



LIVING AND WORKING IN SPACE

USA

Space Shuttle Concepts

1-1

LIVING AND WORKING IN SPACE

1
00:00:01,459 --> 00:00:02,459
WELCOME TO OUR PROGRAM.
WELCOME TO THE AIR AND SPACE

2
00:00:02,459 --> 00:00:03,459
MUSEUM.
EVERYONE WILL HEAR US CLAP.

3
00:00:03,459 --> 00:00:04,459
WATCH AND LISTEN.
WE'VE GOT ABOUT FIVE MINUTES

4
00:00:04,459 --> 00:00:05,459
BEFORE THE PROGRAM.
HANG TIGHT.

5
00:00:05,459 --> 00:00:06,459
I REALLY HOPE YOU ENJOY THE
PROGRAM.

6
00:00:06,459 --> 00:00:07,459
TAKE IT EASY.
[APPLAUSE]

7
00:00:07,459 --> 00:00:08,459
>>> GOOD MORNING LADIES AND
GENTLEMEN.

8
00:00:08,459 --> 00:00:09,459
I AM ROGER LAUNIUS, ASSOCIATE
DIRECTOR FOR COLLECTIONS AND

9
00:00:09,459 --> 00:00:10,459
CURATORIAL AFFAIRS HERE AT THE
SMITHSONIAN INSTITUTION'S

10
00:00:10,459 --> 00:00:17,130
NATIONAL AIR AND SPACE MUSEUM
HERE IN WASHINGTON.

11
00:00:17,130 --> 00:00:23,199
[APPLAUSE]
I WOULD LIKE TO WELCOME YOU TO

12
00:00:23,199 --> 00:00:27,869
THIS WONDERFUL EXPERIENCE WHERE
WE GET TO MEET THE NEW ASTRONAUT

13
00:00:27,869 --> 00:00:33,149
CANDIDATES FROM NASA.
AND TO HOST THIS ACTIVITY TODAY,

14
00:00:33,149 --> 00:00:38,030
I'M ASKING LELAND MELVIN, WHO IS
HIMSELF A FORMER ASTRONAUT, A

15
00:00:38,030 --> 00:00:41,969
VETERAN OF TWO MISSIONS, BUT
ALSO THE ASSOCIATE ADMINISTRATOR

16
00:00:41,969 --> 00:00:47,100
FOR EDUCATION AT NASA TODAY.
SO WITHOUT ANY FURTHER

17
00:00:47,100 --> 00:00:51,599
COMMENTARY FROM ME, LET ME
INVITE LELAND UP TO THE STAGE.

18
00:00:51,599 --> 00:00:54,339
[APPLAUSE]
>> THANK YOU.

19
00:00:54,339 --> 00:00:59,960
THANKS, ROGER.
HOW ARE YOU GUYS DOING TODAY?

20
00:00:59,960 --> 00:01:02,600
OH, COME ON.
HOW ARE YOU DOING?

21

00:01:02,600 --> 00:01:04,610

[hCHEERINGh]

>> ALL RIGHT.

22

00:01:04,610 --> 00:01:07,520

THIS IS VERY EXCITING.

THIS IS THE LATEST ASTRONAUT

23

00:01:07,520 --> 00:01:09,640

CLASS AND THEY'RE FANTASTIC
PEOPLE.

24

00:01:09,640 --> 00:01:13,579

GET TO TALK TO MEMBERS UP ON THE
SPACE STATION RIGHT NOW.

25

00:01:13,579 --> 00:01:15,909

WHAT I'M GOING TO DO IS BRING
THEM ALL UP.

26

00:01:15,909 --> 00:01:18,450

I'M A FORMER ASTRONAUT.
I FLEW A COUPLE TIMES IN SPACE

27

00:01:18,450 --> 00:01:21,370

AND I HAD A COOL THING HAPPEN TO
ME WHEN I WAS YOUR AGE.

28

00:01:21,370 --> 00:01:23,270

WHAT DO YOU THINK IT WAS?
OKAY.

29

00:01:23,270 --> 00:01:27,540

YOU DON'T HAVE TO ANSWER.
I ASKED MY DAD FOR A SKATEBOARD

30

00:01:27,540 --> 00:01:29,660

AND HE SAID YOU CAN'T AFFORD
ONE.

31
00:01:29,660 --> 00:01:32,500
I MADE MY OWN.
I BECAME A MECHANICAL ENGINEER

32
00:01:32,500 --> 00:01:39,330
BY MAKING MY OWN SKATEBOARD.
ARE YOU READY FOR THEM TO COME

33
00:01:39,330 --> 00:01:42,049
UP?
>> WANT TO BRING UP JOSH

34
00:01:42,049 --> 00:01:45,290
CASSADA.
ROUND OF APPLAUSE.

35
00:01:45,290 --> 00:01:48,329
[APPLAUSE]
ALL RIGHT, JOSH.

36
00:01:48,329 --> 00:01:51,850
GOOD JOB.
NEXT WE HAVE VICTOR GLOVER.

37
00:01:51,850 --> 00:01:56,219
VICTOR, COME ON UP!
[APPLAUSE]

38
00:01:56,219 --> 00:01:58,840
ALL RIGHT.
OKAY.

39
00:01:58,840 --> 00:02:01,969
HE'S HEAVY.
NEXT WE HAVE NICK HAGUE.

40
00:02:01,969 --> 00:02:04,990
NICK, COME ON UP.
[APPLAUSE]

41
00:02:04,990 --> 00:02:09,080
ALL RIGHT, MY MAN.
NEXT WE HAVE CHRISTINA HAMMOCK.

42
00:02:09,080 --> 00:02:13,700
CHRISTINA, COME ON DOWN.
THE PRICE IS RIGHT.

43
00:02:13,700 --> 00:02:17,490
[APPLAUSE]
ALL RIGHT.

44
00:02:17,490 --> 00:02:23,440
NEXT IS NICOLE MANN.
COME ON, NICOLE.

45
00:02:23,440 --> 00:02:26,980
[APPLAUSE]
ALL RIGHT.

46
00:02:26,980 --> 00:02:28,560
NEXT WE HAVE ANNE McCLAIN.
COME ON, ANNE.

47
00:02:28,560 --> 00:02:32,910
[APPLAUSE]
COME ON, YOU GUYS GIVE THEM MORE

48
00:02:32,910 --> 00:02:35,670
LOVE THAN THAT.
[APPLAUSE]

49
00:02:35,670 --> 00:02:39,800
OKAY.
HER CALL SIGN IS ANIMAL.

50
00:02:39,800 --> 00:02:47,480
NEXT WE HAVE DREW MORGAN.
COME ON, DREW.

51

00:02:47,480 --> 00:02:49,280

[APPLAUSE]

ALL RIGHT.

52

00:02:49,280 --> 00:02:51,320

OKAY.

I CAN'T EVEN DO ALL THAT.

53

00:02:51,320 --> 00:02:57,980

AND NEXT WE HAVE JESSICA MEIR.

COME ON JESSICA.

54

00:02:57,980 --> 00:03:01,550

[APPLAUSE]

NICE TO MEET YOU.

55

00:03:01,550 --> 00:03:03,240

ALL RIGHT.

OKAY.

56

00:03:03,240 --> 00:03:06,640

SO WE HAVE THE CREW HERE.

WHY DON'T YOU SIT DOWN.

57

00:03:06,640 --> 00:03:12,310

WE'LL ASK THEM, WHAT WAS THAT

THING THAT GOT YOU EXCITED OR

58

00:03:12,310 --> 00:03:15,290

GOT YOU GOING WHEN YOU WERE

THEIR AGE.

59

00:03:15,290 --> 00:03:19,130

ANNE, YOU NEED A MIKE.

THERE YOU GO.

60

00:03:19,130 --> 00:03:21,650

>> WHEN I WAS YOUR AGE, I USED

TO SEE THE SPACE SHUTTLE TAKING

61
00:03:21,650 --> 00:03:24,710
OFF ON TV ALL THE TIME.
I THOUGHT THAT WAS THE COOLEST

62
00:03:24,710 --> 00:03:27,680
THING BECAUSE THERE WERE THE
PEOPLE IN THIS WORLD THAT WERE

63
00:03:27,680 --> 00:03:30,410
GOING TO DO SOMETHING THAT'S
NEVER BEEN DONE BEFORE.

64
00:03:30,410 --> 00:03:33,010
THEY'RE GOING TO SEE SOMETHING
WITH THEIR OWN EYEBALLS THAT NO

65
00:03:33,010 --> 00:03:36,560
ONE HAS SEEN BEFORE AND USING
TECHNOLOGY THAT'S NEVER BEEN

66
00:03:36,560 --> 00:03:38,540
INVENTED BEFORE.
TO ME, THAT WAS THE COOLEST

67
00:03:38,540 --> 00:03:41,440
THING AND I WANTED TO BE PART OF
IT.

68
00:03:41,440 --> 00:03:44,150
>> AWESOME.
VICTOR?

69
00:03:44,150 --> 00:03:49,020
>> SO IT WAS CURIOSITY AND ONE
OF THE EXAMPLES OF MY CURIOSITY

70
00:03:49,020 --> 00:03:51,920
WAS COLLECTING BUGS.
I LOVE TO COLLECT BUGS.

71
00:03:51,920 --> 00:03:55,030
I WOULD PUT THEM IN ANYTHING, A
POCKET, MY BACKPACK.

72
00:03:55,030 --> 00:03:58,460
>> DID YOU EAT THEM?
>> I DIDN'T EAT THEM.

73
00:03:58,460 --> 00:04:02,440
NO COMMENT.
BUT WHEN MY MOM WOULD GO TO WASH

74
00:04:02,440 --> 00:04:05,790
MY CLOTHES, SHE WOULD CLEAN OUT
MY POCKETS AND SOMETIMES I WOULD

75
00:04:05,790 --> 00:04:08,760
FORGET TO TAKE THEM OUT.
TO THIS DAY, SHE WILL NOT PUT

76
00:04:08,760 --> 00:04:11,690
HER HANDS IN MY POCKETS.
>> THANKS.

77
00:04:11,690 --> 00:04:16,150
NICK?
>> WELL, I THINK THE THING THAT

78
00:04:16,150 --> 00:04:19,310
REALLY GOT ME STARTED, WHEN I
WAS YOUR AGE, I LIKED TO FIGURE

79
00:04:19,310 --> 00:04:21,730
OUT HOW THINGS WORKED.
IT GOT ME IN TROUBLE QUITE A BIT

80
00:04:21,730 --> 00:04:25,979
BECAUSE I WOULD BREAK THINGS TO
PUT THEM BACK TOGETHER.

81
00:04:25,979 --> 00:04:28,560
THAT GOT ME STARTED KIND OF ON
THE SAME TRACK AS LELAND.

82
00:04:28,560 --> 00:04:32,020
I LIKE TO MAKE THINGS.
>> AWESOME.

83
00:04:32,020 --> 00:04:34,199
NICOLE?
>> SO WHEN I WAS LITTLE, I

84
00:04:34,199 --> 00:04:36,699
WASN'T SURE WHAT I WANTED TO DO.
BUT I KNEW THAT I LIKED TO

85
00:04:36,699 --> 00:04:39,570
EXPLORE AND I LIKED TO FIND OUT
NEW THINGS.

86
00:04:39,570 --> 00:04:41,909
WE WOULD GO CAMPING WITH MY
FAMILY AND I'D GO ON A HIKE AND

87
00:04:41,909 --> 00:04:46,539
SAY MOM, DAD, CAN WE GO TO THE
NEXT PEAK, I WANT TO GO FARTHER

88
00:04:46,539 --> 00:04:48,129
AND FARTHER.
I KEPT LOOKING AND KEPT

89
00:04:48,129 --> 00:04:49,490
EXPLORING.
THAT'S WHAT FIRST GOT ME

90
00:04:49,490 --> 00:04:51,449
INTERESTED.
>> AWESOME.

91
00:04:51,449 --> 00:04:53,569
DREW?
>> I THINK IT WAS INSPIRATION

92
00:04:53,569 --> 00:04:56,409
FROM THOSE ASTRONAUTS THAT HAD
GONE BEFORE ME.

93
00:04:56,409 --> 00:05:00,439
WHEN I WAS IN FOURTH GRADE, I
WROTE A LETTER TO ALLEN BEAN, HE

94
00:05:00,439 --> 00:05:03,879
SENT ME A PICTURE SIGNED BY HIM.
WHEN IT CAME IN THE MAIL, I WAS

95
00:05:03,879 --> 00:05:06,020
SO EXCITED.
I THOUGHT I WAS CHOSEN TO BE AN

96
00:05:06,020 --> 00:05:10,139
ASTRONAUT AT THAT MOMENT.
I NEVER LOST THAT PASSION OR MY

97
00:05:10,139 --> 00:05:14,419
DRIVE TO DO THAT.
I KEPT IT AND STUCK TO IT.

98
00:05:14,419 --> 00:05:18,080
AND HERE I AM LUCKY ENOUGH TO
SIT AMONG THESE\h-- MY SEVEN

99
00:05:18,080 --> 00:05:20,530
CLASSMATES TODAY.
>> AWESOME.

100
00:05:20,530 --> 00:05:23,249
CHRISTINA?
>> WHEN I WAS LITTLE, MY DAD WAS

101

00:05:23,249 --> 00:05:25,379

REALLY INTO SCIENCE.

WE USED TO HAVE NATIONAL

102

00:05:25,379 --> 00:05:28,560

GEOGRAPHIC MAGAZINES AROUND THE

HOUSE AND I WOULD ALWAYS LOOK

103

00:05:28,560 --> 00:05:31,250

THROUGH THEM.

I WOULD TEAR OUT THE PAGES THAT

104

00:05:31,250 --> 00:05:34,259

INTERESTED ME THE MOST.

ON THE WALLS IN MY BEDROOM WHEN

105

00:05:34,259 --> 00:05:37,520

I WAS A LITTLE GIRL, THERE WERE

ALL THESE PICTURES OF SPACE AND

106

00:05:37,520 --> 00:05:39,539

ANTARCTICA.

THOSE WERE THE TWO THINGS I

107

00:05:39,539 --> 00:05:41,590

LOVED.

WHEN I GREW UP, THOSE WERE MY

108

00:05:41,590 --> 00:05:44,199

DREAMS THAT I BROUGHT TO

FRUITION.

109

00:05:44,199 --> 00:05:47,800

I WENT TO ANTARCTICA AFTER I

GRADUATED FROM COLLEGE AND NOW

110

00:05:47,800 --> 00:05:51,430

I'M PART OF THE ASTRONAUT CORPS.

THE THINGS THAT YOU REALLY LOVE,

111

00:05:51,430 --> 00:05:54,740

TURN THOSE INTO YOUR DREAMS AND
YOUR REALITY.

112

00:05:54,740 --> 00:05:57,620

>> AWESOME.

JOSH?

113

00:05:57,620 --> 00:05:59,350

>> WHEN I WAS GROWING UP MY DAD
WAS A NAVY PILOT.

114

00:05:59,350 --> 00:06:03,120

I WAS SURROUNDED BY AVIATION AND
WAS REALLY INTERESTED IN IT.

115

00:06:03,120 --> 00:06:06,330

I WAS ALSO INTERESTED IN MATH
AND SCIENCE AND COMPUTERS AND

116

00:06:06,330 --> 00:06:09,150

SPORTS.

I THOUGHT I WAS GOING TO PLAY

117

00:06:09,150 --> 00:06:11,789

MAJOR LEAGUE BASEBALL.

THAT WAS THE PLAN.

118

00:06:11,789 --> 00:06:14,500

I WORKED REALLY, REALLY HARD.

MY OFF-SPEED STUFF WAS OKAY BUT

119

00:06:14,500 --> 00:06:18,870

MY FASTBALL WAS NOT A FASTBALL.

SO I HAD TO COME UP WITH A PLAN

120

00:06:18,870 --> 00:06:20,330

B.

I REMEMBER MY DAD SAYING BOY, IF

121

00:06:20,330 --> 00:06:22,460

HE COULD DO ANYTHING
DIFFERENTLY, HE WOULD WORK HARD

122

00:06:22,460 --> 00:06:25,949

TO BE AN ASTRONAUT.
I THOUGHT, WOW, THAT'S A JOB

123

00:06:25,949 --> 00:06:28,389

THAT COMBINES EVERYTHING, THE
MATH AND THE SCIENCE AND THE

124

00:06:28,389 --> 00:06:33,040

EXPLORATION AND THE ATHLETICISM
AND THANKFULLY NASA DOESN'T NEED

125

00:06:33,040 --> 00:06:36,340

ME TO THROW ANYTHING FASTER THAN
75 MIRROR I WOULDN'T BE SITTING

126

00:06:36,340 --> 00:06:38,389

UP HERE.
>>> AWESOME.

127

00:06:38,389 --> 00:06:42,449

THIS IS ALL ABOUT STEM.
SCIENCE TECHNOLOGY, ENGINEERING

128

00:06:42,449 --> 00:06:45,529

AND MATHEMATICS.
ALL OF THESE CANDIDATES HAVE

129

00:06:45,529 --> 00:06:48,300

STEM DEGREES.
WE WANT TO GET YOU GUYS INSPIRED

130

00:06:48,300 --> 00:06:51,749

AND MOTIVATED TO THINK ABOUT
YOURSELVES BEING AN ASTRONAUT,

131

00:06:51,749 --> 00:06:55,090

BEING A ROCKET SCIENTIST, BEING
SOMEONE TO HELP CHANGE THE

132

00:06:55,090 --> 00:06:56,800

WORLD.
THAT'S WHAT SCIENTISTS AND

133

00:06:56,800 --> 00:06:58,999

ENGINEERS DO.
WE CHANGE THE WORLD AND REALLY

134

00:06:58,999 --> 00:07:02,059

POSITIVE WAYS.
WE HAVE AN SSME, A SPACE SHUTTLE

135

00:07:02,059 --> 00:07:04,289

MAIN ENGINE HERE.
THIS IS THE ENGINE THAT TOOK ME

136

00:07:04,289 --> 00:07:07,099

TO SPACE ON THE SPACE SHUTTLE
ATLANTIS.

137

00:07:07,099 --> 00:07:10,499

WE HAVE HABITATS, DISCOVERY, ALL
KINDS OF THINGS IN HERE.

138

00:07:10,499 --> 00:07:13,580

YOU'LL HEAR ABOUT SOME OF THESE
THINGS WHEN YOU TALK ABOUT THE

139

00:07:13,580 --> 00:07:15,590

ASTRONAUTS IN SPACE.
MAKE SURE YOU HAVE YOUR

140

00:07:15,590 --> 00:07:18,139

QUESTIONS READY.
YOU'LL BE TALKING TO TWO

141

00:07:18,139 --> 00:07:22,430

ASTRONAUTS ON THE INTERNATIONAL
SPACE STATION TRAVELING AROUND

142

00:07:22,430 --> 00:07:28,870

THE PLANET AT 17,500 MILES PER
HOUR EVERY 90 MINUTES.

143

00:07:28,870 --> 00:07:33,340

AGAIN, 17,500 MILES PER HOUR.
HAVE YOU EVER GONE THAT FAST IN

144

00:07:33,340 --> 00:07:34,819

A CAR?
>> NOT YET.

145

00:07:34,819 --> 00:07:37,949

>> I DIDN'T THINK SO.
IT'S A REALLY COOL PLACE.

146

00:07:37,949 --> 00:07:41,240

WHEN I WAS UP THERE, ASK THIS
QUESTION, WHAT DO YOU THINK THE

147

00:07:41,240 --> 00:07:46,300

HARDEST THING TO DO IN SPACE IS?
ASK THEM THAT QUESTION WHEN THEY

148

00:07:46,300 --> 00:07:48,729

COME UP.
FOR THE TWITTER FOLKS OUT THERE,

149

00:07:48,729 --> 00:07:52,810

WE'RE GOING TO HAVE A HASH TAG,
#ASTRONAUT\h-- MAKE SURE I HAVE

150

00:07:52,810 --> 00:07:58,800

THE RIGHT THING.
#ASTRO CLASS AND THERE'S ALSO

151
00:07:58,800 --> 00:08:03,650
ANOTHER TWITTER ACCOUNT [h@ASTRO](#)
CLASS 2013.

152
00:08:03,650 --> 00:08:08,340
FOR THOSE IN THE TWITTER VERSE,
SEND YOUR QUESTIONS TO OUR

153
00:08:08,340 --> 00:08:10,289
LOVELY SARA BACK HERE.
SHE'LL BE FIELDING SOME OF THE

154
00:08:10,289 --> 00:08:12,870
QUESTIONS AND WE'LL HAVE
QUESTIONS FOR THE ASTRONAUTS IN

155
00:08:12,870 --> 00:08:15,840
SPACE AND THEN FIND OUT MORE
ABOUT THE ASTRONAUT CANDIDATES

156
00:08:15,840 --> 00:08:18,999
AND WHAT INSPIRED THEM AND
MOTIVATED THEM TO BE ASTRONAUTS

157
00:08:18,999 --> 00:08:22,660
AND COME UP HERE TODAY.
SO WE'VE GOT ABOUT 30 SECONDS

158
00:08:22,660 --> 00:08:26,159
BEFORE WE TALK TO THE
INTERNATIONAL SPACE STATION.

159
00:08:26,159 --> 00:08:29,370
GIVE A BIG ROUND OF APPLAUSE FOR
OUR TEAM HERE.

160
00:08:29,370 --> 00:08:33,890
[APPLAUSE]
YOU GUYS LOOK UP HERE.

161

00:08:33,890 --> 00:08:36,550

WE'VE GOT HOUSTON.

MISSION CONTROL IN HOUSTON,

162

00:08:36,550 --> 00:08:37,550

TEXAS.

PICTURE UP THERE.

163

00:08:37,550 --> 00:08:41,330

WHO IS THE CAP COM DOES ANYONE

KNOW?

164

00:08:41,330 --> 00:08:46,200

ANYONE KNOW WHAT THAT IS.

>> CAPSULE COMMUNICATOR.

165

00:08:46,200 --> 00:08:49,190

THE PERSON WHO TALKS TO THE

PERSON IN SPACE.

166

00:08:49,190 --> 00:08:55,560

I SEE HOWELL UP THERE.

WE GOT A FEW MORE SECONDS HERE.

167

00:08:55,560 --> 00:09:00,890

WHAT'S YOUR\h-- WHAT'S THE

FAVORITE THING THAT YOU\h--

168

00:09:00,890 --> 00:09:04,240

FAVORITE THING YOU'VE DONE SO

FAR AS AN ASTRONAUT CANDIDATE.

169

00:09:04,240 --> 00:09:07,290

>> FAVORITE THING THAT I'VE DONE

SO FAR?

170

00:09:07,290 --> 00:09:08,960

ALL OF IT.

ALL SIX MONTHS.

171

00:09:08,960 --> 00:09:13,570

ONE THING THAT STANDS OUT,
FLYING ON THE ZERO G AIRPLANE

172

00:09:13,570 --> 00:09:18,900

AND EXPERIENCE THE SECONDS OF
WEIGHTLESSNESS, IT WAS WAY

173

00:09:18,900 --> 00:09:20,830

BETTER THAN I THOUGHT IT WOULD
BE CALLED.

174

00:09:20,830 --> 00:09:23,660

>> WHAT'S IT CALLED?
>> THE VOMIT COMET.

175

00:09:23,660 --> 00:09:27,330

>> WHY IS IT CALLED THAT?
>> BECAUSE\h-- YOU CAN USE YOUR

176

00:09:27,330 --> 00:09:30,090

IMAGINATION.
IT CAN GET MESSY.

177

00:09:30,090 --> 00:09:32,150

>> WE'RE READY?
OKAY.

178

00:09:32,150 --> 00:09:38,840

I SEE HOUSTON PREPARING.
LET'S DO A COUNTDOWN.

179

00:09:38,840 --> 00:09:48,130

10, 9, 8, 7, 6, 5\h--

>> STATION, THIS IS HOUSTON.

180

00:09:48,130 --> 00:09:56,160

ARE YOU READY FOR THE EVENT?
>> HOUSTON, STATION IS READY.

181
00:09:56,160 --> 00:09:59,470
>> NATIONAL AIR AND SPACE
MUSEUM, THIS IS MISSION CONTROL,

182
00:09:59,470 --> 00:10:02,940
HOUSTON.
PLEASE CALL STATION FOR A VOICE

183
00:10:02,940 --> 00:10:05,270
CHECK.
>> STATION, THIS IS LELAND AND

184
00:10:05,270 --> 00:10:08,580
THE AS-CANS AT THE NATIONAL AIR
AND SPACE ME SUM.

185
00:10:08,580 --> 00:10:16,210
HOW DO YOU HEAR US?
>> LELAND AND THE AS-CANS, WE

186
00:10:16,210 --> 00:10:22,780
HEAR YOU LOUD AND CLEAR.
>> AWESOME.

187
00:10:22,780 --> 00:10:26,970
[APPLAUSE]
>> YOU GUYS ARE LOOKING GREAT.

188
00:10:26,970 --> 00:10:31,670
MIKE, BEEN PUMPING SOME STEEL UP
THERE OR SOMETHING.

189
00:10:31,670 --> 00:10:37,040
ALL RIGHT.
GO AHEAD, MIKE.

190
00:10:37,040 --> 00:10:39,020
WE'RE GOING TO TAKE SOME
QUESTIONS FROM THE STUDENTS HERE

191

00:10:39,020 --> 00:10:41,430

IN THE AUDIENCE.

>> I WAS JUST GOING TO SAY, THEY

192

00:10:41,430 --> 00:10:45,700

MAKE US DO THAT.

>> YOU HAVE TO DO THAT, RIGHT?

193

00:10:45,700 --> 00:10:48,370

>> KEEP YOUR BONES AND YOUR
MUSCLES IN SHAPE.

194

00:10:48,370 --> 00:10:50,770

SO WE'RE GOING TO TAKE SOME
QUESTIONS FROM THE STUDENTS.

195

00:10:50,770 --> 00:10:53,560

I THINK THE STUDENTS WILL BE
LINING UP NOW, IS THAT CORRECT?

196

00:10:53,560 --> 00:11:00,510

WE'LL GET THEM TO LINE UP.
AND THEN WE'LL ASK YOU YOU TWO

197

00:11:00,510 --> 00:11:03,820

QUESTIONS IN SPACE.
WHAT WAS THE THING THAT GOT YOU

198

00:11:03,820 --> 00:11:09,790

SO INSPIRED WHEN YOU WERE IN
MIDDLE SCHOOL?

199

00:11:09,790 --> 00:11:14,650

>> GUYS, THAT'S A LONG TIME AGO,
LELAND.

200

00:11:14,650 --> 00:11:17,350

I'M NOT SURE IF I CAN REMEMBER
MIDDLE SCHOOL.

201

00:11:17,350 --> 00:11:20,030

BUT I CERTAINLY REMEMBER WHEN I
WAS IN HIGH SCHOOL.

202

00:11:20,030 --> 00:11:22,330

IT WAS THE EARLY DAYS OF THE
SHUTTLE PROGRAM AND GETTING TO

203

00:11:22,330 --> 00:11:26,000

WATCH ALL OF THOSE LAUNCHES THAT
WERE HAPPENING EVERY YEAR.

204

00:11:26,000 --> 00:11:31,810

THAT'S DEFINITELY WHAT INSPIRED
ME ABOUT THE SPACE PROGRAM AND

205

00:11:31,810 --> 00:11:35,280

WHAT GAVE ME THE IDEA OF
BECOMING AN ASTRONAUT SOMEDAY.

206

00:11:35,280 --> 00:11:38,730

>> FANTASTIC.

>> RICK, WHAT ABOUT YOU?

207

00:11:38,730 --> 00:11:43,070

I KNOW THAT WAS A REALLY LONG
TIME AGO FOR YOU.

208

00:11:43,070 --> 00:11:48,940

WHAT WAS THE THING THAT INSPIRED
YOU.

209

00:11:48,940 --> 00:11:52,700

>> I THINK^h-- THANKS, LELAND.

YEAH, I DO REMEMBER ACTUALLY

210

00:11:52,700 --> 00:11:56,510

BACK WHEN I WAS IN SIXTH GRADE
OR THAT TIME FRAME AND I

211

00:11:56,510 --> 00:11:59,180

REMEMBER WHENEVER MY TEACHERS
TALKED ABOUT SPACE OR TALKED

212

00:11:59,180 --> 00:12:02,860

ABOUT PLANETS, THAT WOULD JUST
INTEREST ME TO NO END.

213

00:12:02,860 --> 00:12:05,100

IT WAS MY FAVORITE SUBJECT AND
OF COURSE, I WAS ALWAYS

214

00:12:05,100 --> 00:12:08,510

INTERESTED IN AIRPLANES AND
FLYING AND THINGS LIKE THAT.

215

00:12:08,510 --> 00:12:11,040

IT JUST KIND OF NATURALLY CAME
TOGETHER THAT I WENT AND BECAME

216

00:12:11,040 --> 00:12:15,790

AN ENGINEER AND THEN I DECIDED
TO APPLY AS AN ASTRONAUT AND OF

217

00:12:15,790 --> 00:12:17,480

COURSE, IT TOOK ME MANY, MANY
YEARS AND A LOT OF HARD WORK,

218

00:12:17,480 --> 00:12:18,940

BUT EVENTUALLY I DID GET
SELECTED.

219

00:12:18,940 --> 00:12:21,200

SO IT STARTED AT A VERY YOUNG
AGE.

220

00:12:21,200 --> 00:12:24,160

AN INTERESTING SUBJECT FOR ME.
>> FANTASTIC.

221

00:12:24,160 --> 00:12:27,160

THANK YOU.

WELL, YOU GUYS, ARE YOU READY

222

00:12:27,160 --> 00:12:31,260

FOR SOME QUESTIONS FROM SOME
FANTASTIC STUDENTS FROM THE D.C.

223

00:12:31,260 --> 00:12:33,980

METRO AREA?

OKAY.

224

00:12:33,980 --> 00:12:36,630

>> WE'RE READY.

>> WOULD YOU PLEASE STATE YOUR

225

00:12:36,630 --> 00:12:39,640

NAME AND THEN ASK THE QUESTION,
WHAT SCHOOL YOU'RE FROM.

226

00:12:39,640 --> 00:12:44,260

>> I'M FROM FRIENDSHIP, I'M IN
SIXTH GRADE.

227

00:12:44,260 --> 00:12:49,280

I WOULD JUST LIKE TO ASK IF YOU
WERE NOT SELECTED TO BE AN

228

00:12:49,280 --> 00:12:58,390

ASTRONAUT, WHAT OTHER CAREER
WOULD YOU HAVE CHOSEN?

229

00:12:58,390 --> 00:13:00,890

>> THAT'S A GREAT QUESTION AND
THAT'S EASY FOR ME TO ANSWER

230

00:13:00,890 --> 00:13:04,300

BECAUSE I WAS AN ENGINEER WHO
WORKED AT NASA AND I WORKED AT

231

00:13:04,300 --> 00:13:07,690

THAT A FOR NINE YEARS AS AN
ENGINEER AND THEN IN MISSION

232

00:13:07,690 --> 00:13:10,000

CONTROL.
SO IF I DID NOT BECOME AN

233

00:13:10,000 --> 00:13:12,310

ASTRONAUT, I WOULD STILL BE
WORKING FOR NASA.

234

00:13:12,310 --> 00:13:15,800

IT'S A FANTASTIC PLACE TO WORK.
IT'S GOT SO MANY INTERESTING

235

00:13:15,800 --> 00:13:18,370

JOBS.
NOT JUST ASTRONAUT, IT HAS

236

00:13:18,370 --> 00:13:22,750

ENGINEERING JOBS, IT HAS SIGH
TISS, JOBS FOR SCIENTISTS,

237

00:13:22,750 --> 00:13:24,680

DOCTORS, RESEARCHERS, ALL KIND
OF FOLKS.

238

00:13:24,680 --> 00:13:37,500

IT'S A GREAT PLACE TO WORK.
>> GREAT QUESTION.

239

00:13:37,500 --> 00:13:42,070

>> MY NAME IS NICHOLAS.
AND I'M FROM THE CAPITOL HILL

240

00:13:42,070 --> 00:13:45,280

HILL DAY SCHOOL.
I WAS WONDERING, WHAT DO YOU

241

00:13:45,280 --> 00:13:53,820

RESEARCH ON THE SPACE STATION?

>> NICHOLAS, THAT'S A GREAT

242

00:13:53,820 --> 00:13:56,750

QUESTION.

THERE IS A TON OF RESEARCH GOING

243

00:13:56,750 --> 00:13:58,680

ON UP HERE.

IN FACT, DURING OUR INCREMENT,

244

00:13:58,680 --> 00:14:01,760

THERE'S GOING TO BE OVER 200

EXPERIMENTS GOING ON.

245

00:14:01,760 --> 00:14:04,680

A LOT OF THOSE EXPERIMENTS, THEY

RANGE FROM ONE THAT IS WE DON'T

246

00:14:04,680 --> 00:14:07,440

HAVE A LOT OF INVOLVEMENT IN,

SUCH AS THE ALPHA MAGNETIC

247

00:14:07,440 --> 00:14:10,780

SPECTROMETER LOOKING FOR THE

ORIGINS OF THE UNIVERSE.

248

00:14:10,780 --> 00:14:14,380

WE HELP KEEP THE STATION RUNNING

AND UTILIZES THE POWER AND DATA

249

00:14:14,380 --> 00:14:17,090

AND COMMUNICATION STREAMS TO

BRING THE DATA DOWN TO THE

250

00:14:17,090 --> 00:14:19,960

GROUND.

THEN THERE'S EXPERIMENTS WHERE

251

00:14:19,960 --> 00:14:23,450

WE'RE MORE INVOLVED SO WE'RE
EXECUTING THE EXPERIMENTS IN

252

00:14:23,450 --> 00:14:26,480

CONJUNCTION WITH PRINCIPAL
INVESTIGATOR DOWN ON THE GROUND.

253

00:14:26,480 --> 00:14:29,980

FOR EXAMPLE, FLUID FLOW TYPE
EXPERIMENTS AND HOW THEY MOVE

254

00:14:29,980 --> 00:14:32,550

AND DIFFERENT SHAPED VESSELS,
THAT'S ANOTHER ONE WE'LL WORK

255

00:14:32,550 --> 00:14:34,340

ON.
THEN THERE'S THE EXPERIMENTS

256

00:14:34,340 --> 00:14:37,890

WHERE WE'RE VERY INVOLVED IN
BECAUSE WE'RE THE GUINEA PIGS.

257

00:14:37,890 --> 00:14:39,950

SO THERE'S A LOT OF THOSE WHERE
WE'RE TRYING TO FIGURE OUT WHAT

258

00:14:39,950 --> 00:14:43,410

HAPPENS TO THE HUMAN BODY UP IN
MICRO GRAVITY, SUCH AS OUR

259

00:14:43,410 --> 00:14:46,530

SPINES EXPAND.
WE'LL DO THINGS LIKE TAKE

260

00:14:46,530 --> 00:14:49,660

ULTRASOUND OF OUR SPINES AND,
AGAIN, THAT WILL BE WORKING IN

261

00:14:49,660 --> 00:14:51,630

CONJUNCTION WITH PEOPLE ON THE
GROUND THAT ARE GOING TO TAKE

262

00:14:51,630 --> 00:14:54,670

THAT DATA AND ANALYZE IT AND
HOPEFULLY THAT WILL HELP US

263

00:14:54,670 --> 00:14:58,800

DECIDE OR LEARN HOW WE CAN
PROTECT ASTRONAUTS MAYBE ONE OF

264

00:14:58,800 --> 00:15:04,390

YOU SOMEDAY WHEN WE DO A LONGER
FLIGHT TO MARS OR BEYOND.

265

00:15:04,390 --> 00:15:08,810

>> GREAT QUESTION.
NEXT QUESTION.

266

00:15:08,810 --> 00:15:12,620

>> HELLO.
I'M JOHNNY.

267

00:15:12,620 --> 00:15:15,790

I GO TO JEFFERSON ACADEMY IN
WASHINGTON, D.C.

268

00:15:15,790 --> 00:15:19,540

MY QUESTION IS, HOW DIFFERENT IS
THE TRANSITION FROM BEING IN

269

00:15:19,540 --> 00:15:25,330

SPACE TO COMING BACK DOWN TO
EARTH ON YOUR BODY?

270

00:15:25,330 --> 00:15:29,560

>> YEAH.
THAT'S A GOOD QUESTION.

271

00:15:29,560 --> 00:15:33,161

WHEN WE LAUNCH AND WE ARRIVE
HERE ON THE SPACE STATION, OUR

272

00:15:33,161 --> 00:15:36,210

BODY GOES THROUGH A LOT OF
CHANGES AND WHEN WE RETURN TO

273

00:15:36,210 --> 00:15:39,740

EARTH WE GO THROUGH A LOT OF
CHANGES.

274

00:15:39,740 --> 00:15:43,830

IT'S A GOOD QUESTION ON WHICH IS
HARDER ON THE BODY.

275

00:15:43,830 --> 00:15:46,130

I'VE BEEN THROUGH BOTH SEVERAL
TIMES.

276

00:15:46,130 --> 00:15:50,450

WHEN WE LAND, THE BIGGEST THING
THAT I NOTICE IS I FEEL VERY

277

00:15:50,450 --> 00:15:54,790

DEHYDRATED.
WE LOSE A LOT OF FLUIDS IN SPACE

278

00:15:54,790 --> 00:15:57,500

BECAUSE OF THE LACK OF GRAVITY.
A LOT OF THE BLOOD SHIFTS TO OUR

279

00:15:57,500 --> 00:16:00,100

HEAD AND OUR BODY DOESN'T NEED
ALL THAT FLUID.

280

00:16:00,100 --> 00:16:04,090

SO IT RELEASES ALL THE FLUID BY
URINATING MORE AND JUST

281

00:16:04,090 --> 00:16:07,690

EVAPORATION AND SWEATING IT OUT.
OF COURSE, WHEN WE GET BACK TO

282

00:16:07,690 --> 00:16:10,410

EARTH, THE GRAVITY IS BACK AND
PULLS A LOT OF THE BLOOD BACK IN

283

00:16:10,410 --> 00:16:14,400

OUR LEGS AND WE NEED THE FLUID.
I FEEL DEE HIGH DRIETED AND YOUR

284

00:16:14,400 --> 00:16:17,820

VESTIBULAR SYSTEM, YOU FEEL
DIZZY, LIKE YOU'VE BEEN ON A

285

00:16:17,820 --> 00:16:22,270

CARNIVAL RIDE FOR A FEW WEEKS.
IT TAKES TIME BEFORE YOU'RE ABLE

286

00:16:22,270 --> 00:16:26,220

TO WALK IN A STABLE WAY AND YOUR
MUSCLES OR BONES HAVE ATROPHIED.

287

00:16:26,220 --> 00:16:31,780

BUT WE EXERCISE A LOT TO
MINIMIZE THAT.

288

00:16:31,780 --> 00:16:35,520

YOUR BODY GOES THROUGH A LOT OF
CHANGES EITHER ON YOUR WAY UP OR

289

00:16:35,520 --> 00:16:41,780

ON YOUR WAY DOWN.
>> GREAT QUESTION.

290

00:16:41,780 --> 00:16:47,510

>> HI, MY NAME IS BROOK.
I GO TO THE BRIDGES ACADEMY.

291

00:16:47,510 --> 00:16:54,640

I WANTED TO KNOW HOW MANY LEVELS
OF MATH WOULD I NEED TO TAKE IF

292

00:16:54,640 --> 00:17:00,730

I WANTED TO BE AN ASTRONAUT?
>> EVERY LEVEL YOU CAN FIND.

293

00:17:00,730 --> 00:17:03,490

YEAH.
YOU DEFINITELY NEED TO STUDY THE

294

00:17:03,490 --> 00:17:06,039

MATH, THE SCIENCE, THE
ENGINEERING IN SCHOOL.

295

00:17:06,039 --> 00:17:10,050

MOST OF US HAVE A BACKGROUND IN
THAT, THOUGH THERE ARE

296

00:17:10,050 --> 00:17:13,209

ASTRONAUTS THAT DON'T HAVE THAT
KIND OF A BACKGROUND.

297

00:17:13,209 --> 00:17:17,449

THERE'S TEACHERS OUT THERE.
SO A LOT OF PEOPLE ARE INVOLVED

298

00:17:17,449 --> 00:17:20,819

IN THE ASTRONAUT PROGRAM, BUT
MATH IS CERTAINLY IMPORTANT.

299

00:17:20,819 --> 00:17:27,319

SO I HIGHLY RECOMMEND KEEP
STUDYING IT.

300

00:17:27,319 --> 00:17:34,389

>> REALLY GOOD QUESTION.
>> I'M JESSE.

301

00:17:34,389 --> 00:17:43,220

I'M FROM NORWOOD SCHOOL.
IF YOU HAD A CHOICE, WHAT AREA

302

00:17:43,220 --> 00:17:51,190

IN SPACE WOULD YOU LIKE TO
EXPLORE?

303

00:17:51,190 --> 00:17:54,110

>> THAT IS A GREAT QUESTION.
WHERE IN SPACE WOULD WE LIKE TO

304

00:17:54,110 --> 00:17:57,390

EXPLORE?
WELL, I THINK THE MOON IS A

305

00:17:57,390 --> 00:18:02,009

GREAT PLACE TO VISIT.
IT'S VERY CLOSE TO THE EARTH, IT

306

00:18:02,009 --> 00:18:04,059

ONLY TAKES THREE DAYS TO GET
THERE.

307

00:18:04,059 --> 00:18:06,980

SO IF WE WANT TO VISIT OR IF
THERE'S A PROBLEM WITH A

308

00:18:06,980 --> 00:18:10,129

VEHICLE, WE COULD ACCEPTED HELP.
IT'S A GREAT PLACE TO PRACTICE

309

00:18:10,129 --> 00:18:15,720

BEFORE WE MOVE ON TO COMPLICATED
PLACES LIKE MARS OR ASTEROIDS.

310

00:18:15,720 --> 00:18:19,130

I THINK THE MOON IS A GOOD
STEPPINGSTONE.

311

00:18:19,130 --> 00:18:25,799

>> JESSICA, DO YOU HAVE A
QUESTION FOR MIKE OR RICK?

312

00:18:25,799 --> 00:18:28,519

>> SURE.
SO THIS MIGHT APPLY TO

313

00:18:28,519 --> 00:18:30,250

EVERYBODY.
ALL OF US HAVE WORKED REALLY,

314

00:18:30,250 --> 00:18:31,919

REALLY HARD OUR WHOLE LIVES TO
GET HERE.

315

00:18:31,919 --> 00:18:35,300

OF COURSE, WE'VE HAD A LOT OF
FUN DOING ALL THE REALLY COOL

316

00:18:35,300 --> 00:18:37,270

THINGS THAT WE'VE BEEN FORTUNATE
ENOUGH TO DO.

317

00:18:37,270 --> 00:18:40,600

I GUESS THE QUESTION IS, ALL
THIS HARD WORK AND ALL THIS TIME

318

00:18:40,600 --> 00:18:43,590

AND WAITING AND FOR US THAT ARE
GOING TO WAIT SO LONG, IS IT

319

00:18:43,590 --> 00:18:51,529

WORTH IT?
>> YES.

320

00:18:51,529 --> 00:18:57,460

NO, IT IS DEFINITELY WORTH IT.
IT IS THE MOST AMAZING

321

00:18:57,460 --> 00:19:00,620

EXPERIENCE THAT I THINK YOU
COULD EVER HAVE.

322

00:19:00,620 --> 00:19:03,379

YOU KNOW, FLOATING IS TRULY
INCREDIBLE.

323

00:19:03,379 --> 00:19:05,990

IT NEVER GETS OLD.
IT'S SOMETHING THAT EVEN AS

324

00:19:05,990 --> 00:19:09,990

WE'RE WORKING ALL DAY LONG, YOU
JUST ENJOY DOING IT.

325

00:19:09,990 --> 00:19:12,910

IT'S SOMETHING THAT IS
UNFORTUNATE THAT WE DON'T GET TO

326

00:19:12,910 --> 00:19:15,549

EXPERIENCE MORE DOWN ON EARTH.
IT IS TRULY INCREDIBLE.

327

00:19:15,549 --> 00:19:17,900

THE VIEWS OF EARTH ARE TRULY
INCREDIBLE.

328

00:19:17,900 --> 00:19:21,139

IT IS WORTH THE WAIT.
>> FANTASTIC.

329

00:19:21,139 --> 00:19:25,519

NEXT QUESTION HERE FROM MY
FRIEND RIGHT HERE.

330

00:19:25,519 --> 00:19:29,889

COME ON UP.
>> GOOD MORNING.

331

00:19:29,889 --> 00:19:35,610

MY NAME IS TONY.

I AM A STUDENT AT FRIENDSHIP.

332

00:19:35,610 --> 00:19:41,309

I WOULD LIKE TO ASK YOU HOW DO

YOU FEEL WHEN YOU WERE SELECTED

333

00:19:41,309 --> 00:19:49,620

TO BE AN ASTRONAUT?

>> GOOD QUESTION.

334

00:19:49,620 --> 00:19:52,809

>> THAT'S A GREAT QUESTION.

WHEN I WAS FIRST SELECTED AS AN

335

00:19:52,809 --> 00:19:55,710

ASTRONAUT, I COULD NOT EVEN

BELIEVE THAT IT HAPPENED.

336

00:19:55,710 --> 00:19:59,909

I REMEMBER GETTING A PHONE CALL

AND THEM TELLING ME THAT I WAS

337

00:19:59,909 --> 00:20:02,650

SELECTED AS AN ASTRONAUT AND I

SAID OH, GREAT, THANK YOU VERY

338

00:20:02,650 --> 00:20:04,090

MUCH.

THE PHONE CALL ONLY LASTED A FEW

339

00:20:04,090 --> 00:20:07,659

SECONDS AND THEN I REMEMBER A

COUPLE HOURS LATER WONDERING IF

340

00:20:07,659 --> 00:20:10,259

I REALLY GOT THAT PHONE CALL OR

WAS I DREAMING?

341

00:20:10,259 --> 00:20:14,529

I HAD TO CALL DUANE ROSS WHO
WORKS IN THE ASTRONAUT SELECTION

342

00:20:14,529 --> 00:20:16,419

BOARD.
DUANE, DID I REALLY GET

343

00:20:16,419 --> 00:20:18,510

SELECTED?
HE SAID YES, RICK, YOU'RE NOT

344

00:20:18,510 --> 00:20:20,249

DREAMING.
IT WAS A VERY EXCITING TIME FOR

345

00:20:20,249 --> 00:20:26,279

ME AND I'LL NEVER FORGET IT.
>> MIKE AND RICK, DUANE ROSS IS

346

00:20:26,279 --> 00:20:31,160

ACTUALLY HERE WITH US TODAY.
GOOD QUESTION, YOUNG MAN.

347

00:20:31,160 --> 00:20:32,860

>> SO WE'RE GOING TO GO TO
SOCIAL MEDIA NOW.

348

00:20:32,860 --> 00:20:34,839

SEE WHICH QUESTIONS ARE OUT
THERE.

349

00:20:34,839 --> 00:20:38,210

>> WE HAVE SOME GREAT QUESTIONS
COMING IN.

350

00:20:38,210 --> 00:20:42,610

WE HAVE ONE FROM GREGORIO WHO
WANTS TO KNOW WHAT DOES THE

351

00:20:42,610 --> 00:20:50,120

SPACE PROGRAM HOPE TO ACCOMPLISH
THIS YEAR?

352

00:20:50,120 --> 00:20:53,940

>> WOW, THAT'S A BIG QUESTION.
I THINK THERE'S GOING TO BE A

353

00:20:53,940 --> 00:20:56,789

HUGE OR A LOT OF ACCOMPLISHMENTS
THIS YEAR.

354

00:20:56,789 --> 00:20:59,830

AGAIN, ALL IN THOSE SCIENCE
ARENAS, I EXPECT TO SEE A LOT OF

355

00:20:59,830 --> 00:21:03,000

ACCOMPLISHMENTS THERE.
SOMETIMES, THOUGH, THE SCIENCE,

356

00:21:03,000 --> 00:21:05,759

THE RESULTS FROM WHAT WE'RE
DOING UP HERE TAKE A LITTLE TIME

357

00:21:05,759 --> 00:21:08,669

BECAUSE WE COLLECT A LOT OF THAT
DATA, WE SEND IT DOWN TO THE

358

00:21:08,669 --> 00:21:12,039

GROUND AND THEN THE SCIENTISTS,
THEY NEED TO HAVE TIME TO LOOK

359

00:21:12,039 --> 00:21:16,480

AT THAT DATA, TO ANALYZE IT AND
TO COME UP WITH SOME RESULTS ON

360

00:21:16,480 --> 00:21:18,779

THAT.
SO A LOT OF WHAT WE'RE DOING,

361

00:21:18,779 --> 00:21:22,789

YOU MAY NOT SEE THE RESULTS FOR
THAT UNTIL TWO YEARS FROM NOW.

362

00:21:22,789 --> 00:21:26,179

AND SO THERE'S GOING TO BE A LOT
OF BIG ACCOMPLISH AMS JUST BY

363

00:21:26,179 --> 00:21:28,360

KEEPING THE SPACE STATION
RUNNING.

364

00:21:28,360 --> 00:21:31,659

WE'VE GOT MORE VISITING VEHICLES
THAT WILL BE COMING UP HERE.

365

00:21:31,659 --> 00:21:35,980

WE JUST HAD ORBITAL COME UP,
SPACE X WILL BE COMING UP,

366

00:21:35,980 --> 00:21:37,950

RUSSIAN PROGRESS VEHICLES COMING
UP.

367

00:21:37,950 --> 00:21:43,350

I'M SURE THERE WILL BE MORE EVAs
PLANNED AS WELL THIS YEAR.

368

00:21:43,350 --> 00:21:46,399

IT'S ALWAYS BUSY AND I EXPECT A
LOT OF GREAT THINGS ARE GOING TO

369

00:21:46,399 --> 00:21:51,369

HAPPEN THIS YEAR.

>> AND I THINK WE HAVE ANOTHER

370

00:21:51,369 --> 00:21:56,110

QUESTION FROM THE AS-CANS.

>> HEY GUYS, I WAS WONDERING IF

371

00:21:56,110 --> 00:21:58,909

YOU COULD SHARE WITH THE
AUDIENCE HERE.

372

00:21:58,909 --> 00:22:02,420

WE TALKED ABOUT WORKING OUT AND
TRYING TO PREVENT BONE LOSS AND

373

00:22:02,420 --> 00:22:05,090

MUSCLE ATROPHY.
COULD YOU TALK ABOUT THINGS YOU

374

00:22:05,090 --> 00:22:09,190

DID IN TERMS OF ATHLETICS
GROWING UP AND WHAT YOU HAVE TO

375

00:22:09,190 --> 00:22:16,570

DO ON STATION.
>> THAT'S A GOOD QUESTION, NICK.

376

00:22:16,570 --> 00:22:22,200

I ALWAYS SAID THAT FLYING IN
SPACE, SPACE SHUTTLE MISSIONS

377

00:22:22,200 --> 00:22:24,590

THAT I'VE DONE BEFORE AND NOW A
SPACE STATION MISSION, IT'S A

378

00:22:24,590 --> 00:22:27,899

TEAM EVENT, IT'S A TEAM SPORT.
I THINK IT'S VERY IMPORTANT

379

00:22:27,899 --> 00:22:31,820

GROWING UP TO PLAY TEAM SPORTS,
FOOTBALL, BASEBALL, BASKETBALL,

380

00:22:31,820 --> 00:22:33,980

SOCCER, HOCKEY, ALL THOSE
DIFFERENT SPORTS.

381

00:22:33,980 --> 00:22:38,690

I THINK IT GIVES YOU A BIG
ADVANTAGE TO LEARN TO PLAY WITH

382

00:22:38,690 --> 00:22:41,450

YOUR TEAMMATES, TO WORK WITH
YOUR TEAMMATES, TO WORK TOGETHER

383

00:22:41,450 --> 00:22:43,999

TO ACHIEVE A COMMON GOAL BECAUSE
IT'S WHAT WE DO UP HERE.

384

00:22:43,999 --> 00:22:47,149

IT'S EXACTLY WHAT WE DO UP HERE.
YOU'RE WORKING WITH THE CREW

385

00:22:47,149 --> 00:22:50,840

MATES AND THE FOLKS ON THE
GROUND AND THE SCIENTISTS.

386

00:22:50,840 --> 00:22:53,070

IT'S ONE BIG TEAM, ONE BIG HAPPY
FAMILY.

387

00:22:53,070 --> 00:22:54,759

YOU HAVE TO LEARN TO WORK
TOGETHER.

388

00:22:54,759 --> 00:22:57,470

THE ONLY WAY YOU'RE GOING TO
MOVE FORWARD AND ACCOMPLISH THE

389

00:22:57,470 --> 00:23:00,570

GOALS IS BY WORKING TOGETHER.
I THINK IT'S DIRECTLY RELATED TO

390

00:23:00,570 --> 00:23:04,690

TEAM SPORTS AND THE MISSIONS
THAT WE DO.

391

00:23:04,690 --> 00:23:06,899

GROWING UP, I PLAYED A LOT OF
SPORTS.

392

00:23:06,899 --> 00:23:11,129

I PLAYED FOOTBALL, I PLAYED
BASKETBALL AND LOTS OF DIFFERENT

393

00:23:11,129 --> 00:23:12,510

THINGS.
MOSTLY IN THE STREET WITH MY

394

00:23:12,510 --> 00:23:15,779

FRIENDS BUT ALSO SOME ORGANIZED
SPORTS IN SCHOOL.

395

00:23:15,779 --> 00:23:20,639

>> GREAT.
NOW, MIKE, IF WE\h-- THE WIDE

396

00:23:20,639 --> 00:23:23,279

RECEIVER, DEFENSIVE BACK CLASH
WOULD BE HAPPENING RIGHT NOW,

397

00:23:23,279 --> 00:23:26,080

YOU KNOW.
LET'S TAKE ANOTHER QUESTION FROM

398

00:23:26,080 --> 00:23:29,039

SOCIAL MEDIA.
>> YOU'RE GOING DOWN.

399

00:23:29,039 --> 00:23:31,440

>> OKAY.
SURE.

400

00:23:31,440 --> 00:23:34,379

SO WE HAVE A QUESTION FOR THE
CANDIDATES.

401

00:23:34,379 --> 00:23:38,639

IN THE TRADITION OF THE QUESTION
ASKED TO THE MERCURY ASTRONAUTS,

402

00:23:38,639 --> 00:23:45,820

WHICH ONE OF YOU WILL BE THE
FIRST IN SPACE?

403

00:23:45,820 --> 00:23:49,510

>> WHICH ONE?

>> THEY'RE GOING AS A TEAM

404

00:23:49,510 --> 00:23:52,419

TOGETHER.

>> WE'RE HOPING FOR A BIG

405

00:23:52,419 --> 00:23:58,399

CAPSULE THAT CAN FIT EIGHT.

ANY OTHER SOCIAL MEDIA, MAYBE

406

00:23:58,399 --> 00:24:00,690

ONE MORE QUESTION FROM SOCIAL
MEDIA?

407

00:24:00,690 --> 00:24:09,230

>> SURE.

WHAT ASPECT OF THE TRAINING HAVE

408

00:24:09,230 --> 00:24:12,200

YOU ENJOYED THE MOST?

>> YEAH.

409

00:24:12,200 --> 00:24:16,529

FOR ME, THAT'S AN EASY ONE.

I ENJOYED THE EVA TRAINING.

410

00:24:16,529 --> 00:24:20,340

I ENJOYED SPENDING TIME IN THE
SUITS IN THE WATER.

411
00:24:20,340 --> 00:24:22,820
IT WAS ABSOLUTELY FANTASTIC WHEN
YOU CAME UP HERE.

412
00:24:22,820 --> 00:24:24,919
WE WEREN'T SCHEDULED TO HAVE AN
EVA.

413
00:24:24,919 --> 00:24:28,869
UNFORTUNATELY, WE HAD PROBLEMS
WITH THE EXTERNAL COOLING LOOP

414
00:24:28,869 --> 00:24:32,450
AND WE HAD TO GO OUTSIDE IN
DECEMBER AND FIX IT.

415
00:24:32,450 --> 00:24:35,159
GETTING TO TAKE THAT TRAINING,
ALL OF THAT TRAINING THAT WAS

416
00:24:35,159 --> 00:24:38,499
SPENT ON THE GROUND AND APPLY IT
UP HERE WAS ABSOLUTELY

417
00:24:38,499 --> 00:24:46,270
FANTASTIC.
>> I THINK DREW, YOU'VE GOT A

418
00:24:46,270 --> 00:24:47,870
QUESTION?
>> HEY, MIKE, RICK, DREW, DOWN

419
00:24:47,870 --> 00:24:51,279
HERE BACK ON EARTH.
I HAD A QUESTION OR ACTUALLY I

420
00:24:51,279 --> 00:24:54,019
WAS GOING TO ASK YOU, RATHER
THAN TO JUST FLOATING AROUND

421

00:24:54,019 --> 00:24:56,789

THERE SITTING, I WAS WONDERING
IF YOU COULD DO ACROBATIC TRICKS

422

00:24:56,789 --> 00:25:00,119

FOR US.
>> WE CALL THOSE STUPID

423

00:25:00,119 --> 00:25:02,690

ASTRONAUT TRICKS.
>>> YEAH, I COULD GET MIKE TO DO

424

00:25:02,690 --> 00:25:11,559

SOME TRICKS FOR YOU.
>> SOUNDS GOOD.

425

00:25:11,559 --> 00:25:14,270

NOW I GOT TO GIVE HIM A COOKIE
OR SOMETHING.

426

00:25:14,270 --> 00:25:18,980

[APPLAUSE]
>> THANKS, GUYS.

427

00:25:18,980 --> 00:25:24,190

GOOD JOB.
ANY MORE SOCIAL MEDIA QUESTIONS?

428

00:25:24,190 --> 00:25:27,759

>> SURE.
WOMEN IN THE AIR WANTS TO KNOW

429

00:25:27,759 --> 00:25:32,239

HOW HAS LIFE CHANGED SINCE BEING
SELECTED?

430

00:25:32,239 --> 00:25:37,519

>> ANY FOR THEM?
>> THAT'S FOR US UP HERE OR ON

431

00:25:37,519 --> 00:25:39,730

THE GROUND?

>> I THINK THAT'S ON THE GROUND.

432

00:25:39,730 --> 00:25:42,649

>> ON THE GROUND.

>> WE'LL GET ANOTHER ONE TO YOU

433

00:25:42,649 --> 00:25:45,350

IN A SEC.

>> I THINK IT'S EVERY ASPECT OF

434

00:25:45,350 --> 00:25:48,860

OUR LIVES HAS REALLY CHANGED FOR
PRETTY MUCH ALL OF US, IT'S A

435

00:25:48,860 --> 00:25:52,100

DREAM COME TRUE AND IT'S STILL
REALLY DIFFICULT TO BELIEVE.

436

00:25:52,100 --> 00:25:54,270

EVERY MORNING WE WAKE UP AND
FEEL WE HAVE TO PINCH OURSELVES

437

00:25:54,270 --> 00:25:57,259

TO THINK, COULD THIS DREAM THAT
I HAD SINCE I WAS FIVE YEARS

438

00:25:57,259 --> 00:25:59,820

OLD, HOW COULD IT HAVE ACTUALLY
COME TRUE?

439

00:25:59,820 --> 00:26:04,179

ALL OF US HAD THESE CAREERS THAT
WE ABSOLUTELY LOVED BEFORE DOING

440

00:26:04,179 --> 00:26:05,889

THIS.

AND SO IT WAS A LITTLE SAD TO

441

00:26:05,889 --> 00:26:08,080

LEAVE THOSE CAREERS.

BUT OF COURSE, AT ANY COST OF

442

00:26:08,080 --> 00:26:10,879

GETTING OUR DREAM.

OUR DAYS CHANGED ENTIRELY.

443

00:26:10,879 --> 00:26:14,489

WE ALL MOVED TOGETHER TO HOUSTON

AND BECAME A FAMILY TOGETHER

444

00:26:14,489 --> 00:26:17,179

WHICH HAS BEEN ANOTHER HUGE PART

OF IT.

445

00:26:17,179 --> 00:26:19,960

REALLY EVERY ASPECT OF OUR LIVES

HAVE CHANGED BUT ALL IN

446

00:26:19,960 --> 00:26:21,850

POSITIVE, WONDERFUL WAYS.

>> GREAT.

447

00:26:21,850 --> 00:26:26,230

MIKE AND RICK, CAN YOU TELL THE

STUDENTS HERE WHERE YOU'RE

448

00:26:26,230 --> 00:26:28,370

ACTUALLY FLOATING.

WHAT'S THE MODULE YOU'RE

449

00:26:28,370 --> 00:26:33,569

CURRENTLY IN AND WHAT ARE THE

THINGS AROUND YOU.

450

00:26:33,569 --> 00:26:38,059

>> YEAH.

RIGHT NOW, WE'RE IN THE U.S.

451

00:26:38,059 --> 00:26:41,289

LABORATORY.

BEHIND US IS A NODE II.

452

00:26:41,289 --> 00:26:45,040

THAT'S WHERE WE SLEEP AT NIGHT.

WE EACH HAVE A SMALL CREW

453

00:26:45,040 --> 00:26:48,690

QUARTERS.

FORWARD OF US OR AFT OF THE

454

00:26:48,690 --> 00:26:50,980

SPACE STATION IS THE RUSSIAN
SEGMENT.

455

00:26:50,980 --> 00:26:53,179

HERE IN THE U.S. LABORATORY,
THERE'S A LOT OF DIFFERENT

456

00:26:53,179 --> 00:26:56,259

SCIENCE RACKS.

WE HAVE AN EXERCISE BIKE TO OUR

457

00:26:56,259 --> 00:27:00,129

RIGHT.

ON OUR LEFT, WE HAVE Ah-- IT'S A

458

00:27:00,129 --> 00:27:02,649

GLOVE BOX.

MICRO GRAVITY SCIENCE GLOVE BOX.

459

00:27:02,649 --> 00:27:04,289

THERE'S A SCIENCE EXPERIMENT IN
THERE RIGHT NOW.

460

00:27:04,289 --> 00:27:07,700

WE HAVE FREEZERS OFF OVER HERE.
RIGHT OVER THE CAMERA, AGAIN,

461

00:27:07,700 --> 00:27:10,149

YOU CAN'T SEE IT.

WE HAVE SO TO SPEAK A GALLEY

462

00:27:10,149 --> 00:27:17,230

WHERE WE GET OUR DRINKING WATER

AND REHYDRATE OUR WATER AND FILL

463

00:27:17,230 --> 00:27:18,989

OUR FOOD BAGS.

THIS IS A VERY BUSY PLACE.

464

00:27:18,989 --> 00:27:21,260

THIS IS THE CENTER OF THE U.S.

SEGMENT HERE.

465

00:27:21,260 --> 00:27:25,340

THIS U.S. LABORATORY.

>> FANTASTIC.

466

00:27:25,340 --> 00:27:27,429

MIKE AND RICK, WE'RE REALLY

PROUD OF BOTH OF YOU, WHAT

467

00:27:27,429 --> 00:27:30,140

YOU'RE DOING TO HELP ADVANCE OUR

CIVILIZATION THROUGH SPACE

468

00:27:30,140 --> 00:27:32,809

TRAVEL.

AND YOU GUYS LOOK REALLY GREAT.

469

00:27:32,809 --> 00:27:34,429

WE WHICH WE WOULD BE THERE WITH

YOU.

470

00:27:34,429 --> 00:27:38,730

ESPECIALLY MY AS-CAN BUDDIES.

WE LOOK FORWARD TO YOU COMING

471

00:27:38,730 --> 00:27:41,340

BACK HOME.

WE'LL GET YOU A NICE GREASY

472

00:27:41,340 --> 00:27:44,859

CHEESEBURGER WHEN YOU GET BACK
HOME.

473

00:27:44,859 --> 00:27:49,109

THANK YOU SO MUCH FOR THIS TIME
WITH THE KIDS AND THE FUTURE

474

00:27:49,109 --> 00:27:51,659

EXPLORERS, OUR FUTURE
ASTRONAUTS, GIVE THEM A BIG

475

00:27:51,659 --> 00:28:00,919

ROUND OF APPLAUSE, GUYS.
[APPLAUSE]

476

00:28:00,919 --> 00:28:06,110

WE PROBABLY HAVE 30 SECONDS LEFT
FOR STUPID ASTRONAUT TRICKS.

477

00:28:06,110 --> 00:28:13,080

[LAUGHTER]
>> I'LL HOLD THE MICROPHONE

478

00:28:13,080 --> 00:28:16,440

WHILE HE DOES IT.
[LAUGHTER]

479

00:28:16,440 --> 00:28:21,509

>> ALL RIGHT.
YOU GUYS LOOK GREAT.

480

00:28:21,509 --> 00:28:22,639

THANK YOU SO MUCH.
[APPLAUSE]

481

00:28:22,639 --> 00:28:27,809

>> HE CAN'T BE TRAINED.

THANKS, GUYS.

482

00:28:27,809 --> 00:28:33,490

>>> OKAY.

I THINK THEY'RE FLOATING OFF

483

00:28:33,490 --> 00:28:39,019

NOW.

SO NOW WE HAVE TIME TO ASK OUR

484

00:28:39,019 --> 00:28:41,779

ASTRONAUT CANDIDATES SOME
QUESTIONS.

485

00:28:41,779 --> 00:28:44,859

IF YOU COME UP TO THE MIKE,
WE'LL GET A CHANCE TO ASK THEM

486

00:28:44,859 --> 00:28:47,429

WHAT THEIR GOALS, DREAMS AND
DESIRES ARE FOR THEM TO BE UP IN

487

00:28:47,429 --> 00:28:49,480

SPACE ONE DAY.

ALL RIGHT.

488

00:28:49,480 --> 00:28:53,009

MY FIRST FRIEND.

>> WHAT DOES YOUR TRAINING

489

00:28:53,009 --> 00:28:54,470

INCLUDE?

I'M ETHAN.

490

00:28:54,470 --> 00:28:57,389

I'M FROM CAPITOL HILL DAY
SCHOOL.

491
00:28:57,389 --> 00:29:00,320
WHAT DOES YOUR TRAINING INCLUDE?
>> OKAY.

492
00:29:00,320 --> 00:29:02,409
NICK.
>> SO RIGHT NOW OUR TRAINING

493
00:29:02,409 --> 00:29:04,929
INCLUDES, WE HAVE TO h-- ONE OF
THE TOUGHEST THINGS WE'RE DOING

494
00:29:04,929 --> 00:29:08,850
IS LEARNING HOW TO SPEAK RUSSIAN
BECAUSE WE HAVE TO TRAIN OVER IN

495
00:29:08,850 --> 00:29:12,360
RUSSIA AND POTENTIALLY FLY UP TO
THE STATION ON A RUSSIAN

496
00:29:12,360 --> 00:29:15,269
SPACECRAFT.
BUT WE ALSO ARE LEARNING HOW TO

497
00:29:15,269 --> 00:29:19,669
WORK TOGETHER AS A CREW AND
FLYING AROUND IN JETS.

498
00:29:19,669 --> 00:29:22,720
TRAINER JETS.
AND WE'RE JUST GETTING READY TO

499
00:29:22,720 --> 00:29:26,679
START LEARNING HOW TO SPACEWALK.
SO IF YOU'VE SEEN THE LARGE

500
00:29:26,679 --> 00:29:30,609
TRAINING POOL WHERE THEY HAVE A
MOCK-UP OR A MODEL OF THE

501

00:29:30,609 --> 00:29:33,580

STATION, WE'RE GOING TO PUT ON
SPACESUITS AND GO UNDERWATER AND

502

00:29:33,580 --> 00:29:37,020

PRACTICE DOING THAT.
THAT'S THE BULK OF WHAT WE'RE

503

00:29:37,020 --> 00:29:40,409

DOING NOW AND WE'LL DO THAT FOR
THE NEXT PROBABLY 18 MONTHS.

504

00:29:40,409 --> 00:29:44,950

>> NICK, COULD YOU ALSO TELL
THEM YOUR BACKGROUND BEFORE YOU

505

00:29:44,950 --> 00:29:46,820

YOU BECAME AN ASTRONAUT.
>> SURE.

506

00:29:46,820 --> 00:29:48,700

WE ALL HAVE VERY DIFFERENT
BACKGROUNDS.

507

00:29:48,700 --> 00:29:52,470

I'M IN THE AIR FORCE.
SO I WAS A FLIGHT TEST ENGINEER.

508

00:29:52,470 --> 00:29:57,539

I STARTED OUT AS A LIEUTENANT
TRYING TO DESIGN SPACECRAFT,

509

00:29:57,539 --> 00:30:02,309

BUILD SPACECRAFT AND THEN I GOT
INVOLVED WITH AIRCRAFT AS WELL.

510

00:30:02,309 --> 00:30:07,039

AND SHARE EVERYBODY ELSE'S
BACKGROUNDS TOO.

511

00:30:07,039 --> 00:30:10,539

>> THE NEXT QUESTION.

EVERY TIME WE GET A QUESTION,

512

00:30:10,539 --> 00:30:12,509

YOU'LL TELL YOUR BACKGROUND.

>> THANKS.

513

00:30:12,509 --> 00:30:17,379

>> GOOD QUESTION, YOUNG MAN.

FUTURE ROCKET SCIENTIST THERE.

514

00:30:17,379 --> 00:30:19,539

>> I'M MICAH FROM JEFFERSON

ACADEMY.

515

00:30:19,539 --> 00:30:23,210

I WANT TO KNOW, WHAT ARE THE

PHYSICAL AND MENTAL REQUIREMENTS

516

00:30:23,210 --> 00:30:26,149

TO GET INTO THE ASTRONAUT

PROGRAM.

517

00:30:26,149 --> 00:30:29,440

>> WHO WANTS TO TAKE THAT ONE?

>> CHRISTINA.

518

00:30:29,440 --> 00:30:35,039

>> I'M CHRISTINA.

I'M FORMERLY TO THIS JOB I WAS

519

00:30:35,039 --> 00:30:39,369

AN ELECTRICAL ENGINEER WORKING

ON NASA'S SPACE SCIENCE

520

00:30:39,369 --> 00:30:42,809

INSTRUMENTS DESIGNING THE

GADGETS THAT RIDE ON SPACECRAFT

521

00:30:42,809 --> 00:30:45,989

AND GO STUDY OTHER PLANETS.

AND THEN I ALSO WORKED IN

522

00:30:45,989 --> 00:30:51,049

ANTARCTICA DOING REMOTE SCIENCE

IN CRAZY PLACES.

523

00:30:51,049 --> 00:30:53,970

SO THAT'S A LITTLE BIT ABOUT ME.

TO GET TO YOUR QUESTION, THE

524

00:30:53,970 --> 00:30:56,529

MENTAL AND PHYSICAL REQUIREMENTS

OF BEING AN ASTRONAUT.

525

00:30:56,529 --> 00:31:00,200

WELL, YOU HAVE TO MENTALLY BE

CRAZY ENOUGH TO WANT TO DO IT,

526

00:31:00,200 --> 00:31:03,860

THAT'S FOR SURE.

THEY DO PUT US THROUGH SOME

527

00:31:03,860 --> 00:31:08,049

PSYCHOLOGICAL TESTS AND SOME

PHYSICAL FITNESS TESTS, BUT

528

00:31:08,049 --> 00:31:10,609

THERE ARE NO STRICT ABSOLUTE

REQUIREMENTS.

529

00:31:10,609 --> 00:31:13,559

THEY JUST WANT TO MAKE SURE THAT

WE ARE IN SHAPE SO IT'S

530

00:31:13,559 --> 00:31:17,039

IMPORTANT TO STAY ACTIVE AND

EXERCISE A LOT AND TO BE SOMEONE

531

00:31:17,039 --> 00:31:21,019

WHO IS A PERSON WHO CAN GET
ALONG REALLY WELL IN GROUPS AND

532

00:31:21,019 --> 00:31:23,380

ON A TEAM.
MENTALLY, YOU HAVE TO BE

533

00:31:23,380 --> 00:31:27,439

PREPARED TO WORK WELL IN A TEAM
AND IN A GROUP ENVIRONMENT.

534

00:31:27,439 --> 00:31:28,769

>> GREAT.
THANK YOU.

535

00:31:28,769 --> 00:31:31,809

GREAT QUESTION.
I THINK WE HAVE ANOTHER SOCIAL

536

00:31:31,809 --> 00:31:34,359

MEDIA QUESTION.
>> YES WE DO.

537

00:31:34,359 --> 00:31:38,399

THIS PERSON WANTS TO KNOW WHAT
EDUCATIONAL BACKGROUND DO YOU

538

00:31:38,399 --> 00:31:43,630

HAVE AND IF IT'S SCIENCE, HOW DO
YOU PLAN TO USE THESE SKILLS TO

539

00:31:43,630 --> 00:31:49,729

YOUR ADVANTAGE.
>> OKAY.

540

00:31:49,729 --> 00:31:52,330

OUR PHYSICIST.
>> WAS IT ARIAN A.

541

00:31:52,330 --> 00:31:54,480

>> THAT'S A GREAT QUESTION.
MY BACKGROUND IS IN PHYSICIST.

542

00:31:54,480 --> 00:32:01,509

I WAS A NAVY TEST PILOT UNTIL A
COUPLE MONTHS AGO.

543

00:32:01,509 --> 00:32:05,630

I DID PHYSICS IN COLLEGE AND
HIGH ENERGY PHYSICS IN GRADUATE

544

00:32:05,630 --> 00:32:08,650

SCHOOL.
AND FOR ME, WHILE I PROBABLY

545

00:32:08,650 --> 00:32:13,100

WON'T BE DOING A LOT OF PROTON,
ANTI-PROTON COLLISIONS IN SPACE,

546

00:32:13,100 --> 00:32:17,210

THE REAL NICE THING ABOUT
PHYSICS FROM MY PERSPECTIVE IS

547

00:32:17,210 --> 00:32:21,059

YOU DEVELOP THE SKILLS TO SOLVE
A LOT OF DIFFERENT PROBLEMS.

548

00:32:21,059 --> 00:32:25,369

AND YOU REALLY BREAK IT DOWN TO
THE FUNDAMENTALS AND TRY NOT TO

549

00:32:25,369 --> 00:32:28,399

GET TOO BURIED IN THE DETAILS
INITIALLY AND YOU UNDERSTAND IT

550

00:32:28,399 --> 00:32:31,729

AT A HIGHER LEVEL.
THE SIMPLER THE EXPLANATION,

551

00:32:31,729 --> 00:32:34,299

PROBABLY THE MORE CORRECT THAT
EXPLANATION IS.

552

00:32:34,299 --> 00:32:37,169

THAT'S WHAT HELPS ME IN PHYSICS.
I THINK JESSICA HAS A DIFFERENT

553

00:32:37,169 --> 00:32:39,779

PERSPECTIVE FROM HER BIOLOGY
BACKGROUND.

554

00:32:39,779 --> 00:32:43,461

>> SURE.

I GUESS AS THE SCIENTIST, I WAS

555

00:32:43,461 --> 00:32:49,269

THE^h-- I THINK FOR ME I WAS A
COMPARATIVE PHYSIOLOGIST.

556

00:32:49,269 --> 00:32:52,479

WHAT THAT MEANT I WAS STUDYING
THE BIOLOGY OF ANIMALS THAT DO

557

00:32:52,479 --> 00:32:55,200

REALLY COOL THINGS.
TRYING TO UNDERSTAND THINGS LIKE

558

00:32:55,200 --> 00:32:58,940

HOW PENGUINS IN THE ANTARCTIC
CAN DIVE FOR SO LONG AND THE

559

00:32:58,940 --> 00:33:02,679

SAME THING FOR SEALS OR HOW
BIRDS, SOME SPECIES OF BIRDS CAN

560

00:33:02,679 --> 00:33:05,200

FLY AS HIGH AS THE SUMMIT OF MT.
EVEREST.

561

00:33:05,200 --> 00:33:08,729

I WAS INTERESTED SINCE I WAS A
KID TRYING TO UNDERSTAND HOW

562

00:33:08,729 --> 00:33:11,989

ANIMALS CAN DO THE AMAZING
THINGS THAT THEY DO.

563

00:33:11,989 --> 00:33:16,200

THAT, I THINK, FOR ME WAS THE
DRIVING FORCE BEHIND ALL OF

564

00:33:16,200 --> 00:33:18,039

THAT.
WHETHER OR NOT THAT WILL RELATE

565

00:33:18,039 --> 00:33:20,870

EXACTLY TO WHAT WE DO, WE'RE
GOING TO ALL BE DOING A

566

00:33:20,870 --> 00:33:26,879

MULTITUDE OF TASKS IN SPACE.
THE SCIENTIFIC PART WILL HELP ME

567

00:33:26,879 --> 00:33:29,779

LEARN HOW TO THINK CRITICALLY
FOR ANYTHING THAT ARISES AND BE

568

00:33:29,779 --> 00:33:32,210

INVOLVED IN SCIENCE AS WELL.
COMPLETING EXPERIMENTS, DOING

569

00:33:32,210 --> 00:33:36,609

EXPERIMENTS FOR OTHER SCIENTISTS
THAT ARE LUCKY ENOUGH TO HAVE

570

00:33:36,609 --> 00:33:39,269

THEIR RESEARCH FLOWN ON A SPACE
STATION OR OTHER VENUES.

571

00:33:39,269 --> 00:33:41,690

>> GREAT QUESTION.

COME ON UP.

572

00:33:41,690 --> 00:33:46,520

>> MY NAME IS ALI A.

MY QUESTION IS, WHAT COLLEGE

573

00:33:46,520 --> 00:33:50,899

WOULD YOU RECOMMEND ME, MYSELF

IF I WANTED TO BE AN ASTRONAUT?

574

00:33:50,899 --> 00:33:56,320

>> WHAT WANTS TO TAKE THAT ONE?

>> REALLY MORE IMPORTANT THAN

575

00:33:56,320 --> 00:33:59,370

WHAT COLLEGE THAT YOU WOULD GO

TO, THE MOST IMPORTANT THING IS

576

00:33:59,370 --> 00:34:02,960

THAT YOU DO GO TO COLLEGE.

THAT YOU STAY IN SCHOOL AND THAT

577

00:34:02,960 --> 00:34:05,070

YOU LEARN AND STUDY AS MUCH AS

YOU CAN RIGHT NOW.

578

00:34:05,070 --> 00:34:08,630

YOU MIGHT NOT KNOW WHAT COLLEGE

YOU WANT TO GO TO OR WHAT YOU

579

00:34:08,630 --> 00:34:12,179

WANT TO STUDY, BUT YOU TAKE AS

MANY CLASSES AS YOU CAN AND THEN

580

00:34:12,179 --> 00:34:15,059

YOU KEEP ALL THOSE OPTIONS OPEN

SO THEN YOU'VE GOT GOOD GRADES

581

00:34:15,059 --> 00:34:18,470

IN ELEMENTARY SCHOOL AND HIGH
SCHOOL AND THEN YOU CAN CHOOSE

582

00:34:18,470 --> 00:34:20,260

ANY COLLEGE THAT YOU'D LIKE TO
FROM THERE.

583

00:34:20,260 --> 00:34:22,510

YOU'LL HAVE THE GOOD GRADES TO
BE ABLE TO GET YOU INTO SCHOOL.

584

00:34:22,510 --> 00:34:25,089

THE MOST IMPORTANT PART IS TO
STAY IN SCHOOL AND KEEP

585

00:34:25,089 --> 00:34:27,299

STUDYING.
>> EXACTLY.

586

00:34:27,299 --> 00:34:30,050

GREAT ANSWER.
HI.

587

00:34:30,050 --> 00:34:39,070

I'M FROM NORWOOD SKILL.
WERE THERE ANY GAMES OR

588

00:34:39,070 --> 00:34:43,310

ACTIVITIES YOU DID WHEN YOU WERE
A CHILD THAT LET YOU KNOW THIS

589

00:34:43,310 --> 00:34:48,059

IS WHAT YOU WANTED TO BE
SOMEDAY?

590

00:34:48,059 --> 00:34:50,950

>> THAT'S A GREAT QUESTION.
THANK YOU SO MUCH.

591

00:34:50,950 --> 00:34:54,440

I WAS\h-- LIKE MANY OF US, WERE
VERY INVOLVED IN OUR

592

00:34:54,440 --> 00:34:56,780

COMMUNITIES, VERY INVOLVED IN
SPORTS.

593

00:34:56,780 --> 00:34:58,710

I WAS A CUB SCOUT WHEN I WAS
YOUNG.

594

00:34:58,710 --> 00:35:01,000

AND I HAVE A LITTLE BOY ABOUT
YOUR AGE THAT'S ALSO A CUB

595

00:35:01,000 --> 00:35:04,849

SCOUT.
FOR ALL OF YOU, SCOUTING, I

596

00:35:04,849 --> 00:35:09,941

HIGHLY RECOMMEND.
ALL OF US WERE ATHLETES, HIGH

597

00:35:09,941 --> 00:35:14,820

SCHOOL AND COLLEGE, AND WE ALSO
PARTICIPATED IN A LOT OF

598

00:35:14,820 --> 00:35:17,650

COMMUNITY ACTIVITIES.
SO IT'S NOT JUST DOING WELL IN

599

00:35:17,650 --> 00:35:20,900

SCHOOL BUT DOING WELL IN YOUR
COMMUNITY AS WELL.

600

00:35:20,900 --> 00:35:25,539

I AM\h-- I WAS A PHYSICIAN IN THE
ARMY.

601

00:35:25,539 --> 00:35:32,690

I ALSO WENT TO THE U.S. MILITARY
ACADEMY AND I WAS INVOLVED IN

602

00:35:32,690 --> 00:35:34,650

SPECIAL OLYMPICS WHILE I WAS
THERE.

603

00:35:34,650 --> 00:35:37,400

SO THANKS FOR YOUR QUESTION.
>> GREAT.

604

00:35:37,400 --> 00:35:39,099

GREAT QUESTION.
GREAT ANSWER.

605

00:35:39,099 --> 00:35:41,789

WE HAVE ANOTHER QUESTION FROM
SOCIAL MEDIA NOW.

606

00:35:41,789 --> 00:35:44,280

>> CHRISTOPHER WANTS TO KNOW IF
ANY OF YOU KNEW HOW TO SCUBA

607

00:35:44,280 --> 00:35:47,220

DIVE BEFORE BECOMING AN
ASTRONAUT CANDIDATE AND IF SO,

608

00:35:47,220 --> 00:35:50,709

WHAT PROCESS DID YOU GO THROUGH
TO LEARN THAT.

609

00:35:50,709 --> 00:35:52,110

>> THAT'S A GOOD QUESTION.
CHRISTOPHER.

610

00:35:52,110 --> 00:35:54,809

ACTUALLY, ALL OF US WERE SCUBA
DIVERS BEFORE WE GOT HERE.

611

00:35:54,809 --> 00:35:57,430

I THINK IT'S THE PASSION FOR
EXPLORATION THAT DROVE ME TO DO

612

00:35:57,430 --> 00:36:01,050

IT.
SCUBA DIVING, I THOUGHT IT WOULD

613

00:36:01,050 --> 00:36:03,640

BE LIKE BEING IN SPACE.
YOU CAN SWIM ANYWHERE YOU WANT,

614

00:36:03,640 --> 00:36:10,119

GO UPSIDE DOWN, RIGHT SIDE UP.
I THINK IT'S REALLY COOL.

615

00:36:10,119 --> 00:36:14,369

THE OTHER SIDE OF SCUBA DIVING
THAT'S REALLY FUN, YOU HAVE THIS

616

00:36:14,369 --> 00:36:16,820

REALLY TECHNICAL PIECE OF
EQUIPMENT FEEDING YOU OXYGEN IN

617

00:36:16,820 --> 00:36:19,270

AN ENVIRONMENT THAT HUMAN BEINGS
DON'T LIVE IN.

618

00:36:19,270 --> 00:36:21,920

YOU HAVE TO LEARN TO TRUST THAT
PIECE OF EQUIPMENT, LEARN HOW TO

619

00:36:21,920 --> 00:36:24,410

TAKE CARE OF IT AND YOU GET TO
SEE THINGS THAT ARE REALLY

620

00:36:24,410 --> 00:36:26,200

EXCITING.
TO ANSWER HIS QUESTION, ALL OF

621

00:36:26,200 --> 00:36:29,680

US WERE SCUBA DIVERS BEFOREHAND.
THEY HAVE CLASSES.

622

00:36:29,680 --> 00:36:32,829

ASK YOUR PARENTS, THEY HAVE
CLASSES AT YOUR LOCAL CITY, ASK

623

00:36:32,829 --> 00:36:35,340

AT THE YMCA.
THERE'S TRAINING CLASSES NO

624

00:36:35,340 --> 00:36:39,190

MATTER WHERE YOU LIVE.
>> GREAT ANSWER.

625

00:36:39,190 --> 00:36:41,809

GUYS, THESE GUYS ARE REALLY,
REALLY SMART.

626

00:36:41,809 --> 00:36:45,319

BUT WE'VE ALL FAILED AT THINGS.
IT'S NOT ABOUT FAILING, IT'S

627

00:36:45,319 --> 00:36:48,210

ABOUT NOT GIVING UP.
ANNE, YOU HAD A GREAT ANSWER

628

00:36:48,210 --> 00:36:51,230

YESTERDAY AT THE WHITE HOUSE
ABOUT BELIEVING IN YOURSELF.

629

00:36:51,230 --> 00:36:53,089

YOU WANT TO TALK ABOUT THAT.
>> SURE.

630

00:36:53,089 --> 00:36:56,579

THANKS FOR THAT.
YOU KNOW, I CAME FROM WASHINGTON

631

00:36:56,579 --> 00:36:58,830

STATE.

SOMETIMES WHEN YOU'RE SITTING IN

632

00:36:58,830 --> 00:37:02,280

YOUR SHOES, IT'S HARD TO SEE

YOUR DREAMS AND HARD TO LOOK AT

633

00:37:02,280 --> 00:37:04,660

SOMEBODY THAT'S AN ADULT THAT

YOU CAN'T EVEN IMAGINE YOURSELF

634

00:37:04,660 --> 00:37:07,789

THAT AGE, LET ALONE DOING WHAT

THEY'RE DOING.

635

00:37:07,789 --> 00:37:10,349

BUT THE KEY TO ACHIEVING

WHATEVER YOU WANT TO ACHIEVE,

636

00:37:10,349 --> 00:37:12,910

WHETHER IT BE ASTRONAUT OR

SOMETHING ELSE, IS TO GO AND GET

637

00:37:12,910 --> 00:37:15,010

YOUR DREAMS.

YOUR DREAMS AREN'T GOING TO COME

638

00:37:15,010 --> 00:37:16,039

TO YOU.

THEY'RE NOT GOING TO BE IN YOUR

639

00:37:16,039 --> 00:37:19,170

COMFORT ZONE.

THAT JOURNEY IS REALLY SCARY.

640

00:37:19,170 --> 00:37:21,819

YOU'RE GOING TO HAVE TO TAKE A

CLASS YOU YOU DON'T KNOW IF YOU

641

00:37:21,819 --> 00:37:23,940

CAN PASS.

YOU MAY HAVE TO APPLY TO A

642

00:37:23,940 --> 00:37:26,990

SCHOOL THAT YOU DON'T KNOW THAT
YOU CAN GET INTO.

643

00:37:26,990 --> 00:37:29,920

YOU MAY HAVE TO MOVE TO A CITY
YOU'VE NEVER BEEN TO BEFORE AND

644

00:37:29,920 --> 00:37:35,430

IT'S REALLY SCARY.

I REALLY REMEMBER MY PLANE TRIP

645

00:37:35,430 --> 00:37:39,110

TO GO TO COLLEGE.

I WAS REALLY SCARED.

646

00:37:39,110 --> 00:37:42,500

I WAS LOOKING OUTSIDE THE WINDOW
AND THOUGHT WHAT AM I DOING?

647

00:37:42,500 --> 00:37:44,109

THIS IS REALLY SCARY.

I DON'T KNOW IF I CAN GET

648

00:37:44,109 --> 00:37:47,049

THROUGH THIS SCHOOL.

AND IT WOULD HAVE BEEN REALLY

649

00:37:47,049 --> 00:37:49,900

EASY AT THAT POINT FOR ME TO

TELL MY PARENTS I WANTED TO STAY

650

00:37:49,900 --> 00:37:53,000

AT HOME AND DO SOMETHING ELSE.

IT WOULD HAVE BEEN EASIER TO

651
00:37:53,000 --> 00:37:55,420
GIVE UP.
BUT THAT FEAR WAS INSIDE OF ME

652
00:37:55,420 --> 00:37:58,059
AND YOU HAVE TO FACE THAT FEAR.
>> RIGHT.

653
00:37:58,059 --> 00:38:00,260
>> OKAY.
EVERY TIME YOU FACE THAT FEAR

654
00:38:00,260 --> 00:38:02,520
AND YOU GET THROUGH IT AND YOU
ACCOMPLISH SOMETHING, IT BECOMES

655
00:38:02,520 --> 00:38:05,770
EASIER THE NEXT TIME.
AND IF IT DOESN'T BECOME EASIER,

656
00:38:05,770 --> 00:38:08,829
AT LEAST IT'S A FAMILIAR FEELING
THAT YOU KNOW THAT IF I FEEL

657
00:38:08,829 --> 00:38:11,339
THIS, I KNOW THAT I CAN
ACCOMPLISH THIS BECAUSE YOU KNOW

658
00:38:11,339 --> 00:38:14,130
ANOTHER TIME I WAS SITTING ON A
PLANE LOOKING OUT A WINDOW BEING

659
00:38:14,130 --> 00:38:17,049
SCARED AND WONDERING IF I COULD
DO THIS WAS EARLIER THIS YEAR

660
00:38:17,049 --> 00:38:20,050
FLYING TO NASA.
I FELT LIKE I WAS 18 YEARS OLD

661

00:38:20,050 --> 00:38:22,750

AGAIN GOING TO COLLEGE.

I WAS SCARED.

662

00:38:22,750 --> 00:38:24,120

I DIDN'T KNOW IF I COULD GET

THIS JOB.

663

00:38:24,120 --> 00:38:27,619

I WAS COMING DOWN TO INTERVIEW

TO BE AN ASTRONAUT.

664

00:38:27,619 --> 00:38:30,460

I THOUGHT TO MYSELF, YOU KNOW

WHAT, I'VE HAD THIS FEELING

665

00:38:30,460 --> 00:38:33,480

BEFORE AND IT WENT OKAY.

I KNOW I CAN DO IT THIS TIME.

666

00:38:33,480 --> 00:38:34,960

THE KEY IS THAT YOU CAN'T GIVE

UP.

667

00:38:34,960 --> 00:38:39,010

IT DOESN'T MATTER WHAT GENDER

YOU HAVE, YOUR BACKGROUND, WHERE

668

00:38:39,010 --> 00:38:42,520

YOU LIVE, WHAT SCHOOL YOU GO TO.

YOU CAN DO IT IF YOU KEEP

669

00:38:42,520 --> 00:38:46,520

PUTTING YOUR HAND UP AND KEEP

MOVING FORWARD.

670

00:38:46,520 --> 00:38:48,400

WHAT I ALWAYS SAY IS DON'T

SELF-ELIMINATE.

671

00:38:48,400 --> 00:38:53,119

YOU'RE GOING TO HAVE A THOUSAND
REASONS TO NOT GO GET YOUR GOAL.

672

00:38:53,119 --> 00:38:57,069

BUT YOU'RE THE ONLY ONE THAT CAN
STOP MOVING FORWARD.

673

00:38:57,069 --> 00:38:59,400

DON'T SELF-ELIMINATE BEFORE
YOU'VE TRIED.

674

00:38:59,400 --> 00:39:02,410

>> EXACTLY.
NEVER GIVE UP.

675

00:39:02,410 --> 00:39:06,900

[APPLAUSE]
GREAT ANSWER.

676

00:39:06,900 --> 00:39:10,130

WE HAVE ANOTHER QUESTION HERE.
>> I'M SOPHIE FROM CAPITOL HILL

677

00:39:10,130 --> 00:39:12,250

DAY SCHOOL.
WHAT THINGS DO YOU NEED TO KNOW

678

00:39:12,250 --> 00:39:17,350

TO BE AN ASTRONAUT?
>> WHO WANTS TO TAKE THAT?

679

00:39:17,350 --> 00:39:20,760

VIC?
>> WHAT WAS YOUR NAME AGAIN?

680

00:39:20,760 --> 00:39:22,730

>> SOPHIE.
>> THAT'S A GREAT QUESTION.

681
00:39:22,730 --> 00:39:26,150
WHAT THINGS DO YOU NEED TO KNOW
TO BE AN ASTRONAUT?

682
00:39:26,150 --> 00:39:28,920
I THINK INSTEAD OF TRYING TO
FOCUS ON ALL OF THE THINGS YOU

683
00:39:28,920 --> 00:39:31,809
NEED TO KNOW, I THINK YOU NEED
TO HAVE THE CURIOSITY TO WANT TO

684
00:39:31,809 --> 00:39:35,030
KNOW ABOUT A LITTLE OF
EVERYTHING.

685
00:39:35,030 --> 00:39:36,710
SOMEONE ASKED EARLIER WHAT OUR
DAY IS LIKE.

686
00:39:36,710 --> 00:39:41,859
WE DO TRAINING IN FOREIGN
LANGUAGES AND IN SPACE SYSTEMS

687
00:39:41,859 --> 00:39:47,660
AND AEROSPACE FLIGHTS AND WE'RE
GOING TO LEARN ABOUT MATERIAL

688
00:39:47,660 --> 00:39:50,859
SCIENCE AND WE'RE GOING TO STUDY
PHYSICAL AND LIFE SCIENCES AND

689
00:39:50,859 --> 00:39:55,150
YOU JUST HAVE TO BE INTERESTED.
AS LONG AS, JUST LIKE ANNE JUST

690
00:39:55,150 --> 00:39:58,490
SAID, YOU'RE WILLING TO LEAN IN,
THESE ARE THINGS THAT WE DON'T

691

00:39:58,490 --> 00:40:01,480

ALL HAVE A BACKGROUND IN, BUT
YOU HAVE TO BE WILLING TO LEARN

692

00:40:01,480 --> 00:40:04,840

AND TO BE TAUGHT.
THAT'S A GREAT QUESTION.

693

00:40:04,840 --> 00:40:07,359

YOU JUST HAVE TO BE WILLING TO
LEARN ABOUT MANY DIFFERENT

694

00:40:07,359 --> 00:40:09,599

THINGS.
>> GREAT ANSWER.

695

00:40:09,599 --> 00:40:12,719

>> LELAND, IF I COULD ADD
SOMETHING TO THAT?

696

00:40:12,719 --> 00:40:14,330

>> YEAH.
I THINK IT'S IMPORTANT TO

697

00:40:14,330 --> 00:40:18,170

ACKNOWLEDGE THAT WE DON'T KNOW
EVERYTHING AND SO EVERY ONE OF

698

00:40:18,170 --> 00:40:21,740

US UP HERE HAS SOMETHING UNIQUE
WE BRING TO THE TABLE AND IT

699

00:40:21,740 --> 00:40:23,859

GETS BACK TO WHAT THEY WERE
SAYING ON STATION.

700

00:40:23,859 --> 00:40:27,089

IT'S A TEAM.
YOU DON'T ALWAYS HAVE THE

701

00:40:27,089 --> 00:40:29,039

ANSWERS.

YOU HAVE TO RELY ON THE TEAM

702

00:40:29,039 --> 00:40:30,460

AROUND YOU.

>> DEFINITELY.

703

00:40:30,460 --> 00:40:34,609

>> WE'RE GOING TO GO HERE FIRST

AND THEN BACK TO SOCIAL MEDIA.

704

00:40:34,609 --> 00:40:37,960

>> I'M ALEX.

>> I LIKE YOUR SHIRT, TOO.

705

00:40:37,960 --> 00:40:40,970

VERY NICE SHIRT.

>> I'M ALEX FROM FREEHOLD, NEW

706

00:40:40,970 --> 00:40:43,430

JERSEY.

I WAS WONDERING WHO YOU THOUGHT

707

00:40:43,430 --> 00:40:46,970

WOULD WIN THE COMMERCIAL CREW

DEVELOPMENT PROGRAM, IF IT WAS

708

00:40:46,970 --> 00:40:50,260

GOING TO BE SPACEX, SIERRA

NEVADA CORPORATION OR BOEING?

709

00:40:50,260 --> 00:40:54,710

>> GREAT QUESTION.

MY ANSWER IS YES.

710

00:40:54,710 --> 00:40:58,380

[LAUGHTER]

>> I DON'T THINK WE KNOW THAT

711
00:40:58,380 --> 00:40:59,380
ANSWER YET.
>> OKAY.

712
00:40:59,380 --> 00:41:01,800
>> WE'RE WAITING FOR THAT
PROCESS TO PLAY OUT.

713
00:41:01,800 --> 00:41:04,480
>> GOOD QUESTION.
BACK TO SOCIAL MEDIA.

714
00:41:04,480 --> 00:41:08,270
>> WE HAVE A QUESTION FROM IRISH
SPACE BLOG WHO WANTS TO KNOW IF

715
00:41:08,270 --> 00:41:11,140
YOU'RE ALL SETTING YOUR SIGHTS
ON A FLIGHT TO THE INTERNATIONAL

716
00:41:11,140 --> 00:41:17,650
SPACE STATION?
>> THAT'S A GREAT QUESTION.

717
00:41:17,650 --> 00:41:20,619
SOMETIMES, SOME DREAMS THAT YOU
HAVE AND I THINK THIS ONE

718
00:41:20,619 --> 00:41:23,680
ESPECIALLY, YOU'RE LOOKING OUT
AND YOU CAN'T EVEN ACTUALLY

719
00:41:23,680 --> 00:41:25,630
DEFINE WHAT THAT DREAM IS.
YOU DON'T KNOW WHERE YOU'RE

720
00:41:25,630 --> 00:41:29,190
GOING TO GO.
THE PATCHES^h-- WE DESIGNED OUR

721

00:41:29,190 --> 00:41:31,589

CLASS PATCH.

WE HAVE A SYMBOL OF A STAR

722

00:41:31,589 --> 00:41:34,569

TAKING OFF FROM THE EARTH AND
GOING SOMEWHERE OUT INTO SPACE.

723

00:41:34,569 --> 00:41:38,180

BECAUSE THE MISSIONS THAT NASA
IS LOOKING AT ARE SO DIVERSE.

724

00:41:38,180 --> 00:41:41,010

SOME OF US WILL END UP ON THE
INTERNATIONAL SPACE STATION,

725

00:41:41,010 --> 00:41:45,680

SOME OF US MIGHT GO TO AN
ASTEROID, SOME TO MARS OR MAYBE

726

00:41:45,680 --> 00:41:48,400

YOU'RE GOING TO PICK YOU TO GO
TO MARS.

727

00:41:48,400 --> 00:41:51,049

MAYBE THAT'S IN OUR FUTURE.
WE DON'T KNOW.

728

00:41:51,049 --> 00:41:53,960

THIS CLASS, IT'S SUCH AN
EXCITING TIME TO BE IN NASA.

729

00:41:53,960 --> 00:41:56,480

THERE'S SO MANY DIFFERENT
MISSIONS THEY'RE LOOKING AT.

730

00:41:56,480 --> 00:42:00,339

IN THE NEXT 20 YEARS, WE LOOK
FORWARD TO GETTING THAT QUESTION

731

00:42:00,339 --> 00:42:01,570

ANSWERED.

>> FANTASTIC.

732

00:42:01,570 --> 00:42:04,799

DOES ANYONE ELSE HAVE QUESTIONS
IN THE REST OF THE GALLERY?

733

00:42:04,799 --> 00:42:08,349

WE HAVE A MIKE HERE.

THIS IS A CHANCE TO TALK TO

734

00:42:08,349 --> 00:42:11,109

PEOPLE WHO WILL GO INTO SPACE IN
THE NEAR FUTURE.

735

00:42:11,109 --> 00:42:14,030

PLEASE, PLEASE ASK YOUR
QUESTIONS IF YOU HAVE SOME

736

00:42:14,030 --> 00:42:15,880

QUESTIONS.

WE'LL GO BACK TO SOCIAL MEDIA

737

00:42:15,880 --> 00:42:21,460

REAL QUICK.

>> ALYSSA WANTS TO KNOW, FOR

738

00:42:21,460 --> 00:42:24,210

THOSE WITHOUT A SCIENCE
BACKGROUND, WHAT HELPED YOU

739

00:42:24,210 --> 00:42:34,140

BECOME AN ASTRONAUT CANDIDATE?

>> SO I DON'T HAVE A SCIENCE

740

00:42:34,140 --> 00:42:35,920

BACKGROUND.

I HAVE A MILITARY BACKGROUND.

741

00:42:35,920 --> 00:42:40,380

SO I'M IN THE MARINE CORPS.
AND I USED TO FLY F-18s WHICH

742

00:42:40,380 --> 00:42:43,849

ARE^h-- EVERYBODY KNOWS THE BLUE
ANGELS, THAT'S THE SAME TYPE OF

743

00:42:43,849 --> 00:42:47,299

AIRCRAFT, F-18.
AND SO I DID HAVE AN ENGINEERING

744

00:42:47,299 --> 00:42:50,339

BACKGROUND AND THE MARINE CORPS
HELPED ME OUT A LOT, IT TAUGHT

745

00:42:50,339 --> 00:42:53,520

ME ABOUT WORKING TOGETHER AS A
TEAM.

746

00:42:53,520 --> 00:42:56,400

IT TAUGHT ME A LOT ABOUT
LEADERSHIP AND WHAT WORKING

747

00:42:56,400 --> 00:42:59,029

TOWARDS A COMMON GOAL AND A
COMMON MISSION.

748

00:42:59,029 --> 00:43:02,210

I THINK THAT'S REALLY HELPED ME.
SO FAR IN OUR TRAINING, I THINK

749

00:43:02,210 --> 00:43:07,859

IT WILL HELP ME WHEN I FINALLY
GET TO GO INTO SPACE TO HAVE THE

750

00:43:07,859 --> 00:43:10,369

DISCIPLINE AND STICK WITH WHAT
YOU'RE DOING AND MAKE SURE THAT

751

00:43:10,369 --> 00:43:11,690

YOU TRAIN PROPERLY.

>> GREAT.

752

00:43:11,690 --> 00:43:17,520

>> I'M SARA A FOURTH GRADER.

MY QUESTION IS, WHAT ARE THE

753

00:43:17,520 --> 00:43:21,230

CHALLENGES YOU'LL FACE IN SPACE?

>> GREAT QUESTION.

754

00:43:21,230 --> 00:43:30,470

>> THE CHALLENGES IN SPACE.

WHO WANTS TO TAKE THAT ONE?

755

00:43:30,470 --> 00:43:33,660

>> I THINK THAT ALL OF US ARE

GOING TO MISS OUR FAMILIES.

756

00:43:33,660 --> 00:43:36,170

WE SPEND ALMOST SIX MONTHS ON

THE SPACE STATION NOW.

757

00:43:36,170 --> 00:43:37,839

THAT'S A LONG TIME TO BE AWAY

FROM YOUR FAMILIES.

758

00:43:37,839 --> 00:43:41,700

WE ALL HAVE FAMILIES.

FOR ALL OF US, THAT WILL BE ONE

759

00:43:41,700 --> 00:43:44,760

OF THE HARDEST PARTS.

THANKS FOR YOUR QUESTION.

760

00:43:44,760 --> 00:43:50,780

>> WHAT ABOUT RADIATION?

AS A DOC, AS WE GO TO MARS, WHAT

761

00:43:50,780 --> 00:43:54,010

ARE THE TYPES OF THINGS WE HAVE
TO MITIGATE GOING TO MARS?

762

00:43:54,010 --> 00:43:57,750

>> I WANT TO GIVE THAT TO OUR
PHYSICIST.

763

00:43:57,750 --> 00:44:02,470

[LAUGHTER]

>> HE REALLY DID THAT.

764

00:44:02,470 --> 00:44:06,130

THAT'S GREAT.

HON HE'SLY, A LOT OF US LOOKED

765

00:44:06,130 --> 00:44:09,910

AT IT.

WE GET AN INITIAL BRIEF ON

766

00:44:09,910 --> 00:44:13,650

RADIATION RISKS.

THEY ARE NONTRIVIAL BUT NASA IS

767

00:44:13,650 --> 00:44:18,260

WORKING REALLY HARD TO ENSURE
THAT WE REMAIN SAFE THROUGHOUT

768

00:44:18,260 --> 00:44:21,140

OUR CAREERS.

THERE ARE DIFFERENT TIMES WHEN

769

00:44:21,140 --> 00:44:23,930

WE HAVE TO TAKE SPECIAL
PRECAUTION TOSS MINIMIZE THE

770

00:44:23,930 --> 00:44:28,569

EFFECTS BUT EVERYONE WATCHING IT
VERY, VERY CLOSELY TO ENSURE

771

00:44:28,569 --> 00:44:30,460

THAT WE'RE ALL HANDLED
APPROPRIATELY.

772

00:44:30,460 --> 00:44:35,910

>> AND JUST TO LET YOU ALL KNOW,
WE HAVE AN ORION VEHICLE GOING

773

00:44:35,910 --> 00:44:38,750

TO SPACE IN THE FALL, FALL OF
THIS YEAR.

774

00:44:38,750 --> 00:44:42,390

WE HAVE A STUDENT PROGRAM CALLED
THE EXPLORATION DESIGN CHALLENGE

775

00:44:42,390 --> 00:44:44,680

WHERE ANY OF YOU CAN SIGN UP TO
BE PART OF THIS.

776

00:44:44,680 --> 00:44:47,660

YOUR NAMES CAN ACTUALLY GO TO
SPACE ON THE ORION.

777

00:44:47,660 --> 00:44:50,569

THE STUDENTS THAT ARE IN HIGH
SCHOOL CAN ACTUALLY BUILD A

778

00:44:50,569 --> 00:44:53,349

RADIATION SHIELD THAT WILL BE
DOWN SELECTED.

779

00:44:53,349 --> 00:44:58,589

IF YOURS WIN, WE WILL FLY YOUR
RADIATION SHIELD ON ORION PUT A

780

00:44:58,589 --> 00:45:00,920

SENSOR BEHIND IT AND SEE HOW
EFFECTIVE IT IS.

781

00:45:00,920 --> 00:45:05,049

YOU CAN BE PART OF HELPING US
GET THESE GUYS TO MARS SAFELY

782

00:45:05,049 --> 00:45:07,040

GOING THROUGH MANY, MANY
RADIATION SHIELDS.

783

00:45:07,040 --> 00:45:12,260

GO TO NASA.GOV/EDUCATION AND
LOOK AT THIS PROGRAM FOR GETTING

784

00:45:12,260 --> 00:45:15,109

YOUR NAME IN SPACE.
QUESTION?

785

00:45:15,109 --> 00:45:17,420

>> GOOD MORNING, AS-CANS.
THANK YOU FOR ROW JOINING US

786

00:45:17,420 --> 00:45:21,850

TODAY IN WASHINGTON.
I'M GARY LANG FROM HAGERSTOWN,

787

00:45:21,850 --> 00:45:24,790

MARYLAND.
ARE YOU YOU MUSICALLY TALENTED.

788

00:45:24,790 --> 00:45:31,520

ARE YOU PLANNING TO JOIN THE MAX
Q BAND.

789

00:45:31,520 --> 00:45:34,869

>> IN ADDITION TO THE OTHER
ACTIVITIES THAT WE HAD AS KIDS,

790

00:45:34,869 --> 00:45:37,170

ONE THING I DID WAS PLAY A LOT
OF INSTRUMENTS IN ADDITION TO

791

00:45:37,170 --> 00:45:40,339

THE SPORTS AND EVERYTHING ELSE.
I PLAYED THE FLUTE AND SAXOPHONE

792

00:45:40,339 --> 00:45:45,660

GROWING UP IN REGULAR BAND,
MARCHING BAND AND JAZZ BAND.

793

00:45:45,660 --> 00:45:49,549

I REALLY LOVE MUSIC.
IT'S SOMETHING I REALLY MISS IT.

794

00:45:49,549 --> 00:45:52,200

WE'VE HAD A FEW CONVERSATIONS
ABOUT STARTING A BAND.

795

00:45:52,200 --> 00:45:54,589

I'M NOT SURE IF MAX Q IS PLAYING
LATELY.

796

00:45:54,589 --> 00:45:58,799

WE HAVEN'T SEEN THEM YET.
WE MIGHT TAKE THAT ADVICE AND

797

00:45:58,799 --> 00:46:00,569

THROW SOMETHING TOGETHER.
WE'VE GOT SOME OTHER MUSICIAN

798

00:46:00,569 --> 00:46:05,120

THIS IS THE GROUP.
>> THE NEW AS-CAN BAND.

799

00:46:05,120 --> 00:46:10,119

>> I DO MATH A LOT BETTER THAN I
SING.

800

00:46:10,119 --> 00:46:12,369

>> OKAY.
YES, MA'AM?

801

00:46:12,369 --> 00:46:15,420

>> I'M ROWAN FROM CAPITOL HILL
DAY SCHOOL.

802

00:46:15,420 --> 00:46:18,800

I WAS WONDERING WHAT WAS THE
MOST EXCITING PART OF BEING AN

803

00:46:18,800 --> 00:46:20,440

ASTRONAUT?

>> THE MOST EXCITING PART ABOUT

804

00:46:20,440 --> 00:46:23,100

BEING AN ASTRONAUT, OKAY.

>> GOOD MORNING.

805

00:46:23,100 --> 00:46:27,720

THANKS FOR THAT QUESTION.

SO FAR, WE'VE ONLY BEEN IN

806

00:46:27,720 --> 00:46:30,420

TRAINING TO BE ASTRONAUTS.

SO I WILL ANSWER THAT QUESTION

807

00:46:30,420 --> 00:46:33,460

WHAT'S THE MOST EXCITING THING

WE'VE DONE IN TRAINING.

808

00:46:33,460 --> 00:46:36,690

FOR ME, BY FAR IT'S BEEN FLYING

JETS.

809

00:46:36,690 --> 00:46:39,180

I HAVE NEVER BEEN A PILOT IN MY

LIFE.

810

00:46:39,180 --> 00:46:43,490

AND THREE MONTHS AGO I WENT FROM

ZERO TO PILOT IN TWO WEEKS.

811

00:46:43,490 --> 00:46:47,660

SO THEY STUCK ME IN A COCKPIT,
THREW AN OXYGEN MASK ON ME AND

812

00:46:47,660 --> 00:46:52,049

TOLD ME TO START DOING ROLLS AND
LOOPING THE PLANE UPSIDE DOWN.

813

00:46:52,049 --> 00:46:58,260

IT WAS EXCITING AND I HAD TO
WORK REALLY HARD AT IT.

814

00:46:58,260 --> 00:47:01,329

IT'S ESPECIALLY A GREAT FEELING
TO KNOW I CAN ALWAYS LEARN

815

00:47:01,329 --> 00:47:05,140

SOMETHING NEW AND EVEN WHEN
THINGS ARE SCARE WHEN I I START,

816

00:47:05,140 --> 00:47:07,809

EVENTUALLY, THEY'RE GOING TO GET
EASIER AND EASIER AND EVEN BE

817

00:47:07,809 --> 00:47:09,990

REALLY FUN.
SO THANK YOU.

818

00:47:09,990 --> 00:47:12,380

>> CAN YOU EXPLAIN WHAT THE ROLL
MANEUVER IS.

819

00:47:12,380 --> 00:47:16,339

>> ABSOLUTELY.
SO THE ROLL I LEARNED IS WHEN

820

00:47:16,339 --> 00:47:20,220

YOU TAKE THE CONTROL STICK OF
THE PERFORMANCE AIRCRAFT, YOU

821

00:47:20,220 --> 00:47:24,369

JAM IT OVER TO ONE SIDE AND THE
PLANE FLIPS LIKE THIS.

822

00:47:24,369 --> 00:47:27,819

SO YOU'RE STILL MOVING FORWARD
AND YOU JUST GO UPSIDE DOWN AND

823

00:47:27,819 --> 00:47:31,010

ALL THE WAY RIGHT SIDE BACK UP
AGAIN.

824

00:47:31,010 --> 00:47:35,400

AND THE NICE PART ABOUT DOING IT
IN A JET IS YOU CAN JUST POP IT

825

00:47:35,400 --> 00:47:37,770

WHENEVER AND THE AIR TRAFFIC
CONTROLLERS WON'T EVEN THOUGH

826

00:47:37,770 --> 00:47:40,630

BECAUSE YOU STAY AT THE SAME
ALTITUDE AND KEEP GOING THE SAME

827

00:47:40,630 --> 00:47:43,999

DIRECTION.
>> GREAT.

828

00:47:43,999 --> 00:47:47,609

>> MY NAME IS SALINA.
I'M FROM THE BRIDGES ACADEMY.

829

00:47:47,609 --> 00:47:52,039

THERE WAS AN ARTICLE THIS
MORNING ABOUT TAKING ALGEBRA 2.

830

00:47:52,039 --> 00:47:59,460

HOW DO YOU FEEL ABOUT THAT?
>> TAKING ALGEBRA 2?

831

00:47:59,460 --> 00:48:01,300
>> REMOVING IT FROM THE
CURRICULUM?

832

00:48:01,300 --> 00:48:03,289
>> YEAH.
>> I THINK WE ALL PRETTY

833

00:48:03,289 --> 00:48:07,420
STRONGLY ABOUT THAT.
BECAUSE WITHOUT ALGEBRA 2, WHICH

834

00:48:07,420 --> 00:48:11,460
IF I REMEMBER RIGHT IS RIGHT
AROUND 8th GRADE GENERALLY.

835

00:48:11,460 --> 00:48:12,860
>> YEAH.
>> NOW YOU'RE GOING TO SET

836

00:48:12,860 --> 00:48:17,359
YOURSELF UP FOR HAVING PROBLEMS
WITH GEOMETRY AND TRIGONOMETRY

837

00:48:17,359 --> 00:48:21,619
AND EVENTUALLY CALCULUS WHICH IS
THE FUNDAMENTALS OF WHAT WE DO.

838

00:48:21,619 --> 00:48:25,819
YOU KNOW, WHETHER IT'S SPACE
FLIGHT, WHETHER IT'S PHYSICS,

839

00:48:25,819 --> 00:48:29,190
ANY KIND OF SCIENCE, THE
FUNDAMENTAL LANGUAGE OF ALL OF

840

00:48:29,190 --> 00:48:32,349
THESE THINGS IS MATHEMATICS.
JUST LIKE WHEN WE TALK, WE'RE

841

00:48:32,349 --> 00:48:34,559

TALKING IN ENGLISH.

THE LANGUAGE THAT WE SPEAK IN

842

00:48:34,559 --> 00:48:39,450

SCIENCE IS MATH.

ELIMINATING ALGEBRA, ONE OF THE

843

00:48:39,450 --> 00:48:43,750

MOST FUNDAMENTAL BUILDING BLOCKS

OF A MATHEMATICAL EDUCATION IS

844

00:48:43,750 --> 00:48:47,780

SOMETHING I WOULD PERSONALLY

HOPE WE WOULDN'T DO.

845

00:48:47,780 --> 00:48:52,760

>> ANOTHER QUICK ANSWER TO THAT.

FOR THE JET FLIGHTS, I ACTUALLY

846

00:48:52,760 --> 00:48:55,940

USE ALGEBRA EVERY SINGLE FLIGHT

BECAUSE I HAVE TO FIGURE OUT HOW

847

00:48:55,940 --> 00:48:58,170

MUCH GAS I'M GOING TO HAVE LEFT

WHEN I GET HOME.

848

00:48:58,170 --> 00:49:02,119

I HAVE TO FIGURE OUT THE ANGLE

TO COME INTO A RUNWAY AT.

849

00:49:02,119 --> 00:49:06,640

SO YOU LITERALLY USE MATH EVERY

TIME YOU DO SOMETHING.

850

00:49:06,640 --> 00:49:10,779

FOR MANY TECHNICAL CAREERS, BUT

ESPECIALLY AS AN ASTRONAUT.

851

00:49:10,779 --> 00:49:13,750

>> GREAT.

>> MY NAME IS PETER.

852

00:49:13,750 --> 00:49:16,839

I'M HOME-SCHOOLED.

I WAS WONDERING HOW LONG DO YOU

853

00:49:16,839 --> 00:49:21,260

THINK IT WILL BE BEFORE THE

SPACE STATION GOES TO MARS.

854

00:49:21,260 --> 00:49:26,369

>> WELL, THE SPACE STATION WON'T

BE GOING TO MARS.

855

00:49:26,369 --> 00:49:29,719

BUT ONE OF THESE GUYS MAY.

WANT TO HIT THAT ONE.

856

00:49:29,719 --> 00:49:33,470

>> SO THE SPACE STATION FLIES IN

ORBIT JUST AROUND THE EARTH.

857

00:49:33,470 --> 00:49:37,869

SO THE LAUNCH, THE ORION LAUNCH

THAT LELAND WAS TALKING ABOUT

858

00:49:37,869 --> 00:49:40,950

EARLIER IS ONE OF THE FIRST

STEPS THAT WE'RE TAKING TO

859

00:49:40,950 --> 00:49:44,329

BUILDING A VEHICLE THAT'S GOING

TO BE ABLE TO GET US TO MARS.

860

00:49:44,329 --> 00:49:46,130

WE'RE JUST STARTING THAT

JOURNEY.

861

00:49:46,130 --> 00:49:48,230

>> OKAY.

>> BUT JUST REAL QUICK TO ADD TO

862

00:49:48,230 --> 00:49:50,940

THAT, THE SPACE STATION IS OUR
TESTING GROUND.

863

00:49:50,940 --> 00:49:53,599

THIS IS WHERE WE DEVELOP THE
SKILLS AND THE TECHNOLOGY TO BE

864

00:49:53,599 --> 00:49:57,020

ABLE TO EVENTUALLY GO TO MARS.
THAT'S WHY IT'S SO IMPORTANT TO

865

00:49:57,020 --> 00:49:59,520

THAT MISSION.

>> GREAT.

866

00:49:59,520 --> 00:50:04,259

WHICH PLANET DO YOU WANT TO GO
TO?

867

00:50:04,259 --> 00:50:08,300

[LAUGHTER]

>> I WANT TO GO TO ALL OF THEM.

868

00:50:08,300 --> 00:50:12,730

>> SO YOU HEAR A LOT OF TALK
ABOUT GOING TO MARS.

869

00:50:12,730 --> 00:50:15,700

THAT'S BECAUSE THAT'S THE PLANET
THAT NASA HAS BEEN STUDYING FOR

870

00:50:15,700 --> 00:50:18,670

SO LONG AND WE THINK THAT'S THE
MOST ATTAINABLE FIRST PLANET TO

871
00:50:18,670 --> 00:50:20,230
GET TO.
WHEN YOU HEAR ABOUT THE MOON AND

872
00:50:20,230 --> 00:50:28,460
ASTEROIDS, WE'RE DEVELOPING
TECHNOLOGY TO GETh-- WE'RE

873
00:50:28,460 --> 00:50:32,660
DECIDING WHERE CAN WE REALLY GO.
ON MARS, THERE MY BE WATERWAY

874
00:50:32,660 --> 00:50:36,490
DOWN DEEP INSIDE OF MARS, WHICH
MEANS IF WE HAVE WATER, SOMEBODY

875
00:50:36,490 --> 00:50:39,650
COULD LIVE THERE.
SO WHEN YOU'RE AN ADULT, YOU

876
00:50:39,650 --> 00:50:42,910
COULD LIVE ON MARS.
THAT'S ONE OF THE REASONS WE

877
00:50:42,910 --> 00:50:45,940
REALLY LOVE MARS.
OF ALL THE PLANETS, I THINK WE

878
00:50:45,940 --> 00:50:49,510
WOULD GO TO ANY OF THEM.
>> I WOULD ADD TO THAT, WHICH

879
00:50:49,510 --> 00:50:52,519
PLANET WOULD YOU WANT TO GO TO?
I KNOW YOU KNOW A LOT ABOUT

880
00:50:52,519 --> 00:50:58,869
SPACE ALREADY.
>> YOU DON'T KNOW?

881

00:50:58,869 --> 00:51:04,230

>> MAYBE MARS?

MAYBE YOU'LL COME TO MARS WITH

882

00:51:04,230 --> 00:51:06,239

US?

>> ALL RIGHT.

883

00:51:06,239 --> 00:51:08,630

>> GREAT.

WE HAVE ANOTHER QUESTION.

884

00:51:08,630 --> 00:51:13,960

>> HELLO.

I'M ERRIE FROM NORWOOD SCHOOL.

885

00:51:13,960 --> 00:51:19,210

IF YOU COULD GO TO ONE PLACE IN
THE UNIVERSE, WHERE WOULD IT BE?

886

00:51:19,210 --> 00:51:27,539

>> ONE PLACE IN THE UNIVERSE.

NO MATTER WHERE WE GO IN THE

887

00:51:27,539 --> 00:51:30,360

UNIVERSE, I THINK ULTIMATELY,
WE'RE ALL GOING TO BE THANKFUL

888

00:51:30,360 --> 00:51:32,870

TO COME BACK TO EARTH BECAUSE
ONE OF THE THINGS WE'RE

889

00:51:32,870 --> 00:51:37,200

DISCOVERING AS WE SEARCH THESE
PLACES THAT MIGHT SUPPORT LIFE,

890

00:51:37,200 --> 00:51:41,299

WE KNOW THAT EARTH IS OUR HOME
AND WE NEED TO PROTECT IT AND

891

00:51:41,299 --> 00:51:43,260

WE'LL LOOK FORWARD TO COMING
BACK TO THE GOOD OLD BLUE

892

00:51:43,260 --> 00:51:45,539

PLANET.
>> GREAT ANSWER.

893

00:51:45,539 --> 00:51:50,130

WE'RE GOING TO GO BACK TO
TWITTER VERSE.

894

00:51:50,130 --> 00:51:54,079

>> GARRETT WANTS TO KNOW ABOUT
THE AIRCRAFT YOU FLY DURING YOUR

895

00:51:54,079 --> 00:51:55,119

TRAINING.
>> GREAT.

896

00:51:55,119 --> 00:52:02,359

>> GREAT QUESTION, GARRETT.
SO WE FLY THE T-38N.

897

00:52:02,359 --> 00:52:12,089

IT'S A TWIN ENGINE AFTER BURNING
DUAL TANDEM COCKPIT LOW

898

00:52:12,089 --> 00:52:15,261

AIRPLANE.
IT'S A GREAT PLANE TO DO WHAT WE

899

00:52:15,261 --> 00:52:17,490

DO.
IT'S LEARNING TO WORK TOGETHER

900

00:52:17,490 --> 00:52:20,980

IN A REALISTIC OPERATIONAL
ENVIRONMENT HAVING TO MAKE TIME

901
00:52:20,980 --> 00:52:24,369
CRITICAL DECISIONS.
IT'S ALSO A LOT OF FUN BECAUSE

902
00:52:24,369 --> 00:52:27,950
YOU CAN DO THINGS LIKE CHRISTINA
WAS TALKING ABOUT.

903
00:52:27,950 --> 00:52:34,940
>> IT ALLOWS US TO ACHIEVE OUR
SPACE FLIGHT READINESS TRAINING

904
00:52:34,940 --> 00:52:38,450
WHICH IS IMPORTANT BECAUSE WE'LL
BE IN SITUATION THAT IS ARE LIFE

905
00:52:38,450 --> 00:52:41,630
CRITICAL WHERE OTHER CREW
MEMBERS ARE DEPENDING ON OUR

906
00:52:41,630 --> 00:52:45,450
DECISION-MAKING.
BECAUSE THIS AIRCRAFT IS THE

907
00:52:45,450 --> 00:52:50,809
SAME WAY, IT IS\h-- IT FORCES YOU
TO BE ABLE TO MAKE QUICK

908
00:52:50,809 --> 00:52:54,359
DECISIONS THAT INVOLVE TECHNICAL
ANSWERS.

909
00:52:54,359 --> 00:52:56,760
AND SO IT'S THE PERFECT THING
FOR SPACE FLIGHT READINESS

910
00:52:56,760 --> 00:52:58,920
TRAINING.
>> GREAT.

911

00:52:58,920 --> 00:53:03,790

I THINK WE HAVE A YOUNG MAN
RIGHT HERE READY TO ASK A

912

00:53:03,790 --> 00:53:08,150

QUESTION.

>> I'M FROM ELEMENTARY IN FOURTH

913

00:53:08,150 --> 00:53:14,519

GRADE.

I WANT TO KNOW WHAT THINGS ARE

914

00:53:14,519 --> 00:53:18,529

ATTACHED TO THE SPACESUIT AND
ARE THEY COMFORTABLE?

915

00:53:18,529 --> 00:53:22,850

>> GOOD QUESTION.

>> THAT'S A GREAT QUESTION

916

00:53:22,850 --> 00:53:26,240

BECAUSE WE'VE ALL JUST STARTED
THE PROCESS OF GETTING FITTED

917

00:53:26,240 --> 00:53:29,060

FOR A SPACESUIT.
SO WE CAN START TRAINING.

918

00:53:29,060 --> 00:53:33,670

HAS ANYBODY BEEN IN A FULL
FITTING YET?

919

00:53:33,670 --> 00:53:36,859

>> LELAND HAS ACTUALLY USED ONE.
I CAN TELL YOU FROM A GLOVE

920

00:53:36,859 --> 00:53:42,560

PERSPECTIVE, WHEN I GOT FIT FOR
MY GLOVES, IT WAS ONE OF THOSE

921
00:53:42,560 --> 00:53:45,579
MOMENTS WHERE I WAS LIKE, I'VE
BEEN WANTING TO DO THIS FOR SO

922
00:53:45,579 --> 00:53:49,800
LONG, IT DOESN'T MATTER HOW
UNCOMFORTABLE THIS GLOVE IS.

923
00:53:49,800 --> 00:53:53,430
THIS IS PRETTY COOL.
>> HAVE ALL OF YOU WANTED TO BE

924
00:53:53,430 --> 00:53:55,670
AN ASTRONAUT FROM A VERY EARLY
AGE?

925
00:53:55,670 --> 00:54:01,079
RAISE YOUR HAND IF YOU HAVE.
>> I WAS NOT.

926
00:54:01,079 --> 00:54:04,319
JUST HAPPENED LATER.
SO WE HAVE ANOTHER QUESTION

927
00:54:04,319 --> 00:54:10,359
BEHIND YOU.
>> DID TECHNOLOGY EVER WORK

928
00:54:10,359 --> 00:54:14,919
AGAINST YOU?
>> GOOD QUESTION.

929
00:54:14,919 --> 00:54:18,660
>> UM, SOMETIMES IT DOES.
SO YOU HAVE TO BE REALLY CAREFUL

930
00:54:18,660 --> 00:54:22,869
BECAUSE SOMETIMES BAD THINGS
HAPPEN OR TECHNOLOGY FAILS OR

931
00:54:22,869 --> 00:54:25,320
THE WAY WE THOUGHT IT WAS GOING
TO BE DIDN'T TURN OUT THE WAY

932
00:54:25,320 --> 00:54:29,000
THAT IT WAS.
WE HAVE A REALLY BIG GROUP OF

933
00:54:29,000 --> 00:54:31,799
REALLY SMART ENGINEERS AND
SCIENTISTS AT NASA THAT WORK

934
00:54:31,799 --> 00:54:35,900
REALLY HARD TO MAKE SURE THAT WE
STAY SAFE AND THAT EVEN THOUGH

935
00:54:35,900 --> 00:54:38,730
WE TAKE SOME PRETTY BIG RISKS
SOMETIMES, THEY TAKE ALL THESE

936
00:54:38,730 --> 00:54:42,540
MEASURES TO TRY TO MINIMIZE THE
RISKS SO THAT TECHNOLOGY DOESN'T

937
00:54:42,540 --> 00:54:45,349
FAIL US AND WE DON'T FIND
OURSELVES IN TROUBLE.

938
00:54:45,349 --> 00:54:48,750
>> GOOD ANSWER.
YOU WANT TO UTILIZE THE

939
00:54:48,750 --> 00:54:51,440
TECHNOLOGY, BUT YOU WANT TO h--
IF IT DOES FAIL YOU, TO STILL

940
00:54:51,440 --> 00:54:54,119
HAVE THE ABILITY TO USE YOUR
BRAIN TO FIGURE THINGS OUT

941
00:54:54,119 --> 00:54:56,130
YOURSELF.
YOU WANT TO STAY SHARP AND NOT

942
00:54:56,130 --> 00:55:01,660
JUST DEPEND ON THE TECHNOLOGY.
ANOTHER QUESTION?

943
00:55:01,660 --> 00:55:07,100
DO YOU THINK THERE IS LIFE ON
OTHER PLANETS?

944
00:55:07,100 --> 00:55:10,079
>> SEE HEADS NODDING IN THE
BACK.

945
00:55:10,079 --> 00:55:12,640
>> I THINK THAT JUST SPEAKING
ABOUT STATISTICS, THE

946
00:55:12,640 --> 00:55:15,590
PROBABILITY IS THAT THERE ARE
DEFINITELY IS SOME OTHER FORM OF

947
00:55:15,590 --> 00:55:18,820
LIFE OUT THERE SOMEWHERE.
IT MIGHT NOT BE EXACTLY LIKE US.

948
00:55:18,820 --> 00:55:22,779
IT MIGHT BE ENTIRELY DIFFERENT.
I THINK IT DOES EXIST OR HAS AT

949
00:55:22,779 --> 00:55:25,150
SOME POINT.
BUT THE ODDS ARE ALSO THAT WE

950
00:55:25,150 --> 00:55:28,320
MAY NOT EVER FIND IT.
WE MAY NEVER SEE A SIGN THAT

951

00:55:28,320 --> 00:55:31,700

IT'S THERE AND THEY MAY NEVER
SEE A SIGN WE'RE THERE.

952

00:55:31,700 --> 00:55:38,180

OVER THE GRAND SCHEME OF TIME, I
THINK IT EXISTS BUT WE MAY NOT

953

00:55:38,180 --> 00:55:42,770

HAVE PROOF OF IT UNFORTUNATELY.
>>> THAT WAS YOUR LAST QUESTION.

954

00:55:42,770 --> 00:55:49,690

LET'S THANK OUR AS-CANS FOR A
WONDERFUL JOB.

955

00:55:49,690 --> 00:55:52,890

I WANT TO SAY THAT WE ARE VERY
PROUD OF YOU FOR WHAT YOU'LL BE

956

00:55:52,890 --> 00:55:57,710

DOING WITH YOUR LIVES ONE DAY.
BELIEVE IN YOURSELF, STUDY HARD

957

00:55:57,710 --> 00:56:00,519

AND YOU CAN BE ANYTHING YOU PUT
YOUR MIND TO.

958

00:56:00,519 --> 00:56:03,200

SO FROM THE NATIONAL AEROSPACE
MUSEUM, I'D LIKE TO THANK YOU.

959

00:56:03,200 --> 00:56:08,760

GOOD JOB, GUYS.
YOU GUYS TAKE CARE.

960

00:56:08,760 --> 00:56:13,480

[APPLAUSE]

>> AND THE FRIENDS AND FAMILY

961

00:56:13,480 --> 00:56:16,680

WILL GO WITH OUR LOVELY
ASSISTANT HERE.