

Episode 535

THE
**SKEPTIC
ZONE**
PODCAST

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The Skeptic Zone Podcast



Brad Hoge



Ross Blocher

Episode **535** - 20 Jan 2019

Oh No, it's Ross Blocher from
'Oh No, Ross and Carrie!'

Brad Hoge from the
National Center for
Science Education

Science Friction Movie Update



1
00:00:17,150 --> 00:00:09,110
welcome to the skeptic zone the podcast

2
00:00:24,349 --> 00:00:22,980
[Music]

3
00:00:27,529 --> 00:00:24,359
[Applause]

4
00:00:34,340 --> 00:00:27,539
yes it's the skeptic zone podcast

5
00:00:39,840 --> 00:00:34,350
episode number 535 the 20th of January

6
00:00:42,090 --> 00:00:39,850
2019 Richardson is coming to you along a

7
00:00:46,710 --> 00:00:42,100
country road side just outside of Bend

8
00:00:49,139 --> 00:00:46,720
Oregon I was spending a few days chillin

9
00:00:53,520 --> 00:00:49,149
out and I mean chillin up with my good

10
00:00:55,380 --> 00:00:53,530
friend Brian Dunning from skeptoid later

11
00:00:57,299 --> 00:00:55,390
on in the show we catch up with Brian's

12
00:01:01,290 --> 00:00:57,309
project who will news about Brian's

13
00:01:07,010 --> 00:01:01,300

project science friction to see how

14

00:01:10,139 --> 00:01:07,020

that's going along this is where he or

15

00:01:11,730 --> 00:01:10,149

the documentary will interview

16

00:01:17,460 --> 00:01:11,740

scientists who have been misrepresented

17

00:01:20,100 --> 00:01:17,470

in the media poor so a couple of degrees

18

00:01:21,779 --> 00:01:20,110

above zero I'm just out walking along

19

00:01:26,219 --> 00:01:21,789

the roadside here for exercise really

20

00:01:29,069 --> 00:01:26,229

and tramping on snow which is great fun

21

00:01:31,230 --> 00:01:29,079

for somebody from Sydney Australia also

22

00:01:34,139 --> 00:01:31,240

in this week's podcast the report of the

23

00:01:35,760 --> 00:01:34,149

live show of oh no Ross and Carrie which

24

00:01:39,450 --> 00:01:35,770

was a couple of days ago in Portland

25

00:01:42,690 --> 00:01:39,460

Oregon and we chat to rust Blocher after

26
00:01:44,340 --> 00:01:42,700
the show what a fantastic show was and

27
00:01:46,800 --> 00:01:44,350
great to see a live recording of a

28
00:01:50,960 --> 00:01:46,810
podcast in front of a very very

29
00:02:02,700 --> 00:01:59,160
hello dog you look a bit cold hey it's

30
00:02:04,830 --> 00:02:02,710
alright it's behind a fence hmm I don't

31
00:02:08,270 --> 00:02:04,840
think I'll get any closer I'm actually

32
00:02:16,560 --> 00:02:08,280
passing a paddock with no horses grazing

33
00:02:20,720 --> 00:02:16,570
just by the roadside here and I'm not

34
00:02:22,950 --> 00:02:20,730
used to seeing chains on car tires huh

35
00:02:24,840 --> 00:02:22,960
people who live in colder climates or

36
00:02:28,920 --> 00:02:24,850
think I'm I've lost the plot but to me

37
00:02:31,920 --> 00:02:28,930
it's very interesting and ahead to this

38
00:02:34,020 --> 00:02:31,930

week's show I go to the National Center

39

00:02:37,130 --> 00:02:34,030

for Science education in Oakland

40

00:02:40,520 --> 00:02:37,140

California and speak to Brad Hogg about

41

00:02:43,320 --> 00:02:40,530

the efforts of the center is making to

42

00:02:45,870 --> 00:02:43,330

help battle misinformation of climate

43

00:02:47,910 --> 00:02:45,880

change about climate change and what

44

00:02:51,450 --> 00:02:47,920

resources and help they can offer

45

00:02:54,740 --> 00:02:51,460

teachers around the world really when it

46

00:03:01,080 --> 00:02:54,750

comes to helping them to convey the

47

00:03:02,900 --> 00:03:01,090

science of climate change oh wow there's

48

00:03:06,060 --> 00:03:02,910

another horse grazing I don't know how I

49

00:03:09,300 --> 00:03:06,070

look at new respect for horses and cows

50

00:03:11,570 --> 00:03:09,310

and things seem to be they don't care

51

00:03:14,220 --> 00:03:11,580

about this cold weather

52

00:03:19,110 --> 00:03:14,230

it's just beautiful here in Bend Oregon

53

00:03:21,210 --> 00:03:19,120

and with somebody who has to give digs

54

00:03:23,580 --> 00:03:21,220

our listeners will may well know realize

55

00:03:26,370 --> 00:03:23,590

remember I don't cope well in the heat

56

00:03:32,060 --> 00:03:26,380

and humidity and to be here in a cold

57

00:03:34,650 --> 00:03:32,070

crisp environment dressed up gloves and

58

00:03:36,949 --> 00:03:34,660

breathing the cold air well to me it's

59

00:03:40,490 --> 00:03:36,959

pretty good

60

00:03:42,050 --> 00:03:40,500

ha I don't know where I'm walking to now

61

00:03:49,640 --> 00:03:42,060

just

62

00:03:50,960 --> 00:03:49,650

the other side of the road there's still

63

00:03:58,100 --> 00:03:50,970

lots of snow everywhere

64

00:03:59,480 --> 00:03:58,110

ah hello what's this big long patch of

65

00:04:05,500 --> 00:03:59,490

ice Wow

66

00:04:08,690 --> 00:04:05,510

better be careful well well I keep

67

00:04:10,730 --> 00:04:08,700

walking along this snowy road in search

68

00:04:11,510 --> 00:04:10,740

of something to eat he'll drink maybe a

69

00:04:14,660 --> 00:04:11,520

hot cup of coffee

70

00:04:16,040 --> 00:04:14,670

I hope you enjoy this week's skeptics

71

00:04:23,340 --> 00:04:16,050

urn

72

00:04:32,939 --> 00:04:23,350

[Music]

73

00:04:36,420 --> 00:04:32,949

since 2011 the Oh No Ross and Carrie

74

00:04:38,820 --> 00:04:36,430

podcast with Ross Blocher and Gary poppy

75

00:04:42,870 --> 00:04:38,830

who has been investigating science

76
00:04:44,999 --> 00:04:42,880
spirituality medicine fringe beliefs the

77
00:04:48,270 --> 00:04:45,009
motto of the podcast is when we show up

78
00:04:50,520 --> 00:04:48,280
and say you don't have to I had the

79
00:04:54,210 --> 00:04:50,530
pleasure of interviewing Russell Harry

80
00:04:57,719 --> 00:04:54,220
way back I think in about 2011 when

81
00:04:59,550 --> 00:04:57,729
their podcast was relatively new and now

82
00:05:01,290 --> 00:04:59,560
they're taking their show on the road I

83
00:05:04,170 --> 00:05:01,300
had the great pleasure of attending

84
00:05:06,900 --> 00:05:04,180
their performance in Portland Oregon

85
00:05:10,710 --> 00:05:06,910
where I caught up with Ross after the

86
00:05:10,720 --> 00:05:25,720
[Music]

87
00:05:25,730 --> 00:05:28,869
oh man

88
00:05:33,489 --> 00:05:31,749

tweet us your eyes like theoretically

89

00:05:42,990 --> 00:05:33,499

Alma right and obviously I think this

90

00:05:47,170 --> 00:05:45,580

all right I feel like I feel like

91

00:05:54,380 --> 00:05:47,180

something just brewing up in the

92

00:05:54,390 --> 00:06:03,490

[Applause]

93

00:06:10,090 --> 00:06:07,750

I was stepping out now I'm with a rush

94

00:06:12,190 --> 00:06:10,100

from ona rhosync a great show Ross thank

95

00:06:14,410 --> 00:06:12,200

you so much Richard thank you for coming

96

00:06:16,150 --> 00:06:14,420

out tonight yeah a big it was a full

97

00:06:17,560 --> 00:06:16,160

house I don't know how many people with

98

00:06:20,320 --> 00:06:17,570

that but it was a nice theater with a

99

00:06:22,810 --> 00:06:20,330

full house up up and down and you and

100

00:06:24,700 --> 00:06:22,820

Carrie came out and singing I did a

101
00:06:27,880 --> 00:06:24,710
really great show hey this is Carrie's

102
00:06:29,260 --> 00:06:27,890
idea that we come out singing part we're

103
00:06:31,570 --> 00:06:29,270
now not part of your world that's Little

104
00:06:34,180 --> 00:06:31,580
Mermaid this is a lot in a whole new

105
00:06:35,770 --> 00:06:34,190
world yes with the flat earth behind us

106
00:06:37,660 --> 00:06:35,780
which won't make any sense to people

107
00:06:38,980 --> 00:06:37,670
listening to it later but hopefully at

108
00:06:40,660 --> 00:06:38,990
least it made sense to everyone in the

109
00:06:41,880 --> 00:06:40,670
audience that's freezing cold out here

110
00:06:44,350 --> 00:06:41,890
on the street we were to put out our

111
00:06:48,160 --> 00:06:44,360
bags away and we'll have a chat in a

112
00:06:49,720 --> 00:06:48,170
minute Ross great to see you again we

113
00:06:51,880 --> 00:06:49,730

haven't seen each other for a few years

114

00:06:52,240 --> 00:06:51,890

likewise always wonderful to see you

115

00:06:55,300 --> 00:06:52,250

Richard

116

00:06:56,770 --> 00:06:55,310

and it's interesting only you know six

117

00:06:58,480 --> 00:06:56,780

or seven weeks ago Maynard was

118

00:07:00,820 --> 00:06:58,490

interviewing Carrie because she came to

119

00:07:03,190 --> 00:07:00,830

the convention in Australia I think

120

00:07:05,500 --> 00:07:03,200

we're gonna have to try and wrangle it

121

00:07:08,020 --> 00:07:05,510

so you come to visit too yes please

122

00:07:10,030 --> 00:07:08,030

oh yeah I I'm really excited to come

123

00:07:13,480 --> 00:07:10,040

down to Australia so please give me an

124

00:07:15,010 --> 00:07:13,490

excuse look into that but at a plane

125

00:07:16,540 --> 00:07:15,020

ticket and a plane ticket that always

126

00:07:18,969 --> 00:07:16,550

helps but as I was saying it was a

127

00:07:20,440 --> 00:07:18,979

really yeah it was a full venue tonight

128

00:07:22,240 --> 00:07:20,450

and when the crowd loving it though

129

00:07:25,890 --> 00:07:22,250

really into the show tonight thank you

130

00:07:28,030 --> 00:07:25,900

so much yeah it's you know you

131

00:07:30,280 --> 00:07:28,040

podcasting you know this you you talk

132

00:07:32,110 --> 00:07:30,290

into a microphone and you put it out

133

00:07:33,790 --> 00:07:32,120

somewhere as a file and you know

134

00:07:36,010 --> 00:07:33,800

eventually you hear that people listen

135

00:07:39,700 --> 00:07:36,020

to it but it's so great to meet people

136

00:07:42,550 --> 00:07:39,710

in person and and know that our message

137

00:07:44,230 --> 00:07:42,560

you know silly thing about this was

138

00:07:46,060 --> 00:07:44,240

haunted dolls in this particular case

139

00:07:48,909 --> 00:07:46,070

but just the the selling message of

140

00:07:51,790 --> 00:07:48,919

having fun with these kind of zany

141

00:07:53,830 --> 00:07:51,800

beliefs and exploring them from

142

00:07:57,190 --> 00:07:53,840

different angles resonates with people

143

00:07:58,300 --> 00:07:57,200

well it does and I could I could tell

144

00:07:59,980 --> 00:07:58,310

that by the reaction from the audience

145

00:08:02,029 --> 00:07:59,990

especially when they ask personal

146

00:08:04,579 --> 00:08:02,039

questions about children and pets

147

00:08:06,559 --> 00:08:04,589

yeah and that's always the amazing thing

148

00:08:09,230 --> 00:08:06,569

as people will stop by afterwards to

149

00:08:10,399 --> 00:08:09,240

tell us that you know maybe hearing us

150

00:08:13,339 --> 00:08:10,409

go through one of these adventures

151
00:08:16,339 --> 00:08:13,349
helped them as they were dealing with a

152
00:08:17,959 --> 00:08:16,349
sick loved one or going through a really

153
00:08:19,429 --> 00:08:17,969
hard time in their lives and you don't

154
00:08:21,829 --> 00:08:19,439
you don't anticipate something like that

155
00:08:24,529 --> 00:08:21,839
when you're talking about these issues

156
00:08:27,260 --> 00:08:24,539
and your haunted houses and Scientology

157
00:08:29,629 --> 00:08:27,270
and firewalking and all that but I guess

158
00:08:32,600 --> 00:08:29,639
sometimes that can just help people to

159
00:08:34,699 --> 00:08:32,610
sort of stay grounded and and maybe get

160
00:08:36,559 --> 00:08:34,709
out of get outside of whatever troubles

161
00:08:38,540 --> 00:08:36,569
they're facing now how long is the

162
00:08:41,899 --> 00:08:38,550
podcast I've never seen Carrie bean with

163
00:08:45,500 --> 00:08:41,909

the maximum fund it's it's a network of

164

00:08:48,769 --> 00:08:45,510

podcasters yeah since 2014 beginning of

165

00:08:52,030 --> 00:08:48,779

2014 so five years now Wow and yeah it's

166

00:08:54,500 --> 00:08:52,040

a great family with a lot of fantastic

167

00:08:56,090 --> 00:08:54,510

comedy and culture shows so you've got

168

00:08:57,980 --> 00:08:56,100

the McElroy brothers with a bunch of

169

00:09:00,019 --> 00:08:57,990

their shows Sawbones is one of my

170

00:09:02,629 --> 00:09:00,029

favorites looking for good

171

00:09:04,490 --> 00:09:02,639

recommendation reading glasses is

172

00:09:06,800 --> 00:09:04,500

another favorite there's my brother my

173

00:09:08,389 --> 00:09:06,810

brother and me judge John Hodgman all

174

00:09:10,189 --> 00:09:08,399

kinds of great content on that network

175

00:09:12,259 --> 00:09:10,199

so we're proud to be part of it I

176

00:09:14,120 --> 00:09:12,269

getting ready to see you again Russ

177

00:09:15,920 --> 00:09:14,130

thanks for doing the live show it was

178

00:09:18,079 --> 00:09:15,930

nice to catch up with Carrie papi as

179

00:09:19,970 --> 00:09:18,089

well and folks there's the message of

180

00:09:22,670 --> 00:09:19,980

course we wrote regular promos for

181

00:09:24,410 --> 00:09:22,680

Ross and Carrie and we look forward to

182

00:09:26,810 --> 00:09:24,420

your next adventure thank you so much

183

00:09:28,250 --> 00:09:26,820

Richard and yeah I'm sure our next

184

00:09:35,040 --> 00:09:28,260

adventure will be somewhere here in the

185

00:09:41,019 --> 00:09:39,310

this is NASA Hoshi a flat earth but we

186

00:09:43,870 --> 00:09:41,029

should lie to everybody about it and say

187

00:09:46,720 --> 00:09:43,880

it's round 10 for maximum fun brings you

188

00:09:49,630 --> 00:09:46,730

the latest podcasts and expose aren't

189

00:09:52,090 --> 00:09:49,640

the Flat Earth I want to take advantage

190

00:09:53,470 --> 00:09:52,100

of humankind and make them believe a lie

191

00:09:55,240 --> 00:09:53,480

so that they will trust us at the

192

00:09:56,560 --> 00:09:55,250

government it's all an elaborate lie and

193

00:09:58,420 --> 00:09:56,570

when you get on a plane they

194

00:10:00,160 --> 00:09:58,430

purposefully fly you farther than you

195

00:10:02,200 --> 00:10:00,170

need to go it's disgusting

196

00:10:04,060 --> 00:10:02,210

it needs to be stopped and if you listen

197

00:10:09,970 --> 00:10:04,070

to onna Ross and Carrie we will tell you

198

00:10:11,440 --> 00:10:09,980

the truth behind the lies we will just

199

00:10:12,850 --> 00:10:11,450

tell you the truth behind the truth

200

00:10:15,100 --> 00:10:12,860

because what we do is we look at

201
00:10:17,769 --> 00:10:15,110
extraordinary claims that's right we've

202
00:10:19,600 --> 00:10:17,779
gone undercover with alternative medical

203
00:10:22,150 --> 00:10:19,610
treatments fringe religious groups

204
00:10:24,370 --> 00:10:22,160
fringe science claims spiritual

205
00:10:26,110 --> 00:10:24,380
paranormal were there to check it out

206
00:10:28,360 --> 00:10:26,120
and let you know what happens is the

207
00:10:31,600 --> 00:10:28,370
Queen Mary haunted I don't know find out

208
00:10:33,250 --> 00:10:31,610
we show up we make friends we learn what

209
00:10:35,290 --> 00:10:33,260
happens when you ask questions and we

210
00:10:37,840 --> 00:10:35,300
tell you all about it and we get all

211
00:10:41,170 --> 00:10:37,850
that funky stuff done to us it's oh no

212
00:10:50,129 --> 00:10:41,180
Ross and Carrie maximumfun.org

213
00:10:53,769 --> 00:10:50,139

[Music]

214

00:10:56,199 --> 00:10:53,779

Brad high is the director of teacher

215

00:10:58,870 --> 00:10:56,209

support at the National Center for

216

00:11:00,870 --> 00:10:58,880

Science education Brad joined the

217

00:11:05,290 --> 00:11:00,880

National Center for Science education in

218

00:11:08,199 --> 00:11:05,300

2017 to help steward the NCSE teach into

219

00:11:11,170 --> 00:11:08,209

its next phase he has been a classroom

220

00:11:13,990 --> 00:11:11,180

teacher a children's museum curator

221

00:11:16,809 --> 00:11:14,000

a research scientist and a science

222

00:11:19,019 --> 00:11:16,819

educator including working as associate

223

00:11:23,670 --> 00:11:19,029

professor at the University of Houston

224

00:11:26,170 --> 00:11:23,680

downtown he holds a PhD in ecology and

225

00:11:29,680 --> 00:11:26,180

evolutionary biology from Rice

226
00:11:31,870 --> 00:11:29,690
University and Masters of Education in

227
00:11:35,540 --> 00:11:31,880
curriculum and instruction from Texas

228
00:11:41,700 --> 00:11:38,150
I decided to take the local transport

229
00:11:43,170 --> 00:11:41,710
options to meet with Brad Hoke

230
00:11:49,080 --> 00:11:43,180
you

231
00:11:53,170 --> 00:11:49,090
[Music]

232
00:11:56,110 --> 00:11:53,180
do the sounds of traffic roaring down a

233
00:12:00,070 --> 00:11:56,120
California Highway I'm at the Orang

234
00:12:03,130 --> 00:12:00,080
depart station but they Area Rapid

235
00:12:07,840 --> 00:12:03,140
Transit it's the local train system here

236
00:12:09,580 --> 00:12:07,850
in the San Francisco Bay Area and I'm on

237
00:12:12,460 --> 00:12:09,590
my way to the National Center for

238
00:12:13,810 --> 00:12:12,470

Science education in Oakland and looking

239

00:12:16,420 --> 00:12:13,820

forward to this I've been visiting the

240

00:12:19,260 --> 00:12:16,430

National Center now for Wow

241

00:12:21,580 --> 00:12:19,270

over ten years it's hard to remember

242

00:12:24,940 --> 00:12:21,590

certainly if you search the archives of

243

00:12:27,730 --> 00:12:24,950

the skeptic zone you'll see many times

244

00:12:29,980 --> 00:12:27,740

I've interviewed dr. eugenie Scott over

245

00:12:34,090 --> 00:12:29,990

Anne Reed who is the current director

246

00:12:35,830 --> 00:12:34,100

I'm on my way there now once again but

247

00:12:57,030 --> 00:12:35,840

this time the angle is going to be on

248

00:12:57,040 --> 00:13:05,800

[Applause]

249

00:13:10,370 --> 00:13:08,570

the long steps up from the bots

250

00:13:17,240 --> 00:13:10,380

stationed at 19th Street here in

251

00:13:33,170 --> 00:13:17,250

Oklahoma miss this neighborhood has

252

00:13:38,680 --> 00:13:35,820

lots of construction going on

253

00:13:40,780 --> 00:13:38,690

very colorful here

254

00:13:46,449 --> 00:13:40,790

a lot of the buildings have very large

255

00:13:50,590 --> 00:13:46,459

murals as I make my way around the

256

00:13:56,770 --> 00:13:50,600

corner on some streets and head to the

257

00:14:00,620 --> 00:13:59,420

and yes I've made it I've made it to the

258

00:14:03,980 --> 00:14:00,630

National Center for science education

259

00:14:06,050 --> 00:14:03,990

once again and I'm delighted to be back

260

00:14:07,910 --> 00:14:06,060

here and of course skeptic zone fans

261

00:14:09,350 --> 00:14:07,920

will know that we've been here many

262

00:14:10,880 --> 00:14:09,360

times over the years to talk to all

263

00:14:13,220 --> 00:14:10,890

sorts of people including you genus

264

00:14:15,320 --> 00:14:13,230

cotton and Reed today I'm talking to

265

00:14:17,510 --> 00:14:15,330

Brad hog hello Brad hello how are you

266

00:14:20,360 --> 00:14:17,520

I'm really well I'm really happy to be

267

00:14:21,980 --> 00:14:20,370

here I love to visit the the center here

268

00:14:24,170 --> 00:14:21,990

in Oakland and we look out the windows

269

00:14:28,370 --> 00:14:24,180

massive building going on in Oakland at

270

00:14:31,100 --> 00:14:28,380

least but I am here today normally I'm

271

00:14:33,890 --> 00:14:31,110

here to talk about creationism which is

272

00:14:36,500 --> 00:14:33,900

the old chestnut of course and the the

273

00:14:38,540 --> 00:14:36,510

work the center does to battle

274

00:14:40,730 --> 00:14:38,550

creationism and promote good science and

275

00:14:42,740 --> 00:14:40,740

that's still ongoing of course but the

276

00:14:45,290 --> 00:14:42,750

more pressing issue now and something

277

00:14:47,390 --> 00:14:45,300

the center has taken on in the last four

278

00:14:52,100 --> 00:14:47,400

or five six years or so is climate

279

00:14:53,720 --> 00:14:52,110

change and it's far more pressing in my

280

00:14:55,700 --> 00:14:53,730

mind certainly in Australia than

281

00:14:57,200 --> 00:14:55,710

creationism although I don't want to put

282

00:14:58,520 --> 00:14:57,210

that into the background too much

283

00:15:00,140 --> 00:14:58,530

because it's still an important issue

284

00:15:02,750 --> 00:15:00,150

probably more important here in the

285

00:15:04,460 --> 00:15:02,760

United States so I'm very interested I'm

286

00:15:06,800 --> 00:15:04,470

sure that our listeners are interested

287

00:15:09,620 --> 00:15:06,810

to know exactly what the National Center

288

00:15:11,330 --> 00:15:09,630

for Science education is doing what do

289

00:15:14,630 --> 00:15:11,340

you have in place and how do you help

290

00:15:16,430 --> 00:15:14,640

especially teachers in this issue all

291

00:15:18,050 --> 00:15:16,440

right well we've recently established a

292

00:15:19,730 --> 00:15:18,060

program called our teacher ambassador

293

00:15:22,910 --> 00:15:19,740

program which is how we're addressing

294

00:15:25,340 --> 00:15:22,920

the issue directly and we're part of a

295

00:15:27,050 --> 00:15:25,350

larger network here that's called clean

296

00:15:28,400 --> 00:15:27,060

and there are people all across the

297

00:15:30,170 --> 00:15:28,410

country who are working on climate

298

00:15:32,870 --> 00:15:30,180

change issues from an education side of

299

00:15:34,220 --> 00:15:32,880

things so we're not looking to try to do

300

00:15:35,930 --> 00:15:34,230

everything ourselves we have a

301
00:15:37,540 --> 00:15:35,940
particular niche where we think we're

302
00:15:39,920 --> 00:15:37,550
really effective at communicating

303
00:15:42,260 --> 00:15:39,930
controversial issues without controversy

304
00:15:44,300 --> 00:15:42,270
and helping teachers know how to do that

305
00:15:47,150 --> 00:15:44,310
so the teacher ambassador program is

306
00:15:50,000 --> 00:15:47,160
sort of a three-phase program first we

307
00:15:52,220 --> 00:15:50,010
recruit really strong teachers who are

308
00:15:53,720 --> 00:15:52,230
in areas where it's difficult teaching

309
00:15:54,920 --> 00:15:53,730
climate change but they've figured out

310
00:15:55,340 --> 00:15:54,930
how to do it and they're really good at

311
00:15:56,870 --> 00:15:55,350
it

312
00:15:58,700 --> 00:15:56,880
we have a wonderful group of eight

313
00:16:01,010 --> 00:15:58,710

teacher ambassadors that we've recruited

314

00:16:02,810 --> 00:16:01,020

for climate change we've met with them

315

00:16:05,150 --> 00:16:02,820

at George Mason University and working

316

00:16:08,120 --> 00:16:05,160

with John Cook there to develop a series

317

00:16:09,390 --> 00:16:08,130

of five lessons so it's a five unit five

318

00:16:12,660 --> 00:16:09,400

lesson unit

319

00:16:14,280 --> 00:16:12,670

that focuses on misconceptions this was

320

00:16:16,310 --> 00:16:14,290

kind of in response to that Heartland

321

00:16:18,720 --> 00:16:16,320

mailing with that challenge teachers

322

00:16:22,020 --> 00:16:18,730

with misinformation it was a very

323

00:16:25,560 --> 00:16:22,030

deliberate attempt to to get teachers to

324

00:16:28,920 --> 00:16:25,570

teach the wrong things and to think that

325

00:16:30,780 --> 00:16:28,930

climate change is not as a topic that is

326

00:16:32,510 --> 00:16:30,790

that is founded in science and so forth

327

00:16:35,100 --> 00:16:32,520

so we identified five specific

328

00:16:36,750 --> 00:16:35,110

misconceptions in that mailing and each

329

00:16:39,510 --> 00:16:36,760

of the five lessons addresses one of

330

00:16:42,060 --> 00:16:39,520

them the first one is based on consensus

331

00:16:44,880 --> 00:16:42,070

the fact is that 97% of climate

332

00:16:48,090 --> 00:16:44,890

scientists support human impacts causing

333

00:16:49,860 --> 00:16:48,100

climate change so we have a lesson where

334

00:16:51,750 --> 00:16:49,870

the students actually work with the data

335

00:16:54,350 --> 00:16:51,760

themselves come to that conclusion

336

00:16:57,000 --> 00:16:54,360

independently and then share their

337

00:16:59,220 --> 00:16:57,010

outcomes and and realize that no matter

338

00:17:01,170 --> 00:16:59,230

which line of evidence they studied it

339

00:17:03,210 --> 00:17:01,180

led to that conclusion that only the

340

00:17:05,309 --> 00:17:03,220

only explanation is that human impacts

341

00:17:06,600 --> 00:17:05,319

are causing climate change from there

342

00:17:08,400 --> 00:17:06,610

they look at models they look at the

343

00:17:10,050 --> 00:17:08,410

Paleo record they look at and then they

344

00:17:12,660 --> 00:17:10,060

look at to the last two lessons are

345

00:17:16,679 --> 00:17:12,670

place based so the teachers find issues

346

00:17:18,420 --> 00:17:16,689

where they are that are I mean where

347

00:17:21,199 --> 00:17:18,430

climate changes of the underlying cause

348

00:17:24,449 --> 00:17:21,209

so whether it's wildfires or droughts or

349

00:17:26,790 --> 00:17:24,459

decrease snowfall in in in some areas

350

00:17:28,199 --> 00:17:26,800

they design their lesson around that and

351

00:17:30,870 --> 00:17:28,209

get the students involved with data

352

00:17:33,870 --> 00:17:30,880

about their local issues and then the

353

00:17:35,040 --> 00:17:33,880

final one looking at solutions most of

354

00:17:36,930 --> 00:17:35,050

the time a lot of times it's more

355

00:17:39,690 --> 00:17:36,940

effective to start with solutions to get

356

00:17:41,130 --> 00:17:39,700

people involved in a conversation but we

357

00:17:43,530 --> 00:17:41,140

found that with this lesson if we

358

00:17:46,830 --> 00:17:43,540

started with with the not you know

359

00:17:48,180 --> 00:17:46,840

inoculating students about with data by

360

00:17:50,450 --> 00:17:48,190

the time we get to solutions they're

361

00:17:53,670 --> 00:17:50,460

really on board to look at it a lot more

362

00:17:55,740 --> 00:17:53,680

as something they can be involved in and

363

00:17:58,170 --> 00:17:55,750

and so that that place-based education

364

00:17:59,700 --> 00:17:58,180

works really well the ultimate goal

365

00:18:01,530 --> 00:17:59,710

though that you know those lessons were

366

00:18:03,600 --> 00:18:01,540

field tested by the eighth ambassador

367

00:18:05,400 --> 00:18:03,610

teachers or teacher ambassadors in their

368

00:18:07,110 --> 00:18:05,410

own classrooms and anjana's assessed

369

00:18:08,880 --> 00:18:07,120

that the effectiveness of that and it

370

00:18:11,130 --> 00:18:08,890

worked really well so we're currently

371

00:18:13,230 --> 00:18:11,140

working with them to set up workshops in

372

00:18:15,420 --> 00:18:13,240

their areas where they are to try to

373

00:18:18,450 --> 00:18:15,430

reach teachers that wouldn't normally

374

00:18:20,400 --> 00:18:18,460

come to a a workshop with the words

375

00:18:21,630 --> 00:18:20,410

climate change in it or you know

376

00:18:22,120 --> 00:18:21,640

anything that they might because what

377

00:18:23,740 --> 00:18:22,130

we've

378

00:18:25,440 --> 00:18:23,750

from our own surveys is that teachers

379

00:18:27,870 --> 00:18:25,450

are avoiding teaching climate change

380

00:18:30,250 --> 00:18:27,880

primarily because it's controversial and

381

00:18:32,740 --> 00:18:30,260

somewhat because they also share those

382

00:18:34,480 --> 00:18:32,750

misconceptions so we're trying to get to

383

00:18:35,680 --> 00:18:34,490

those teachers that the teachers that

384

00:18:37,870 --> 00:18:35,690

might be a little tentative about

385

00:18:40,150 --> 00:18:37,880

wanting to teach climate change and if

386

00:18:41,860 --> 00:18:40,160

we can get our teacher ambassadors to

387

00:18:43,450 --> 00:18:41,870

then reach them and give them these

388

00:18:46,240 --> 00:18:43,460

lessons and teach them how to do these

389

00:18:48,190 --> 00:18:46,250

lessons then we then we're going to be

390

00:18:50,380 --> 00:18:48,200

able to saturate into that portion of

391

00:18:52,020 --> 00:18:50,390

the teaching population that is not

392

00:18:54,340 --> 00:18:52,030

teaching climate change effectively

393

00:18:56,200 --> 00:18:54,350

we've already done a series of webinars

394

00:18:57,670 --> 00:18:56,210

with these lessons with a partner

395

00:19:00,580 --> 00:18:57,680

organization called the Alliance for

396

00:19:02,110 --> 00:19:00,590

climate education or ace and those went

397

00:19:04,570 --> 00:19:02,120

extremely well as well so those are

398

00:19:06,670 --> 00:19:04,580

available on our website along with the

399

00:19:08,350 --> 00:19:06,680

lessons themselves it's interesting when

400

00:19:10,480 --> 00:19:08,360

you're talking about that some teachers

401
00:19:11,890 --> 00:19:10,490
are hesitant it does now remind me of

402
00:19:14,170 --> 00:19:11,900
some of the problems with the

403
00:19:16,960 --> 00:19:14,180
creationism yeah I think there are a lot

404
00:19:18,130 --> 00:19:16,970
of parallels they're interesting

405
00:19:19,360 --> 00:19:18,140
particularly with our misconception

406
00:19:22,090 --> 00:19:19,370
based focus because we also have a

407
00:19:24,790 --> 00:19:22,100
similar group of teacher ambassadors for

408
00:19:26,790 --> 00:19:24,800
evolution and similarly based on five

409
00:19:28,870 --> 00:19:26,800
misconceptions and so forth

410
00:19:32,200 --> 00:19:28,880
misconceptions around creationism or

411
00:19:34,870 --> 00:19:32,210
mostly larger conceptual misconceptions

412
00:19:36,670 --> 00:19:34,880
as well as of course the conflicts that

413
00:19:39,340 --> 00:19:36,680

many people see between evolution and

414

00:19:41,110 --> 00:19:39,350

religion which is why we work with a man

415

00:19:42,400 --> 00:19:41,120

to glaze on that one and she's a really

416

00:19:44,230 --> 00:19:42,410

effective at being able to communicate

417

00:19:46,150 --> 00:19:44,240

how that it doesn't need to be a

418

00:19:47,980 --> 00:19:46,160

conflict there and you can learn about

419

00:19:51,310 --> 00:19:47,990

evolution and still have faith that

420

00:19:53,260 --> 00:19:51,320

doesn't but that's an aside I think to

421

00:19:57,190 --> 00:19:53,270

get to this point the similarities being

422

00:19:59,650 --> 00:19:57,200

that climate change misconceptions are a

423

00:20:02,280 --> 00:19:59,660

little bit more logical fallacy because

424

00:20:05,050 --> 00:20:02,290

they're based on misconceptions that

425

00:20:07,480 --> 00:20:05,060

people have naturally due to their

426

00:20:10,060 --> 00:20:07,490

inability to grapple with probabilities

427

00:20:11,940 --> 00:20:10,070

and changing frequencies and personal

428

00:20:15,180 --> 00:20:11,950

biases but more fundamentally

429

00:20:18,280 --> 00:20:15,190

ideologically resistant to the idea of

430

00:20:20,140 --> 00:20:18,290

climate change on a political level or

431

00:20:23,740 --> 00:20:20,150

an ideological level because it doesn't

432

00:20:25,330 --> 00:20:23,750

align with what their their beliefs are

433

00:20:27,070 --> 00:20:25,340

in that sense so there's a there's kind

434

00:20:29,920 --> 00:20:27,080

of an underlying similarity in terms of

435

00:20:31,370 --> 00:20:29,930

the misconceptions being bolstered by an

436

00:20:35,659 --> 00:20:31,380

ideological or

437

00:20:39,080 --> 00:20:35,669

religious resistance to just allowing

438

00:20:41,060 --> 00:20:39,090

that information to be true now one of

439

00:20:43,220 --> 00:20:41,070

the problems we have in Australia and I

440

00:20:46,220 --> 00:20:43,230

think it's reflected here on vice-versa

441

00:20:49,130 --> 00:20:46,230

ah is the conservative media especially

442

00:20:51,140 --> 00:20:49,140

what we call the shock jocks and the the

443

00:20:56,270 --> 00:20:51,150

conservative talkback

444

00:20:59,299 --> 00:20:56,280

calling announcers who it's almost a

445

00:21:02,990 --> 00:20:59,309

religion with them to rail against this

446

00:21:04,340 --> 00:21:03,000

thing of climate change I imagine you've

447

00:21:07,100 --> 00:21:04,350

come across the same sort of thing here

448

00:21:08,720 --> 00:21:07,110

yes definitely I think when we I tried

449

00:21:10,700 --> 00:21:08,730

intend to use the word ideology rather

450

00:21:12,409 --> 00:21:10,710

than Pollak political but it's kind of

451
00:21:14,810 --> 00:21:12,419
the same thing that I'm referring to and

452
00:21:19,760 --> 00:21:14,820
it's you know there's there's there is a

453
00:21:21,500 --> 00:21:19,770
group of or a mindset rather of this

454
00:21:25,970 --> 00:21:21,510
globe just fight against a globalization

455
00:21:28,460 --> 00:21:25,980
of our economy and the fact or the idea

456
00:21:30,590 --> 00:21:28,470
that somehow climate change is part of

457
00:21:34,220 --> 00:21:30,600
that agenda that because it's a global

458
00:21:36,020 --> 00:21:34,230
issue that our intent as by teaching

459
00:21:39,169 --> 00:21:36,030
climate change is to actually try to

460
00:21:42,350 --> 00:21:39,179
make you break down American democracy

461
00:21:43,940 --> 00:21:42,360
and turn it into a globalized and that's

462
00:21:46,850 --> 00:21:43,950
that's really what's coming to what they

463
00:21:49,340 --> 00:21:46,860

feel ya feel sometimes yeah and even if

464

00:21:51,730 --> 00:21:49,350

it's not as upfront in their minds I

465

00:21:54,409 --> 00:21:51,740

think that's sort of the underlying

466

00:21:57,680 --> 00:21:54,419

anxieties that drive that ideology is

467

00:22:00,020 --> 00:21:57,690

that climate changes is it is a

468

00:22:04,100 --> 00:22:00,030

conspiracy of sorts to try to achieve

469

00:22:05,720 --> 00:22:04,110

this liberal agenda of expanding

470

00:22:07,520 --> 00:22:05,730

government because the response to

471

00:22:11,090 --> 00:22:07,530

climate change would be mostly a

472

00:22:13,270 --> 00:22:11,100

governmental issue and globalizing our

473

00:22:16,279 --> 00:22:13,280

economy and both of those things are

474

00:22:19,899 --> 00:22:16,289

ideologically anathema to them or yeah

475

00:22:22,190 --> 00:22:19,909

and so that's the underlying and

476

00:22:24,010 --> 00:22:22,200

underlying aspect of that and I think

477

00:22:26,870 --> 00:22:24,020

that that's why a lot of the the

478

00:22:29,570 --> 00:22:26,880

rhetoric on that again is very illogical

479

00:22:31,700 --> 00:22:29,580

if you break it down a lot of a lot

480

00:22:33,860 --> 00:22:31,710

logical fallacy used to try to attack

481

00:22:37,130 --> 00:22:33,870

the climate science a lot of

482

00:22:40,430 --> 00:22:37,140

cherry-picking of data a lot of you know

483

00:22:42,980 --> 00:22:40,440

false experts trying to claim that

484

00:22:45,680 --> 00:22:42,990

scientists outside of you know when you

485

00:22:47,210 --> 00:22:45,690

look at that 97% consensus number that's

486

00:22:48,799 --> 00:22:47,220

of climate scientists those are the

487

00:22:51,350 --> 00:22:48,809

scientists who were studying studying

488

00:22:54,860 --> 00:22:51,360

climate directly if you ask a petroleum

489

00:22:56,570 --> 00:22:54,870

geologist or a chemist or a physicist

490

00:22:57,830 --> 00:22:56,580

they're not going to have the expertise

491

00:22:59,690 --> 00:22:57,840

to really be able to judge it so

492

00:23:02,030 --> 00:22:59,700

obviously they're able to go into some

493

00:23:04,549 --> 00:23:02,040

of the fine scientists who are quote

494

00:23:06,980 --> 00:23:04,559

scientists who would deny climate change

495

00:23:08,299 --> 00:23:06,990

or deny human impact but they're not the

496

00:23:10,820 --> 00:23:08,309

climate scientists who were studying

497

00:23:12,680 --> 00:23:10,830

climate this is a great point because

498

00:23:15,290 --> 00:23:12,690

you know if I glanced towards my notes

499

00:23:16,460 --> 00:23:15,300

is exactly the the the notes I've

500

00:23:18,830 --> 00:23:16,470

written here for this interview

501
00:23:20,540 --> 00:23:18,840
cherry-picking I've put here and experts

502
00:23:21,950 --> 00:23:20,550
and this is very important we'll get

503
00:23:25,910 --> 00:23:21,960
back to these shock jocks and whatever

504
00:23:30,770 --> 00:23:25,920
the conservative media because they will

505
00:23:34,549 --> 00:23:30,780
have on their show an expert and a

506
00:23:36,080 --> 00:23:34,559
scientist right and that to them is game

507
00:23:37,940 --> 00:23:36,090
set and match right you know they've

508
00:23:40,010 --> 00:23:37,950
found somebody who agrees with their

509
00:23:41,870 --> 00:23:40,020
side of the story they interview them

510
00:23:43,460 --> 00:23:41,880
and they say after you new view they say

511
00:23:45,530 --> 00:23:43,470
to the audience well there you are there

512
00:23:47,180 --> 00:23:45,540
you are this person has is an expert in

513
00:23:50,390 --> 00:23:47,190

whatever they are a scientist and they

514

00:23:52,400 --> 00:23:50,400

say it's it's all it's all baloney and I

515

00:23:54,380 --> 00:23:52,410

guess that happens here it would happen

516

00:23:56,000 --> 00:23:54,390

here more yeah and there's there's two

517

00:23:58,910 --> 00:23:56,010

ways that it happens I think there's one

518

00:24:01,100 --> 00:23:58,920

very again deliberate way and this goes

519

00:24:03,890 --> 00:24:01,110

back to the tobacco Wars and as the

520

00:24:07,400 --> 00:24:03,900

climate Wars as well in the u.s. kiss

521

00:24:09,710 --> 00:24:07,410

has documented that quite well in her

522

00:24:11,870 --> 00:24:09,720

book the merchants of doubt' and so

523

00:24:15,080 --> 00:24:11,880

that's an attempt to actually recruit

524

00:24:18,350 --> 00:24:15,090

scientists who are willing to to say

525

00:24:20,570 --> 00:24:18,360

what the you know to attack science and

526
00:24:22,280 --> 00:24:20,580
to try to make it sound like well

527
00:24:23,810 --> 00:24:22,290
they're scientists and and so they're

528
00:24:25,780 --> 00:24:23,820
they're saying that this isn't good

529
00:24:28,010 --> 00:24:25,790
science it's not bad science and so

530
00:24:30,230 --> 00:24:28,020
that's a deliberate attempt

531
00:24:31,580 --> 00:24:30,240
there's also however just there are

532
00:24:34,910 --> 00:24:31,590
scientists who are outside of their

533
00:24:37,490 --> 00:24:34,920
field who feel like they have some

534
00:24:38,870 --> 00:24:37,500
capacity for analyzing data sort of from

535
00:24:40,850 --> 00:24:38,880
the periphery and coming up with

536
00:24:43,880 --> 00:24:40,860
conclusions and having the same sort of

537
00:24:45,500 --> 00:24:43,890
ideological anxieties and it drives them

538
00:24:47,840 --> 00:24:45,510

to bad conclusions I mean that's always

539

00:24:50,690 --> 00:24:47,850

been true in science is true and

540

00:24:53,030 --> 00:24:50,700

that's why science as a process works by

541

00:24:55,700 --> 00:24:53,040

peer review and constant repetition and

542

00:24:59,210 --> 00:24:55,710

and so forth so over decades of research

543

00:25:01,760 --> 00:24:59,220

on climate change the climate experts

544

00:25:03,500 --> 00:25:01,770

have seen the impact that that our own

545

00:25:06,230 --> 00:25:03,510

activities have had and they're pretty

546

00:25:07,910 --> 00:25:06,240

settled on it and it's it's something

547

00:25:09,169 --> 00:25:07,920

that they're confident about but outside

548

00:25:11,090 --> 00:25:09,179

of that on the peripheries those

549

00:25:13,220 --> 00:25:11,100

anxieties that underlie a lot of the

550

00:25:15,320 --> 00:25:13,230

denial they exist in scientists as well

551
00:25:17,299 --> 00:25:15,330
and some of them are willing to to speak

552
00:25:19,220 --> 00:25:17,309
to that but I think the bigger problem

553
00:25:21,440 --> 00:25:19,230
and in what you're talking about with

554
00:25:22,669 --> 00:25:21,450
these shock jocks is still till there

555
00:25:25,430 --> 00:25:22,679
are a group of scientists they were

556
00:25:28,880 --> 00:25:25,440
almost specifically targeted over and

557
00:25:31,040 --> 00:25:28,890
over again to deny different types of

558
00:25:35,090 --> 00:25:31,050
science it's just kind of even become a

559
00:25:38,000 --> 00:25:35,100
career for some wow that's interesting

560
00:25:40,580 --> 00:25:38,010
now I I don't know what the situation

561
00:25:43,190 --> 00:25:40,590
here was in the United States last year

562
00:25:44,810 --> 00:25:43,200
in November there was a strike a student

563
00:25:48,710 --> 00:25:44,820

strike which undoubtedly you've heard

564

00:25:51,710 --> 00:25:48,720

about a note I think it it started in

565

00:25:52,880 --> 00:25:51,720

Sweden now if I'm correct with a student

566

00:25:53,060 --> 00:25:52,890

there or wasn't Norway or something like

567

00:25:55,490 --> 00:25:53,070

that

568

00:25:57,470 --> 00:25:55,500

listen his honor and it made its way to

569

00:26:00,710 --> 00:25:57,480

Australia and one day in Australia in

570

00:26:02,270 --> 00:26:00,720

late November there was a big strike and

571

00:26:03,860 --> 00:26:02,280

thousands of students didn't go to

572

00:26:05,360 --> 00:26:03,870

school they all turned up in the center

573

00:26:06,860 --> 00:26:05,370

of Sydney and held up protests about

574

00:26:11,240 --> 00:26:06,870

climate change and one of the government

575

00:26:14,570 --> 00:26:11,250

to do something and I couldn't help

576

00:26:15,470 --> 00:26:14,580

think that there was it was good of them

577

00:26:18,500 --> 00:26:15,480

to do that because they obviously

578

00:26:20,090 --> 00:26:18,510

passionate and concerned but I was

579

00:26:22,549 --> 00:26:20,100

wondering I couldn't help wondering if

580

00:26:24,799 --> 00:26:22,559

they were doing the right thing for the

581

00:26:26,540 --> 00:26:24,809

wrong reasons in other words do they

582

00:26:30,640 --> 00:26:26,550

actually have enough knowledge or they

583

00:26:33,910 --> 00:26:30,650

simply jumping on the bandwagon of of

584

00:26:37,250 --> 00:26:33,920

this even if it's the right conclusion

585

00:26:39,410 --> 00:26:37,260

and I just wondered what you'd think

586

00:26:42,890 --> 00:26:39,420

about the the the younger generation

587

00:26:45,799 --> 00:26:42,900

taking such action well I think I think

588

00:26:47,600 --> 00:26:45,809

that it's a part of of how we are

589

00:26:50,660 --> 00:26:47,610

approaching you know we certainly

590

00:26:53,480 --> 00:26:50,670

support students in in expressing

591

00:26:55,640 --> 00:26:53,490

themselves in that way and here in the

592

00:26:56,990 --> 00:26:55,650

US I think it's been more of a court

593

00:26:58,910 --> 00:26:57,000

case students have actually brought

594

00:27:03,140 --> 00:26:58,920

against different states about

595

00:27:05,540 --> 00:27:03,150

they're being denied a quality education

596

00:27:07,160 --> 00:27:05,550

by not having climate change and there's

597

00:27:08,690 --> 00:27:07,170

those typically that haven't gone very

598

00:27:10,280 --> 00:27:08,700

far yet but they're still working their

599

00:27:11,690 --> 00:27:10,290

way through the court system to some

600

00:27:13,760 --> 00:27:11,700

level and there are a lot of programs

601
00:27:16,490 --> 00:27:13,770
that are that are meant to empower the

602
00:27:18,170 --> 00:27:16,500
youth in terms of climate action and

603
00:27:20,510 --> 00:27:18,180
things like that and doing something a

604
00:27:21,830 --> 00:27:20,520
lot of a lot of the groups are looking

605
00:27:24,650 --> 00:27:21,840
for making their communities more

606
00:27:26,750 --> 00:27:24,660
resilient by getting students involved

607
00:27:28,520 --> 00:27:26,760
in not only understanding climate change

608
00:27:31,310 --> 00:27:28,530
but then translating that into things

609
00:27:33,590 --> 00:27:31,320
they can do locally to to make a

610
00:27:35,870 --> 00:27:33,600
difference in terms of drought or water

611
00:27:37,850 --> 00:27:35,880
issues or agricultural issues and so on

612
00:27:40,340 --> 00:27:37,860
and I mentioned earlier that you know we

613
00:27:43,670 --> 00:27:40,350

sort of take our own niche in this

614

00:27:45,470 --> 00:27:43,680

bigger piece and that is to to get to

615

00:27:47,810 --> 00:27:45,480

those misconceptions that inoculate

616

00:27:49,420 --> 00:27:47,820

students against them in a way that they

617

00:27:52,280 --> 00:27:49,430

can really understand the issues

618

00:27:53,660 --> 00:27:52,290

obviously most of these students haven't

619

00:27:55,640 --> 00:27:53,670

studied climate change to a level where

620

00:27:57,230 --> 00:27:55,650

where they understand the issues and so

621

00:27:58,790 --> 00:27:57,240

thoroughly that they can speak to in a

622

00:28:01,880 --> 00:27:58,800

way they're an expert would but that's

623

00:28:05,330 --> 00:28:01,890

not that's not necessary as long as

624

00:28:06,920 --> 00:28:05,340

they're focusing on action Nets is built

625

00:28:08,390 --> 00:28:06,930

around finding solutions to real

626

00:28:10,790 --> 00:28:08,400

problems I think that that's very

627

00:28:13,280 --> 00:28:10,800

productive well it is a huge problem for

628

00:28:16,550 --> 00:28:13,290

us and we don't know what the next five

629

00:28:17,900 --> 00:28:16,560

or ten years will bring because and

630

00:28:20,000 --> 00:28:17,910

again I haven't seen the latest research

631

00:28:23,120 --> 00:28:20,010

but I don't think it's slowing down any

632

00:28:26,120 --> 00:28:23,130

and I don't know what the next decade

633

00:28:30,740 --> 00:28:26,130

decade will bring us in terms of direct

634

00:28:34,100 --> 00:28:30,750

impact on our climate on society etc but

635

00:28:35,900 --> 00:28:34,110

I think the kids are doing a good thing

636

00:28:39,380 --> 00:28:35,910

but you're right I I don't think they

637

00:28:41,900 --> 00:28:39,390

have the knowledge to really speak to

638

00:28:43,700 --> 00:28:41,910

what they're doing right but they're

639

00:28:45,440 --> 00:28:43,710

passionate enough and I guess it's a

640

00:28:46,910 --> 00:28:45,450

generational thing too isn't it it's

641

00:28:48,320 --> 00:28:46,920

certainly a generation I think this

642

00:28:51,400 --> 00:28:48,330

generation is coming up my daughter's

643

00:28:55,400 --> 00:28:51,410

part of it yeah they do have a sense of

644

00:28:57,500 --> 00:28:55,410

activism they want to make change part

645

00:28:58,550 --> 00:28:57,510

of their lives and so I definitely think

646

00:29:01,130 --> 00:28:58,560

that there's an energy in this

647

00:29:02,930 --> 00:29:01,140

generation that is very positive I think

648

00:29:05,420 --> 00:29:02,940

speaking to your earlier question too as

649

00:29:08,090 --> 00:29:05,430

long as this one is that there is kind

650

00:29:09,769 --> 00:29:08,100

of maybe a razor's edge in terms of

651
00:29:12,049 --> 00:29:09,779
doing good and doing day

652
00:29:13,820 --> 00:29:12,059
and conceptually with climate change and

653
00:29:14,869 --> 00:29:13,830
a lot of the people that fight climate

654
00:29:16,430 --> 00:29:14,879
change and deny it

655
00:29:19,070 --> 00:29:16,440
we'll take advantage of some of that

656
00:29:21,769 --> 00:29:19,080
naivete at times and in sort of try to

657
00:29:23,810 --> 00:29:21,779
undo some of those efforts and the

658
00:29:26,229 --> 00:29:23,820
impact for on extreme weather for

659
00:29:29,659 --> 00:29:26,239
instance is one of those areas where

660
00:29:31,580 --> 00:29:29,669
climate change is not causing a specific

661
00:29:34,279 --> 00:29:31,590
hurricane or a specific drought or a

662
00:29:36,739 --> 00:29:34,289
specific wildfire but it's contributing

663
00:29:39,080 --> 00:29:36,749

because it's increasing the odds of

664

00:29:40,249 --> 00:29:39,090

those things happening that's a very

665

00:29:42,379 --> 00:29:40,259

tricky thing to really communicate

666

00:29:44,659 --> 00:29:42,389

effectively and we're in the science

667

00:29:46,639 --> 00:29:44,669

behind it is really still evolving in

668

00:29:48,259 --> 00:29:46,649

terms of getting the data there is clear

669

00:29:50,599 --> 00:29:48,269

data now that's clear enough to make

670

00:29:53,450 --> 00:29:50,609

that connection that we can connect

671

00:29:55,999 --> 00:29:53,460

climate change to these events but it's

672

00:29:57,979 --> 00:29:56,009

not a direct causal relationship and

673

00:30:00,889 --> 00:29:57,989

that is easily turn into a misconception

674

00:30:02,299 --> 00:30:00,899

by somebody who wants to deny it you

675

00:30:03,859 --> 00:30:02,309

know that wants to say oh this is just

676

00:30:05,299 --> 00:30:03,869

something that's happened to all the

677

00:30:08,479 --> 00:30:05,309

time we've always had extreme weather

678

00:30:10,999 --> 00:30:08,489

there's no connection and so unless you

679

00:30:12,589 --> 00:30:11,009

can really talk about well the

680

00:30:14,269 --> 00:30:12,599

connection what the connection is and

681

00:30:16,430 --> 00:30:14,279

that it's that there's more heat in the

682

00:30:19,969 --> 00:30:16,440

oceans or there's you know there's and

683

00:30:21,709 --> 00:30:19,979

there's perhaps more you know drier air

684

00:30:23,119 --> 00:30:21,719

in the jet stream or the jet streams

685

00:30:25,369 --> 00:30:23,129

weaker and various things that are

686

00:30:27,499 --> 00:30:25,379

contributing to those extreme events but

687

00:30:29,599 --> 00:30:27,509

it's not a direct directly causing them

688

00:30:31,249 --> 00:30:29,609

and that's a difficult thing to do now

689

00:30:33,979 --> 00:30:31,259

let's sir before we wrap up let's go on

690

00:30:35,269 --> 00:30:33,989

another little tangent here and I don't

691

00:30:37,099 --> 00:30:35,279

know if this is something that the

692

00:30:41,509 --> 00:30:37,109

center will have to address one day or

693

00:30:44,440 --> 00:30:41,519

not but I've been absolutely dumbfounded

694

00:30:48,259 --> 00:30:44,450

by the rise of the Flat Earth movement

695

00:30:50,629 --> 00:30:48,269

yeah is this impacting on anything you

696

00:30:54,469 --> 00:30:50,639

do here or is it just so bizarre and

697

00:30:56,749 --> 00:30:54,479

crazy it's always been part of kind of

698

00:30:58,339 --> 00:30:56,759

what we do when we approach evolution

699

00:31:00,829 --> 00:30:58,349

and misconceptions about evolution

700

00:31:02,869 --> 00:31:00,839

because it it's in the nature of science

701
00:31:04,489 --> 00:31:02,879
we've just added it actually we're going

702
00:31:06,769 --> 00:31:04,499
to recruit teachers in addition to our

703
00:31:08,119 --> 00:31:06,779
climate change ambassador to teacher

704
00:31:09,229 --> 00:31:08,129
ambassadors and our evolution teacher

705
00:31:11,869 --> 00:31:09,239
ambassadors are gonna have a nature of

706
00:31:13,459 --> 00:31:11,879
science group specifically focused on

707
00:31:15,229 --> 00:31:13,469
the nature of science because anytime

708
00:31:16,849 --> 00:31:15,239
we're with our evolution teachers or our

709
00:31:19,339 --> 00:31:16,859
climate change teachers it inevitably

710
00:31:21,710 --> 00:31:19,349
comes around to a discussion about well

711
00:31:23,000 --> 00:31:21,720
how does you know it's the nature of

712
00:31:24,919 --> 00:31:23,010
science that

713
00:31:27,980 --> 00:31:24,929

the students need to learn here because

714

00:31:29,330 --> 00:31:27,990

that's what most of the misconception a

715

00:31:32,390 --> 00:31:29,340

lot of the misconceptions are tied into

716

00:31:35,659 --> 00:31:32,400

misconceptions about science itself and

717

00:31:38,930 --> 00:31:35,669

the Flat Earth it's kind of become just

718

00:31:40,640 --> 00:31:38,940

a fad to think or a media source it's

719

00:31:43,039 --> 00:31:40,650

always been there that the group those

720

00:31:45,230 --> 00:31:43,049

groups have always been around it's

721

00:31:47,330 --> 00:31:45,240

become over the last two years yeah the

722

00:31:49,100 --> 00:31:47,340

last few years a few celebrities and

723

00:31:52,549 --> 00:31:49,110

athletes or whatever have kind of made

724

00:31:54,770 --> 00:31:52,559

it I think sort of a new fad I don't

725

00:31:57,080 --> 00:31:54,780

know that it'll have any more traction

726

00:31:59,299 --> 00:31:57,090

now than it has in the past so we're not

727

00:32:01,280 --> 00:31:59,309

focused at least at this point on that

728

00:32:03,049 --> 00:32:01,290

is our front I hope you don't have to be

729

00:32:05,690 --> 00:32:03,059

now and I don't think we will but we

730

00:32:07,700 --> 00:32:05,700

certainly monitor all of that because it

731

00:32:09,980 --> 00:32:07,710

is worth being able to tell a teacher

732

00:32:11,630 --> 00:32:09,990

you know this this is all part of the

733

00:32:13,789 --> 00:32:11,640

nature of why we need people to be

734

00:32:15,320 --> 00:32:13,799

literate scientifically literate and why

735

00:32:18,710 --> 00:32:15,330

they need to understand how science is

736

00:32:21,650 --> 00:32:18,720

done and how it provides explanation and

737

00:32:23,150 --> 00:32:21,660

in four phenomena and it's not just a

738

00:32:25,010 --> 00:32:23,160

matter of opinion it's not just well you

739

00:32:26,720 --> 00:32:25,020

think this and I think that so you know

740

00:32:29,299 --> 00:32:26,730

we can have this debate science doesn't

741

00:32:32,150 --> 00:32:29,309

operate that way I like to say you know

742

00:32:34,310 --> 00:32:32,160

science doesn't proceed by debate you

743

00:32:35,630 --> 00:32:34,320

don't have two sides that say I believe

744

00:32:36,650 --> 00:32:35,640

one thing and the other side believes

745

00:32:38,330 --> 00:32:36,660

the other and they come to some

746

00:32:40,100 --> 00:32:38,340

consensus in the middle and that's not

747

00:32:42,520 --> 00:32:40,110

what we mean by consensus when we talk

748

00:32:46,909 --> 00:32:42,530

about a consensus of experts in science

749

00:32:49,640 --> 00:32:46,919

it's the data that tells them what is

750

00:32:52,400 --> 00:32:49,650

right what what the evidence is and so

751

00:32:53,150 --> 00:32:52,410

it's not a it's not a compromise it's an

752

00:32:55,430 --> 00:32:53,160

agreement

753

00:32:57,140 --> 00:32:55,440

due to their finding the same

754

00:32:58,850 --> 00:32:57,150

conclusions over and over again through

755

00:33:01,130 --> 00:32:58,860

different lines of evidence but the

756

00:33:04,250 --> 00:33:01,140

evidence it's the data that drives that

757

00:33:06,950 --> 00:33:04,260

consensus not compromise and finally

758

00:33:08,390 --> 00:33:06,960

bread what can people do teaches here in

759

00:33:09,140 --> 00:33:08,400

the United States and teachers around

760

00:33:12,169 --> 00:33:09,150

the world

761

00:33:14,720 --> 00:33:12,179

I guess visiting the website here and is

762

00:33:16,700 --> 00:33:14,730

a good Stan yeah we're we're redesigning

763

00:33:18,980 --> 00:33:16,710

our website right now right now there's

764

00:33:21,320 --> 00:33:18,990

a we do have our lessons available and

765

00:33:23,450 --> 00:33:21,330

the webinars that we did with ace are

766

00:33:25,430 --> 00:33:23,460

available but in the next few months

767

00:33:26,990 --> 00:33:25,440

we're going to be unveiling a lot more

768

00:33:29,180 --> 00:33:27,000

resources for teachers that'll be a lot

769

00:33:31,520 --> 00:33:29,190

easier to navigate and so forth so

770

00:33:33,140 --> 00:33:31,530

that's probably going to be two or three

771

00:33:35,289 --> 00:33:33,150

months before it's completed but I would

772

00:33:37,930 --> 00:33:35,299

certainly invite anybody to visit

773

00:33:39,310 --> 00:33:37,940

website or to contact me directly about

774

00:33:42,909 --> 00:33:39,320

any of the resources I'm talking about

775

00:33:45,100 --> 00:33:42,919

or any of the issues that they might

776

00:33:46,690 --> 00:33:45,110

have questions they may have so there

777

00:33:48,549 --> 00:33:46,700

you are folks especially teachers out

778

00:33:54,220 --> 00:33:48,559

there no matter where in the world you

779

00:33:56,229 --> 00:33:54,230

are if you visit WWN si se comm you'll

780

00:33:58,269 --> 00:33:56,239

find all the resources and information

781

00:34:00,039 --> 00:33:58,279

there and of course you can contact the

782

00:34:02,019 --> 00:34:00,049

good people here directly for any help

783

00:34:03,970 --> 00:34:02,029

well Brad hagh thank you very much for

784

00:34:06,460 --> 00:34:03,980

your time today and I look forward to

785

00:34:08,289 --> 00:34:06,470

maybe interviewing you again in a year

786

00:34:10,240 --> 00:34:08,299

or two to see how we're progressing yeah

787

00:34:11,829 --> 00:34:10,250

that would be wonderful it's it's an

788

00:34:13,260 --> 00:34:11,839

ever-changing thing to think interesting

789

00:34:17,409 --> 00:34:13,270

thing about climate change is that it's

790

00:34:18,789 --> 00:34:17,419

it is a new part of Education I mean

791

00:34:20,799 --> 00:34:18,799

it's just now getting into the standards

792

00:34:23,319 --> 00:34:20,809

it's just now being a need for teachers

793

00:34:25,119 --> 00:34:23,329

to teach this and so the resources are

794

00:34:26,319 --> 00:34:25,129

being developed as we speak and so a

795

00:34:27,419 --> 00:34:26,329

year from now there's gonna be a lot

796

00:34:36,020 --> 00:34:27,429

more talking about

797

00:34:36,030 --> 00:34:41,300

you told me

798

00:34:41,310 --> 00:34:44,419

cysts

799

00:34:50,280 --> 00:34:48,030

CSO simply idiot hey Sal you guys guys I

800

00:34:52,200 --> 00:34:50,290

just had the most amazing experience

801
00:34:53,849 --> 00:34:52,210
what experience on dress under Chevy

802
00:34:55,980 --> 00:34:53,859
been to the pub children nuts hang out

803
00:34:58,410 --> 00:34:55,990
with mash you know he was blessed by

804
00:35:01,260 --> 00:34:58,420
peter Popoff no Yellin I'm not talking

805
00:35:03,240 --> 00:35:01,270
about psychics it was a really SP

806
00:35:04,980 --> 00:35:03,250
experience now you have been to the pub

807
00:35:05,460 --> 00:35:04,990
either that or you've been smoking

808
00:35:07,980 --> 00:35:05,470
something

809
00:35:10,200 --> 00:35:07,990
no punters the ESB is the European

810
00:35:12,359 --> 00:35:10,210
sceptics podcast it's the most amazing

811
00:35:14,160 --> 00:35:12,369
thing you get to know so much about

812
00:35:17,099 --> 00:35:14,170
sceptics and their activities across

813
00:35:18,690 --> 00:35:17,109

Europe you know events hot topics and

814

00:35:21,089 --> 00:35:18,700

interviews with lots of interesting

815

00:35:22,410 --> 00:35:21,099

people oh wow cool by the way punters

816

00:35:25,260 --> 00:35:22,420

you just come into the false dichotomy

817

00:35:26,790 --> 00:35:25,270

fallacy I guess that means I'm really

818

00:35:28,290 --> 00:35:26,800

wrong yep

819

00:35:30,240 --> 00:35:28,300

then you can even learn about those

820

00:35:32,640 --> 00:35:30,250

fallacies in the show and hear about

821

00:35:35,339 --> 00:35:32,650

people spreading silly ideas you should

822

00:35:38,250 --> 00:35:35,349

really check it out it's the ESP the

823

00:35:40,890 --> 00:35:38,260

European sceptics podcast it's on never

824

00:35:43,079 --> 00:35:40,900

weak all right so where can I get this

825

00:35:45,540 --> 00:35:43,089

is the experience it sounds good

826

00:35:48,599 --> 00:35:45,550

you can go online at the ESP dotty you

827

00:35:51,630 --> 00:35:48,609

follow it on twitter at es podcast

828

00:35:53,789 --> 00:35:51,640

underscore EU or like the podcast on

829

00:35:56,849 --> 00:35:53,799

Facebook oh and you can also contact the

830

00:36:00,660 --> 00:35:56,859

show by sending them an email to info at

831

00:36:02,700 --> 00:36:00,670

the ESPE you and if you want to

832

00:36:05,450 --> 00:36:02,710

subscribe do a quick search for the

833

00:36:11,460 --> 00:36:05,460

European skeptic podcast on soundcloud

834

00:36:16,810 --> 00:36:11,470

iTunes or stitcher I don't know how you

835

00:36:29,180 --> 00:36:25,470

[Music]

836

00:36:33,440 --> 00:36:32,270

Brian Dunning hello hello sir how are

837

00:36:36,339 --> 00:36:33,450

you good to see you as always

838

00:36:39,260 --> 00:36:36,349

thank you we're sitting here in the

839

00:36:41,480 --> 00:36:39,270

downstairs section of skeptoid media's

840

00:36:45,079 --> 00:36:41,490

palatial headquarters Thunder wood ranch

841

00:36:47,150 --> 00:36:45,089

and we're delighted because a couple of

842

00:36:49,789 --> 00:36:47,160

minutes ago you look out the window and

843

00:36:51,890 --> 00:36:49,799

the snow is snowing the snow snow to

844

00:36:53,510 --> 00:36:51,900

snowfall what's happening all right now

845

00:36:55,490 --> 00:36:53,520

you would say it's really dumping

846

00:36:57,260 --> 00:36:55,500

because it really is it's pick out the

847

00:37:00,049 --> 00:36:57,270

front that's crazy

848

00:37:01,460 --> 00:37:00,059

lot of snow when we went up before to

849

00:37:03,440 --> 00:37:01,470

make a quick video for the folks back

850

00:37:04,420 --> 00:37:03,450

home and we came back inside and it's

851
00:37:08,029 --> 00:37:04,430
really coming down

852
00:37:09,980 --> 00:37:08,039
Brian Oh wonderful to see you I love

853
00:37:13,370 --> 00:37:09,990
coming to bend the first time here in

854
00:37:15,170 --> 00:37:13,380
winter and what I want to do is find out

855
00:37:18,200 --> 00:37:15,180
get a direct update from you about

856
00:37:20,270 --> 00:37:18,210
science friction and a quick overview

857
00:37:23,410 --> 00:37:20,280
for those people out there who may be

858
00:37:26,390 --> 00:37:23,420
new to the skeptic zone or skeptoid

859
00:37:28,490 --> 00:37:26,400
what's it all about so science friction

860
00:37:31,190 --> 00:37:28,500
is a feature documentary that we're

861
00:37:33,769 --> 00:37:31,200
executive producing Emory Emory is the

862
00:37:36,529 --> 00:37:33,779
director and it's about scientists who

863
00:37:40,220 --> 00:37:36,539

get misquoted or edited out of context

864

00:37:43,130 --> 00:37:40,230

on these air quotes science networks on

865

00:37:45,650 --> 00:37:43,140

television which happens more often than

866

00:37:48,769 --> 00:37:45,660

anyone would would would fear to think

867

00:37:50,900 --> 00:37:48,779

so you know you're the average cases

868

00:37:52,579 --> 00:37:50,910

you're a scientist and you go on to give

869

00:37:54,289 --> 00:37:52,589

your expert opinion on whatever this

870

00:37:57,799 --> 00:37:54,299

show is about ancient aliens or

871

00:38:00,260 --> 00:37:57,809

something and they often will edit the

872

00:38:02,120 --> 00:38:00,270

words in a sentence even or they'll have

873

00:38:03,680 --> 00:38:02,130

you start to say one thing they'll cut

874

00:38:06,109 --> 00:38:03,690

away to something else they'll cut back

875

00:38:07,549 --> 00:38:06,119

to you finishing a different thought the

876

00:38:10,250 --> 00:38:07,559

trying to make it sound like these

877

00:38:12,349 --> 00:38:10,260

legitimate scientists are supporting the

878

00:38:13,039 --> 00:38:12,359

idea that aliens built the pyramids or

879

00:38:15,680 --> 00:38:13,049

what-have-you

880

00:38:17,539 --> 00:38:15,690

so we're going around we're interviewing

881

00:38:18,680 --> 00:38:17,549

as many of these scientists as we can to

882

00:38:20,690 --> 00:38:18,690

whom this has happened we're

883

00:38:23,299 --> 00:38:20,700

interviewing some industry people who

884

00:38:25,430 --> 00:38:23,309

engage in this practice to explain how

885

00:38:28,760 --> 00:38:25,440

and why they do it so it's going to be

886

00:38:32,510 --> 00:38:28,770

quite the interesting expose the

887

00:38:34,160 --> 00:38:32,520

production update is we've just finished

888

00:38:35,539 --> 00:38:34,170

having the holidays write down so we're

889

00:38:38,690 --> 00:38:35,549

just kind of picking up after that

890

00:38:41,420 --> 00:38:38,700

before the holidays we sent a film crew

891

00:38:42,860 --> 00:38:41,430

out to Washington DC to the American

892

00:38:45,800 --> 00:38:42,870

Geophysical Union

893

00:38:47,750 --> 00:38:45,810

conference where they had 32,000 earth

894

00:38:48,800 --> 00:38:47,760

scientists attend this conference it's

895

00:38:51,230 --> 00:38:48,810

out of this world

896

00:38:54,890 --> 00:38:51,240

hey there thirty two thousand thirty two

897

00:38:56,480 --> 00:38:54,900

thousand yeah I wasn't there personally

898

00:38:59,240 --> 00:38:56,490

so I I don't know what it looked like

899

00:39:01,010 --> 00:38:59,250

but oh my god so we we had arranged in

900

00:39:03,320 --> 00:39:01,020

advance with quite a few of them to sit

901
00:39:05,120 --> 00:39:03,330
down with an interview about their their

902
00:39:07,640 --> 00:39:05,130
experiences and many many of these these

903
00:39:10,700 --> 00:39:07,650
being earth scientists it'll be two

904
00:39:12,620 --> 00:39:10,710
basic cases they edit them to make it

905
00:39:14,840 --> 00:39:12,630
sound like the giant earthquake is

906
00:39:17,230 --> 00:39:14,850
coming any second now to kill us all and

907
00:39:19,880 --> 00:39:17,240
slide California into the ocean or the

908
00:39:22,460 --> 00:39:19,890
what is the mega volcano this the

909
00:39:24,170 --> 00:39:22,470
Yellowstone supervolcano yes that it's

910
00:39:27,320 --> 00:39:24,180
going to explode any day now and wipe

911
00:39:29,810 --> 00:39:27,330
out civilization and both of these are

912
00:39:32,660 --> 00:39:29,820
old jokes in the geophysical community

913
00:39:35,120 --> 00:39:32,670

and it happens they have to be so

914

00:39:39,110 --> 00:39:35,130

careful when they go on TV but no matter

915

00:39:40,850 --> 00:39:39,120

how careful you are they this happens so

916

00:39:43,460 --> 00:39:40,860

we collected some great interviews there

917

00:39:46,010 --> 00:39:43,470

and we're you've got at least three more

918

00:39:48,050 --> 00:39:46,020

little shooting tours planned one is

919

00:39:49,610 --> 00:39:48,060

going to go through the east coast one

920

00:39:51,200 --> 00:39:49,620

is going to go through the southwest and

921

00:39:53,200 --> 00:39:51,210

one is just going to be right there in

922

00:39:56,000 --> 00:39:53,210

Los Angeles where the film crews based

923

00:39:58,190 --> 00:39:56,010

that's the update wow that's fantastic

924

00:40:03,740 --> 00:39:58,200

and for those people who don't know it's

925

00:40:06,440 --> 00:40:03,750

it's being driven by the kind generosity

926
00:40:09,650 --> 00:40:06,450
if you can say that kind generosity the

927
00:40:12,530 --> 00:40:09,660
generosity of fans and listeners to skip

928
00:40:15,320 --> 00:40:12,540
tide particularly which is yeah it's

929
00:40:18,950 --> 00:40:15,330
it's being crowdfunded which is unusual

930
00:40:20,630 --> 00:40:18,960
for a feature film because you say oh

931
00:40:21,830 --> 00:40:20,640
it's going to be in theater so it makes

932
00:40:24,800 --> 00:40:21,840
lots of money so what do you need

933
00:40:26,750 --> 00:40:24,810
crowdfunding for so since we're we're

934
00:40:28,060 --> 00:40:26,760
executive producing at skeptoid media

935
00:40:30,380 --> 00:40:28,070
and we're an educational non-profit

936
00:40:31,790 --> 00:40:30,390
we're not just making a movie and giving

937
00:40:33,400 --> 00:40:31,800
it out there to some studio here take

938
00:40:35,840 --> 00:40:33,410

this put it in theaters make money on it

939

00:40:37,790 --> 00:40:35,850

we're gonna retain the educational

940

00:40:39,440 --> 00:40:37,800

rights and so when you're retaining a

941

00:40:40,850 --> 00:40:39,450

certain amount of the rights you're not

942

00:40:42,200 --> 00:40:40,860

going to get the same kind of a deal as

943

00:40:45,860 --> 00:40:42,210

you would when you normally sell a film

944

00:40:47,600 --> 00:40:45,870

to a distributor so we're crowdfunding

945

00:40:50,270 --> 00:40:47,610

basically the whole production phase of

946

00:40:52,670 --> 00:40:50,280

it and then we're going to be able to

947

00:40:55,100 --> 00:40:52,680

include it in the teachers toolkit which

948

00:40:57,609 --> 00:40:55,110

is one of our growing and upcoming

949

00:40:59,950 --> 00:40:57,619

products here at skeptoid

950

00:41:01,780 --> 00:40:59,960

and it's going to be part of its going

951
00:41:03,250 --> 00:41:01,790
to have educational curricula that we go

952
00:41:04,390 --> 00:41:03,260
along with it and it's something that

953
00:41:07,599 --> 00:41:04,400
we're just gonna be able to give out to

954
00:41:11,650 --> 00:41:07,609
schools for free that's going to really

955
00:41:13,300 --> 00:41:11,660
help students understand what they're

956
00:41:15,339 --> 00:41:13,310
seeing in the media and learn to

957
00:41:17,530 --> 00:41:15,349
recognize that the media is not giving

958
00:41:19,839 --> 00:41:17,540
them the full story when it comes to

959
00:41:21,280 --> 00:41:19,849
true science and true history because

960
00:41:25,000 --> 00:41:21,290
those are the things that are it really

961
00:41:26,829 --> 00:41:25,010
abused the most in this pop media of

962
00:41:29,650 --> 00:41:26,839
television the entertainment industry

963
00:41:33,849 --> 00:41:29,660

when it can people go to find out more

964

00:41:36,130 --> 00:41:33,859

yeah so science friction TV is the

965

00:41:37,750 --> 00:41:36,140

website that's not only the crowdfunding

966

00:41:39,670 --> 00:41:37,760

website but it's also where we've got a

967

00:41:41,230 --> 00:41:39,680

little trailer and we've got some of the

968

00:41:44,589 --> 00:41:41,240

stories that were featuring from some of

969

00:41:45,940 --> 00:41:44,599

the scientists are up there and what you

970

00:41:47,920 --> 00:41:45,950

should at least do is put your name on

971

00:41:49,359 --> 00:41:47,930

the mailing lists because every couple

972

00:41:51,760 --> 00:41:49,369

weeks I'm sending out a new update for

973

00:41:53,200 --> 00:41:51,770

who we've shot lately here's some news

974

00:41:55,720 --> 00:41:53,210

stories here's some exciting things

975

00:41:57,430 --> 00:41:55,730

happening with the film and of course

976
00:41:58,750 --> 00:41:57,440
donors if you want to donate to the film

977
00:42:00,069 --> 00:41:58,760
then you can get your name in the

978
00:42:02,230 --> 00:42:00,079
credits we're doing that whole thing

979
00:42:04,210 --> 00:42:02,240
you'll be able to get a digital download

980
00:42:06,910 --> 00:42:04,220
of the film and and there's other perks

981
00:42:09,790 --> 00:42:06,920
for people who may want to donate at at

982
00:42:11,109 --> 00:42:09,800
higher levels and that's a you can see

983
00:42:13,809 --> 00:42:11,119
all of that on the website science

984
00:42:15,339 --> 00:42:13,819
friction TV that's the clue folks that's

985
00:42:17,829 --> 00:42:15,349
where you should head to find out more

986
00:42:20,079 --> 00:42:17,839
now last time I was here we had a lot of

987
00:42:21,910 --> 00:42:20,089
fun we went out to a lava cave and we

988
00:42:24,220 --> 00:42:21,920

did a report and also we'd had a gag

989

00:42:27,460 --> 00:42:24,230

where I was hiding from you because you

990

00:42:28,059 --> 00:42:27,470

were Bigfoot but all joking aside well

991

00:42:30,849 --> 00:42:28,069

sort of

992

00:42:33,040 --> 00:42:30,859

recently you and you were telling you

993

00:42:35,980 --> 00:42:33,050

this just yesterday that you attended a

994

00:42:39,040 --> 00:42:35,990

Bigfoot meetup or a Bigfoot meeting or

995

00:42:41,260 --> 00:42:39,050

something like this yeah this is a total

996

00:42:43,420 --> 00:42:41,270

total change of gears here obviously so

997

00:42:45,780 --> 00:42:43,430

this is a Central Oregon which is you

998

00:42:48,520 --> 00:42:45,790

know we're right near all of the major

999

00:42:50,589 --> 00:42:48,530

Bigfoot stories from history the the

1000

00:42:54,309 --> 00:42:50,599

Patterson Gimlin film was shot you know

1001

00:42:56,140 --> 00:42:54,319

just a few hours south of here and to

1002

00:42:58,870 --> 00:42:56,150

this day there's Bigfoot reports coming

1003

00:43:01,960 --> 00:42:58,880

out of right here where I live all the

1004

00:43:05,559 --> 00:43:01,970

time that the Cascade Range so here in

1005

00:43:09,880 --> 00:43:05,569

Bend Oregon just I found on the meetup

1006

00:43:12,760 --> 00:43:09,890

groups that they have a Bigfoot

1007

00:43:15,370 --> 00:43:12,770

of people who believe that bigfoot is

1008

00:43:16,780 --> 00:43:15,380

real they're absolutely persuaded and

1009

00:43:18,670 --> 00:43:16,790

they go out and they have regular

1010

00:43:20,440 --> 00:43:18,680

camping trips which are fun whether you

1011

00:43:22,120 --> 00:43:20,450

believe in Bigfoot or not and it's nice

1012

00:43:24,820 --> 00:43:22,130

to have some sort of organization to the

1013

00:43:27,670 --> 00:43:24,830

camping trip I guess a very nice very

1014

00:43:29,410 --> 00:43:27,680

nice group of folks so my wife and I we

1015

00:43:31,660 --> 00:43:29,420

went they held their meeting a little

1016

00:43:34,390 --> 00:43:31,670

pizza place here we went they were all

1017

00:43:37,150 --> 00:43:34,400

super super nice there was not a single

1018

00:43:39,550 --> 00:43:37,160

person there that you'd say is a raving

1019

00:43:41,550 --> 00:43:39,560

crazy Bigfoot lunatic there were even a

1020

00:43:45,520 --> 00:43:41,560

couple of working scientists in

1021

00:43:47,980 --> 00:43:45,530

semi-related Sciences there and we had

1022

00:43:49,450 --> 00:43:47,990

had great conversation the main thrust

1023

00:43:51,370 --> 00:43:49,460

of the evening was everyone went around

1024

00:43:54,100 --> 00:43:51,380

and told what their Bigfoot experience

1025

00:43:56,080 --> 00:43:54,110

was and there wasn't a single person

1026
00:43:59,620 --> 00:43:56,090
there who claims to have seen a Bigfoot

1027
00:44:03,000 --> 00:43:59,630
and by far the most common story that

1028
00:44:05,740 --> 00:44:03,010
many of them had was that they had heard

1029
00:44:07,540 --> 00:44:05,750
branches being struck together like

1030
00:44:09,700 --> 00:44:07,550
you've picked up a fallen limb and you

1031
00:44:11,020 --> 00:44:09,710
beat it against a tree they say they had

1032
00:44:13,030 --> 00:44:11,030
heard that and they all believe that

1033
00:44:15,370 --> 00:44:13,040
that's evidence that Bigfoot is out

1034
00:44:16,840 --> 00:44:15,380
there for for some reason it's not clear

1035
00:44:18,730 --> 00:44:16,850
to me why they all think that that's an

1036
00:44:27,790 --> 00:44:18,740
activity that Bigfoot would be likely to

1037
00:44:30,730 --> 00:44:27,800
engage in yeah that's right it's really

1038
00:44:36,130 --> 00:44:30,740

popular you did you stood about 20

1039

00:44:38,350 --> 00:44:36,140

meters from me go to big log and I've

1040

00:44:40,600 --> 00:44:38,360

since learned from from other people

1041

00:44:43,930 --> 00:44:40,610

that there are birds that that make

1042

00:44:47,080 --> 00:44:43,940

these exact same sound incredibly loud I

1043

00:44:48,850 --> 00:44:47,090

don't know what kind of bird it is I was

1044

00:44:51,010 --> 00:44:48,860

told but I didn't recognize the species

1045

00:44:52,450 --> 00:44:51,020

it wasn't a woodpecker so I'm I I

1046

00:44:53,740 --> 00:44:52,460

shouldn't say more cuz I really don't

1047

00:44:57,220 --> 00:44:53,750

know what's going on in fact if someone

1048

00:44:59,620 --> 00:44:57,230

does use an episode of Bigfoot sounds d

1049

00:45:01,330 --> 00:44:59,630

yes on the skeptoid podcast just

1050

00:45:04,090 --> 00:45:01,340

recently I did an episode but it was on

1051
00:45:07,060 --> 00:45:04,100
vocalizations right so you know a

1052
00:45:09,010 --> 00:45:07,070
Bigfoot goes right up but the these

1053
00:45:11,170 --> 00:45:09,020
beliefs are that Bigfoot will kind of

1054
00:45:13,510 --> 00:45:11,180
scream like we hear at the zoo like

1055
00:45:16,930 --> 00:45:13,520
chimpanzees do at the zoo or whatever or

1056
00:45:18,490 --> 00:45:16,940
we'll make some other sounds and Bigfoot

1057
00:45:20,890 --> 00:45:18,500
enthusiasts have collected quite a few

1058
00:45:22,210 --> 00:45:20,900
recordings and they've got them on you

1059
00:45:23,390 --> 00:45:22,220
can buy them on albums or they're just

1060
00:45:25,010 --> 00:45:23,400
all over the internet as

1061
00:45:27,980 --> 00:45:25,020
little sound clips you can listen to and

1062
00:45:31,279 --> 00:45:27,990
the funny thing is that virtually every

1063
00:45:33,950 --> 00:45:31,289

one of these you can find an analog from

1064

00:45:38,210 --> 00:45:33,960

the known animal kingdom a lot of them

1065

00:45:40,940 --> 00:45:38,220

are owls a lot of them are foxes one of

1066

00:45:44,660 --> 00:45:40,950

the most popular ones is a bird called a

1067

00:45:47,660 --> 00:45:44,670

common loon so there's there's very

1068

00:45:51,440 --> 00:45:47,670

little mystery but there's also a lot of

1069

00:45:53,299 --> 00:45:51,450

really cool new stuff to learn I was I

1070

00:45:56,329 --> 00:45:53,309

was amazed at some of the animal sounds

1071

00:45:58,130 --> 00:45:56,339

when I was collecting them very

1072

00:45:59,120 --> 00:45:58,140

unexpected and if I heard these sounds

1073

00:46:00,890 --> 00:45:59,130

out in the woods in the middle of the

1074

00:46:03,470 --> 00:46:00,900

night I would go oh my god what the heck

1075

00:46:07,069 --> 00:46:03,480

is that it never would occur to me that

1076

00:46:09,680 --> 00:46:07,079

it's a bird or an owl or or Lynx that

1077

00:46:12,260 --> 00:46:09,690

what Lynx sounds crazy just looking out

1078

00:46:15,829 --> 00:46:12,270

the window again and the other side over

1079

00:46:17,210 --> 00:46:15,839

there and we were out in the snow as I

1080

00:46:18,769 --> 00:46:17,220

said a little while ago to make a little

1081

00:46:20,750 --> 00:46:18,779

video and then we thought oh it's

1082

00:46:22,460 --> 00:46:20,760

getting too cold I would not like to go

1083

00:46:25,609 --> 00:46:22,470

out hunting for Bigfoot in the middle of

1084

00:46:29,660 --> 00:46:25,619

winter in Oregon to be honest well if

1085

00:46:31,010 --> 00:46:29,670

you're properly equipped yes if you yeah

1086

00:46:32,960 --> 00:46:31,020

we've taken the Jeep up in the snow a

1087

00:46:34,069 --> 00:46:32,970

few times so that's that's a lot of fun

1088

00:46:35,960 --> 00:46:34,079

I had to learn a whole new type of

1089

00:46:38,240 --> 00:46:35,970

jeeping how do you get how do you Jeep

1090

00:46:39,710 --> 00:46:38,250

in the snow which is very different than

1091

00:46:41,630 --> 00:46:39,720

how you do it out in the desert or in

1092

00:46:44,299 --> 00:46:41,640

the sand or on rocks which is you know

1093

00:46:45,890 --> 00:46:44,309

most of my experiences and I've had to

1094

00:46:47,359 --> 00:46:45,900

buy all new clothes of course in

1095

00:46:50,000 --> 00:46:47,369

everything and every one of my family

1096

00:46:53,029 --> 00:46:50,010

we've all got snowshoes now so do the

1097

00:46:54,890 --> 00:46:53,039

whole thing it's great I love this part

1098

00:46:56,569 --> 00:46:54,900

of the world I'm having a wonderful time

1099

00:46:59,329 --> 00:46:56,579

sitting back on this comfortable couch

1100

00:46:59,990 --> 00:46:59,339

and skeptoid headquarters looking at the

1101
00:47:03,020 --> 00:47:00,000
snow falling

1102
00:47:06,530 --> 00:47:03,030
but for now Brian Dunning thank you very

1103
00:47:06,540 --> 00:47:21,910
[Music]

1104
00:47:26,750 --> 00:47:24,350
thank you for listening to the skeptic

1105
00:47:29,090 --> 00:47:26,760
zone and a big hi to everybody in

1106
00:47:30,890 --> 00:47:29,100
Australia I hope I'll be back soon I'm

1107
00:47:35,150 --> 00:47:30,900
really just having a few days break here

1108
00:47:36,800 --> 00:47:35,160
in Oregon I've got important Oh another

1109
00:47:39,770 --> 00:47:36,810
dog I've got important things to do in

1110
00:47:42,950 --> 00:47:39,780
California but a few days break for me

1111
00:47:44,650 --> 00:47:42,960
then back to California and some time or

1112
00:47:46,760 --> 00:47:44,660
other I'll be heading back to Sydney and

1113
00:47:48,590 --> 00:47:46,770

again to all those people who are

1114

00:47:51,020 --> 00:47:48,600

waiting on packages from the sceptic

1115

00:47:53,450 --> 00:47:51,030

zone new patreon people I hope you

1116

00:47:55,490 --> 00:47:53,460

understand that I will get those to you

1117

00:47:58,520 --> 00:47:55,500

as soon as I can and I hope it'll be

1118

00:48:02,030 --> 00:47:58,530

worth the wait and thank you to those

1119

00:48:04,460 --> 00:48:02,040

people who are contribute to the

1120

00:48:08,450 --> 00:48:04,470

skeptics owned by patreon beta at

1121

00:48:10,970 --> 00:48:08,460

skeptic zone TV it means a lot to Stu

1122

00:48:12,620 --> 00:48:10,980

the show it means there is a show and it

1123

00:48:16,130 --> 00:48:12,630

means that everybody else listening for

1124

00:48:21,290 --> 00:48:16,140

free which is fine are benefiting from

1125

00:48:25,100 --> 00:48:21,300

your generosity and I hope you get a lot

1126

00:48:28,940 --> 00:48:25,110

out of the show every week a big shout

1127

00:48:30,560 --> 00:48:28,950

out to Maynard and I look forward to

1128

00:48:34,100 --> 00:48:30,570

catching up to main out as soon as I get

1129

00:48:39,190 --> 00:48:34,110

home don't forget his podcasts over at

1130

00:48:42,320 --> 00:48:39,200

Maynard comm dot a you and he like me

1131

00:48:44,780 --> 00:48:42,330

depends on the generosity of listeners

1132

00:48:46,910 --> 00:48:44,790

to help keep his podcast going like

1133

00:48:49,580 --> 00:48:46,920

bunga bunga so if you're missing on

1134

00:48:51,440 --> 00:48:49,590

hearing if you miss hearing Maynard at

1135

00:48:53,090 --> 00:48:51,450

the moment on the sceptic zone head over

1136

00:48:55,589 --> 00:48:53,100

to Maynard calm day year for his

1137

00:48:58,620 --> 00:48:55,599

podcasts

1138

00:49:01,109 --> 00:48:58,630

I think I'm lost

1139

00:49:03,890 --> 00:49:01,119

grandma I've been wandering around for

1140

00:49:08,449 --> 00:49:03,900

some time now just on these back roads

1141

00:49:11,789 --> 00:49:08,459

when the outskirts are Bend it's just

1142

00:49:14,189 --> 00:49:11,799

it's beautiful Central Oregon is just

1143

00:49:17,370 --> 00:49:14,199

beautiful and I'm not getting any

1144

00:49:21,240 --> 00:49:17,380

kickback from the Oregon tourist boat or

1145

00:49:23,299 --> 00:49:21,250

anything like that but this week has a

1146

00:49:25,650 --> 00:49:23,309

[Applause]

1147

00:49:27,719 --> 00:49:25,660

crunch along some more snow

1148

00:49:35,489 --> 00:49:27,729

this is Richard Saunders signing off

1149

00:49:38,189 --> 00:49:35,499

from Oregon you've been listening to the

1150

00:49:44,880 --> 00:49:38,199

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1151
00:49:47,670 --> 00:49:44,890
website at wwlp.com tax and to access

1152
00:49:51,269 --> 00:49:47,680
the bat catalog of episodes going back

1153
00:49:54,930 --> 00:49:51,279
to 2008 you can follow the skeptic zone

1154
00:49:57,329 --> 00:49:54,940
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1155
00:49:58,219 --> 00:49:57,339
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1156
00:50:01,319 --> 00:49:58,229
itunes

1157
00:50:04,259 --> 00:50:01,329
you can also support the skeptic zone by

1158
00:50:07,680 --> 00:50:04,269
a patreon or paypal the skeptic zone

1159
00:50:09,390 --> 00:50:07,690
podcast is an independent production the

1160
00:50:11,489 --> 00:50:09,400
views and opinions expressed on the

1161
00:50:13,859 --> 00:50:11,499
skeptic zone are not necessarily those

1162
00:50:15,640 --> 00:50:13,869
of Australian skeptics or any other