



1  
00:00:05,338 --> 00:00:07,006  
>> IF YOU WOULD FOR THE NASA

2  
00:00:07,073 --> 00:00:08,842  
AUDIENCE, JUST SHARE WITH US

3  
00:00:08,908 --> 00:00:09,943  
WHAT YOUR BACKGROUND IS,

4  
00:00:10,009 --> 00:00:11,978  
EDUCATION, WHERE YOU WENT TO

5  
00:00:12,045 --> 00:00:13,580  
SCHOOL, WHAT YOU STUDIED, AND

6  
00:00:13,646 --> 00:00:14,781  
ULTIMATELY WHAT YOU DID AS A

7  
00:00:14,848 --> 00:00:18,885  
CAREER AND WHAT YOU DID TO

8  
00:00:18,952 --> 00:00:19,452  
BECOME AN ASTRONAUT.

9  
00:00:19,519 --> 00:00:22,922  
>> I WENT TO ST. JOHN'S FOR

10  
00:00:22,989 --> 00:00:23,256  
PHYSICS.

11  
00:00:23,323 --> 00:00:26,493  
I WAS IN THE ROTC PROGRAM SO

12  
00:00:26,559 --> 00:00:29,763  
IMMEDIATELY AFTER GRADUATION I

13  
00:00:29,829 --> 00:00:30,730

BECAME AN ARMY OFFICER.

14

00:00:30,797 --> 00:00:32,999

AT SOME POINT IN MY CAREER I HAD

15

00:00:33,066 --> 00:00:34,567

THE OPPORTUNITY TO GO TO

16

00:00:34,634 --> 00:00:35,402

GRADUATE SCHOOL.

17

00:00:35,468 --> 00:00:39,406

SO I GOT A MASTERS IN APPLIED

18

00:00:39,472 --> 00:00:40,707

PHYSICS FROM STANFORD,

19

00:00:40,774 --> 00:00:41,708

UNIVERSITY.

20

00:00:41,775 --> 00:00:43,943

I USED THAT TO TEACH PHYSICS IN

21

00:00:44,010 --> 00:00:47,514

THE DEPARTMENT OF--WELL,

22

00:00:47,580 --> 00:00:49,182

DEPARTMENT OF PHYSICS AND

23

00:00:49,249 --> 00:00:51,451

NUCLEAR ENGINEERING AT WEST

24

00:00:51,518 --> 00:00:51,785

POINT.

25

00:00:51,851 --> 00:00:53,353

AFTER THAT WAS DONE, IN THAT

26  
00:00:53,420 --> 00:00:56,756  
PROCESS I HAD STUDIED SPACE, SO

27  
00:00:56,823 --> 00:00:59,759  
I WAS INTERESTED IN THAT AND TO

28  
00:00:59,826 --> 00:01:01,861  
TRANSITION INTO A SPACE

29  
00:01:01,928 --> 00:01:03,830  
OPERATIONS OFFICER IN THE ARMY.

30  
00:01:03,897 --> 00:01:06,232  
THATLED ME TO WORK WITH NASA AS

31  
00:01:06,299 --> 00:01:08,935  
AN EXPERIMENT HAVING AN ACTIVE

32  
00:01:09,002 --> 00:01:13,973  
DUTY ARMY OFFICER WITH A SPACE

33  
00:01:14,040 --> 00:01:14,808  
BACKGROUND.

34  
00:01:14,874 --> 00:01:16,543  
I GOT TO KNOW A LOT OF

35  
00:01:16,609 --> 00:01:16,943  
ASTRONAUTS.

36  
00:01:17,010 --> 00:01:18,812  
I ENJOYED WORKING WITH THEM, AND

37  
00:01:18,878 --> 00:01:20,046  
BECAUSE OF THAT I WAS INSPIRED

38  
00:01:20,113 --> 00:01:21,414

TO FLY BECAUSE OF THE

39

00:01:21,481 --> 00:01:22,649

COMBINATION OF PHYSICAL

40

00:01:22,715 --> 00:01:24,651

CHALLENGES AND MENTAL

41

00:01:24,717 --> 00:01:25,351

CHALLENGES.

42

00:01:25,418 --> 00:01:26,519

I WAS FORTUNATE ENOUGH TO GET

43

00:01:26,586 --> 00:01:27,554

HIRED IN 2009.

44

00:01:27,620 --> 00:01:28,655

>> FOR A LOT OF PEOPLE WATCHING,

45

00:01:28,721 --> 00:01:31,658

MAYBE THEY'RE NOT FAMILIAR WITH

46

00:01:31,724 --> 00:01:33,326

WHAT A COMBAT ENGINEER IS.

47

00:01:33,393 --> 00:01:36,162

CAN YOU SHARE WHAT THAT IS?

48

00:01:36,229 --> 00:01:36,563

>> SURE.

49

00:01:36,629 --> 00:01:38,998

A COMBAT ENGINEER HELPS OUT WITH

50

00:01:39,065 --> 00:01:42,335

GROUND TACTICAL UNITS WITH

51  
00:01:42,402 --> 00:01:43,369  
PROVIDING--MAKING SURE THEY HAVE

52  
00:01:43,436 --> 00:01:43,736  
MOBILITY.

53  
00:01:43,803 --> 00:01:46,172  
IF YOU RUN INTO AN OBSTACLE,

54  
00:01:46,239 --> 00:01:47,907  
THEN WE TRY TO HELP BREAK

55  
00:01:47,974 --> 00:01:54,380  
THROUGH THOSE ON CITYCALLS.

56  
00:01:54,447 --> 00:02:00,453  
IF.

57  
00:02:00,520 --> 00:02:04,023  
>> SO YOU'RE MAKING REALTIME

58  
00:02:04,090 --> 00:02:05,758  
DECISIONS IN LIFE AND DEATH

59  
00:02:05,825 --> 00:02:06,659  
CRITICAL MOMENTS.

60  
00:02:06,726 --> 00:02:08,595  
IS THAT SAFE TO SAY.

61  
00:02:08,661 --> 00:02:10,330  
>> THAT'S SAFE TO SAY OF ANY

62  
00:02:10,396 --> 00:02:11,431  
MILITARY OFFICER.

63  
00:02:11,498 --> 00:02:13,366

>> JOE, GIVE US YOUR BACKGROUND,

64

00:02:13,433 --> 00:02:14,968

WHERE YOU WENT TO SCHOOL,

65

00:02:15,034 --> 00:02:17,971

ULTIMATELY YOUR CAREER AND

66

00:02:18,037 --> 00:02:19,005

ASTRONAUT COURSE.

67

00:02:19,072 --> 00:02:20,240

>> I'M IS A SOUTHERN CALIFORNIA

68

00:02:20,306 --> 00:02:24,844

KID AND WENT TO SCHOOL AT

69

00:02:24,911 --> 00:02:31,317

UNIVERSITY OF CAL, SANTA

70

00:02:31,384 --> 00:02:31,651

BARBARA.

71

00:02:31,718 --> 00:02:33,419

I WORKED A BUNCH OF DIFFERENT

72

00:02:33,486 --> 00:02:34,120

JOBS WHILE I WAS IN SCHOOL.

73

00:02:34,187 --> 00:02:36,756

I WAS IN THE U.S. MARINE CORPS

74

00:02:36,823 --> 00:02:37,123

RESERVES.

75

00:02:37,190 --> 00:02:42,962

I WORKED AS A HYDROGEOLOGIST,

76

00:02:43,029 --> 00:02:47,567

AND BEFORE I BECAME AN

77

00:02:47,634 --> 00:02:49,402

ASTRONAUT, I WAS A HIGH SCHOOL

78

00:02:49,469 --> 00:02:51,137

AND MIDDLE SCHOOL TEACHER.

79

00:02:51,204 --> 00:02:53,706

IN 2004 NASA WANTED TO HIRE SOME

80

00:02:53,773 --> 00:02:54,807

EDUCATORS TO BECOME TEACHERS.

81

00:02:54,874 --> 00:02:57,443

I WAS ONE OF THE LUCKY ONES TO

82

00:02:57,510 --> 00:02:58,845

BE SELECTED.

83

00:02:58,912 --> 00:02:59,312

>> AWESOME.

84

00:02:59,379 --> 00:03:00,713

YOU HAVE SPENT TIME ON THE SPACE

85

00:03:00,780 --> 00:03:02,282

STATION TALKING TO YOUNG FOLKS,

86

00:03:02,348 --> 00:03:03,983

I PRESUME.

87

00:03:04,050 --> 00:03:04,617

>> YES.

88

00:03:04,684 --> 00:03:07,487

>> WAS THAT ONE OF YOUR DUTIES?

89

00:03:07,554 --> 00:03:09,722

>> ALL OF OUR DUTIES, WHILE

90

00:03:09,789 --> 00:03:11,691

WE'RE UP THERE, IS TO SHARE WHAT

91

00:03:11,758 --> 00:03:13,860

WE ARE A HE DOING WITH SCHOOL

92

00:03:13,927 --> 00:03:15,361

KIDS.

93

00:03:15,428 --> 00:03:18,064

YOU LOOK AT YOUR STUDENTS, ARE

94

00:03:18,131 --> 00:03:18,965

THEY BORED?

95

00:03:19,032 --> 00:03:21,568

ARE THEY FALLING ASLEEP?

96

00:03:21,634 --> 00:03:23,436

ARE THEY ENGAGED?

97

00:03:23,503 --> 00:03:29,042

BUT WHEN YOU'RE UP IN SPACE, YOU

98

00:03:29,108 --> 00:03:32,712

CAN'T SEE THEM, AND THAT'S ONE

99

00:03:32,779 --> 00:03:34,180

OF THE CHALLENGING PARTS.

100

00:03:34,247 --> 00:03:36,616

>> I'M SURE YOU KEPT THEIR

101  
00:03:36,683 --> 00:03:37,483  
ATTENTION.

102  
00:03:37,550 --> 00:03:39,452  
>> WE SENT OUT A TWEET ASKING

103  
00:03:39,519 --> 00:03:40,587  
PEOPLE IF THEY HAD THE

104  
00:03:40,653 --> 00:03:43,723  
OPPORTUNITY TO ASK ANY QUESTIONS

105  
00:03:43,790 --> 00:03:45,425  
QUESTIONS, WHAT WOULD THOSE

106  
00:03:45,491 --> 00:03:45,858  
QUESTIONS BE?

107  
00:03:45,925 --> 00:03:47,193  
I HAVE A NUMBER OF QUESTIONS

108  
00:03:47,260 --> 00:03:48,561  
FROM SOME OF THE FOLKS THAT

109  
00:03:48,628 --> 00:03:49,429  
FOLLOW NASA.

110  
00:03:49,495 --> 00:03:56,803  
AND I'LL JUST START WITH ONE

111  
00:03:56,869 --> 00:03:58,638  
HERE THAT I THINK WOULD BE

112  
00:03:58,705 --> 00:04:00,139  
PRETTY EASY TO ANSWER.

113  
00:04:00,206 --> 00:04:01,641

WHAT DO RESTAURANT DO WHILE

114

00:04:01,708 --> 00:04:03,209

YOU'RE ON YOUR WAY TO JOINING

115

00:04:03,276 --> 00:04:05,778

THE INTERNATIONAL SPACE STATION?

116

00:04:05,845 --> 00:04:12,285

>> WE DOUBLE CHECK EVERYTHING.

117

00:04:12,352 --> 00:04:15,588

WE HAVE TO DOUBLE CHECK THAT

118

00:04:15,655 --> 00:04:16,956

EVERYTHING IS WORKING WELL.

119

00:04:17,023 --> 00:04:18,891

THERE ARE A LOT OF RETURN

120

00:04:18,958 --> 00:04:21,561

SYSTEMS, WHICH FOR A SPACE

121

00:04:21,628 --> 00:04:23,162

FLIGHT IS VERY IMPORTANT.

122

00:04:23,229 --> 00:04:24,464

WE'RE READY AND TRAINED SO THAT

123

00:04:24,530 --> 00:04:27,433

IF ONE OF THOSE SYSTEMS FAIL WE

124

00:04:27,500 --> 00:04:28,801

CAN TAKE OVER MANUALLY.

125

00:04:28,868 --> 00:04:30,470

>> HOW MUCH TIME DID YOU HAVE

126  
00:04:30,536 --> 00:04:32,805  
FROM THE TIME YOU LAUNCHED UNTIL

127  
00:04:32,872 --> 00:04:34,040  
YOU DOCKED?

128  
00:04:34,107 --> 00:04:35,208  
>> FROM THE FLIGHT THAT JOE AND

129  
00:04:35,274 --> 00:04:37,043  
I WERE ON, THAT'S SIX HOURS.

130  
00:04:37,110 --> 00:04:39,512  
>> WAS THAT COMMON OR UNCOMMON?

131  
00:04:39,579 --> 00:04:41,748  
>> SOMETIMES IT TAKES MULTIPLE

132  
00:04:41,814 --> 00:04:42,048  
DAYS.

133  
00:04:42,115 --> 00:04:43,349  
>> MY FIRST FLIGHT WITH THE

134  
00:04:43,416 --> 00:04:45,718  
RUSSIANS, IT WAS A TWO-DAY

135  
00:04:45,785 --> 00:04:46,119  
RENDEZVOUS.

136  
00:04:46,185 --> 00:04:49,422  
IT ALL DEPENDS ON THE ORBITAL

137  
00:04:49,489 --> 00:04:52,291  
DYNAMICS AND WHERE IS THE SPACE

138  
00:04:52,358 --> 00:04:52,925

STATION WHEN YOU LAUNCH.

139

00:04:52,992 --> 00:04:56,796

WE ENJOYED THE SIX HOURS BECAUSE

140

00:04:56,863 --> 00:05:03,503

THE SOYUZ IS SMALL, AND YOU'RE

141

00:05:03,569 --> 00:05:04,804

READY TO GET TO THE ISS.

142

00:05:04,871 --> 00:05:05,738

>> I WOULD IMAGINE.

143

00:05:05,805 --> 00:05:07,874

HOW LONG DID IT TAKE YOU TO GET

144

00:05:07,940 --> 00:05:10,677

USED TO 1G ONCE YOU GOT BACK?

145

00:05:10,743 --> 00:05:12,178

>> I THINK IT VARIES FOR

146

00:05:12,245 --> 00:05:12,545

EVERYONE.

147

00:05:12,612 --> 00:05:17,383

FOR ME, THE HARDEST PART IS MY

148

00:05:17,450 --> 00:05:19,252

BALANCE, THE FIRST 20 HOURS IF I

149

00:05:19,318 --> 00:05:22,121

STOOD UP, I WAS NOT FEELING TOO

150

00:05:22,188 --> 00:05:23,423

GOOD.

151  
00:05:23,489 --> 00:05:24,123  
MUSCLE-WISE, AND STRENGTH, IT

152  
00:05:24,190 --> 00:05:26,392  
WAS PRETTY GOOD, BUT AFTER A

153  
00:05:26,459 --> 00:05:28,428  
DAY, YOU KNOW, I GOT BETTER, BUT

154  
00:05:28,494 --> 00:05:29,796  
IT'S AMAZING WHAT THE BODY DOES

155  
00:05:29,862 --> 00:05:32,932  
AND HOW QUICKLY IT RECOVERS

156  
00:05:32,999 --> 00:05:33,900  
WHERE IT'S JUST ALMOST EVERY

157  
00:05:33,966 --> 00:05:35,768  
MINUTE YOU'RE GETTING BETTER AND

158  
00:05:35,835 --> 00:05:36,102  
BETTER.

159  
00:05:36,169 --> 00:05:37,370  
>> ARE YOU ABLE TO WALK?

160  
00:05:37,437 --> 00:05:38,571  
>> I COULD WALK WITH A LITTLE

161  
00:05:38,638 --> 00:05:41,741  
BIT OF AN ASSISTANCE.

162  
00:05:41,808 --> 00:05:42,141  
>> OKAY.

163  
00:05:42,208 --> 00:05:44,110

>> YEAH, YOU TURN YOUR HEAD, AND

164

00:05:44,177 --> 00:05:45,745

YOU FEEL LIKE THE FLOOR IS

165

00:05:45,812 --> 00:05:46,079

MOVING.

166

00:05:46,145 --> 00:05:47,246

IF YOU CAN IMAGINE BEING ON A

167

00:05:47,313 --> 00:05:48,448

BOAT ALL DAY.

168

00:05:48,514 --> 00:05:48,881

>> SURE.

169

00:05:48,948 --> 00:05:49,949

>> AND WHEN YOU GET OFF THE

170

00:05:50,016 --> 00:05:51,384

BOAT, AND WHEN YOU STAND THERE

171

00:05:51,451 --> 00:05:52,852

YOU CAN STILL FEEL THE WAVES

172

00:05:52,919 --> 00:05:53,319

UNDERNEATH YOU.

173

00:05:53,386 --> 00:05:54,954

IT'S KIND OF LIKE THAT, BUT A

174

00:05:55,021 --> 00:05:56,122

LITTLE MORE EXTREME.

175

00:05:56,189 --> 00:05:58,424

>> HOW ABOUT YOU, MARK?

176

00:05:58,491 --> 00:06:00,693

>> I FELT PRETTY GOOD, LIKE JOE

177

00:06:00,760 --> 00:06:02,228

MENTIONED I CERTAINLY HAD THE

178

00:06:02,295 --> 00:06:05,264

FEELING THAT THINGS WEREN'T

179

00:06:05,331 --> 00:06:06,933

WORKING AS THEY NORMALLY WOULD.

180

00:06:06,999 --> 00:06:09,635

THE BIGGEST ISSUE FOR ME WAS A

181

00:06:09,702 --> 00:06:11,571

LOT OF SORENESS IN THE SMALLER

182

00:06:11,637 --> 00:06:13,439

MUSCLES THAT HELP WITH BALANCE.

183

00:06:13,506 --> 00:06:15,641

I COULD FEEL THAT, JUST SITTING

184

00:06:15,708 --> 00:06:16,743

UP IN BED WAS HARD.

185

00:06:16,809 --> 00:06:19,445

>> WHAT WAS YOUR FIRST MEAL WHEN

186

00:06:19,512 --> 00:06:19,879

YOU CAME BACK.

187

00:06:19,946 --> 00:06:21,380

AND HOW LONG DID IT TAKE UNTIL

188

00:06:21,447 --> 00:06:22,782

YOU WERE READY TO EAT?

189

00:06:22,849 --> 00:06:24,684

>> I WAS READY TO EAT RIGHT

190

00:06:24,751 --> 00:06:25,785

AWAY.

191

00:06:25,852 --> 00:06:28,354

>> HE'S ALWAYS READY TO EAT.

192

00:06:28,421 --> 00:06:32,058

>> MY MOM MIGHT BE MAD IF I SAY

193

00:06:32,125 --> 00:06:34,894

IT WAS MY FIRST MEAL BECAUSE IT

194

00:06:34,961 --> 00:06:36,562

WAS CHIPS AND GUACAMOLE.

195

00:06:36,629 --> 00:06:37,497

>> THAT'S ALWAYS GOOD.

196

00:06:37,563 --> 00:06:39,732

>> WHAT WAS YOUR FIRST MEAL?

197

00:06:39,799 --> 00:06:41,334

>> WE HAD SMALL SNACKS ON THE

198

00:06:41,400 --> 00:06:42,368

PLANE.

199

00:06:42,435 --> 00:06:44,837

BUT THE MEAL I ASKED

200

00:06:44,904 --> 00:06:45,705

FOR--BECAUSE I WAS NOT GOING

201  
00:06:45,772 --> 00:06:47,440  
HOME TO MOM'S COOKING RIGHT

202  
00:06:47,507 --> 00:06:53,346  
AWAY, WAS TO HAVE SOME LOCAL

203  
00:06:53,412 --> 00:06:53,679  
OXTAIL.

204  
00:06:53,746 --> 00:06:55,748  
IT WAS TASTY.

205  
00:06:55,815 --> 00:06:57,150  
>> OXTAIL, THAT'S INTERESTING.

206  
00:06:57,216 --> 00:06:58,151  
WHAT IS THE LEAST KNOWN FACT

207  
00:06:58,217 --> 00:06:59,519  
ABOUT THE ISS?

208  
00:06:59,585 --> 00:07:02,688  
MARK, I'LL LET YOU GO FIRST.

209  
00:07:02,755 --> 00:07:04,657  
>> I WOULD SAY IT'S THE AMOUNT

210  
00:07:04,724 --> 00:07:06,058  
OF SCIENCE EXPERIMENTS WE'RE

211  
00:07:06,125 --> 00:07:06,359  
DOING.

212  
00:07:06,425 --> 00:07:10,029  
FOR JOE AND I, HE WERE UP ON THE

213  
00:07:10,096 --> 00:07:17,036

ISS FOR 168 DAYS, AND THERE WERE

214

00:07:17,103 --> 00:07:19,906

ABOUT 204 EXPERIMENTS GOING ON,

215

00:07:19,972 --> 00:07:21,974

AND A LOT OF THEM WE DIDN'T HAVE

216

00:07:22,041 --> 00:07:24,544

TO INTERACT WITH.

217

00:07:24,610 --> 00:07:25,478

>> A LOT OF PEOPLE MAY NOT

218

00:07:25,545 --> 00:07:27,780

REALIZE THAT WE'VE HAD HUMAN

219

00:07:27,847 --> 00:07:29,282

ASTRONAUTS ON THE SPACE STATION

220

00:07:29,348 --> 00:07:32,418

FOR THE LAST 18 YEARS, 24/7,

221

00:07:32,485 --> 00:07:34,320

365, LIVING IN THIS

222

00:07:34,387 --> 00:07:34,987

SELF-CONTAINED ENVIRONMENT.

223

00:07:35,054 --> 00:07:36,355

YOU CAN IMAGINE THE RECYCLING

224

00:07:36,422 --> 00:07:37,890

THAT WE DO ON EARTH, THE NATURAL

225

00:07:37,957 --> 00:07:42,094

AND THE MANMADE, WE RECYCLE

226

00:07:42,161 --> 00:07:43,229

PRETTY MUCH EVERYTHING WE CAN UP

227

00:07:43,296 --> 00:07:43,963

THERE.

228

00:07:44,030 --> 00:07:44,430

>> AWESOME.

229

00:07:44,497 --> 00:07:46,132

AS FAR AS SPACE DEBRIS.

230

00:07:46,199 --> 00:07:47,967

I'VE GOT A QUESTION, FOLKS WHO

231

00:07:48,034 --> 00:07:49,836

ARE INTERESTED, CAN YOU SEE IT

232

00:07:49,902 --> 00:07:51,437

FROM SPACE, AND WHAT DO YOU DO

233

00:07:51,504 --> 00:07:52,471

ABOUT IT?

234

00:07:52,538 --> 00:07:54,273

>> WELL, HOPEFULLY WE WON'T SEE

235

00:07:54,340 --> 00:07:54,874

IT.

236

00:07:54,941 --> 00:07:55,942

IF IT'S BIG ENOUGH WE CAN SEE

237

00:07:56,008 --> 00:07:58,945

IT, WE'LL TRY TO GO AHEAD AND

238

00:07:59,011 --> 00:08:00,413

CHANGE THE ORBIT OF THE SPACE

239

00:08:00,479 --> 00:08:00,746

STATION.

240

00:08:00,813 --> 00:08:02,348

SO PEOPLE ARE TRACKING THAT FOR

241

00:08:02,415 --> 00:08:03,549

US, AND WE CAN DO THAT.

242

00:08:03,616 --> 00:08:05,184

IT PROBABLY HAPPENS A FEW TIMES

243

00:08:05,251 --> 00:08:06,919

A YEAR THAT WE'LL CHANGE THE

244

00:08:06,986 --> 00:08:09,055

ORBIT FOR OBJECTS THAT ARE

245

00:08:09,121 --> 00:08:09,455

LARGE.

246

00:08:09,522 --> 00:08:12,592

THE SMALLER OBJECTS, WE SEE SPAU

247

00:08:12,658 --> 00:08:15,862

MIGHT SEE A DING ON A HAND RAIL.

248

00:08:15,928 --> 00:08:18,531

WE HAVE THE BIG WINDOW THAT WE

249

00:08:18,598 --> 00:08:20,032

LOOK OUT OF, AND YOU CAN SEE

250

00:08:20,099 --> 00:08:21,734

WHERE THAT HAS BEEN STRUCK

251

00:08:21,801 --> 00:08:22,568

BEFORE.

252

00:08:22,635 --> 00:08:23,936

LUCKILY, IT'S A STRONG WINDOW.

253

00:08:24,003 --> 00:08:25,504

>> IT'S A STRONG WINDOW, A

254

00:08:25,571 --> 00:08:27,573

LITTLE BIT BIGGER, BUT IT LOOKS

255

00:08:27,640 --> 00:08:29,308

ALMOST LIKE IT WOULD ON YOUR CAR

256

00:08:29,375 --> 00:08:30,910

WHEN YOU HAVE A ROCK THAT HIT

257

00:08:30,977 --> 00:08:31,577

YOUR WINDOW.

258

00:08:31,644 --> 00:08:33,713

>> DID YOU SEE ANY SPACE DEBRIS?

259

00:08:33,779 --> 00:08:35,681

>> I SAY THE SAME EVIDENCE

260

00:08:35,748 --> 00:08:37,850

DURING THE SPACEWALKS THAT JOE

261

00:08:37,917 --> 00:08:39,352

MENTIONED, AND LOOKING OUT THE

262

00:08:39,418 --> 00:08:41,487

WINDOW THAT HE MENTIONED.

263

00:08:41,554 --> 00:08:43,289

AND AN ITALIAN ASTRONAUT THAT

264

00:08:43,356 --> 00:08:45,024

WAS ON BOARD WITH US DURING THE

265

00:08:45,091 --> 00:08:47,627

FIRST HALF OF OUR FLIGHT, HE

266

00:08:47,693 --> 00:08:50,496

TOOK A LOT OF PICTURES AND

267

00:08:50,563 --> 00:08:52,431

CAPTURED NATURAL SPACE DEBRIS.

268

00:08:52,498 --> 00:08:54,567

HE SAW THE DEBRIS ONLY WHEN IT

269

00:08:54,634 --> 00:08:56,402

STARTED BURNING UP, AND YOU

270

00:08:56,469 --> 00:08:58,337

COULD SEE THE FLASH OF LIGHT

271

00:08:58,404 --> 00:09:00,172

WHEN IT WAS FINALLY BURNED UP.

272

00:09:00,239 --> 00:09:02,008

>> IS THAT VIDEO OUT THERE

273

00:09:02,074 --> 00:09:02,375

SOMEWHERE?

274

00:09:02,441 --> 00:09:03,542

>> I WOULD BE SURPRISED IF IT

275

00:09:03,609 --> 00:09:03,876

WASN'T.

276

00:09:03,943 --> 00:09:05,711

>> IT IS OUT THERE, AND IT IS

277

00:09:05,778 --> 00:09:06,979

PRETTY COOL TO SEE.

278

00:09:07,046 --> 00:09:08,047

>> HERE IS ANOTHER QUESTION FROM

279

00:09:08,114 --> 00:09:08,981

ONE OF OUR FANS.

280

00:09:09,048 --> 00:09:11,450

WHAT IS YOUR FAVORITE GEOLOGICAL

281

00:09:11,517 --> 00:09:12,518

FEATURES TO LOOK AT AND ADMIRE

282

00:09:12,585 --> 00:09:15,121

FROM THE SPACE STATION?

283

00:09:15,187 --> 00:09:21,994

>> WELL, SO AS A GEOLOGIST

284

00:09:22,061 --> 00:09:23,462

YOU'RE IN HEAVEN BECAUSE YOU CAN

285

00:09:23,529 --> 00:09:26,565

SEE EVERYTHING FROM A GRAND

286

00:09:26,632 --> 00:09:26,866

SCALE.

287

00:09:26,933 --> 00:09:28,901

I REALLY ENJOYED FLYING OVER

288

00:09:28,968 --> 00:09:29,235

AFRICA.

289

00:09:29,302 --> 00:09:30,569  
NOT ONLY CAN YOU SEE THE

290

00:09:30,636 --> 00:09:33,172  
DIFFERENT COLORS OF THE

291

00:09:33,239 --> 00:09:35,141  
DIFFERENT ROCK FORMATIONS, YOU

292

00:09:35,207 --> 00:09:41,213  
CAN SEE THE DUNES, THE MOUNTAIN

293

00:09:41,280 --> 00:09:41,647  
RANGES.

294

00:09:41,714 --> 00:09:43,549  
THE EARTH IS BEAUTIFUL.

295

00:09:43,616 --> 00:09:44,750  
IT'S HARD TO PICK OUT ONE

296

00:09:44,817 --> 00:09:45,985  
BECAUSE EVERY TIME YOU LOOK OUT

297

00:09:46,052 --> 00:09:47,453  
THE WINDOW YOU SEE SOMETHING

298

00:09:47,520 --> 00:09:47,920  
NEW.

299

00:09:47,987 --> 00:09:50,756  
>> FOR ME, IT WASN'T--CERTAINLY

300

00:09:50,823 --> 00:09:52,658  
DESERTS ARE PARTICULARLY

301  
00:09:52,725 --> 00:09:55,528  
IMPRESSIVE BECAUSE THERE IS LESS

302  
00:09:55,594 --> 00:09:57,229  
MOISTURE IN THE AIR, SO YOU GET

303  
00:09:57,296 --> 00:09:58,698  
A BETTER VIEW THROUGH THE

304  
00:09:58,764 --> 00:09:59,565  
ATMOSPHERE OF THE DESERT.

305  
00:09:59,632 --> 00:10:01,300  
THE TIME IT WAS PARTICULARLY

306  
00:10:01,367 --> 00:10:03,135  
IMPRESSIVE FOR ME WAS LOOKING AT

307  
00:10:03,202 --> 00:10:07,106  
THE AMERICAN WEST FROM--I GOT A

308  
00:10:07,173 --> 00:10:08,107  
VIEW FROM DENVER WHEN I LOOKED

309  
00:10:08,174 --> 00:10:10,343  
LATER AT THE PICTURE AND TRIED

310  
00:10:10,409 --> 00:10:11,210  
TO MAP OUT WHAT I WAS SEEING.

311  
00:10:11,277 --> 00:10:13,446  
I WAS SEEING THE LIGHTS FROM

312  
00:10:13,512 --> 00:10:14,747  
DENVER ALL THE WAY TO THE LIGHTS

313  
00:10:14,814 --> 00:10:16,615

OF HOUSTON IN ONE VIEW, WHICH

314

00:10:16,682 --> 00:10:17,984

WAS AMAZING.

315

00:10:18,050 --> 00:10:19,352

PARTICULARLY WHEN THE VIEW IS AT

316

00:10:19,418 --> 00:10:21,454

NIGHT AND UNDER A FULL MOON

317

00:10:21,520 --> 00:10:23,756

BECAUSE THE FULL MOON WOULD

318

00:10:23,823 --> 00:10:25,191

LIGHT UP THE COLORS OF THE

319

00:10:25,257 --> 00:10:27,360

DESERTS, BUT YOU STILL HAVE THE

320

00:10:27,426 --> 00:10:27,693

LIGHTS.

321

00:10:27,760 --> 00:10:29,996

>> HERE IS A QUESTION OF

322

00:10:30,062 --> 00:10:32,198

INTEREST, BUT MAYBE NOT SERIOUS.

323

00:10:32,264 --> 00:10:34,834

WHAT IS IT LIKE TO SNEEZE IN 0

324

00:10:34,900 --> 00:10:35,301

G?

325

00:10:35,368 --> 00:10:37,703

AND HOW DO YOU DO IT?

326

00:10:41,173 --> 00:10:39,138

>> AWAY FROM EVERYBODY ELSE.

327

00:10:41,240 --> 00:10:44,577

>> THERE YOU GO.

328

00:10:44,643 --> 00:10:45,811

I WOULD IMAGINE SANITATION ON

329

00:10:45,878 --> 00:10:48,347

THE ISS IS CRITICALLY IMPORTANT.

330

00:10:48,414 --> 00:10:52,918

CAN YOU--SHARE SOME OF YOUR

331

00:10:52,985 --> 00:10:54,353

EXPERIENCES GETTING READY TO FLY

332

00:10:54,420 --> 00:10:56,922

AND ULTIMATELY BEING ON THE ISS?

333

00:10:56,989 --> 00:10:58,724

>> WE DO GO INTO QUARANTINE A

334

00:10:58,791 --> 00:11:00,192

COUPLE OF WEEKS BEFORE WE LAUNCH

335

00:11:00,259 --> 00:11:01,494

TO MAKE SURE WE DON'T TAKE

336

00:11:01,560 --> 00:11:02,328

ANYTHING WITH US.

337

00:11:02,395 --> 00:11:03,729

ONE OF THE GREAT THINGS BEING UP

338

00:11:03,796 --> 00:11:05,031

THERE, ONCE YOU GET THERE,

339

00:11:05,097 --> 00:11:08,801

YOU'RE IN A PRETTY GOOD AND

340

00:11:08,868 --> 00:11:10,569

STERILE ENVIRONMENT IN TERMS OF

341

00:11:10,636 --> 00:11:12,671

A COLD OR THE FLU.

342

00:11:12,738 --> 00:11:14,907

SO WE MISSED THE FLU SEASON

343

00:11:14,974 --> 00:11:15,941

WHILE HE WERE UP THERE.

344

00:11:16,008 --> 00:11:18,077

BUT IT TAKES A LOT OF WORK

345

00:11:18,144 --> 00:11:20,813

PROTECTING US GETTING UP THERE,

346

00:11:20,880 --> 00:11:22,314

BUT WE SPENT TIME CLEANING UP

347

00:11:22,381 --> 00:11:25,084

THE SPACE STATION AS WELL.

348

00:11:25,151 --> 00:11:25,918

>> EVERY SATURDAY MORNING, YOU

349

00:11:25,985 --> 00:11:28,988

HAVE TO CLEAN THE SPACE STATION.

350

00:11:29,055 --> 00:11:29,789

>> VACUUMING, AND WIPING DOWN

351  
00:11:29,855 --> 00:11:30,156  
THINGS.

352  
00:11:30,222 --> 00:11:32,391  
>> AS A NAVY GUY MYSELF, BEING

353  
00:11:32,458 --> 00:11:33,692  
ON A SHIP, CRITICALLY IMPORTANT

354  
00:11:33,759 --> 00:11:35,027  
TO KEEP EVERYTHING AS CLEAN AS

355  
00:11:35,094 --> 00:11:36,829  
POSSIBLE BECAUSE IF ONE PERSON

356  
00:11:36,896 --> 00:11:39,498  
GETS SICK, EVERYBODY GETS SICK.

357  
00:11:39,565 --> 00:11:43,536  
IT HAPPEN ONCE IN A WHILE

358  
00:11:43,602 --> 00:11:45,971  
WHETHER IT WAS THREE CREW OR

359  
00:11:46,038 --> 00:11:47,006  
SIX.

360  
00:11:47,073 --> 00:11:50,676  
ANOTHER QUESTION IS--A NUMBER OF

361  
00:11:50,743 --> 00:11:52,178  
THESE, JUST LAUNCHED.

362  
00:11:52,244 --> 00:11:55,448  
WHEN YOU LAUNCH ON SOYUZ, WHAT

363  
00:11:55,514 --> 00:11:56,916

IS THE JOLT LIKE?

364

00:11:56,982 --> 00:11:58,284

IS IT SMOOTH?

365

00:11:58,350 --> 00:11:59,385

IS IT HARSH?

366

00:11:59,452 --> 00:12:01,554

WHAT IS IT LIKE WHEN YOU LAUNCH

367

00:12:01,620 --> 00:12:03,155

ON SOYUZ OR DO YOU REMEMBER MUCH

368

00:12:03,222 --> 00:12:06,358

OF IT?

369

00:12:06,425 --> 00:12:10,196

>> I DEFINITELY REMAINDER THE

370

00:12:10,262 --> 00:12:10,529

LAUNCH.

371

00:12:10,596 --> 00:12:12,098

WE TRAINED IN THE SIMULATOR THAT

372

00:12:12,164 --> 00:12:13,766

DID A REALLY GOOD JOB GETTING US

373

00:12:13,833 --> 00:12:16,735

USED TO THE SMALL SPACE.

374

00:12:16,802 --> 00:12:18,671

BECAUSE IT WAS SO SMOOTH I WAS

375

00:12:18,737 --> 00:12:19,438

DISAPPOINTED THAT I WOULDN'T GET

376

00:12:19,505 --> 00:12:22,274

A BETTER STORY OUT OF IT.

377

00:12:22,341 --> 00:12:24,877

THE WINDOW WAS DIFFERENT FROM

378

00:12:24,944 --> 00:12:26,879

THE SIMULATOR, AND MOSTLY IT WAS

379

00:12:26,946 --> 00:12:28,714

JUST THE BLACKNESS OF SPACE.

380

00:12:28,781 --> 00:12:32,485

THE ONE THING THAT WAS VERY

381

00:12:32,551 --> 00:12:32,852

DIFFERENT.

382

00:12:32,918 --> 00:12:35,387

WE WENT FROM ONE STAGE TO

383

00:12:35,454 --> 00:12:36,722

ANOTHER, WHICH FELT LIKE A JOLT

384

00:12:36,789 --> 00:12:37,056

FORWARD.

385

00:12:37,123 --> 00:12:39,425

THAT WAS SHOCKING AS WE CHANGED,

386

00:12:39,492 --> 00:12:41,093

BUT OTHERWISE IT WAS VERY

387

00:12:41,160 --> 00:12:41,427

SMOOTH.

388

00:12:41,494 --> 00:12:43,062

>> YEAH, UNTIL WE GOT TO THE

389

00:12:43,129 --> 00:12:45,231

SPACE STATION, AND IT'S A FUNNY

390

00:12:45,297 --> 00:12:45,664

STORY.

391

00:12:45,731 --> 00:12:46,298

MARK--

392

00:12:46,365 --> 00:12:48,968

>> YES, AS WE WERE APPROACHING.

393

00:12:49,034 --> 00:12:54,773

>> YOU KNOW, YOU GET TO THE

394

00:12:54,840 --> 00:12:55,708

LAUNCH SEQUENCE.

395

00:12:55,774 --> 00:12:58,244

YOU START TO APPROACH THE SPACE

396

00:12:58,310 --> 00:13:00,946

STATION, AND YOU GET YOUR FIRST

397

00:13:01,013 --> 00:13:03,315

GLIMPSE OUT OF THE WINDOW OF

398

00:13:03,382 --> 00:13:04,850

THIS BEAUTIFUL LABORATORY THAT

399

00:13:04,917 --> 00:13:06,652

WE BUILT, AND THEN MARK--

400

00:13:06,719 --> 00:13:07,887

>> WHICH WAS THE SAME TIME THE

401  
00:13:07,953 --> 00:13:09,622  
SPACE STATION WAS LOOKING OUT OF

402  
00:13:09,688 --> 00:13:12,391  
THE SPACE STATION WITH HIS

403  
00:13:12,458 --> 00:13:12,791  
PERISCOPE.

404  
00:13:12,858 --> 00:13:15,127  
HE HAS TO BE REREADY TO RESPOND

405  
00:13:15,194 --> 00:13:16,262  
TO A FAILURE BECAUSE HE HAS TO

406  
00:13:16,328 --> 00:13:19,598  
DO IT MANUALLY, POSSIBLY.

407  
00:13:19,665 --> 00:13:20,599  
SO IT'S VERY TENSE FOR HIM.

408  
00:13:20,666 --> 00:13:22,234  
I'M TRYING TO SUPPORT HIM, BUT I

409  
00:13:22,301 --> 00:13:25,471  
GET THIS VIEW OF MASSIVE SOLAR

410  
00:13:25,538 --> 00:13:27,706  
RAY'S OUT THE WINDOW.

411  
00:13:27,773 --> 00:13:30,075  
>> YES, WE WERE HOT MICKED, SO

412  
00:13:30,142 --> 00:13:31,010  
EVERYBODY COULD HEAR WHAT WE

413  
00:13:31,076 --> 00:13:32,311

WERE SAYING.

414

00:13:32,378 --> 00:13:33,279

>> HOW MUCH DO YOU SWEAT DURING

415

00:13:33,345 --> 00:13:35,381

ALL THAT?

416

00:13:35,447 --> 00:13:37,783

>> THE SUIT--WE'RE CONNECTED TO

417

00:13:37,850 --> 00:13:38,551

A VENTILATION SYSTEM.

418

00:13:38,617 --> 00:13:41,353

IF WE'RE SWEATING A LOT, IT GETS

419

00:13:41,420 --> 00:13:41,754

DRIED UP.

420

00:13:41,820 --> 00:13:44,423

AS LONG AS THE SUIT SYSTEM IS

421

00:13:44,490 --> 00:13:44,823

WORKING.

422

00:13:44,890 --> 00:13:47,426

THERE WERE SIMULATORS WHERE WE

423

00:13:47,493 --> 00:13:48,060

SWEATED TONS.

424

00:13:48,127 --> 00:13:49,428

>> IT'S EASIER REALTIME.

425

00:13:49,495 --> 00:13:51,096

YOU'VE TRAINED FOR SO LONG, AND

426

00:13:51,163 --> 00:13:52,731

YOU'RE READY FOR IT.

427

00:13:52,798 --> 00:13:53,933

>> YOU'RE PRETTY PREPARED.

428

00:13:53,999 --> 00:13:54,967

>> FINAL QUESTION FOR BOTH OF

429

00:13:55,034 --> 00:13:56,569

YOU, BUT BOTH OF YOU HAVE BEEN

430

00:13:56,635 --> 00:13:58,804

EDUCATORS IN YOUR DAY.

431

00:13:58,871 --> 00:14:01,807

I HAVE A QUESTION HERE FROM A

432

00:14:01,874 --> 00:14:02,641

FOURTH GRADER.

433

00:14:02,708 --> 00:14:05,144

DID YOU USE ALGEBRA WHEN YOU'RE

434

00:14:05,211 --> 00:14:06,212

UP THERE?

435

00:14:06,278 --> 00:14:09,348

>> HOW CAN YOU NOT USE ALGEBRA?

436

00:14:09,415 --> 00:14:14,220

EVERY DAY ALGEBRA IS INVOLVED.

437

00:14:14,286 --> 00:14:14,820

IT'S PRETTY IMPORTANT.

438

00:14:14,887 --> 00:14:16,255

>> ONE OF THE THINGS THAT NASA

439

00:14:16,322 --> 00:14:18,123

DOES IN ITS MISSION IS TO

440

00:14:18,190 --> 00:14:20,960

INSPIRE YOUNG PEOPLE TO LEARN

441

00:14:21,026 --> 00:14:22,394

SCIENCE, TECHNOLOGY, ENGINEERING

442

00:14:22,461 --> 00:14:22,761

AND MATH.

443

00:14:22,828 --> 00:14:25,064

IT'S NOT JUST THE ASTRONAUTS WHO

444

00:14:25,130 --> 00:14:27,499

ARE HEROES WHO NEED TO USE THESE

445

00:14:27,566 --> 00:14:28,934

SKILLS, IT'S ALSO ALL THE PEOPLE

446

00:14:29,001 --> 00:14:31,203

WHO DESIGN AND BUILD AND

447

00:14:31,270 --> 00:14:32,538

INTEGRATE THESE AMAZING

448

00:14:32,605 --> 00:14:33,872

CAPABILITIES FOR OUR COUNTRY AND

449

00:14:33,939 --> 00:14:34,773

FOR THE WORLD.

450

00:14:34,840 --> 00:14:36,308

I JUST WANT TO THANK YOU BOTH

451  
00:14:36,375 --> 00:14:36,976  
FOR BEING HERE.

452  
00:14:37,042 --> 00:14:39,044  
THANK YOU FOR YOUR SERVICE TO

453  
00:14:39,111 --> 00:14:39,678  
THIS COUNTRY.

454  
00:14:39,745 --> 00:14:41,880  
THANK YOU FOR YOUR SERVICE TO

455  
00:14:41,947 --> 00:14:42,181  
NASA.

456  
00:14:42,248 --> 00:14:44,016  
ONE OF THE BEST PARTS OF MY JOB

457  
00:14:44,083 --> 00:14:45,684  
IS GETTING TO SIT DOWN AND TALK

458  
00:14:45,751 --> 00:14:47,620  
WITH FOLKS LIKE YOU.

459  
00:14:47,686 --> 00:14:49,388  
YOU'RE BOTH GREAT AMERICANS.

460  
00:14:49,455 --> 00:14:50,956  
MARK VANDE HEI AND JOE ACABA,

461  
00:14:51,023 --> 00:14:52,758  
THANK YOU FOR YOUR SERVICE.