



1
00:00:10,670 --> 00:00:14,310
right

2
00:00:19,350 --> 00:00:17,460
like that energy good afternoon everyone

3
00:00:21,810 --> 00:00:19,360
I'm very excited to be here in this very

4
00:00:23,249 --> 00:00:21,820
historic day and I want to thank our

5
00:00:30,410 --> 00:00:23,259
students here that's our next generation

6
00:00:34,680 --> 00:00:33,119
my name is Leland Melvin I'm the

7
00:00:36,450 --> 00:00:34,690
associate administrator for education of

8
00:00:38,070 --> 00:00:36,460
a former astronaut and i'm here to help

9
00:00:39,600 --> 00:00:38,080
inspire that next generation of

10
00:00:41,220 --> 00:00:39,610
explorers we're here at the Jet

11
00:00:43,619 --> 00:00:41,230
Propulsion Laboratory which is the lead

12
00:00:45,210 --> 00:00:43,629
Center for planetary science and we all

13
00:00:46,889 --> 00:00:45,220

know about this fantastic vehicle

14

00:00:49,350 --> 00:00:46,899

curiosity that's on the Martian surface

15

00:00:51,660 --> 00:00:49,360

right now but before we get into the

16

00:00:55,049 --> 00:00:51,670

program I just want to take a moment to

17

00:00:58,110 --> 00:00:55,059

honor a fallen hero commander Neil

18

00:01:01,500 --> 00:00:58,120

Armstrong her past this weekend and Neil

19

00:01:03,779 --> 00:01:01,510

was the first human being to plant his

20

00:01:06,660 --> 00:01:03,789

foot on another on another surface on

21

00:01:09,480 --> 00:01:06,670

the lunar surface and we are here today

22

00:01:12,120 --> 00:01:09,490

to help honor his legacy so the students

23

00:01:15,660 --> 00:01:12,130

in this room can help honor his legacy

24

00:01:17,550 --> 00:01:15,670

by being the best you can be his family

25

00:01:19,620 --> 00:01:17,560

wants you to do everything to be

26

00:01:22,230 --> 00:01:19,630

inspired to be motivated to maybe the

27

00:01:24,719 --> 00:01:22,240

one of you one day will be walking on

28

00:01:27,060 --> 00:01:24,729

the Martian surface so let's honor him

29

00:01:28,950 --> 00:01:27,070

by doing everything that we can but

30

00:01:32,149 --> 00:01:28,960

before we get into the rest of the show

31

00:01:34,679 --> 00:01:32,159

I want to introduce my big boss

32

00:01:36,660 --> 00:01:34,689

administrator Charlie Bolden who is

33

00:01:38,340 --> 00:01:36,670

already going to give you a little

34

00:01:40,830 --> 00:01:38,350

welcome so we have a little video clip

35

00:01:42,990 --> 00:01:40,840

coming from him but he's also been the

36

00:01:45,300 --> 00:01:43,000

first voice to come from Mars which came

37

00:01:48,120 --> 00:01:45,310

down yesterday so if we could roll the

38

00:01:50,160 --> 00:01:48,130

video with the administrator Bolden I'm

39

00:01:51,840 --> 00:01:50,170

nasa administrator charlie bolden with

40

00:01:54,660 --> 00:01:51,850

greetings and best wishes for today's

41

00:01:57,389 --> 00:01:54,670

event I'm sorry I'm not able to join you

42

00:01:59,429 --> 00:01:57,399

in person millions of people around the

43

00:02:02,100 --> 00:01:59,439

world shared in our excitement earlier

44

00:02:04,350 --> 00:02:02,110

this month as the Curiosity rover defied

45

00:02:07,319 --> 00:02:04,360

the odds demonstrated cutting-edge

46

00:02:09,960 --> 00:02:07,329

technology flawlessly and landed on the

47

00:02:13,020 --> 00:02:09,970

surface of Mars it was a great day for

48

00:02:15,300 --> 00:02:13,030

NASA but even more importantly it helped

49

00:02:17,130 --> 00:02:15,310

people in the US and around the world to

50

00:02:18,750 --> 00:02:17,140

share a common moment of accomplishment

51
00:02:22,259 --> 00:02:18,760
when the heights of human possibility

52
00:02:24,840 --> 00:02:22,269
were demonstrated we explore because as

53
00:02:26,970 --> 00:02:24,850
humans we have to it's part of our

54
00:02:28,020 --> 00:02:26,980
nature and it helps us to push ourselves

55
00:02:30,210 --> 00:02:28,030
to

56
00:02:33,540 --> 00:02:30,220
what seemed impossible yesterday but

57
00:02:36,210 --> 00:02:33,550
today is reality Mars has always

58
00:02:38,460 --> 00:02:36,220
fascinated us and the things curiosity

59
00:02:40,559 --> 00:02:38,470
tell us about it will help us learn

60
00:02:42,420 --> 00:02:40,569
about whether or not life was possible

61
00:02:45,240 --> 00:02:42,430
there and what future human explorers

62
00:02:47,400 --> 00:02:45,250
can expect there it's science

63
00:02:49,740 --> 00:02:47,410

instruments are like nothing we've ever

64

00:02:52,080 --> 00:02:49,750

sent to another planet and we can't wait

65

00:02:53,910 --> 00:02:52,090

to start getting results the first

66

00:02:57,000 --> 00:02:53,920

pictures have already been absolutely

67

00:02:58,979 --> 00:02:57,010

spectacular curiosity is a precursor to

68

00:03:01,740 --> 00:02:58,989

human arrival at the red planet and

69

00:03:04,020 --> 00:03:01,750

right now we're developing the rockets

70

00:03:07,140 --> 00:03:04,030

and spacecraft and technologies to get

71

00:03:08,850 --> 00:03:07,150

us there in the meantime there's so much

72

00:03:12,240 --> 00:03:08,860

more we need to learn about our neighbor

73

00:03:14,580 --> 00:03:12,250

in the solar system today the music of

74

00:03:16,259 --> 00:03:14,590

will.i.am has already provided the first

75

00:03:19,530 --> 00:03:16,269

song on our playlist for Mars

76

00:03:21,930 --> 00:03:19,540

exploration it's crucial that we inspire

77

00:03:24,900 --> 00:03:21,940

the next generation to help developing

78

00:03:26,699 --> 00:03:24,910

more capabilities to explore and that we

79

00:03:28,949 --> 00:03:26,709

provide opportunities like this where

80

00:03:31,500 --> 00:03:28,959

scientists and engineers can share what

81

00:03:34,440 --> 00:03:31,510

they do and the passion they have for

82

00:03:36,300 --> 00:03:34,450

making our world a better place it's

83

00:03:38,850 --> 00:03:36,310

important that every student knows

84

00:03:42,390 --> 00:03:38,860

science technology engineering and math

85

00:03:44,580 --> 00:03:42,400

can be fun they can take us out of this

86

00:03:47,310 --> 00:03:44,590

world and they can open unexpected doors

87

00:03:50,250 --> 00:03:47,320

of discovery and everyone can take part

88

00:03:51,810 --> 00:03:50,260

so enjoy today's events and take

89

00:03:53,819 --> 00:03:51,820

advantage of the highly trained people

90

00:03:57,300 --> 00:03:53,829

you're with to find out more about

91

00:03:59,699 --> 00:03:57,310

careers in exploration finally let me

92

00:04:02,340 --> 00:03:59,709

thank you will for your continued

93

00:04:04,860 --> 00:04:02,350

passion for NASA and for all you do to

94

00:04:09,479 --> 00:04:04,870

keep the next generation reaching for

95

00:04:12,539 --> 00:04:09,489

the stars all right give it up for

96

00:04:17,800 --> 00:04:15,970

so that was a historic moment and now

97

00:04:20,500 --> 00:04:17,810

we're ready for another historic moment

98

00:04:22,090 --> 00:04:20,510

the first time that a song has come from

99

00:04:23,770 --> 00:04:22,100

the Martian surface and again this song

100

00:04:25,659 --> 00:04:23,780

is for you guys it's all about you guys

101
00:04:27,730 --> 00:04:25,669
today and being inspired and motivated

102
00:04:29,950 --> 00:04:27,740
to lead that charge to be those

103
00:04:31,000 --> 00:04:29,960
explorers so the next person I want to

104
00:04:32,260 --> 00:04:31,010
bring up to the stage needs no

105
00:04:34,960 --> 00:04:32,270
introduction but I'll give him one

106
00:04:37,510 --> 00:04:34,970
anyway his name is will.i.am he's a

107
00:04:39,640 --> 00:04:37,520
singer-songwriter and he's one of the

108
00:04:42,640 --> 00:04:39,650
most creative people that I know but

109
00:04:45,129 --> 00:04:42,650
also he is so passionate about making

110
00:04:47,770 --> 00:04:45,139
sure that our kids have an opportunity

111
00:04:49,050 --> 00:04:47,780
all kids have an opportunity to live

112
00:04:51,850 --> 00:04:49,060
their dreams whether they want to be

113
00:04:53,260 --> 00:04:51,860

astronauts or artists and musicians or

114

00:04:55,659 --> 00:04:53,270

ballplayers of whatever you want to do

115

00:04:57,340 --> 00:04:55,669

he's inspired to ensure that you guys

116

00:04:59,140 --> 00:04:57,350

are inspired so without further ado

117

00:05:10,250 --> 00:04:59,150

would you please come up to the stage

118

00:05:18,330 --> 00:05:14,760

everybody this is a you know I can't

119

00:05:22,230 --> 00:05:18,340

even there's no words to explain how

120

00:05:23,760 --> 00:05:22,240

amazing this is these kids here from

121

00:05:28,200 --> 00:05:23,770

Boyle Heights to same neighborhood I'm

122

00:05:34,680 --> 00:05:28,210

from and this time last year I did a

123

00:05:37,800 --> 00:05:34,690

program on ABC called I'm first and it

124

00:05:40,980 --> 00:05:37,810

was to inspire kids to take an interest

125

00:05:42,750 --> 00:05:40,990

in stem and just just to say hey kids

126

00:05:45,410 --> 00:05:42,760

usually want to become scientists I'm

127

00:05:47,910 --> 00:05:45,420

going to put this program and Roosevelt

128

00:05:50,880 --> 00:05:47,920

doesn't mean that kids are going to want

129

00:05:54,300 --> 00:05:50,890

to join that program so I thought making

130

00:05:56,820 --> 00:05:54,310

a television program to inspire kids on

131

00:05:58,620 --> 00:05:56,830

how cool science is to show that my

132

00:06:00,240 --> 00:05:58,630

world appreciates the scientists and the

133

00:06:03,480 --> 00:06:00,250

engineers that give us the tools to

134

00:06:05,550 --> 00:06:03,490

express ourselves and you know entertain

135

00:06:07,410 --> 00:06:05,560

the world without scientists we wouldn't

136

00:06:09,270 --> 00:06:07,420

have these tools there would be no music

137

00:06:11,760 --> 00:06:09,280

if it wasn't for people like Nikola

138

00:06:13,820 --> 00:06:11,770

Tesla it wouldn't be radio I'm sorry if

139

00:06:18,690 --> 00:06:13,830

it wasn't for people like Nikola Tesla

140

00:06:21,570 --> 00:06:18,700

wouldn't be record players and CDs if it

141

00:06:23,520 --> 00:06:21,580

wasn't for all the engineers that you

142

00:06:27,810 --> 00:06:23,530

know champion that technology and

143

00:06:30,930 --> 00:06:27,820

passionate about connectivity and so I

144

00:06:33,510 --> 00:06:30,940

appreciate them to the point where I use

145

00:06:35,280 --> 00:06:33,520

my own money to make that TV program to

146

00:06:37,260 --> 00:06:35,290

inspire kids in my neighborhood that

147

00:06:40,770 --> 00:06:37,270

that movie waiting for superman was

148

00:06:43,680 --> 00:06:40,780

about our neighborhood and it doesn't

149

00:06:46,380 --> 00:06:43,690

have to be that way roosevelt changes

150

00:06:50,130 --> 00:06:46,390

when you guys become Mark Zuckerberg

151
00:06:53,550 --> 00:06:50,140
Dave laver ease you know jack dorsey's

152
00:06:56,040 --> 00:06:53,560
and it's not impossible you know it's

153
00:06:59,730 --> 00:06:56,050
only impossible for no one brings those

154
00:07:02,400 --> 00:06:59,740
tools to you guys so now you know he got

155
00:07:07,710 --> 00:07:02,410
a champion in me to bring the tools to

156
00:07:09,950 --> 00:07:07,720
you guys to become the next completely

157
00:07:13,380 --> 00:07:09,960
not just you but everyone in this room

158
00:07:14,700 --> 00:07:13,390
we are here for you guys yes it takes a

159
00:07:16,800 --> 00:07:14,710
community takes a village to raise a

160
00:07:18,040 --> 00:07:16,810
child and I know I had a lot of hands in

161
00:07:20,540 --> 00:07:18,050
my development

162
00:07:26,060 --> 00:07:20,550
you know a lot of people were developing

163
00:07:30,160 --> 00:07:26,070

me what got you inspired um really my

164

00:07:32,960 --> 00:07:30,170

mom you know she she sent me to

165

00:07:36,710 --> 00:07:32,970

brentwood science magnet so early on I

166

00:07:38,690 --> 00:07:36,720

got you know I don't know what gave her

167

00:07:40,700 --> 00:07:38,700

the idea to send me an hour way out of

168

00:07:44,000 --> 00:07:40,710

our neighborhood but that was brave of

169

00:07:45,800 --> 00:07:44,010

her to think of sending me an hour away

170

00:07:47,360 --> 00:07:45,810

from home I was seven years old going to

171

00:07:49,940 --> 00:07:47,370

a brim with brim with science magnet

172

00:07:53,990 --> 00:07:49,950

school and I attended schools outside of

173

00:07:59,180 --> 00:07:54,000

my area for 12 years of my life and my

174

00:08:02,240 --> 00:07:59,190

teachers mr. right miss Montez they

175

00:08:05,180 --> 00:08:02,250

encouraged me so that encouragement goes

176

00:08:07,430 --> 00:08:05,190

a long way yeah my encouragement was my

177

00:08:09,140 --> 00:08:07,440

mother gave me a chemistry set and I mix

178

00:08:11,680 --> 00:08:09,150

these two chemicals together and I

179

00:08:15,710 --> 00:08:11,690

created the most fantastic explosion I

180

00:08:17,390 --> 00:08:15,720

mean fantastic huge orange smoke flames

181

00:08:20,330 --> 00:08:17,400

all that and then I had a hand in my

182

00:08:21,740 --> 00:08:20,340

development I wanted to go I wanted that

183

00:08:24,650 --> 00:08:21,750

chemistry said I remember I told my mom

184

00:08:27,830 --> 00:08:24,660

I was like I want to kiss you set for

185

00:08:29,750 --> 00:08:27,840

Christmas and then my uncle roger was

186

00:08:32,960 --> 00:08:29,760

gonna give me you remember my shoot I

187

00:08:34,310 --> 00:08:32,970

wanted to Kimber she said and I know I

188

00:08:36,890 --> 00:08:34,320

didn't get why no it's not too late

189

00:08:39,500 --> 00:08:36,900

though no so I wanted a chemistry set

190

00:08:40,970 --> 00:08:39,510

and then I want a piano I was like mom I

191

00:08:45,380 --> 00:08:40,980

going to get my piano for Christmas I

192

00:08:47,210 --> 00:08:45,390

never got it over but it was that it was

193

00:08:49,280 --> 00:08:47,220

that you know the drive of wanting

194

00:08:52,010 --> 00:08:49,290

something you couldn't have that keeps

195

00:08:53,720 --> 00:08:52,020

you going right you kids in Boyle

196

00:08:55,550 --> 00:08:53,730

Heights you and outside you know

197

00:08:57,830 --> 00:08:55,560

communities like Boyle Heights you want

198

00:08:59,600 --> 00:08:57,840

something that you can't have but

199

00:09:01,850 --> 00:08:59,610

doesn't mean you won't be able to get it

200

00:09:03,290 --> 00:09:01,860

if you just stay focused and surround

201
00:09:06,440 --> 00:09:03,300
yourself with people that have that same

202
00:09:08,990 --> 00:09:06,450
drive to change you know your lives a

203
00:09:11,540 --> 00:09:09,000
lot of times you know far too many

204
00:09:13,130 --> 00:09:11,550
people want to escape the neighborhood

205
00:09:16,100 --> 00:09:13,140
to the point where the neighborhood

206
00:09:17,660 --> 00:09:16,110
stays a ghetto everyone wants to get out

207
00:09:19,460 --> 00:09:17,670
of it may I can't wait to get if I just

208
00:09:22,460 --> 00:09:19,470
gotta learn but that's the reason why I

209
00:09:24,770 --> 00:09:22,470
want to go back to Boyle Heights so let

210
00:09:27,610 --> 00:09:24,780
you guys don't ever think about leaving

211
00:09:29,450 --> 00:09:27,620
it but changing it we have to change

212
00:09:30,920 --> 00:09:29,460
communities like Boyle Heights and

213
00:09:34,490 --> 00:09:30,930

you're going to change it vyas

214

00:09:37,010 --> 00:09:34,500

and esteem and if you think about music

215

00:09:38,540 --> 00:09:37,020

and math those are two true absolutes

216

00:09:40,519 --> 00:09:38,550

that use both the right and left side of

217

00:09:42,620 --> 00:09:40,529

your brain so if you know music you know

218

00:09:44,840 --> 00:09:42,630

math and if no Matthew no music and if

219

00:09:47,420 --> 00:09:44,850

those two things are in you you can do

220

00:09:49,699 --> 00:09:47,430

anything your creativity your innovation

221

00:09:51,440 --> 00:09:49,709

your curiosity I mean that's what we

222

00:09:53,120 --> 00:09:51,450

have these scientists and engineers like

223

00:09:55,850 --> 00:09:53,130

Adam right here who helped develop the

224

00:09:58,820 --> 00:09:55,860

edl mission to get this Mars Curiosity

225

00:09:59,930 --> 00:09:58,830

rover on the ground so that curiosity is

226

00:10:01,670 --> 00:09:59,940

I'm tell you a little story later on

227

00:10:03,889 --> 00:10:01,680

about what it took to keep him in school

228

00:10:07,220 --> 00:10:03,899

and the things that he had to do to keep

229

00:10:09,380 --> 00:10:07,230

going so never give up people told me

230

00:10:10,880 --> 00:10:09,390

that I can be an astronaut I said why

231

00:10:12,350 --> 00:10:10,890

why can't it be an astronaut well

232

00:10:13,579 --> 00:10:12,360

because you weren't in the military well

233

00:10:15,500 --> 00:10:13,589

because you weren't this and run that

234

00:10:17,329 --> 00:10:15,510

it's not has nothing to do with that it

235

00:10:19,160 --> 00:10:17,339

has to do with the drive inside of you

236

00:10:21,230 --> 00:10:19,170

whatever you want to be whatever you

237

00:10:23,269 --> 00:10:21,240

dream you can do if you put your mind to

238

00:10:26,180 --> 00:10:23,279

it right that's right is that is our

239

00:10:28,480 --> 00:10:26,190

right student oh come on this week come

240

00:10:31,990 --> 00:10:28,490

on give me a little more is that right

241

00:10:34,460 --> 00:10:32,000

that's more like it that's more like it

242

00:10:36,110 --> 00:10:34,470

yep I mean I'm a little nervous because

243

00:10:39,110 --> 00:10:36,120

moms in the audience is your mama gonna

244

00:10:42,140 --> 00:10:39,120

see this is hey mom but hey guess what

245

00:10:44,390 --> 00:10:42,150

it's about that time yes is we have

246

00:10:46,280 --> 00:10:44,400

something this is the first time that a

247

00:10:49,190 --> 00:10:46,290

song has ever come from another planet

248

00:10:51,829 --> 00:10:49,200

and I think we have I think there's a

249

00:10:55,280 --> 00:10:51,839

guy with a mohawk you know how famous I

250

00:10:57,800 --> 00:10:55,290

got you high no way yeah that's all

251

00:10:59,510 --> 00:10:57,810

right we got a we got mr. Bobak there

252

00:11:02,390 --> 00:10:59,520

and we thank you for everything you've

253

00:11:04,640 --> 00:11:02,400

done to help inspire and motivate one of

254

00:11:06,440 --> 00:11:04,650

my friends was at the school bus the

255

00:11:08,000 --> 00:11:06,450

other day and it was a little kid had a

256

00:11:09,230 --> 00:11:08,010

mohawk and a star in the side of his

257

00:11:12,019 --> 00:11:09,240

head and I wonder where he got that from

258

00:11:14,660 --> 00:11:12,029

it was you man so you've inspired and

259

00:11:17,420 --> 00:11:14,670

motivated kids just by just by being

260

00:11:20,720 --> 00:11:17,430

there so let's hear the song yes let's

261

00:11:24,260 --> 00:11:20,730

do that I've been waiting you know for a

262

00:11:26,449 --> 00:11:24,270

year now I've been keeping this under my

263

00:11:29,750 --> 00:11:26,459

belt and not telling anybody what kind

264

00:11:33,620 --> 00:11:29,760

of under your bed kind of but it was so

265

00:11:36,230 --> 00:11:33,630

hard to like not want to you know just

266

00:11:38,660 --> 00:11:36,240

blurt out the first couple of months but

267

00:11:42,800 --> 00:11:38,670

now it's it finally is a reality and

268

00:11:43,860 --> 00:11:42,810

it's and it's coming just in a second

269

00:12:33,809 --> 00:11:43,870

there we go

270

00:12:51,460 --> 00:12:37,869

when I see the footprints our own why do

271

00:12:51,470 --> 00:13:00,160

I

272

00:13:00,170 --> 00:13:08,710

star reach force

273

00:13:21,680 --> 00:13:11,140

four star

274

00:13:21,690 --> 00:13:38,460

ok

275

00:13:49,199 --> 00:13:39,860

me

276

00:13:49,209 --> 00:13:52,809

Oh

277

00:13:52,819 --> 00:13:55,990

ha

278

00:13:56,000 --> 00:13:58,750

yes

279

00:13:58,760 --> 00:14:04,060

monospaced master

280

00:15:07,750 --> 00:14:05,590

I

281

00:15:07,760 --> 00:15:19,610

ha ha

282

00:15:19,620 --> 00:15:28,329

member

283

00:15:28,339 --> 00:16:08,150

the

284

00:16:08,160 --> 00:16:17,239

give it up give it up for will I am here

285

00:16:23,280 --> 00:16:19,679

whenever I hear that I get so inspired

286

00:16:25,079 --> 00:16:23,290

and what what was it about this song

287

00:16:27,119 --> 00:16:25,089

that you know when you saw the launch

288

00:16:29,309 --> 00:16:27,129

what was it that just made you want to

289

00:16:31,199 --> 00:16:29,319

use the orchestral pieces and the French

290

00:16:35,030 --> 00:16:31,209

horns and those kind of things that to

291

00:16:38,400 --> 00:16:35,040

make this song well the first thing when

292

00:16:41,189 --> 00:16:38,410

when I was here last year and they said

293

00:16:44,189 --> 00:16:41,199

it was a possibility of having a song

294

00:16:46,710 --> 00:16:44,199

broadcast it back from Mars the first

295

00:16:48,389 --> 00:16:46,720

thing that hit my head was I don't want

296

00:16:52,139 --> 00:16:48,399

to do a song that was done on a computer

297

00:16:54,389 --> 00:16:52,149

I wanted to show human collaboration and

298

00:16:56,489 --> 00:16:54,399

have an orchestra there and something

299

00:16:58,499 --> 00:16:56,499

that would be timeless where it's you

300

00:17:00,869 --> 00:16:58,509

know and translated in different

301
00:17:04,799 --> 00:17:00,879
cultures not have like a hip hop beat or

302
00:17:06,899 --> 00:17:04,809
a dance beat you know a lot of a lot of

303
00:17:09,179 --> 00:17:06,909
times you think that people in my field

304
00:17:12,500 --> 00:17:09,189
aren't aren't supposed to try to execute

305
00:17:15,379 --> 00:17:12,510
something classical or a core orchestral

306
00:17:18,929 --> 00:17:15,389
so I wanted to break that you know

307
00:17:22,470 --> 00:17:18,939
stigma and do my interpretation of an

308
00:17:24,960 --> 00:17:22,480
hour of an orchestral piece so you know

309
00:17:30,450 --> 00:17:24,970
there was a 40-piece Orchestra there and

310
00:17:35,250 --> 00:17:30,460
a friend of mine help me it was it was

311
00:17:36,750 --> 00:17:35,260
it was so beautiful to see in all the

312
00:17:39,750 --> 00:17:36,760
the people from the orchestra there

313
00:17:41,850 --> 00:17:39,760

reading the sheet music and it was in

314

00:17:44,279 --> 00:17:41,860

record plant in Hollywood and you know

315

00:17:46,230 --> 00:17:44,289

see a big Orchestra translate something

316

00:17:49,230 --> 00:17:46,240

that was in my head was just was so was

317

00:17:50,580 --> 00:17:49,240

so beautiful right all right so do you

318

00:17:52,769 --> 00:17:50,590

have any students here they have any

319

00:17:55,080 --> 00:17:52,779

questions I think this young lady right

320

00:17:57,240 --> 00:17:55,090

here has a question don't you you don't

321

00:17:59,190 --> 00:17:57,250

have a question oh come on anyone have a

322

00:18:03,440 --> 00:17:59,200

question for will about the making of

323

00:18:06,149 --> 00:18:03,450

the song behind me okay here we go what

324

00:18:07,409 --> 00:18:06,159

my name is Christina Cervantes and I

325

00:18:09,899 --> 00:18:07,419

just wanted to ask you like what

326

00:18:12,350 --> 00:18:09,909

inspired you to play do all this and

327

00:18:17,039 --> 00:18:12,360

make show off what you're doing a

328

00:18:18,120 --> 00:18:17,049

question just really was um my

329

00:18:21,690 --> 00:18:18,130

neighborhood

330

00:18:25,290 --> 00:18:21,700

encouraging me that's where it started

331

00:18:27,030 --> 00:18:25,300

really was people in Boyle Heights east

332

00:18:29,970 --> 00:18:27,040

LA saying hey Willie I heard you rapped

333

00:18:33,060 --> 00:18:29,980

dance for us show us your new dance

334

00:18:35,400 --> 00:18:33,070

moves and then from there it went you

335

00:18:38,040 --> 00:18:35,410

know it just grew but just being

336

00:18:40,980 --> 00:18:38,050

acknowledged and encouraged goes a long

337

00:18:43,620 --> 00:18:40,990

way so that that really was the the you

338

00:18:46,560 --> 00:18:43,630

know the birth of you know my passion

339

00:18:51,480 --> 00:18:46,570

was just being encouraged by family and

340

00:18:52,710 --> 00:18:51,490

friends and then no boundaries you know

341

00:18:56,730 --> 00:18:52,720

once you're encouraged you don't see

342

00:18:59,040 --> 00:18:56,740

boundaries you know so that's pretty

343

00:19:00,750 --> 00:18:59,050

much it so that's why one try my hardest

344

00:19:02,160 --> 00:19:00,760

to encourage you guys to go beyond what

345

00:19:03,900 --> 00:19:02,170

they tell you're supposed to do in Boyle

346

00:19:07,920 --> 00:19:03,910

Heights so what you can do in Boyle

347

00:19:11,670 --> 00:19:07,930

Heights have another question will I'm

348

00:19:14,400 --> 00:19:11,680

Cynthia enough my question is well what

349

00:19:17,280 --> 00:19:14,410

would you have said if the NASA were

350

00:19:21,540 --> 00:19:17,290

told to not make the song what would

351
00:19:25,040 --> 00:19:21,550
have been your reaction to it oh if NASA

352
00:19:27,030 --> 00:19:25,050
said we can't be me back from Mars I

353
00:19:28,550 --> 00:19:27,040
would have still been blessed that I

354
00:19:31,590 --> 00:19:28,560
came to JP oh and hung out with

355
00:19:36,690 --> 00:19:31,600
scientists and people like Leland you

356
00:19:38,880 --> 00:19:36,700
know not not not every idea if it's a

357
00:19:42,210 --> 00:19:38,890
good idea doesn't mean it's not going to

358
00:19:44,070 --> 00:19:42,220
happen at the time that you told them if

359
00:19:46,740 --> 00:19:44,080
you're persistent at one point in time

360
00:19:50,100 --> 00:19:46,750
it would happen you know I've been told

361
00:19:53,430 --> 00:19:50,110
no a trillion times but that doesn't

362
00:19:54,960 --> 00:19:53,440
stop you so if you know the day that I

363
00:19:57,420 --> 00:19:54,970

came here and I presented the idea to

364

00:19:59,850 --> 00:19:57,430

the people to at NASA and they and they

365

00:20:01,530 --> 00:19:59,860

said no it was not possible I still

366

00:20:03,300 --> 00:20:01,540

would have went to my community and

367

00:20:05,310 --> 00:20:03,310

around the world and said hey I was

368

00:20:08,690 --> 00:20:05,320

chillin at NASA and I pitched an idea

369

00:20:15,320 --> 00:20:08,700

that they didn't like

370

00:20:19,070 --> 00:20:15,330

here I still came to NASA got another

371

00:20:21,710 --> 00:20:19,080

question back here my name is Jeffrey

372

00:20:24,950 --> 00:20:21,720

Malenko and um I don't know what gave

373

00:20:30,860 --> 00:20:24,960

you the idea to do this um to be my song

374

00:20:32,690 --> 00:20:30,870

to Mars and bring it back so I had met

375

00:20:34,820 --> 00:20:32,700

Dean Cayman and Dean campaign has this

376

00:20:38,530 --> 00:20:34,830

program called us first where he teaches

377

00:20:41,180 --> 00:20:38,540

kids from the ages eight to nineteen

378

00:20:44,030 --> 00:20:41,190

stem and they compete building robots

379

00:20:46,970 --> 00:20:44,040

every April within the st. Louis and I

380

00:20:49,040 --> 00:20:46,980

helped them with you know I told him I

381

00:20:52,370 --> 00:20:49,050

wanted to help him make us first louder

382

00:20:56,150 --> 00:20:52,380

so I exhausted all my thoughts on how to

383

00:20:59,390 --> 00:20:56,160

you know make it loud in America so the

384

00:21:01,340 --> 00:20:59,400

solution was to buy time on ABC so about

385

00:21:04,130 --> 00:21:01,350

the time when ABC and made a TV program

386

00:21:06,560 --> 00:21:04,140

and when you buy time and you put

387

00:21:09,020 --> 00:21:06,570

yourself in that position all that it

388

00:21:11,600 --> 00:21:09,030

all ends on you if you don't if it

389

00:21:14,330 --> 00:21:11,610

doesn't happen so I wanted to take the

390

00:21:15,890 --> 00:21:14,340

risk so you use your own money so I

391

00:21:17,660 --> 00:21:15,900

remember people my team were like you

392

00:21:18,950 --> 00:21:17,670

know you could you could risk four

393

00:21:24,770 --> 00:21:18,960

million dollars you can lose four

394

00:21:26,780 --> 00:21:24,780

million bucks so I said I rather risk

395

00:21:28,490 --> 00:21:26,790

losing four million dollars to bring

396

00:21:30,710 --> 00:21:28,500

opportunity to the neighborhood I come

397

00:21:32,960 --> 00:21:30,720

from because the only way people in

398

00:21:34,550 --> 00:21:32,970

Boyle Heights and communities like Boyle

399

00:21:38,480 --> 00:21:34,560

Heights are going to take an interest in

400

00:21:41,450 --> 00:21:38,490

stem is if they think it's cool so you

401
00:21:44,360 --> 00:21:41,460
know that TV show Cape was so successful

402
00:21:47,150 --> 00:21:44,370
that Charlie Bolden called me on the

403
00:21:49,940 --> 00:21:47,160
phone and said he wanted me to come to

404
00:21:52,250 --> 00:21:49,950
NASA to help them with their efforts in

405
00:21:56,210 --> 00:21:52,260
inspiring kids to care about stem and

406
00:21:57,650 --> 00:21:56,220
space exploration so I asked a question

407
00:21:59,630 --> 00:21:57,660
like hey what do you guys got coming up

408
00:22:01,460 --> 00:21:59,640
they said we have a rocket going to Mars

409
00:22:02,900 --> 00:22:01,470
say hey have you ever thought about

410
00:22:04,040 --> 00:22:02,910
putting a song on the rocket so when the

411
00:22:06,700 --> 00:22:04,050
rocket lands it coming back to earth

412
00:22:10,510 --> 00:22:06,710
that's never happened before

413
00:22:16,269 --> 00:22:10,520

and so they said who's gonna do the song

414

00:22:23,919 --> 00:22:16,279

I was like are you serious damn that's a

415

00:22:25,840 --> 00:22:23,929

tote my name is Arlene Sibella um my

416

00:22:27,820 --> 00:22:25,850

question is how do you feel when people

417

00:22:30,970 --> 00:22:27,830

tell you that you're an inspiration of

418

00:22:33,370 --> 00:22:30,980

them what was the question how do you

419

00:22:41,080 --> 00:22:33,380

feel when people tell you you're an

420

00:22:44,380 --> 00:22:41,090

inspiration to them um I get emotional

421

00:22:46,960 --> 00:22:44,390

I'm an emotional cat so I get emotional

422

00:22:51,029 --> 00:22:46,970

and uh but then it just reminds me of

423

00:22:54,120 --> 00:22:51,039

how responsible I have to be you know

424

00:22:58,480 --> 00:22:54,130

some people run away from responsibility

425

00:23:02,529 --> 00:22:58,490

so it just helps me stay focused that I

426
00:23:05,830 --> 00:23:02,539
know that people can be inspired by the

427
00:23:08,830 --> 00:23:05,840
things that I you know involve myself in

428
00:23:10,779 --> 00:23:08,840
and when I'm in studio writing songs i

429
00:23:13,180 --> 00:23:10,789
have to say hey you know i shouldn't say

430
00:23:16,870 --> 00:23:13,190
that even though a lot of times i want

431
00:23:18,940 --> 00:23:16,880
to say that it keeps me responsible you

432
00:23:21,970 --> 00:23:18,950
know Oprah Winfrey is a big inspiration

433
00:23:27,039 --> 00:23:21,980
to me so when I met her and we became

434
00:23:30,240 --> 00:23:27,049
friends it it kept me balanced to a now

435
00:23:32,529 --> 00:23:30,250
I know I'm doing things for different

436
00:23:34,930 --> 00:23:32,539
you know from what I thought I was just

437
00:23:37,600 --> 00:23:34,940
going to be doing them for so it just

438
00:23:39,970 --> 00:23:37,610

keeps me keeps me level-headed when I

439

00:23:43,690 --> 00:23:39,980

hear things from the youth saying you

440

00:23:46,480 --> 00:23:43,700

inspire me so I can't go out and do some

441

00:23:49,840 --> 00:23:46,490

knucklehead stuff so you you guys

442

00:23:53,740 --> 00:23:49,850

actually bring me it's it's reciprocal

443

00:23:55,779 --> 00:23:53,750

so I you I may inspire you you keep me

444

00:23:59,019 --> 00:23:55,789

balanced because if I didn't have you

445

00:24:01,350 --> 00:23:59,029

guys as foundation to say those things I

446

00:24:11,750 --> 00:24:01,360

don't know what I would be getting into

447

00:24:17,519 --> 00:24:14,669

my name is Bridget look at us and I

448

00:24:19,799 --> 00:24:17,529

wanted to ask how anxious for you to to

449

00:24:23,450 --> 00:24:19,809

know that one is your song gonna be

450

00:24:27,029 --> 00:24:23,460

broadcasted into other / cece that you

451
00:24:28,680 --> 00:24:27,039
how anxious for you to know that your

452
00:24:35,700 --> 00:24:28,690
song was gonna be broadcasted into other

453
00:24:38,370 --> 00:24:35,710
over anxious it was it was more I didn't

454
00:24:42,710 --> 00:24:38,380
think it was real you know still to this

455
00:24:46,260 --> 00:24:42,720
date right now seemed surreal you know

456
00:24:49,680 --> 00:24:46,270
but it's it's a real thing and it should

457
00:24:51,600 --> 00:24:49,690
it should remind you guys that you know

458
00:24:54,810 --> 00:24:51,610
after today you're going to go home and

459
00:24:56,430 --> 00:24:54,820
life is going to be as it is and you're

460
00:24:59,279 --> 00:24:56,440
going to have all these boundaries in

461
00:25:01,169 --> 00:24:59,289
front of you and you know reality is

462
00:25:02,159 --> 00:25:01,179
going to be telling society and reality

463
00:25:06,570 --> 00:25:02,169

is going to be telling you that you need

464

00:25:09,269 --> 00:25:06,580

to stay in this area but you have to

465

00:25:11,700 --> 00:25:09,279

think beyond because anything is

466

00:25:13,279 --> 00:25:11,710

possible with discipline so you just

467

00:25:15,840 --> 00:25:13,289

have to discipline yourself and whatever

468

00:25:18,389 --> 00:25:15,850

passion point of interest that you have

469

00:25:22,380 --> 00:25:18,399

and surround yourself with friends and

470

00:25:24,450 --> 00:25:22,390

teachers like mr. legaspi and and you'll

471

00:25:25,830 --> 00:25:24,460

be able to do that but it's not gonna

472

00:25:29,130 --> 00:25:25,840

happen overnight it didn't happen

473

00:25:32,159 --> 00:25:29,140

overnight for me and I've come from I'm

474

00:25:35,399 --> 00:25:32,169

one of you guys like really I was in

475

00:25:37,200 --> 00:25:35,409

strata court yesterday seriously I

476
00:25:38,639 --> 00:25:37,210
called my mom yesterday because I was

477
00:25:42,360 --> 00:25:38,649
like wow Mike song is gonna be beamed

478
00:25:44,460 --> 00:25:42,370
back from Mars today tomorrow so I went

479
00:25:46,590 --> 00:25:44,470
to my old neighborhood to keep me

480
00:25:49,500 --> 00:25:46,600
balanced cuz I could be like yeah I'm

481
00:25:51,630 --> 00:25:49,510
boys that's what's up so I was like let

482
00:25:54,720 --> 00:25:51,640
me go back to my neighborhood where I'm

483
00:25:58,440 --> 00:25:54,730
from and sit on the porch that I said

484
00:25:59,820 --> 00:25:58,450
that okay hey I got a question for you

485
00:26:01,289 --> 00:25:59,830
guys how many of you have smartphones in

486
00:26:03,539 --> 00:26:01,299
here raise your hands we have a

487
00:26:05,870 --> 00:26:03,549
smartphone how many of you have played

488
00:26:08,540 --> 00:26:05,880

Angry Birds

489

00:26:11,540 --> 00:26:08,550

have you played angry birds space okay

490

00:26:15,320 --> 00:26:11,550

angry birds space all right do you know

491

00:26:18,260 --> 00:26:15,330

that that game made ten million dollars

492

00:26:20,930 --> 00:26:18,270

in three days and did you know that

493

00:26:24,350 --> 00:26:20,940

you're holding in your hand this little

494

00:26:26,720 --> 00:26:24,360

tool that you can program and make your

495

00:26:28,790 --> 00:26:26,730

own games and you can get paid you can

496

00:26:30,940 --> 00:26:28,800

pay for your college if you want to so

497

00:26:33,470 --> 00:26:30,950

the thing that we're trying to teach our

498

00:26:36,650 --> 00:26:33,480

students to look at is not just being a

499

00:26:38,720 --> 00:26:36,660

user of the technology be a developer of

500

00:26:41,660 --> 00:26:38,730

the technology you can create your own

501
00:26:44,360 --> 00:26:41,670
things and use that to advance yourself

502
00:26:46,810 --> 00:26:44,370
to advance your community to Vance your

503
00:26:49,670 --> 00:26:46,820
friends how many people on Instagram

504
00:26:52,430 --> 00:26:49,680
Instagram do you know that the people

505
00:26:54,380 --> 00:26:52,440
that started Instagram this time last

506
00:26:56,030 --> 00:26:54,390
year instagram didn't exist and there's

507
00:26:59,990 --> 00:26:56,040
only 14 of them and they sold it for a

508
00:27:05,180 --> 00:27:00,000
billion dollars real yeah what is right

509
00:27:12,170 --> 00:27:05,190
14 kids the younger to me and I'm pretty

510
00:27:14,720 --> 00:27:12,180
young yes look pretty young my name is

511
00:27:22,580 --> 00:27:14,730
Kimberly Ortega how did you find what

512
00:27:25,580 --> 00:27:22,590
your passion was if it's real passion

513
00:27:27,170 --> 00:27:25,590

your passion finds you you know what

514

00:27:29,930 --> 00:27:27,180

you're looking for it then it's probably

515

00:27:32,480 --> 00:27:29,940

not passion it's probably you know an

516

00:27:35,090 --> 00:27:32,490

obsession or something that's going to

517

00:27:37,040 --> 00:27:35,100

come and go when something else you

518

00:27:41,330 --> 00:27:37,050

think is your passion comes so a lot of

519

00:27:42,980 --> 00:27:41,340

times your passion find you and it's

520

00:27:45,260 --> 00:27:42,990

something you can't ignore it's

521

00:27:47,990 --> 00:27:45,270

something you can't run from and you

522

00:27:50,030 --> 00:27:48,000

find yourself you're going to find

523

00:27:53,630 --> 00:27:50,040

yourself depressed if you don't follow

524

00:27:56,540 --> 00:27:53,640

that passion in the future and so that

525

00:27:58,550 --> 00:27:56,550

means ignoring all the things that are

526

00:28:01,310 --> 00:27:58,560

going to get in the way of that passion

527

00:28:03,740 --> 00:28:01,320

becoming a reality so you have to have

528

00:28:05,110 --> 00:28:03,750

the ability to see that far like I

529

00:28:09,230 --> 00:28:05,120

shouldn't be hanging out with you

530

00:28:12,110 --> 00:28:09,240

because you are going to keep me from

531

00:28:16,190 --> 00:28:12,120

achieving this passion that I want to

532

00:28:17,880 --> 00:28:16,200

see real so it takes you knowing

533

00:28:25,080 --> 00:28:17,890

yourself

534

00:28:27,330 --> 00:28:25,090

you know getting your five closest

535

00:28:30,120 --> 00:28:27,340

friends that you have and then looking

536

00:28:32,790 --> 00:28:30,130

at their personality and then that's a

537

00:28:34,620 --> 00:28:32,800

reflection of you so if you don't like

538

00:28:38,250 --> 00:28:34,630

that combination of friends then you

539

00:28:40,650 --> 00:28:38,260

probably should change friends so and

540

00:28:43,530 --> 00:28:40,660

then once you do that you have like you

541

00:28:45,920 --> 00:28:43,540

know I you know selection of friends

542

00:28:47,760 --> 00:28:45,930

that you will aspire to be like then

543

00:28:54,600 --> 00:28:47,770

you're going to find your passion

544

00:28:58,410 --> 00:28:54,610

somewhere in there my name my name is

545

00:29:00,540 --> 00:28:58,420

Clarissa and I want to ask um is there a

546

00:29:02,760 --> 00:29:00,550

message you want like you did this song

547

00:29:04,920 --> 00:29:02,770

to send a message to so on or say

548

00:29:08,550 --> 00:29:04,930

something like what was the whole point

549

00:29:13,560 --> 00:29:08,560

like trying to send a message someone so

550

00:29:15,960 --> 00:29:13,570

the point of the song is to remind

551
00:29:23,010 --> 00:29:15,970
people it's not a point but it's a

552
00:29:25,350 --> 00:29:23,020
reminder that anything is possible if

553
00:29:28,860 --> 00:29:25,360
you discipline yourself and dedicate

554
00:29:30,780 --> 00:29:28,870
yourself and stand for something you

555
00:29:32,970 --> 00:29:30,790
know every single person that's a part

556
00:29:34,770 --> 00:29:32,980
of NASA stood for something and we have

557
00:29:36,840 --> 00:29:34,780
this wonderful technology the phone you

558
00:29:38,610 --> 00:29:36,850
have in your hand small computers if it

559
00:29:40,740 --> 00:29:38,620
wasn't for their discipline and they're

560
00:29:42,530 --> 00:29:40,750
relentless you know research and efforts

561
00:29:47,910 --> 00:29:42,540
we wouldn't have these small computers

562
00:29:49,860 --> 00:29:47,920
you know so we don't have to be I say we

563
00:29:53,580 --> 00:29:49,870

because I'm no different in you we don't

564

00:29:55,680 --> 00:29:53,590

have to just end up in a hood but it's a

565

00:30:00,990 --> 00:29:55,690

hard thing the hardest thing is

566

00:30:03,060 --> 00:30:01,000

discipline everything else is easy Hey

567

00:30:13,790 --> 00:30:03,070

thank you sir thank you there's awesome

568

00:30:19,440 --> 00:30:17,220

okay next up we have some other really

569

00:30:22,550 --> 00:30:19,450

cool people these were the people that

570

00:30:25,310 --> 00:30:22,560

actually built designed created and

571

00:30:27,830 --> 00:30:25,320

landed curiosity on the Martian surface

572

00:30:30,450 --> 00:30:27,840

so I want to bring up two individuals

573

00:30:31,860 --> 00:30:30,460

Adam steltzner he was part of the entry

574

00:30:36,170 --> 00:30:31,870

descent and landing team coming up at

575

00:30:38,820 --> 00:30:36,180

him and also want to bring up Mike Myers

576
00:30:39,990 --> 00:30:38,830
who was also part of making this whole

577
00:30:42,270 --> 00:30:40,000
thing happened to they're going to talk

578
00:30:44,760 --> 00:30:42,280
a little bit about their backgrounds

579
00:30:47,220 --> 00:30:44,770
their careers and also the science

580
00:30:57,300 --> 00:30:47,230
associated with curiosity right thanks

581
00:31:01,050 --> 00:30:57,310
my thanks brother don't be shy guys

582
00:31:07,260 --> 00:31:01,060
don't be shy good afternoon how you guys

583
00:31:09,930 --> 00:31:07,270
doing so my name is Adam I led the team

584
00:31:12,380 --> 00:31:09,940
that invented that wacky sky crane

585
00:31:19,140 --> 00:31:12,390
maneuver we used at the very end to land

586
00:31:22,080 --> 00:31:19,150
curiosity and I had a kind of a maybe an

587
00:31:25,800 --> 00:31:22,090
unusual way to find myself here speaking

588
00:31:28,620 --> 00:31:25,810

to you about landing a 2,000 pound rover

589

00:31:31,110 --> 00:31:28,630

on Mars I started out being interested

590

00:31:33,180 --> 00:31:31,120

in music and and will and Ieland

591

00:31:35,520 --> 00:31:33,190

mentioned that you know the connection

592

00:31:38,970 --> 00:31:35,530

between a science mathematics

593

00:31:40,470 --> 00:31:38,980

engineering music the arts they're all

594

00:31:42,750 --> 00:31:40,480

in there they're all on the different

595

00:31:46,650 --> 00:31:42,760

parts of your brain and using that whole

596

00:31:48,240 --> 00:31:46,660

brain of yours is not only is it super

597

00:31:52,020 --> 00:31:48,250

important for your life but it feels

598

00:31:54,030 --> 00:31:52,030

great and I discovered kind of late

599

00:31:56,280 --> 00:31:54,040

after high school when I was playing

600

00:31:59,220 --> 00:31:56,290

music that then I was a little

601
00:32:02,190 --> 00:31:59,230
interested in in physics and astronomy

602
00:32:06,210 --> 00:32:02,200
and the way that the world worked and

603
00:32:11,430 --> 00:32:06,220
and so started started down that path

604
00:32:13,500 --> 00:32:11,440
and that led me to be in here so again

605
00:32:15,450 --> 00:32:13,510
as will mentioned you know discipline

606
00:32:17,580 --> 00:32:15,460
once you find that thing that sort of

607
00:32:20,400 --> 00:32:17,590
lights the fire inside of you if you're

608
00:32:26,030 --> 00:32:20,410
true to it and you work hard

609
00:32:31,580 --> 00:32:28,470
I'm Michael Meyer and I'm the lead

610
00:32:34,500 --> 00:32:31,590
scientist for the Mars program and I

611
00:32:40,140 --> 00:32:34,510
think maybe the message today is is that

612
00:32:41,730 --> 00:32:40,150
whatever path you're on follow it do the

613
00:32:44,280 --> 00:32:41,740

best that you can because you never know

614

00:32:47,850 --> 00:32:44,290

where you'll end up I was kind of a late

615

00:32:50,820 --> 00:32:47,860

bloomer I flunked out of college and

616

00:32:53,570 --> 00:32:50,830

then decided that maybe it was a good

617

00:32:56,160 --> 00:32:53,580

idea to go to college and I ended up

618

00:32:57,720 --> 00:32:56,170

starting as an engineer moving into

619

00:33:01,890 --> 00:32:57,730

biology because I really liked biology

620

00:33:05,490 --> 00:33:01,900

getting a degree in oceanography doing

621

00:33:09,690 --> 00:33:05,500

oceanography then my first real job was

622

00:33:12,780 --> 00:33:09,700

actually working in deserts and so is a

623

00:33:15,360 --> 00:33:12,790

pretty circuitous path to end up going

624

00:33:19,530 --> 00:33:15,370

from just being passionate about

625

00:33:23,880 --> 00:33:19,540

learning to going from oceans to deserts

626

00:33:26,420 --> 00:33:23,890

to now to the red planet and and part of

627

00:33:30,390 --> 00:33:26,430

this is we have a tremendous opportunity

628

00:33:32,520 --> 00:33:30,400

is only 50 years ago this year that we

629

00:33:35,190 --> 00:33:32,530

sent the first instruments out into

630

00:33:36,540 --> 00:33:35,200

space out toward another planet it's

631

00:33:40,350 --> 00:33:36,550

only 50 years that we've actually

632

00:33:42,540 --> 00:33:40,360

started exploration other than looking

633

00:33:44,970 --> 00:33:42,550

through telescopes from the very ground

634

00:33:46,680 --> 00:33:44,980

that we're standing on and here we are

635

00:33:49,680 --> 00:33:46,690

we have something on Mars with

636

00:33:51,360 --> 00:33:49,690

tremendous capability trying to answer

637

00:33:53,340 --> 00:33:51,370

the question whether or not that red

638

00:33:56,310 --> 00:33:53,350

planet could have ever supported life

639

00:33:58,380 --> 00:33:56,320

and with that we're starting on a quest

640

00:33:59,430 --> 00:33:58,390

a real scientific quest understand

641

00:34:01,290 --> 00:33:59,440

whether or not we're alone in the

642

00:34:04,830 --> 00:34:01,300

universe and that doesn't get you jazzed

643

00:34:08,580 --> 00:34:04,840

I don't know what wouldn't that's that's

644

00:34:09,870 --> 00:34:08,590

pretty freaky it's pretty crazy so do

645

00:34:12,150 --> 00:34:09,880

you guys got some questions you want to

646

00:34:20,210 --> 00:34:12,160

know about curiosity not only your

647

00:34:27,750 --> 00:34:24,149

what is the goal for curiosity

648

00:34:31,409 --> 00:34:27,760

it is going to place called gale crater

649

00:34:33,899 --> 00:34:31,419

and we're going there because it looks

650

00:34:36,299 --> 00:34:33,909

like it had water for a significant

651
00:34:38,309 --> 00:34:36,309
period of its time and the whole goal is

652
00:34:40,889 --> 00:34:38,319
to determine whether or not it could

653
00:34:43,020 --> 00:34:40,899
have supported life so the idea is by

654
00:34:45,089 --> 00:34:43,030
making the right measurements exploring

655
00:34:48,270 --> 00:34:45,099
this whole region we can get an idea of

656
00:34:49,889 --> 00:34:48,280
what ancient Mars was like when we think

657
00:34:52,440 --> 00:34:49,899
it was warmer and wetter whether or not

658
00:34:54,990 --> 00:34:52,450
it actually could have supported

659
00:34:56,460 --> 00:34:55,000
microbial life part of the if you've

660
00:34:58,950 --> 00:34:56,470
been looking at some of the images back

661
00:35:00,990 --> 00:34:58,960
here one of the ones that really gets

662
00:35:02,910 --> 00:35:01,000
the scientific community excited is

663
00:35:06,210 --> 00:35:02,920

there's a close up of all this layering

664

00:35:09,480 --> 00:35:06,220

on the base of Mount sharp and that

665

00:35:10,799 --> 00:35:09,490

layering it's like taking a history book

666

00:35:13,380 --> 00:35:10,809

and putting it face down on the table

667

00:35:15,539 --> 00:35:13,390

and each of those layers is a page of

668

00:35:17,819 --> 00:35:15,549

history and so as we go and explore

669

00:35:19,770 --> 00:35:17,829

going up Mount sharp looking at each of

670

00:35:21,750 --> 00:35:19,780

those pages is going to tell us what was

671

00:35:24,420 --> 00:35:21,760

going on on Mars at some point in time

672

00:35:38,269 --> 00:35:24,430

in the past and whether or not it could

673

00:35:40,740 --> 00:35:38,279

have been a habitable place questions is

674

00:35:42,269 --> 00:35:40,750

the is curiosity gonna stay there

675

00:35:47,549 --> 00:35:42,279

forever or are we gonna bring you back

676
00:35:49,170 --> 00:35:47,559
and when she stays there forever well I

677
00:35:51,120 --> 00:35:49,180
don't know do you think your space

678
00:35:55,049 --> 00:35:51,130
museum might bring it back one of these

679
00:35:59,010 --> 00:35:55,059
days you know I once had a student asked

680
00:36:01,880 --> 00:35:59,020
me will you leave it behind is that

681
00:36:05,520 --> 00:36:04,050
and I thought about it for a while and i

682
00:36:08,730 --> 00:36:05,530
said no i think of it as an art

683
00:36:11,150 --> 00:36:08,740
installation right as a gesture of our

684
00:36:13,110 --> 00:36:11,160
humanity of our curiosity of our

685
00:36:16,200 --> 00:36:13,120
interest about what's around the next

686
00:36:19,950 --> 00:36:16,210
corner and we leave it there to remind

687
00:36:23,340 --> 00:36:19,960
ourselves about that i think you should

688
00:36:27,840 --> 00:36:23,350

get ready and go there and help check it

689

00:36:35,880 --> 00:36:27,850

out right with your curiosity other

690

00:36:37,710 --> 00:36:35,890

questions how long did it take you to

691

00:36:43,920 --> 00:36:37,720

build curiosity and did it take day and

692

00:36:48,030 --> 00:36:43,930

night yeah so it took a while we started

693

00:36:50,340 --> 00:36:48,040

thinking about her this big Rover the

694

00:36:55,400 --> 00:36:50,350

science instruments almost ten years ago

695

00:36:59,640 --> 00:36:55,410

and and actually wrenching or together

696

00:37:02,100 --> 00:36:59,650

took about three years and and there

697

00:37:03,750 --> 00:37:02,110

were periods of time when it was day and

698

00:37:05,010 --> 00:37:03,760

night not all of those three years not

699

00:37:07,770 --> 00:37:05,020

all of that ten years but there was

700

00:37:10,760 --> 00:37:07,780

maybe a good year all in where it was

701
00:37:14,040 --> 00:37:10,770
day and night seven days a week yeah

702
00:37:15,780 --> 00:37:14,050
just to add to that a little bit it it

703
00:37:17,610 --> 00:37:15,790
starts with the concept and the

704
00:37:18,930 --> 00:37:17,620
community getting behind it and deciding

705
00:37:21,300 --> 00:37:18,940
what the real goals of the mission

706
00:37:24,510 --> 00:37:21,310
should be so we actually had the first

707
00:37:27,840 --> 00:37:24,520
what should cure eos ax t be back in two

708
00:37:30,510 --> 00:37:27,850
thousand one and it took three years

709
00:37:32,400 --> 00:37:30,520
before we got what we thought was a

710
00:37:34,470 --> 00:37:32,410
reasonable plan that would then we could

711
00:37:39,750 --> 00:37:34,480
go forward and actually start really

712
00:37:41,130 --> 00:37:39,760
building things cool um so do you guys

713
00:37:45,120 --> 00:37:41,140

think that you guys could have made

714

00:37:47,460 --> 00:37:45,130

curiosity like better in any way that's

715

00:37:49,740 --> 00:37:47,470

the beauty about making anything is you

716

00:37:51,120 --> 00:37:49,750

always know by the time you're done with

717

00:37:53,790 --> 00:37:51,130

it you always know how you could make it

718

00:37:55,950 --> 00:37:53,800

better and absolutely there's things we

719

00:38:01,140 --> 00:37:55,960

could do to make her better and next

720

00:38:03,540 --> 00:38:01,150

time we go there we'll do that other

721

00:38:06,240 --> 00:38:03,550

questions over there

722

00:38:07,530 --> 00:38:06,250

like you said that if you leave it it's

723

00:38:11,550 --> 00:38:07,540

gonna stay there forever will that ever

724

00:38:13,050 --> 00:38:11,560

run out of energy or battery yeah one of

725

00:38:18,570 --> 00:38:13,060

the great things about the way she's

726

00:38:21,060 --> 00:38:18,580

powered uses a little pieces of

727

00:38:23,730 --> 00:38:21,070

plutonium that are decaying plutonium's

728

00:38:26,340 --> 00:38:23,740

a radioactive material and it puts off a

729

00:38:28,560 --> 00:38:26,350

lot of heat and she uses that heat and

730

00:38:32,910 --> 00:38:28,570

turns it into electricity that heat will

731

00:38:36,180 --> 00:38:32,920

always be there really forever it decays

732

00:38:38,670 --> 00:38:36,190

and gets puts off less heat so she'll

733

00:38:41,610 --> 00:38:38,680

have less and less and less power but

734

00:38:43,800 --> 00:38:41,620

she'll always have a little bit someday

735

00:38:45,300 --> 00:38:43,810

she may not have enough to operate her

736

00:38:47,100 --> 00:38:45,310

instruments and someday she may not even

737

00:38:49,170 --> 00:38:47,110

have enough to talk on the radios to us

738

00:38:51,180 --> 00:38:49,180

but it's gonna potentially could be a

739

00:38:57,140 --> 00:38:51,190

long time she could beat speaking to us

740

00:39:01,730 --> 00:38:57,150

for quite some time um what kind of

741

00:39:08,400 --> 00:39:01,740

instrument do you guys use to make her

742

00:39:10,200 --> 00:39:08,410

it actually has ten instruments I'm not

743

00:39:11,430 --> 00:39:10,210

sure I should list all of them but one

744

00:39:13,470 --> 00:39:11,440

of the things that really makes it

745

00:39:15,960 --> 00:39:13,480

unique is that it's a analytical

746

00:39:18,720 --> 00:39:15,970

laboratory so there are two instruments

747

00:39:20,310 --> 00:39:18,730

inside the rover that actually do the

748

00:39:23,700 --> 00:39:20,320

same kind of things that you would do in

749

00:39:25,710 --> 00:39:23,710

your chemistry lab and those are sort of

750

00:39:27,780 --> 00:39:25,720

the hallmark of the instrumentation and

751

00:39:29,940 --> 00:39:27,790

the rest of the instruments are actually

752

00:39:31,470 --> 00:39:29,950

ways to look around and decide what

753

00:39:39,870 --> 00:39:31,480

would be the best thing to put into your

754

00:39:42,180 --> 00:39:39,880

chemistry set yeah no way my question is

755

00:39:45,480 --> 00:39:42,190

that weapons if you do find out that

756

00:39:47,190 --> 00:39:45,490

there was water in the in the location

757

00:39:51,840 --> 00:39:47,200

what will you do will you just know

758

00:39:54,810 --> 00:39:51,850

that's it or well yeah it's interesting

759

00:39:57,300 --> 00:39:54,820

question we're pretty sure that there

760

00:39:59,430 --> 00:39:57,310

was water there and then now it comes to

761

00:40:02,490 --> 00:39:59,440

what was the temperature are the right

762

00:40:04,110 --> 00:40:02,500

minerals there what it really does is

763

00:40:06,480 --> 00:40:04,120

you're trying to establish whether or

764

00:40:09,240 --> 00:40:06,490

not life what's possible there and then

765

00:40:10,470 --> 00:40:09,250

the next big question which we can start

766

00:40:12,420 --> 00:40:10,480

getting toward is whether or not

767

00:40:15,090 --> 00:40:12,430

anything happened so one of the

768

00:40:17,250 --> 00:40:15,100

analytical instruments inside the rover

769

00:40:19,980 --> 00:40:17,260

is able to measure organic

770

00:40:22,950 --> 00:40:19,990

so one of the big questions the real

771

00:40:25,050 --> 00:40:22,960

tough thing here on earth we don't know

772

00:40:26,910 --> 00:40:25,060

how tough it is on Mars is can we find a

773

00:40:29,250 --> 00:40:26,920

place where if there was organic matter

774

00:40:31,020 --> 00:40:29,260

would it be preserved is there something

775

00:40:32,880 --> 00:40:31,030

there for you to actually see so that's

776

00:40:35,220 --> 00:40:32,890

going to be the big question that we're

777

00:40:37,080 --> 00:40:35,230

going to be playing with over the next

778

00:40:40,620 --> 00:40:37,090

couple of years on on the surface of

779

00:40:42,690 --> 00:40:40,630

Mars great here's another question once

780

00:40:45,690 --> 00:40:42,700

you guys reach your goal on finding out

781

00:40:47,850 --> 00:40:45,700

if there was life or there could be um

782

00:40:52,410 --> 00:40:47,860

what are your future plans about it like

783

00:40:57,060 --> 00:40:52,420

once you find out what are your future

784

00:41:01,620 --> 00:40:57,070

plans on going back to Mars great

785

00:41:05,700 --> 00:41:01,630

question really important question right

786

00:41:11,130 --> 00:41:05,710

now we're still we're still replanning

787

00:41:13,440 --> 00:41:11,140

the Mars exploration program so for some

788

00:41:14,880 --> 00:41:13,450

people myself included I'm a little

789

00:41:17,430 --> 00:41:14,890

disappointed because I can't see the

790

00:41:18,990 --> 00:41:17,440

road map to the next mission but we know

791

00:41:20,970 --> 00:41:19,000

that those missions are out there and we

792

00:41:23,760 --> 00:41:20,980

know that their Grand Challenges waiting

793

00:41:26,820 --> 00:41:23,770

for us in Mars the next grand challenge

794

00:41:30,150 --> 00:41:26,830

is called Mars sample return and it

795

00:41:32,970 --> 00:41:30,160

involves bringing a sample from Mars

796

00:41:36,230 --> 00:41:32,980

back to earth because although we've

797

00:41:39,870 --> 00:41:36,240

taken a ton of really smart people and

798

00:41:43,230 --> 00:41:39,880

and developed these instruments and put

799

00:41:45,060 --> 00:41:43,240

all their smarts onto a robot rover

800

00:41:47,340 --> 00:41:45,070

named curiosity sitting down on the

801
00:41:49,410 --> 00:41:47,350
bottom of Gale Crater it's still not as

802
00:41:53,310 --> 00:41:49,420
good as having a piece of Mars here on

803
00:41:55,950 --> 00:41:53,320
earth for us to sniff wonder about

804
00:41:58,890 --> 00:41:55,960
decide to invent a new instrument to

805
00:42:01,800 --> 00:41:58,900
look at and so that's the next big grand

806
00:42:04,350 --> 00:42:01,810
challenge for Mars is bringing going to

807
00:42:08,430 --> 00:42:04,360
Mars carefully picking some pieces of

808
00:42:10,950 --> 00:42:08,440
Mars and bringing it back and I'm hoping

809
00:42:14,130 --> 00:42:10,960
that you and some of the guys and girls

810
00:42:17,160 --> 00:42:14,140
in the audience will help us do that um

811
00:42:18,810 --> 00:42:17,170
my question is you know how you guys are

812
00:42:20,520 --> 00:42:18,820
saying that she's gonna be over there

813
00:42:22,320 --> 00:42:20,530

how are you guys gonna bring that piece

814

00:42:24,360 --> 00:42:22,330

back if you guys are leaving this one

815

00:42:27,030 --> 00:42:24,370

behind like you guys are gonna set

816

00:42:29,400 --> 00:42:27,040

another one to get a piece of it and

817

00:42:31,760 --> 00:42:29,410

bring it back yes ma'am but why are you

818

00:42:38,220 --> 00:42:31,770

guys leaving this one back behind

819

00:42:39,660 --> 00:42:38,230

it's a fun future it's not easy getting

820

00:42:42,480 --> 00:42:39,670

something off the surface of Mars and

821

00:42:44,880 --> 00:42:42,490

back to earth in fact we'll probably

822

00:42:47,010 --> 00:42:44,890

take a whole mission maybe with a rover

823

00:42:49,470 --> 00:42:47,020

the size of curiosity and then a little

824

00:42:51,480 --> 00:42:49,480

rocket on top of her that will take a

825

00:42:53,400 --> 00:42:51,490

little piece of Mars maybe the size of

826

00:42:57,120 --> 00:42:53,410

my fist put it in the top of the rocket

827

00:42:59,370 --> 00:42:57,130

shoot it off of Mars collected by from

828

00:43:01,470 --> 00:42:59,380

another spacecraft and fly it back to

829

00:43:03,030 --> 00:43:01,480

earth it's involved that's why I say

830

00:43:05,220 --> 00:43:03,040

it's a grand challenge and it's

831

00:43:07,920 --> 00:43:05,230

something for us for us to put our

832

00:43:10,050 --> 00:43:07,930

efforts to because when we when we

833

00:43:12,630 --> 00:43:10,060

engage in those grand challenges just

834

00:43:15,120 --> 00:43:12,640

like curiosity they pay off in the

835

00:43:20,940 --> 00:43:15,130

science answers and the inspiration to

836

00:43:23,730 --> 00:43:20,950

all of us to do better in our lives if

837

00:43:28,250 --> 00:43:23,740

if the rover ever tips over how will

838

00:43:42,390 --> 00:43:37,020

don't tip the rover over as bad right

839

00:43:54,720 --> 00:43:42,400

bad any other questions right did you

840

00:43:57,450 --> 00:43:54,730

make sure yes you did okay so um um does

841

00:44:05,370 --> 00:43:57,460

that Rover um send information

842

00:44:09,120 --> 00:44:05,380

constantly like what um yeah Mars is

843

00:44:11,099 --> 00:44:09,130

kind of far away and so for one thing it

844

00:44:16,500 --> 00:44:11,109

takes a fair amount of energy to send a

845

00:44:19,319 --> 00:44:16,510

signal all that distance and also Mars

846

00:44:22,710 --> 00:44:19,329

is rotating just like Earth is and so if

847

00:44:25,680 --> 00:44:22,720

you try to do it directly or Mars is

848

00:44:28,859 --> 00:44:25,690

only facing earth half the time of its

849

00:44:31,530 --> 00:44:28,869

day so what we do is we have a couple of

850

00:44:33,690 --> 00:44:31,540

orbiters going around Mars that collect

851
00:44:37,680 --> 00:44:33,700
the information from the rover whenever

852
00:44:40,050 --> 00:44:37,690
the orbiter passes over so twice a day

853
00:44:43,020 --> 00:44:40,060
each each of the orbiters gets

854
00:44:44,529 --> 00:44:43,030
information from the rover and because

855
00:44:46,209 --> 00:44:44,539
it's a lot easier to send

856
00:44:48,219 --> 00:44:46,219
signal just to something in orbit then

857
00:44:50,769 --> 00:44:48,229
it is all the way back to earth and then

858
00:44:54,309 --> 00:44:50,779
the orbiters they have these large solar

859
00:44:56,529 --> 00:44:54,319
panels and big antennas and so for them

860
00:44:59,829 --> 00:44:56,539
it's not that big of a deal then to beam

861
00:45:02,349 --> 00:44:59,839
the information back to us and so

862
00:45:05,140 --> 00:45:02,359
because of that we get a lot more

863
00:45:08,890 --> 00:45:05,150

information doesn't take as much power

864

00:45:14,140 --> 00:45:08,900

but it's also bracketed so that we only

865

00:45:17,259 --> 00:45:14,150

get maximum two passes from each orbiter

866

00:45:19,679 --> 00:45:17,269

each day so much of our cadence of how

867

00:45:21,909 --> 00:45:19,689

we're exploring Mars is we sit around

868

00:45:24,069 --> 00:45:21,919

wait for the information to come from

869

00:45:25,749 --> 00:45:24,079

the orbiter and then we go oh the rover

870

00:45:28,269 --> 00:45:25,759

did what we wanted and here's a new

871

00:45:30,519 --> 00:45:28,279

pitcher and then the science team spends

872

00:45:34,380 --> 00:45:30,529

the rest of day planning what to do for

873

00:45:36,849 --> 00:45:34,390

the next day's opportunity so

874

00:45:40,630 --> 00:45:36,859

conversation is difficult because it

875

00:45:42,339 --> 00:45:40,640

ends up taking a whole 24 hours to find

876

00:45:45,130 --> 00:45:42,349

out what happened come up with a new

877

00:45:46,449 --> 00:45:45,140

plan send the plan and have the rover do

878

00:45:49,689 --> 00:45:46,459

that plan tell us whether or not it

879

00:45:53,169 --> 00:45:49,699

happened I have a great like a homework

880

00:45:55,209 --> 00:45:53,179

assignment for you guys we're so paper

881

00:45:57,069 --> 00:45:55,219

and pencil get it out no no it's going

882

00:46:02,769 --> 00:45:57,079

to be easy and it's it's going to be fun

883

00:46:04,839 --> 00:46:02,779

um pick a friend and next weekend only

884

00:46:07,870 --> 00:46:04,849

speak to the friend by writing a note to

885

00:46:09,880 --> 00:46:07,880

the friend and putting it in a box then

886

00:46:11,859 --> 00:46:09,890

the friend re and there's good let's say

887

00:46:13,479 --> 00:46:11,869

and you got to wait an hour and then the

888

00:46:15,009 --> 00:46:13,489

friend reads the note then they write a

889

00:46:17,679 --> 00:46:15,019

note back to you put it in another box

890

00:46:19,630 --> 00:46:17,689

wait an hour and see how tough it is to

891

00:46:21,189 --> 00:46:19,640

have a conversation and that's what

892

00:46:22,959 --> 00:46:21,199

these guys are operating the rover have

893

00:46:25,870 --> 00:46:22,969

to go through when they're trying to

894

00:46:28,179 --> 00:46:25,880

figure out what to do with her awesome

895

00:46:36,779 --> 00:46:28,189

one more question right here here you go

896

00:46:40,239 --> 00:46:36,789

sir oh yeah I have question um um huh I

897

00:46:44,529 --> 00:46:40,249

know my question is that if you're to

898

00:46:46,509 --> 00:46:44,539

find water or ice on Mars would you

899

00:46:48,219 --> 00:46:46,519

possibly like create something to like

900

00:46:49,569 --> 00:46:48,229

signature like maybe like the moon of

901
00:46:51,640 --> 00:46:49,579
and Saturdays or something like to see

902
00:46:56,000 --> 00:46:51,650
if life could be generated may be there

903
00:47:03,840 --> 00:47:01,250
thanks very good well oh so so quick

904
00:47:06,600 --> 00:47:03,850
first thing to consider is whether or

905
00:47:08,970 --> 00:47:06,610
not there's life on Mars because you you

906
00:47:11,790 --> 00:47:08,980
don't want to infect the planet and ruin

907
00:47:14,190 --> 00:47:11,800
it for the Martians so you want to be

908
00:47:16,590 --> 00:47:14,200
responsible you want to explore safely

909
00:47:20,130 --> 00:47:16,600
and make sure that we're protecting Mars

910
00:47:21,750 --> 00:47:20,140
from us so that we don't change the

911
00:47:24,840 --> 00:47:21,760
planet before we know what's going on

912
00:47:27,360 --> 00:47:24,850
then the idea of taking life to some

913
00:47:29,640 --> 00:47:27,370

other place will have the same kind of

914

00:47:31,860 --> 00:47:29,650

ethical decision to make whether or not

915

00:47:33,630 --> 00:47:31,870

wherever we're taking it whether or not

916

00:47:36,630 --> 00:47:33,640

there's something already there that we

917

00:47:39,090 --> 00:47:36,640

might displace no so underneath your

918

00:47:43,500 --> 00:47:39,100

question I think is a is a is Mexes oak

919

00:47:46,080 --> 00:47:43,510

is a a wondering about life in other

920

00:47:48,420 --> 00:47:46,090

places in our solar system and Mars is

921

00:47:51,540 --> 00:47:48,430

not the only place that we think life

922

00:47:55,110 --> 00:47:51,550

may have existed or could exist today

923

00:47:57,450 --> 00:47:55,120

you met until this there's also the moon

924

00:47:59,280 --> 00:47:57,460

of Jupiter Europa we think that that

925

00:48:02,970 --> 00:47:59,290

might be the leading place where life

926
00:48:06,420 --> 00:48:02,980
might be present today as we sit here

927
00:48:08,340 --> 00:48:06,430
talking about it so in that big list of

928
00:48:10,980 --> 00:48:08,350
grand challenges in front of us for you

929
00:48:13,800 --> 00:48:10,990
guys to work on I'll try and help out

930
00:48:17,250 --> 00:48:13,810
but will we need we need all the help we

931
00:48:19,350 --> 00:48:17,260
can get our things like Mars sample

932
00:48:22,140 --> 00:48:19,360
return it's about going to the surface

933
00:48:24,210 --> 00:48:22,150
of Europa to look at that ice to see

934
00:48:27,600 --> 00:48:24,220
what's in that ice ultimately I'd love

935
00:48:30,300 --> 00:48:27,610
to get a get a spacecraft underneath the

936
00:48:32,610 --> 00:48:30,310
ice a submarine into the warm liquid

937
00:48:34,440 --> 00:48:32,620
ocean of water under the ice of Europa

938
00:48:39,090 --> 00:48:34,450

these are things that are out there

939

00:48:42,090 --> 00:48:39,100

waiting for you guys to go do it's easy

940

00:48:43,680 --> 00:48:42,100

for your rope it's only ten ten miles or

941

00:48:46,650 --> 00:48:43,690

so of ice that you have to go through

942

00:48:47,760 --> 00:48:46,660

yes well no problem hey guys I really

943

00:48:52,549 --> 00:48:47,770

appreciate let's give a round of

944

00:48:56,269 --> 00:48:52,559

applause Adam in my great job

945

00:48:57,319 --> 00:48:56,279

and morning I want to introduce before

946

00:48:59,449 --> 00:48:57,329

you guys leave I want introduce one more

947

00:49:03,219 --> 00:48:59,459

person from the flight control team this

948

00:49:06,559 --> 00:49:03,229

is babak for Josie yep yeah got it right

949

00:49:08,359 --> 00:49:06,569

we got better known as mohawk guy but

950

00:49:10,130 --> 00:49:08,369

also he's the one that played the song

951
00:49:11,929 --> 00:49:10,140
today for us so let's give a round of

952
00:49:13,640 --> 00:49:11,939
applause for him and the rest of the

953
00:49:24,349 --> 00:49:13,650
team in Mission Control thanks guys

954
00:49:26,150 --> 00:49:24,359
awesome ok next I mentioned at the

955
00:49:27,709 --> 00:49:26,160
beginning of the show that it takes a

956
00:49:29,059 --> 00:49:27,719
village to raise a child and I had a lot

957
00:49:31,130 --> 00:49:29,069
of people in my village that helped me

958
00:49:33,229 --> 00:49:31,140
become an astronaut become a chemist's

959
00:49:35,539 --> 00:49:33,239
become a scientist become whatever I

960
00:49:37,489 --> 00:49:35,549
wanted to be but one of the things that

961
00:49:39,529 --> 00:49:37,499
we're kicking off today is a partnership

962
00:49:42,170 --> 00:49:39,539
it's a relationship with collaboration

963
00:49:44,779 --> 00:49:42,180

and I'd like to introduce will.i.am back

964

00:49:49,130 --> 00:49:44,789

to the stage and i'll also like to bring

965

00:49:50,150 --> 00:49:49,140

up the CEO for Discovery Education build

966

00:49:59,209 --> 00:49:50,160

good wouldn't you come to the stage

967

00:50:00,859 --> 00:49:59,219

please ok ok bill you want to talk a bit

968

00:50:03,979 --> 00:50:00,869

about the partnership with I am angel

969

00:50:06,079 --> 00:50:03,989

and William and absolutey I'm just an

970

00:50:08,299 --> 00:50:06,089

Avenger borrow Mike one sec oh this one

971

00:50:10,130 --> 00:50:08,309

or treat there we go ok first of all

972

00:50:13,069 --> 00:50:10,140

what an amazing moment in history we've

973

00:50:15,380 --> 00:50:13,079

seen today we heard a song that will IM

974

00:50:18,410 --> 00:50:15,390

wrote and beamed it back from Mars

975

00:50:21,019 --> 00:50:18,420

pretty cool huh we also look back on her

976
00:50:23,079 --> 00:50:21,029
first walk on the moon and celebrated a

977
00:50:25,039 --> 00:50:23,089
real american hero neil armstrong ger

978
00:50:27,169 --> 00:50:25,049
absolutely and then we heard from leland

979
00:50:29,870 --> 00:50:27,179
in the incredibly brilliant people from

980
00:50:32,749 --> 00:50:29,880
NASA right they'd built a rover to

981
00:50:34,519 --> 00:50:32,759
explore Mars there's a lot to explore in

982
00:50:36,319 --> 00:50:34,529
our own backyard Boyle Heights and all

983
00:50:37,939 --> 00:50:36,329
the neighborhoods and in our schools and

984
00:50:39,169 --> 00:50:37,949
that's what we want to do and that's

985
00:50:42,469 --> 00:50:39,179
what this partnership is going to be

986
00:50:45,919 --> 00:50:42,479
about because ultimately when discovery

987
00:50:47,390 --> 00:50:45,929
channel was first launched in 1985 John

988
00:50:49,189 --> 00:50:47,400

Hendricks the founder believed that

989

00:50:53,299 --> 00:50:49,199

television could do more than entertain

990

00:50:55,219 --> 00:50:53,309

it could educate it could inspire and so

991

00:50:57,259 --> 00:50:55,229

that's what discovery education is doing

992

00:50:59,599 --> 00:50:57,269

classrooms today we're trying to

993

00:51:02,120 --> 00:50:59,609

transform teaching and learning to

994

00:51:03,650 --> 00:51:02,130

improve student achievement so with

995

00:51:06,200 --> 00:51:03,660

discovery education we want to engage

996

00:51:08,390 --> 00:51:06,210

students get them excited about all

997

00:51:11,030 --> 00:51:08,400

subjects we talked about today stem but

998

00:51:13,609 --> 00:51:11,040

it's really not stem it's steam it's

999

00:51:17,210 --> 00:51:13,619

science technology engineering arts and

1000

00:51:19,370 --> 00:51:17,220

math so we prepare you 21st century

1001
00:51:22,250 --> 00:51:19,380
learners we give you twenty first

1002
00:51:24,020 --> 00:51:22,260
century tools so you'll have 21st

1003
00:51:25,550 --> 00:51:24,030
century jobs and that's what this

1004
00:51:27,440 --> 00:51:25,560
partnerships all about so we're proud to

1005
00:51:30,829 --> 00:51:27,450
announce they want to be partnering with

1006
00:51:32,390 --> 00:51:30,839
will.i.am the I am angel foundation and

1007
00:51:34,430 --> 00:51:32,400
Discovery Education to bring STEM

1008
00:51:35,990 --> 00:51:34,440
education to life for millions of

1009
00:51:37,730 --> 00:51:36,000
students across the country you're going

1010
00:51:54,609 --> 00:51:37,740
to hear more about it in September but

1011
00:52:01,220 --> 00:51:58,640
song and I think thank NASA really

1012
00:52:03,710 --> 00:52:01,230
putting this fantastic program together

1013
00:52:12,109 --> 00:52:03,720

my education director here apartment

1014

00:52:16,099 --> 00:52:12,119

aside you're in the front I'd also like

1015

00:52:17,480 --> 00:52:16,109

to use your mic and thank Dave Lavery to

1016

00:52:21,010 --> 00:52:17,490

for helping put this together Dave

1017

00:52:24,349 --> 00:52:21,020

Lavery over here in the corner and it

1018

00:52:25,670 --> 00:52:24,359

work I really appreciate the students

1019

00:52:28,130 --> 00:52:25,680

questions you had some fantastic

1020

00:52:30,200 --> 00:52:28,140

questions keep those questions coming

1021

00:52:32,570 --> 00:52:30,210

when when someone asks you to do

1022

00:52:35,030 --> 00:52:32,580

something don't don't don't just always

1023

00:52:36,500 --> 00:52:35,040

questioned it but think in your mind how

1024

00:52:39,050 --> 00:52:36,510

can I make this better how can I make

1025

00:52:41,150 --> 00:52:39,060

something out of my own hands when I was

1026

00:52:43,099 --> 00:52:41,160

a kid I built a skateboard that was the

1027

00:52:44,480 --> 00:52:43,109

first thing that I built because my mom

1028

00:52:47,210 --> 00:52:44,490

and dad didn't have money to buy me a

1029

00:52:48,920 --> 00:52:47,220

skateboard so stay curious with

1030

00:52:50,720 --> 00:52:48,930

partnerships like discovery and I am

1031

00:52:52,700 --> 00:52:50,730

angel we're going to build new things

1032

00:52:55,010 --> 00:52:52,710

we're going to send you one of you maybe

1033

00:52:56,450 --> 00:52:55,020

tomorrow's one day I think this young

1034

00:53:00,260 --> 00:52:56,460

lady right here is ready to go to Mars

1035

00:53:02,839 --> 00:53:00,270

to grab the rover and bring it back but

1036

00:53:04,910 --> 00:53:02,849

just stay curious and when I talk about

1037

00:53:07,820 --> 00:53:04,920

these smartphones and these devices that

1038

00:53:10,760 --> 00:53:07,830

you use don't just be a user of the

1039

00:53:12,650 --> 00:53:10,770

technology be a developer and you will

1040

00:53:15,530 --> 00:53:12,660

win we will all win and some of you in

1041

00:53:17,540 --> 00:53:15,540

this room a cure the cure cancer one day

1042

00:53:19,670 --> 00:53:17,550

or you may save someone's life one day

1043

00:53:22,520 --> 00:53:19,680

or you may write a song

1044

00:53:24,589 --> 00:53:22,530

that inspires someone else to do

1045

00:53:26,390 --> 00:53:24,599

something great and wonderful so with

1046

00:53:30,049 --> 00:53:26,400

that I just want to say thanks again to

1047

00:53:34,390 --> 00:53:30,059

everyone in the room thank you I like to

1048

00:53:37,010 --> 00:53:34,400

thank um I like to thank honoree for

1049

00:53:38,359 --> 00:53:37,020

helping me with the song and bring in

1050

00:53:40,670 --> 00:53:38,369

the orchestra together Thank You

1051
00:53:43,910 --> 00:53:40,680
Discovery Education for the partnership

1052
00:53:45,740 --> 00:53:43,920
and I am angel and thank you kids thank

1053
00:53:48,500 --> 00:53:45,750
you guys for joining the item first

1054
00:53:51,410 --> 00:53:48,510
college track program here in Boyle

1055
00:53:53,450 --> 00:53:51,420
Heights and Roosevelt don't just look

1056
00:53:55,160 --> 00:53:53,460
for a job create a job and you're going

1057
00:53:57,710 --> 00:53:55,170
to create a job by disciplining yourself

1058
00:54:00,079 --> 00:53:57,720
around steam science technology

1059
00:54:18,250 --> 00:54:00,089
engineering arts and mathematics we

1060
00:54:28,230 --> 00:54:23,380
baby really bad in