --> 00:13:54,230

because of, you know, the
background that we came from.

268

00:13:54,230 --> 00:13:54,750

>> Exactly.

269

00:13:54,750 --> 00:13:56,240

So bottom line is
it's up to you.

270

00:13:56,240 --> 00:13:59,210

Good question, and next one.

271

00:13:59,210 --> 00:14:00,510

>> Thank you.

272

00:14:00,510 --> 00:14:06,480

[Silence]

273

00:14:06,480 --> 00:14:08,340

>> Hi, my name is Kennedy.

274

00:14:08,340 --> 00:14:12,370

I'd like to know when you're
in space, are you ever afraid

275

00:14:12,370 --> 00:14:17,910

of what you might
discover there?

276

00:14:17,910 --> 00:14:18,480

>> Scott Kelly: You know, I --

277

00:14:18,480 --> 00:14:20,550

I think people that
are astronauts are --

278

00:14:20,550 --> 00:14:25,660

are explorers in -- at
heart, and they're looking

279

00:14:25,660 --> 00:14:29,810

for discoveries, and, you
know, not really afraid

280

00:14:29,810 --> 00:14:31,320

of what they might find.

281

00:14:31,320 --> 00:14:36,400

You know, as far as like big
surprises, if you're referring

282

00:14:36,400 --> 00:14:38,690

to things that might, you
know, you might have seen

283

00:14:38,690 --> 00:14:41,460
on a science fiction movie,
or something or that --

284

00:14:41,460 --> 00:14:44,830
that kind of stuff that
might scare you, no,

285

00:14:44,830 --> 00:14:47,240
we actually don't really
think about that in space.

286

00:14:47,240 --> 00:14:50,280
Certainly -- certainly there
are some things that worry you

287

00:14:50,280 --> 00:14:51,990
and might be a little bit scary.

288

00:14:51,990 --> 00:14:57,410
Most -- most astronauts are more
scared about making mistakes

289

00:14:57,410 --> 00:15:00,070
than they are about their,
you know, physical well-being

290

00:15:00,070 --> 00:15:01,150
on the -- on the rocket.

291

00:15:01,150 --> 00:15:03,240
You know, most of the --

292

00:15:03,240 --> 00:15:09,500
the times in space that are the
riskiest -- riskiest are the --

293

00:15:09,500 --> 00:15:12,790

are the times where you're most
focused on what you're doing.

294

00:15:12,790 --> 00:15:14,400

So you really don't
have time to be scared.

295

00:15:14,400 --> 00:15:17,270

You're -- you're, you
know, focused on your job,

296

00:15:17,270 --> 00:15:20,330

and completing that,
and not really worrying

297

00:15:20,330 --> 00:15:22,740

about what could
happen if things go bad.

298

00:15:22,740 --> 00:15:25,510

>> Thank you.

299

00:15:25,510 --> 00:15:32,050

[Silence]

300

00:15:32,050 --> 00:15:33,950

>> Who inspired you to become
an astronaut [inaudible]

301

00:15:33,950 --> 00:15:37,540

or were you following
in your brother's path?

302

00:15:37,540 --> 00:15:40,130

>> Scott Kelly: You know,
my brother and I were both

303

00:15:40,130 --> 00:15:44,760

in the same astronaut
class, and although he was

304

00:15:44,760 --> 00:15:47,450
in the navy a year before
me, it was really my idea

305

00:15:47,450 --> 00:15:49,850
to join the navy and be a pilot,

306

00:15:49,850 --> 00:15:52,030
and he kind of stole
that from me.

307

00:15:52,030 --> 00:15:57,310
As far as -- as far as
inspiration, I just thought

308

00:15:57,310 --> 00:16:01,350
that -- I do remember reading
the book The Right Stuff,

309

00:16:01,350 --> 00:16:02,300
it's called.

310

00:16:02,300 --> 00:16:05,910
It's about the early
test pilots in the --

311

00:16:05,910 --> 00:16:10,350
in the jet age when we first
broke the speed of sound,

312

00:16:10,350 --> 00:16:11,890
and about the early astronauts.

313

00:16:11,890 --> 00:16:13,860
And I remember reading
that book,

314

00:16:13,860 --> 00:16:16,380

and while I was reading
it I'm thinking, you know,

315

00:16:16,380 --> 00:16:17,720

I think I can do this.

316

00:16:17,720 --> 00:16:19,750

You know, this seems really
exciting, but, you know,

317

00:16:19,750 --> 00:16:23,680

I didn't see anything in that
book that made those pilots

318

00:16:23,680 --> 00:16:26,230

or those astronauts
really, you know,

319

00:16:26,230 --> 00:16:32,320

stand out above what I thought
I had the capability to achieve.

320

00:16:32,320 --> 00:16:34,740

Maybe I was being naive
at the time, but --

321

00:16:34,740 --> 00:16:38,370

but, you know, I was certainly
a dreamer like a lot of kids,

322

00:16:38,370 --> 00:16:40,450

and I thought hey, I
could probably do this.

323

00:16:40,450 --> 00:16:44,170

And I thought it would be
really fun to be a -- a --

324

00:16:44,170 --> 00:16:46,590

a pilot of a high

performance jet airplane.

325

00:16:46,590 --> 00:16:48,770

And I thought to
myself, you know,

326

00:16:48,770 --> 00:16:51,030

what would be the most
challenging type of flying?

327

00:16:51,030 --> 00:16:53,120

And I, you know, figured
it would be landing

328

00:16:53,120 --> 00:16:57,240

on an aircraft carrier,
especially at night.

329

00:16:57,240 --> 00:17:03,530

So I decided to be a
navy -- navy pilot.

330

00:17:03,530 --> 00:17:05,510

>> Thanks.

331

00:17:05,510 --> 00:17:10,040

[Silence]

332

00:17:10,040 --> 00:17:12,480

>> Scott Kelly: Next question?

333

00:17:12,480 --> 00:17:14,280

>> Hi, my name is Arianna.

334

00:17:14,280 --> 00:17:18,990

I would like to know how you
felt when you were landing.

335

00:17:20,090 --> 00:17:24,350

>> Scott Kelly: How I
felt when I was where?

336

00:17:24,350 --> 00:17:25,820

>> Landing [inaudible]?

337

00:17:27,470 --> 00:17:29,730

>> Scott Kelly: On my
last landing in the --

338

00:17:29,730 --> 00:17:34,240

in the Space Shuttle I
was actually flying it.

339

00:17:34,240 --> 00:17:36,140

So like I said before,
I was really focused

340

00:17:36,140 --> 00:17:38,090

on -- on doing my job.

341

00:17:38,090 --> 00:17:41,350

You feel a little bit dizzy.

342

00:17:41,350 --> 00:17:44,420

You -- you haven't been exposed
to gravity for in that --

343

00:17:44,420 --> 00:17:49,960

in that case 13 days, so your
what's called the vestibular

344

00:17:49,960 --> 00:17:55,590

system -- your balance system is
not normal, it's not how it --

345

00:17:55,590 --> 00:18:01,230

how it is on earth, because
it uses gravity to --

346

00:18:01,230 --> 00:18:05,500
to, you know, know which way
is up and down, and to --

347

00:18:05,500 --> 00:18:06,630
to stabilize yourself.

348

00:18:06,630 --> 00:18:09,770
So when you're coming back
into gravity, you're dizzy,

349

00:18:09,770 --> 00:18:12,140
and in this case I'm
trying to fly the --

350

00:18:12,140 --> 00:18:15,530
the Space Shuttle so it's
somewhat challenging,

351

00:18:15,530 --> 00:18:18,810
certainly very exciting 'cause
you're at the end of this very,

352

00:18:18,810 --> 00:18:21,570
you know, challenging
and exciting

353

00:18:21,570 --> 00:18:23,260
and -- time in your life.

354

00:18:23,260 --> 00:18:26,400
And the Soyuz though
is different.

355

00:18:26,400 --> 00:18:28,570
It's much more dynamic.

356

00:18:28,570 --> 00:18:31,770
When the drogue chute opens,

it has several parachutes,

357

00:18:31,770 --> 00:18:35,580

one of 'em's called a drogue chute that stabilizes the --

358

00:18:35,580 --> 00:18:38,060

the vehicle, and -- and pulls out the main chute.

359

00:18:38,060 --> 00:18:40,800

And when that opens, it's kind of like a --

360

00:18:40,800 --> 00:18:43,400

the wildest roller coaster you could ever imagine.

361

00:18:43,400 --> 00:18:47,820

It really, you know, the -- the Soyuz really moves around

362

00:18:47,820 --> 00:18:51,000

and feels -- probably feels a lot worse than it really is

363

00:18:51,000 --> 00:18:52,200

because of your -- like I said,

364

00:18:52,200 --> 00:18:55,970

your balance system is somewhat messed up, so it really tumbles.

365

00:18:55,970 --> 00:19:00,170

And for -- it feels like it's, you know, more than a minute.

366

00:19:00,170 --> 00:19:02,800

As you can see on the TV here, they show the drogue chute,

367

00:19:02,800 --> 00:19:06,720
and this the main chute --
the main parachute opening.

368

00:19:06,720 --> 00:19:09,050
Once the main parachute
opens it gets pretty stable,

369

00:19:09,050 --> 00:19:11,720
but then when it hits
the ground, it's like --

370

00:19:11,720 --> 00:19:14,620
again, like kind of
like a car crash.

371

00:19:14,620 --> 00:19:17,380
If you could imagine
like a race car driver

372

00:19:17,380 --> 00:19:20,040
when they actually flip the
car and it's kind of tumbling

373

00:19:20,040 --> 00:19:22,830
through the air down the
track, actually feels a lot

374

00:19:22,830 --> 00:19:26,040
like what I would
imagine that to feel like.

375

00:19:26,040 --> 00:19:26,630
>> Exhilarating.

376

00:19:26,630 --> 00:19:27,810
Do we have any more questions?

377

00:19:27,810 --> 00:19:29,310
>> Thank you.

378
00:19:30,510 --> 00:19:38,210
[Silence]

379
00:19:38,210 --> 00:19:39,350
>> My name is Dean.

380
00:19:39,350 --> 00:19:44,250
And what I want to know
is are astronauts affected

381
00:19:44,250 --> 00:19:48,330
by deep vein thrombosis,
otherwise known as blood clots,

382
00:19:48,330 --> 00:19:53,730
since they aren't using
their muscles too often?

383
00:19:53,730 --> 00:19:55,510
>> Scott Kelly: Yeah,
that -- so the --

384
00:19:55,510 --> 00:19:59,030
the deep vein thrombosis
that I think you --

385
00:19:59,030 --> 00:20:05,650
you hear about people -- excuse
me -- experiencing, you know,

386
00:20:05,650 --> 00:20:07,580
sometimes people on airplanes,

387
00:20:07,580 --> 00:20:10,010
I guess there's anecdotal
information that's sitting

388

00:20:10,010 --> 00:20:15,070

for long periods of time could
cause those type of blood clots.

389

00:20:15,070 --> 00:20:19,130

You know, I don't think there's
any history of us having --

390

00:20:19,130 --> 00:20:20,560

there's certainly
not any history

391

00:20:20,560 --> 00:20:22,910

of us having anything
like that in space.

392

00:20:22,910 --> 00:20:28,790

But in some ways, I -- and I'm
just kind of guessing here,

393

00:20:28,790 --> 00:20:33,310

you might be less susceptible
to that kind of thing in space

394

00:20:33,310 --> 00:20:37,290

because in space the, you know,

395

00:20:37,290 --> 00:20:40,140

you don't have gravity
pushing all the blood

396

00:20:40,140 --> 00:20:43,080

down from your upper body
into your lower body.

397

00:20:43,080 --> 00:20:46,540

And I think that kind of
phenomenon is potentially due

398

00:20:46,540 --> 00:20:49,200
to like if you're sitting a
long time, you have, you know,

399

00:20:49,200 --> 00:20:51,980
and you're not moving around,
potentially the blood in your --

400

00:20:51,980 --> 00:20:56,620
in your lower extremities
are kind of, you know,

401

00:20:56,620 --> 00:21:00,200
little bit more stagnant than
they might otherwise would be.

402

00:21:00,200 --> 00:21:03,440
So in space where
everything floats, your --

403

00:21:03,440 --> 00:21:07,210
the blood in your body
is distributed, you know,

404

00:21:07,210 --> 00:21:12,020
perfectly evenly, and is not,
you know, affected by gravity.

405

00:21:12,020 --> 00:21:14,450
So I think there's probably less
of a chance to have something

406

00:21:14,450 --> 00:21:19,020
like that in -- in --
in orbit or in space.

407

00:21:19,020 --> 00:21:21,960
>> Thank you.

408

00:21:21,960 --> 00:21:22,850

>> Alright.

409

00:21:22,850 --> 00:21:24,190

Thank you for that
answer, Scott Kelly.

410

00:21:24,190 --> 00:21:26,980

We are going to do one more
question from Galena Park ISD,

411

00:21:26,980 --> 00:21:28,210

and then wrap up from there.

412

00:21:28,210 --> 00:21:31,310

So one more question, speak loud
and clearly in the microphone,

413

00:21:31,310 --> 00:21:33,100

and we'll go from there.

414

00:21:33,100 --> 00:21:35,630

>> Good morning,
my name is Jocelyn.

415

00:21:35,630 --> 00:21:38,130

And I wanted to know when you
finally reached outer space,

416

00:21:38,130 --> 00:21:40,560

and you were able
to gaze at the --

417

00:21:40,560 --> 00:21:43,930

the magnificent earth in
person, that must be so surreal,

418

00:21:43,930 --> 00:21:46,300

and how does that make you feel?

419

00:21:46,300 --> 00:21:47,850

>> Scott Kelly: You
know, I can, you know,

420

00:21:47,850 --> 00:21:51,250

on my last flight I had six
months of looking at the earth,

421

00:21:51,250 --> 00:21:53,320

and it's very beautiful.

422

00:21:53,320 --> 00:21:55,470

Have certain memories
of -- of --

423

00:21:55,470 --> 00:22:01,020

of certain parts of the earth.

424

00:22:01,020 --> 00:22:04,750

My -- on my first
flight on STS-103,

425

00:22:04,750 --> 00:22:06,280

I can remember we
launched at night,

426

00:22:06,280 --> 00:22:10,280

and I can remember
turning to the Commander

427

00:22:10,280 --> 00:22:16,570

of the Space Shuttle and asking
him what -- I said something,

428

00:22:16,570 --> 00:22:19,770

I forget exactly how I put it,
but I was like what is that?

429

00:22:19,770 --> 00:22:22,660

You know, it was just

so amazing looking,

430

00:22:22,660 --> 00:22:26,710

and basically it was the
sunrise and then the earth,

431

00:22:26,710 --> 00:22:29,100

and it was just this
brilliant blue color,

432

00:22:29,100 --> 00:22:30,780

like the bluest thing
I've ever seen

433

00:22:30,780 --> 00:22:33,100

in my life, perfectly clear.

434

00:22:33,100 --> 00:22:36,390

The, you know, just the
clarity of it was --

435

00:22:36,390 --> 00:22:41,330

was impressive, you know,
just absolutely breathtaking.

436

00:22:41,330 --> 00:22:44,450

And then, you know, it's
interesting the places on earth

437

00:22:44,450 --> 00:22:47,970

that are most beautiful are
the places that are kind

438

00:22:47,970 --> 00:22:52,040

of the least habitable,
you know, the water.

439

00:22:52,040 --> 00:22:54,820

You know, most of the
planet is water, I'm --

440

00:22:54,820 --> 00:22:56,550

it's kind of surprising
that we've decided

441

00:22:56,550 --> 00:22:59,490

to call it planet earth and we
didn't call it planet water.

442

00:22:59,490 --> 00:23:02,520

But anyway, so the, you
know, water is very beautiful

443

00:23:02,520 --> 00:23:04,380

in certain areas, and -- as well

444

00:23:04,380 --> 00:23:06,890

as the deserts are
incredibly beautiful.

445

00:23:06,890 --> 00:23:09,150

>> That's a wrap.

446

00:23:09,150 --> 00:23:10,400

Good questions, guys.

447

00:23:10,400 --> 00:23:13,350

And you heard it
here, dream big,