

**THE  
SKEPTIC  
ZONE  
PODCAST**

[www.skepticzone.tv](http://www.skepticzone.tv)

1  
00:00:09,090 --> 00:00:06,000

[Music]

2  
00:00:11,840 --> 00:00:09,100

welcome to the skeptic zone the podcast

3  
00:00:13,910 --> 00:00:11,850

from Australia for science and reason

4  
00:00:21,999 --> 00:00:13,920

[Music]

5  
00:00:31,999 --> 00:00:26,830

yes it's the skeptic zone episode number

6  
00:00:33,880 --> 00:00:32,009

458 for the 30th of July 2017 Richardson

7  
00:00:36,500 --> 00:00:33,890

is here with you from Sydney Australia

8  
00:00:39,470 --> 00:00:36,510

now just this morning on the radio news

9  
00:00:41,660 --> 00:00:39,480

I heard that today in Sydney is expected

10  
00:00:44,689 --> 00:00:41,670

to be a record-breaking heat day

11  
00:00:48,229 --> 00:00:44,699

something like 26 degrees they're

12  
00:00:51,680 --> 00:00:48,239

expecting 26 degrees Celsius of course

13  
00:00:52,369 --> 00:00:51,690

well that will be it will be nice I

14

00:00:54,590 --> 00:00:52,379

guess

15

00:00:57,229 --> 00:00:54,600

a nice warm sort of day for this time of

16

00:00:58,970 --> 00:00:57,239

the year with a low humidity yes and I

17

00:01:00,590 --> 00:00:58,980

think I can tolerate that might be a

18

00:01:03,290 --> 00:01:00,600

nice day for a walk in the park

19

00:01:04,939 --> 00:01:03,300

listening to a podcast or two if you're

20

00:01:07,190 --> 00:01:04,949

having a walk in the park listening to

21

00:01:10,130 --> 00:01:07,200

this podcast what you can expect to hear

22

00:01:11,990 --> 00:01:10,140

over the next hour or so we're gonna

23

00:01:14,690 --> 00:01:12,000

kick off with an interview with Michael

24

00:01:17,060 --> 00:01:14,700

Marshall from the good thinking society

25

00:01:18,889 --> 00:01:17,070

and the Merseyside skeptics he's gonna

26

00:01:21,469 --> 00:01:18,899

be filling us in on the latest news

27

00:01:24,859 --> 00:01:21,479

where it comes to homeopathy and the

28

00:01:27,529 --> 00:01:24,869

prescribing of homeopathy and access to

29

00:01:30,350 --> 00:01:27,539

homeopathy in the UK it seems the

30

00:01:32,660 --> 00:01:30,360

government could be making some moves

31

00:01:35,809 --> 00:01:32,670

there in the right direction like here

32

00:01:39,380 --> 00:01:35,819

in Australia where it's quite possible

33

00:01:42,580 --> 00:01:39,390

that not too far down the track laws

34

00:01:47,660 --> 00:01:42,590

will be changing in regards to this

35

00:01:50,419 --> 00:01:47,670

classic of quackery after that I catch

36

00:01:52,669 --> 00:01:50,429

up with my old friend Bob novella from

37

00:01:54,229 --> 00:01:52,679

the skeptics guide to the universe now

38

00:01:56,839 --> 00:01:54,239

Bob and the rest of the skeptics guide

39

00:01:59,710 --> 00:01:56,849

people were in New York just a couple of

40

00:02:04,760 --> 00:01:59,720

weeks ago for the Nexxus convention and

41

00:02:08,270 --> 00:02:04,770

I was very lucky to be a guest to rogue

42

00:02:10,699 --> 00:02:08,280

on the SGU for a live recording in New

43

00:02:13,190 --> 00:02:10,709

York but before we go on stage I catch

44

00:02:16,160 --> 00:02:13,200

up with Bob novella to chat about what's

45

00:02:18,860 --> 00:02:16,170

it like to go live with the skeptics

46

00:02:20,990 --> 00:02:18,870

guide as opposed to do you two each week

47

00:02:22,220 --> 00:02:21,000

from their home so that's Bob novella

48

00:02:24,320 --> 00:02:22,230

coming up a bit later on

49

00:02:26,449 --> 00:02:24,330

following that it's the raw skeptic

50

00:02:30,680 --> 00:02:26,459

report this week Heidi Robinson

51  
00:02:32,480 --> 00:02:30,690  
reporting from her car again she likes

52  
00:02:34,250 --> 00:02:32,490  
reporting from her car this time the car

53  
00:02:35,960 --> 00:02:34,260  
isn't moving however Heidi

54  
00:02:38,660 --> 00:02:35,970  
going to be telling us about the Hendra

55  
00:02:41,990 --> 00:02:38,670  
virus when it comes to horses and issues

56  
00:02:44,600 --> 00:02:42,000  
regarding vaccine there so of course

57  
00:02:47,479 --> 00:02:44,610  
vaccines aren't only beneficial for

58  
00:02:50,390 --> 00:02:47,489  
humans but well your local vet will

59  
00:02:52,430 --> 00:02:50,400  
certainly tell you also as ever

60  
00:02:55,759 --> 00:02:52,440  
brouhaha science from Australia's

61  
00:02:57,530 --> 00:02:55,769  
science channel this week origami hey

62  
00:03:00,259 --> 00:02:57,540  
the topic close to my heart

63  
00:03:02,809 --> 00:03:00,269

origami and space travel origami and

64

00:03:04,849 --> 00:03:02,819

space travel folding in space heads

65

00:03:06,380 --> 00:03:04,859

coming up a bit later on and then to

66

00:03:08,300 --> 00:03:06,390

round off the show part two of a series

67

00:03:10,309 --> 00:03:08,310

of interviews with Anne Reed the

68

00:03:12,140 --> 00:03:10,319

director of the National Center for

69

00:03:16,039 --> 00:03:12,150

Science education based in Oakland

70

00:03:19,819 --> 00:03:16,049

California this week n discusses the ups

71

00:03:21,610 --> 00:03:19,829

and downs the the warmth and the cooling

72

00:03:24,680 --> 00:03:21,620

when it comes to the climate change

73

00:03:27,080 --> 00:03:24,690

science issue some of the arguments that

74

00:03:30,140 --> 00:03:27,090

have been used over the years and why

75

00:03:33,080 --> 00:03:30,150

some people are so shall we say stubborn

76

00:03:35,270 --> 00:03:33,090

when it comes to accepting the science

77

00:03:37,220 --> 00:03:35,280

when it comes to climate change a packed

78

00:03:39,680 --> 00:03:37,230

show a packed show a few little

79

00:03:42,619 --> 00:03:39,690

announcements before we begin and then a

80

00:03:45,229 --> 00:03:42,629

couple more at the end of the show now

81

00:03:50,300 --> 00:03:45,239

last week I reviewed the book nibbling

82

00:03:53,420 --> 00:03:50,310

on Einstein's brain and I went to order

83

00:03:55,789 --> 00:03:53,430

another coffee myself only to discover

84

00:03:58,879 --> 00:03:55,799

that the Book Depository currently is

85

00:04:00,860 --> 00:03:58,889

out of stock I wonder why hmm I wonder

86

00:04:03,349 --> 00:04:00,870

why hopefully it's because lots of

87

00:04:06,050 --> 00:04:03,359

skeptics and fans were clicking on that

88

00:04:07,819 --> 00:04:06,060

site to order the book I put my name on

89

00:04:09,770 --> 00:04:07,829

their list and they'll email me when

90

00:04:11,539 --> 00:04:09,780

that book is available again but I guess

91

00:04:13,909 --> 00:04:11,549

if you google the book and hunt around

92

00:04:15,680 --> 00:04:13,919

you might be able to find a copy from

93

00:04:17,930 --> 00:04:15,690

somewhere else or you could put your

94

00:04:19,640 --> 00:04:17,940

name on the list and they'll let you

95

00:04:21,979 --> 00:04:19,650

know when that book is available and

96

00:04:24,020 --> 00:04:21,989

just before we start I hope to see

97

00:04:27,589 --> 00:04:24,030

Sydneysiders at Sydney's skeptics in the

98

00:04:30,890 --> 00:04:27,599

pub this Thursday at the Occidental

99

00:04:33,439 --> 00:04:30,900

hotel near Wynyard station and I'll put

100

00:04:36,920 --> 00:04:33,449

a link in the Meetup starting at 6 p.m.

101  
00:04:39,620 --> 00:04:36,930  
ah this week this time this month

102  
00:04:42,140 --> 00:04:39,630  
Ian Bryce the chief investigator of

103  
00:04:44,120 --> 00:04:42,150  
Australian skeptics our committee member

104  
00:04:46,610 --> 00:04:44,130  
Jessica Hazard White and myself will be

105  
00:04:50,900 --> 00:04:46,620  
conducting three classic

106  
00:04:52,520 --> 00:04:50,910  
psychic tests on the audience so if you

107  
00:04:55,210 --> 00:04:52,530  
come along he can be part of the fun

108  
00:04:57,620 --> 00:04:55,220  
give your psychic abilities ago and

109  
00:04:59,780 --> 00:04:57,630  
there'll be prizes along the way so

110  
00:05:01,790 --> 00:04:59,790  
that's water divining test we're going

111  
00:05:03,530 --> 00:05:01,800  
to be doing a classic we're going to be

112  
00:05:08,210 --> 00:05:03,540  
doing it serious a test with Zener cards

113  
00:05:10,970 --> 00:05:08,220

and also predicting the future lots of

114

00:05:13,730 --> 00:05:10,980

fun Sydney skeptics in the pub but now

115

00:05:17,090 --> 00:05:13,740

it's time for me to run downstairs being

116

00:05:19,070 --> 00:05:17,100

careful to to not trip over the cats who

117

00:05:20,930 --> 00:05:19,080

are just waiting outside the door here

118

00:05:23,930 --> 00:05:20,940

of the studio because I just had to kick

119

00:05:25,550 --> 00:05:23,940

them out they promised me that be quiet

120

00:05:26,930 --> 00:05:25,560

but as soon as I started recording they

121

00:05:29,600 --> 00:05:26,940

were jumping around and playing with

122

00:05:30,950 --> 00:05:29,610

things and as cats like to do so I'll

123

00:05:34,630 --> 00:05:30,960

run down the stairs being very careful

124

00:05:36,410 --> 00:05:34,640

open up the cupboard get out some lovely

125

00:05:39,620 --> 00:05:36,420

fresh bagels

126  
00:05:41,390 --> 00:05:39,630  
why not toast up the bagels and yes I'm

127  
00:05:43,790 --> 00:05:41,400  
going for the classics of classics when

128  
00:05:49,330 --> 00:05:43,800  
it comes to me anyway but of creamed

129  
00:05:52,700 --> 00:05:49,340  
cheese on the bagel and peanut butter Oh

130  
00:05:55,730 --> 00:05:52,710  
peanut butter they should write songs

131  
00:05:58,130 --> 00:05:55,740  
about you mmm crunchy of course while I

132  
00:05:59,160 --> 00:05:58,140  
do that and I hope you enjoy this

133  
00:06:22,030 --> 00:05:59,170  
sceptic zone

134  
00:06:27,050 --> 00:06:24,350  
joining me now all the way from

135  
00:06:28,550 --> 00:06:27,060  
Liverpool and well he occasionally does

136  
00:06:29,900 --> 00:06:28,560  
join the sceptic zone all the way look

137  
00:06:33,620 --> 00:06:29,910  
from Liverpool it's none other than

138  
00:06:35,570 --> 00:06:33,630

Michael Marshall hello Marshall climate

139

00:06:38,120 --> 00:06:35,580

kid always pleasure to be here thank you

140

00:06:39,560 --> 00:06:38,130

yes you're our sort of unofficial UK

141

00:06:42,890 --> 00:06:39,570

reporter I think you've been on the show

142

00:06:44,629 --> 00:06:42,900

enough times to qualify for that oh yeah

143

00:06:46,370 --> 00:06:44,639

I think so I think I'm maybe only a

144

00:06:47,930 --> 00:06:46,380

couple more appearances away from

145

00:06:50,719 --> 00:06:47,940

getting my official badge through the

146

00:06:52,730 --> 00:06:50,729

post I'm looking for any day now I'll

147

00:06:54,770 --> 00:06:52,740

send it tomorrow now mash a couple of

148

00:06:57,260 --> 00:06:54,780

things first of all I was listening to

149

00:06:59,390 --> 00:06:57,270

that fabulous podcast skeptics with a

150

00:07:01,520 --> 00:06:59,400

Kay just this morning in fact and

151

00:07:04,400 --> 00:07:01,530

catching up on some Beckett back

152

00:07:07,790 --> 00:07:04,410

episodes and can you give our listeners

153

00:07:09,260 --> 00:07:07,800

a quick overview of what you told your

154

00:07:13,700 --> 00:07:09,270

listeners about the current news

155

00:07:15,379 --> 00:07:13,710

regarding homeopathy in the UK yeah

156

00:07:16,159 --> 00:07:15,389

absolutely so there was a big

157

00:07:18,400 --> 00:07:16,169

announcement

158

00:07:22,040 --> 00:07:18,410

from NHS England which is one of the

159

00:07:23,390 --> 00:07:22,050

many myriad bodies that runs the the

160

00:07:26,000 --> 00:07:23,400

National Health Service here in the UK

161

00:07:27,800 --> 00:07:26,010

but the big announcement was that there

162

00:07:29,870 --> 00:07:27,810

is going to be a consultation on whether

163

00:07:31,580 --> 00:07:29,880

homeopathic prescriptions homeopathic

164

00:07:34,339 --> 00:07:31,590

remedies are going to be banned from

165

00:07:36,800 --> 00:07:34,349

prescription so GPS here in the UK

166

00:07:38,600 --> 00:07:36,810

aren't allowed to prescribe homeopathic

167

00:07:40,400 --> 00:07:38,610

remedies and then have them reimbursed

168

00:07:42,050 --> 00:07:40,410

from the the tax payer for National

169

00:07:44,210 --> 00:07:42,060

Health Service so this is actually

170

00:07:46,550 --> 00:07:44,220

pretty significant news now the

171

00:07:49,520 --> 00:07:46,560

consultation isn't done yet I'm a lot of

172

00:07:51,469 --> 00:07:49,530

the newspapers reported this as gp's are

173

00:07:53,689 --> 00:07:51,479

now banned from prescribing homeopathy

174

00:07:56,029 --> 00:07:53,699

and I think a lot of people reacted like

175

00:07:59,180 --> 00:07:56,039

this was the total end of homeopathy on

176

00:08:00,830 --> 00:07:59,190

the NHS it's not quite there yet but it

177

00:08:02,930 --> 00:08:00,840

is pretty significant because we have

178

00:08:05,420 --> 00:08:02,940

this consultation now that's all for

179

00:08:06,920 --> 00:08:05,430

three months everybody in the UK and

180

00:08:08,360 --> 00:08:06,930

possibly even beyond is welcome to

181

00:08:10,460 --> 00:08:08,370

submit their thoughts as to whether they

182

00:08:12,170 --> 00:08:10,470

think it's a good idea that GPS should

183

00:08:14,600 --> 00:08:12,180

be prevented from prescribing homeopathy

184

00:08:15,980 --> 00:08:14,610

and then hopefully by something like the

185

00:08:17,210 --> 00:08:15,990

end of the era or a little bit after

186

00:08:20,029 --> 00:08:17,220

that we should see the results the

187

00:08:22,520 --> 00:08:20,039

consultation which I'm hoping very

188

00:08:23,960 --> 00:08:22,530

strongly and it certainly looks like all

189

00:08:25,700 --> 00:08:23,970

indications are in the direction that

190

00:08:28,129 --> 00:08:25,710

homeopathy will then be banned from

191

00:08:30,170 --> 00:08:28,139

prescription and that will stop a

192

00:08:32,750 --> 00:08:30,180

reasonable amount of homeopathic

193

00:08:35,030 --> 00:08:32,760

spending here on the in the UK on the on

194

00:08:36,950 --> 00:08:35,040

the NHS there'll be still

195

00:08:38,630 --> 00:08:36,960

be other ways to get it funded so that's

196

00:08:40,700 --> 00:08:38,640

where your GP instead of giving you a

197

00:08:42,710 --> 00:08:40,710

prescription for homeopathy they send

198

00:08:44,210 --> 00:08:42,720

you off to their local homeopathy

199

00:08:47,090 --> 00:08:44,220

service or after the homeopathic

200

00:08:50,780 --> 00:08:47,100

hospital ridiculously - to get treatment

201  
00:08:52,430 --> 00:08:50,790  
but if we get a big definitive clearly a

202  
00:08:54,230 --> 00:08:52,440  
message from NHS England that

203  
00:08:58,280 --> 00:08:54,240  
homeopathic prescriptions are no longer

204  
00:09:00,350 --> 00:08:58,290  
allowed that would be a huge huge

205  
00:09:02,570 --> 00:09:00,360  
symbolic win when it comes to ending

206  
00:09:04,160 --> 00:09:02,580  
homeopathic services around the rest of

207  
00:09:06,320 --> 00:09:04,170  
the country which obviously as you know

208  
00:09:08,330 --> 00:09:06,330  
we've been working on that that side of

209  
00:09:10,580 --> 00:09:08,340  
things with good thinking for three or

210  
00:09:12,320 --> 00:09:10,590  
four years now and it feels like there's

211  
00:09:15,020 --> 00:09:12,330  
some real momentum happening it does

212  
00:09:16,700 --> 00:09:15,030  
indeed and it's a similar sort of in way

213  
00:09:18,410 --> 00:09:16,710

situation to what's happening here in

214

00:09:21,110 --> 00:09:18,420

Australia with an interim report coming

215

00:09:23,840 --> 00:09:21,120

up suggesting that or putting it out

216

00:09:27,530 --> 00:09:23,850

there that homeopathy be now no longer

217

00:09:30,110 --> 00:09:27,540

supported via sales in pharmacies and

218

00:09:32,480 --> 00:09:30,120

all these are adding up they're adding

219

00:09:34,790 --> 00:09:32,490

up they're adding up because each one is

220

00:09:36,590 --> 00:09:34,800

a victory if it comes through of course

221

00:09:37,910 --> 00:09:36,600

but even if it's being considered I

222

00:09:41,030 --> 00:09:37,920

think that that's that's quite

223

00:09:43,580 --> 00:09:41,040

remarkable but once and let's look on

224

00:09:46,130 --> 00:09:43,590

the bright side let's say that in both

225

00:09:48,620 --> 00:09:46,140

our countries the situation arises as we

226

00:09:50,800 --> 00:09:48,630

hope that sends a powerful message to

227

00:09:53,390 --> 00:09:50,810

our colleagues around the planet I think

228

00:09:58,400 --> 00:09:53,400

yeah it really does and I think one of

229

00:10:00,320 --> 00:09:58,410

the the really indicative aspects of

230

00:10:02,240 --> 00:10:00,330

this is that when these consultations

231

00:10:04,610 --> 00:10:02,250

are being talked about in the media now

232

00:10:06,530 --> 00:10:04,620

the media isn't taking the angle of Oh

233

00:10:08,240 --> 00:10:06,540

homeopathy is going to be banned that's

234

00:10:09,590 --> 00:10:08,250

a shame homeopathy is wonderful here are

235

00:10:12,500 --> 00:10:09,600

10 holy paths to tell you how amazing

236

00:10:13,970 --> 00:10:12,510

homeopathy is the media is is pretty

237

00:10:15,710 --> 00:10:13,980

much on board with this and that shows a

238

00:10:18,410 --> 00:10:15,720

huge sea change with the web that these

239

00:10:20,090 --> 00:10:18,420

stories are treated either within the

240

00:10:23,090 --> 00:10:20,100

media within society more generally I

241

00:10:24,230 --> 00:10:23,100

think people are now more and more aware

242

00:10:25,880 --> 00:10:24,240

that home you know that the Holy

243

00:10:27,920 --> 00:10:25,890

Catholic remedies aren't effective that

244

00:10:30,560 --> 00:10:27,930

they aren't really anything beyond sugar

245

00:10:32,540 --> 00:10:30,570

and water so I think that's a testament

246

00:10:35,840 --> 00:10:32,550

to the work that sceptics have been

247

00:10:38,810 --> 00:10:35,850

doing for decades I would say and it's

248

00:10:40,900 --> 00:10:38,820

it's really encouraging when the the

249

00:10:44,420 --> 00:10:40,910

story about NHS prescriptions was first

250

00:10:45,860 --> 00:10:44,430

mentioned in March here in the UK they

251

00:10:47,300 --> 00:10:45,870

didn't mention homeopathy initially

252

00:10:48,470 --> 00:10:47,310

because it wasn't one of the 10 biggest

253

00:10:49,819 --> 00:10:48,480

spends

254

00:10:51,470 --> 00:10:49,829

so they just talk about the ten biggest

255

00:10:52,519 --> 00:10:51,480

things is there's a whole consultation

256

00:10:54,230 --> 00:10:52,529

about other products that are going to

257

00:10:56,269 --> 00:10:54,240

be banned from prescription for not

258

00:10:59,030 --> 00:10:56,279

being effective - I'm not being cost

259

00:11:00,400 --> 00:10:59,040

effective so when that consultation is

260

00:11:03,290 --> 00:11:00,410

being talked about back in March

261

00:11:05,389 --> 00:11:03,300

newspapers and radio shows were actually

262

00:11:07,699 --> 00:11:05,399

bringing up homeopathy themselves to say

263

00:11:09,110 --> 00:11:07,709

why isn't homeopathy included and I

264

00:11:11,240 --> 00:11:09,120

think that's a remarkable position to be

265

00:11:12,500 --> 00:11:11,250

in that that when you when people are

266

00:11:14,509 --> 00:11:12,510

talking about treatments that aren't

267

00:11:16,460 --> 00:11:14,519

effective the media are spontaneously

268

00:11:18,949 --> 00:11:16,470

bringing up homeopathy is an example of

269

00:11:20,750 --> 00:11:18,959

that so it really goes sure how far the

270

00:11:22,519 --> 00:11:20,760

discourse on homeopathy has come and I

271

00:11:25,040 --> 00:11:22,529

think that's a huge contributing factor

272

00:11:27,590 --> 00:11:25,050

to softening the ground for

273

00:11:30,079 --> 00:11:27,600

consultations like this and steps by

274

00:11:32,329 --> 00:11:30,089

bodies like the NHS and pharmacies over

275

00:11:34,400 --> 00:11:32,339

there in Australia to take these very

276

00:11:37,100 --> 00:11:34,410

necessary steps to stop funding

277

00:11:38,810 --> 00:11:37,110

homeopathy to stop wasting money on it

278

00:11:41,930 --> 00:11:38,820

and to stop supporting it it's

279

00:11:43,730 --> 00:11:41,940

encouraging news indeed Marshall and and

280

00:11:45,350 --> 00:11:43,740

tip of the hat to you and the good

281

00:11:47,600 --> 00:11:45,360

thinking society of course and all your

282

00:11:49,730 --> 00:11:47,610

colleagues in the UK who are working

283

00:11:52,490 --> 00:11:49,740

hard towards the ascent and and as I

284

00:11:54,650 --> 00:11:52,500

said I was really brought up-to-date

285

00:11:57,410 --> 00:11:54,660

with a lot more information by listening

286

00:11:59,300 --> 00:11:57,420

to skeptics with a k and that podcast is

287

00:12:02,720 --> 00:11:59,310

sailing along quite well hello is that

288

00:12:05,660 --> 00:12:02,730

been going now oh gosh I think he might

289

00:12:07,519 --> 00:12:05,670

started something like August 2009

290

00:12:09,170 --> 00:12:07,529

something like that

291

00:12:11,600 --> 00:12:09,180

it's a fortnightly show and I think one

292

00:12:19,220 --> 00:12:11,610

episode 203 which obviously is hugely

293

00:12:20,809 --> 00:12:19,230

dwarfed by the number of it yeah you

294

00:12:23,389 --> 00:12:20,819

certainly do and it's a very enjoyable

295

00:12:24,889 --> 00:12:23,399

show folks I'll put a link to skeptics

296

00:12:27,259 --> 00:12:24,899

with a K in the show notes or you can

297

00:12:29,870 --> 00:12:27,269

just google skeptics with a K and before

298

00:12:33,620 --> 00:12:29,880

we go Marsh it's not so long now before

299

00:12:36,680 --> 00:12:33,630

the wonderful QED in Manchester the

300

00:12:38,720 --> 00:12:36,690

convention how's that shaping up yeah

301  
00:12:40,819 --> 00:12:38,730  
it's all coming together really well I

302  
00:12:42,769 --> 00:12:40,829  
think whenever you're involved in

303  
00:12:45,350 --> 00:12:42,779  
putting together conferences it doesn't

304  
00:12:47,269 --> 00:12:45,360  
get any easier have seven years in it

305  
00:12:50,090 --> 00:12:47,279  
still takes time but we're pretty

306  
00:12:51,889 --> 00:12:50,100  
excited about it I think it's um last

307  
00:12:55,250 --> 00:12:51,899  
year's was the biggest and most kind of

308  
00:12:57,500 --> 00:12:55,260  
varied QED that we've ever had and this

309  
00:12:59,179 --> 00:12:57,510  
is looking to be the same really so yeah

310  
00:13:00,559 --> 00:12:59,189  
I'm very very excited about that and if

311  
00:13:02,360 --> 00:13:00,569  
people want to find out what what's

312  
00:13:05,300 --> 00:13:02,370  
happening at QD they've got a QD car

313  
00:13:07,820 --> 00:13:05,310

dot org we actually have a month left if

314

00:13:09,800 --> 00:13:07,830

people are looking to bring their

315

00:13:11,900 --> 00:13:09,810

children to QED and want to access the

316

00:13:14,329 --> 00:13:11,910

crash facilities who have affordable

317

00:13:16,870 --> 00:13:14,339

child care that we that we fund while

318

00:13:18,950 --> 00:13:16,880

we're at QED so for the price of a

319

00:13:20,630 --> 00:13:18,960

concession ticket you can actually have

320

00:13:22,190 --> 00:13:20,640

full child care throughout the entire

321

00:13:23,720 --> 00:13:22,200

weekend so we've got a month left if

322

00:13:25,010 --> 00:13:23,730

people do want to use that facility they

323

00:13:26,990 --> 00:13:25,020

need to get in quick because at some

324

00:13:28,970 --> 00:13:27,000

point we have to shut it so we know how

325

00:13:30,980 --> 00:13:28,980

many kids were dealing with so yeah

326

00:13:32,990 --> 00:13:30,990

we're going for that one you know it's

327

00:13:35,000 --> 00:13:33,000

why you need someone like me there to be

328

00:13:36,829 --> 00:13:35,010

there making origami for all the kids I

329

00:13:44,930 --> 00:13:36,839

should send over a truckload of DVD

330

00:13:48,170 --> 00:13:44,940

origami DVDs for them all on YouTube oh

331

00:13:50,540 --> 00:13:48,180

yeah I think I probably do well Marsh

332

00:13:54,290 --> 00:13:50,550

thank you once again congratulations so

333

00:13:57,140 --> 00:13:54,300

far I know the victory isn't isn't there

334

00:14:00,260 --> 00:13:57,150

quite yet but I think and you'll have to

335

00:14:01,990 --> 00:14:00,270

agree things are looking positive yeah

336

00:14:04,310 --> 00:14:02,000

absolutely I think they really are and

337

00:14:06,590 --> 00:14:04,320

great stuff in in Australia too

338

00:14:08,810 --> 00:14:06,600

hopefully that will all pan out to the

339

00:14:11,150 --> 00:14:08,820

pharmacy stuff and we can all make a

340

00:14:12,500 --> 00:14:11,160

stride into a more reasonable world it

341

00:14:15,350 --> 00:14:12,510

at least did that particular aspect

342

00:14:18,050 --> 00:14:15,360

together at least so Marsh thank you

343

00:14:19,530 --> 00:14:18,060

once again thanks a lot Richard always

344

00:14:34,300 --> 00:14:19,540

places peachy guys

345

00:14:38,330 --> 00:14:36,680

hi this is Ben Radford and this is

346

00:14:40,520 --> 00:14:38,340

Pascual Romero from the squaring the

347

00:14:42,440 --> 00:14:40,530

strange podcast every week my co-host

348

00:14:44,780 --> 00:14:42,450

and I cast a skeptical eye at a

349

00:14:46,730 --> 00:14:44,790

different topic monsters ghosts demons

350

00:14:48,800 --> 00:14:46,740

mysteries and even current events are

351

00:14:50,840 --> 00:14:48,810

dissected and discussed with a fun

352

00:14:52,370 --> 00:14:50,850

unscripted and skeptical take that

353

00:14:54,950 --> 00:14:52,380

you're sure to enjoy find this is

354

00:15:03,520 --> 00:14:54,960

squirting strange calm iTunes or on your

355

00:15:18,019 --> 00:15:15,310

[Music]

356

00:15:19,730 --> 00:15:18,029

it's behind the scenes here at the

357

00:15:22,070 --> 00:15:19,740

Northeast Conference of science and

358

00:15:23,810 --> 00:15:22,080

skepticism were in the green room which

359

00:15:25,639 --> 00:15:23,820

is in green it's a bit green it's green

360

00:15:28,430 --> 00:15:25,649

rabbits do some green plants around the

361

00:15:30,170 --> 00:15:28,440

edges and we're just getting ready for

362

00:15:32,990 --> 00:15:30,180

the skeptics guide to the universe live

363

00:15:35,360 --> 00:15:33,000

I'm with Bob novella hi Bob hey Richard

364

00:15:38,060 --> 00:15:35,370

how are you I'm okay every now and then

365

00:15:40,579 --> 00:15:38,070

I get the creepy jetlag feeling but it's

366

00:15:41,750 --> 00:15:40,589

okay I'm in there you've been there yeah

367

00:15:43,639 --> 00:15:41,760

but not like you you're an old hand at

368

00:15:45,019 --> 00:15:43,649

this you travels on the other side of

369

00:15:46,610 --> 00:15:45,029

the planet it seems like every month

370

00:15:48,560 --> 00:15:46,620

you're like okay time to travel on the

371

00:15:49,970 --> 00:15:48,570

other side of the world so I'm thinking

372

00:15:51,710 --> 00:15:49,980

you're probably used to it by now but

373

00:15:54,230 --> 00:15:51,720

you're not right done you don't get used

374

00:15:56,780 --> 00:15:54,240

to it you know what you're gonna get so

375

00:15:58,370 --> 00:15:56,790

you sort of are aware of it but no you

376

00:15:59,449 --> 00:15:58,380

never quite get you have to work around

377

00:16:02,030 --> 00:15:59,459

you know there are I'm going to need to

378

00:16:06,079 --> 00:16:02,040

nap here I'm gonna need to do this there

379

00:16:07,340 --> 00:16:06,089

and adapt you adapt you try to adapt I

380

00:16:11,660 --> 00:16:07,350

thought I have a quick chat with you

381

00:16:13,910 --> 00:16:11,670

about the difference between between

382

00:16:16,670 --> 00:16:13,920

doing is to you every week from your

383

00:16:20,090 --> 00:16:16,680

home and a live experience because they

384

00:16:22,519 --> 00:16:20,100

are similar but very different huh there

385

00:16:24,470 --> 00:16:22,529

are different beasts at home when we do

386

00:16:25,940 --> 00:16:24,480

our weekly show we're at home and we're

387

00:16:28,790 --> 00:16:25,950

on you know we're on a conference call

388

00:16:30,350 --> 00:16:28,800

on skype together chatting and and so

389

00:16:32,510 --> 00:16:30,360

that's and it goes great with that's how

390

00:16:33,829 --> 00:16:32,520

we do our podcast but when we're all

391

00:16:35,449 --> 00:16:33,839

together in the same room especially

392

00:16:38,360 --> 00:16:35,459

care is here from what from the other

393

00:16:40,940 --> 00:16:38,370

side of the the United States the the

394

00:16:43,130 --> 00:16:40,950

synergy and the dynamic between us I

395

00:16:44,960 --> 00:16:43,140

think amps up a little bit and it's al

396

00:16:47,300 --> 00:16:44,970

it's a lot more fun and they're they're

397

00:16:49,850 --> 00:16:47,310

great shows plus we also optimized the

398

00:16:52,910 --> 00:16:49,860

show for stage to be to be a little

399

00:16:54,590 --> 00:16:52,920

pickier a little quicker you know we try

400

00:16:55,970 --> 00:16:54,600

to have some visual aids you know some

401  
00:16:57,740 --> 00:16:55,980  
visual images that are funny on the

402  
00:16:59,750 --> 00:16:57,750  
screen so it's a it's a little bit of a

403  
00:17:01,819 --> 00:16:59,760  
kind of a variant of the podcast that's

404  
00:17:03,769 --> 00:17:01,829  
optimized for a live audience and it's

405  
00:17:04,970 --> 00:17:03,779  
fun it's a it's a lot of fun we always

406  
00:17:07,220 --> 00:17:04,980  
look forward to doing that yeah because

407  
00:17:08,540 --> 00:17:07,230  
you also get the when you hear the

408  
00:17:10,160 --> 00:17:08,550  
recordings they're me it's sitting at

409  
00:17:12,680 --> 00:17:10,170  
home or whatever hitting hearing your

410  
00:17:14,210 --> 00:17:12,690  
of the live shows you get that feeling

411  
00:17:15,770 --> 00:17:14,220  
of the audience because they're laughing

412  
00:17:17,960 --> 00:17:15,780  
and they're shouting out things and

413  
00:17:19,880 --> 00:17:17,970

whatever yeah it's it's a complete is a

414

00:17:22,730 --> 00:17:19,890

very different experience and and

415

00:17:24,079 --> 00:17:22,740

happier translates well on to the to the

416

00:17:25,910 --> 00:17:24,089

people listening and they know yeah

417

00:17:27,380 --> 00:17:25,920

that's a live show oh maybe maybe I'll

418

00:17:28,880 --> 00:17:27,390

go to a live show one day and see what

419

00:17:30,290 --> 00:17:28,890

it's like so that'd be great because

420

00:17:34,970 --> 00:17:30,300

when you were in Australia

421

00:17:37,280 --> 00:17:34,980

twice now yes in 2010 2014 I think it

422

00:17:39,470 --> 00:17:37,290

was you did a series of life shows

423

00:17:42,140 --> 00:17:39,480

around the country time flies and trying

424

00:17:44,840 --> 00:17:42,150

to remember you've done them all over

425

00:17:46,460 --> 00:17:44,850

Steve Steve he's spoken in the UK he was

426

00:17:48,800 --> 00:17:46,470

in Vienna we've done him on though on

427

00:17:50,690 --> 00:17:48,810

the west coast we've done them you know

428

00:17:52,310 --> 00:17:50,700

yeah a lot of different places but we

429

00:17:55,760 --> 00:17:52,320

wanted to go more and more we want to go

430

00:17:57,620 --> 00:17:55,770

to the UK and do and do a QED eventually

431

00:17:59,480 --> 00:17:57,630

we're gonna go back to Australia within

432

00:18:01,520 --> 00:17:59,490

probably a couple years we can't wait to

433

00:18:04,460 --> 00:18:01,530

do that and probably New Zealand as well

434

00:18:06,890 --> 00:18:04,470

and who knows who knows where else Hong

435

00:18:08,390 --> 00:18:06,900

Kong you know we've got different places

436

00:18:11,540 --> 00:18:08,400

in our sights and we'll get there

437

00:18:12,950 --> 00:18:11,550

eventually it's wonderful when when I've

438

00:18:16,660 --> 00:18:12,960

seen you do the live shows in Australia

439

00:18:19,100 --> 00:18:16,670

the audience it's like they've been

440

00:18:20,510 --> 00:18:19,110

transplanted from the United States when

441

00:18:22,460 --> 00:18:20,520

I see the audience in your live shows

442

00:18:23,960 --> 00:18:22,470

here tam or whatever then the audience

443

00:18:26,870 --> 00:18:23,970

are enthusiastic and they love it and

444

00:18:28,430 --> 00:18:26,880

that same feeling is exactly what you

445

00:18:30,020 --> 00:18:28,440

get when you do it around the world yeah

446

00:18:32,060 --> 00:18:30,030

it's a little bit extra special because

447

00:18:33,500 --> 00:18:32,070

you know we do Nexus every year on the

448

00:18:36,860 --> 00:18:33,510

East Coast we've been on the west coast

449

00:18:39,020 --> 00:18:36,870

of Tam and for four years as well so a

450

00:18:40,310 --> 00:18:39,030

lot of people if you pull any audience I

451  
00:18:42,050 --> 00:18:40,320  
think you'll find a good chunk of them

452  
00:18:43,820 --> 00:18:42,060  
they've seen us been there kind of done

453  
00:18:45,950 --> 00:18:43,830  
that and hopefully they're still they're

454  
00:18:47,540 --> 00:18:45,960  
not getting bored of us but uh but when

455  
00:18:48,890 --> 00:18:47,550  
we were in Australia that was like the

456  
00:18:51,170 --> 00:18:48,900  
other the other side of the world so a

457  
00:18:52,850 --> 00:18:51,180  
lot of those people like when are they

458  
00:18:54,110 --> 00:18:52,860  
gonna see us live because they live

459  
00:18:55,610 --> 00:18:54,120  
literally on the other side of the

460  
00:18:57,320 --> 00:18:55,620  
planet so there's a little bit of extra

461  
00:18:58,940 --> 00:18:57,330  
enthusiasm I think but is it very

462  
00:19:01,660 --> 00:18:58,950  
similar but a little bit extra like oh

463  
00:19:03,830 --> 00:19:01,670

wow you know the guys are down here and

464

00:19:05,960 --> 00:19:03,840

and hopefully they'll see us again in a

465

00:19:08,600 --> 00:19:05,970

couple years so yeah it's it was such a

466

00:19:10,730 --> 00:19:08,610

memorable trip when we went to two times

467

00:19:12,110 --> 00:19:10,740

I can't wait to go back we just all fell

468

00:19:14,660 --> 00:19:12,120

in love with Australia can't wait to go

469

00:19:16,130 --> 00:19:14,670

back so I it would be wrong to say what

470

00:19:17,630 --> 00:19:16,140

what would you rather do would you

471

00:19:18,419 --> 00:19:17,640

rather do or you're more comfortable

472

00:19:19,980 --> 00:19:18,429

doing the

473

00:19:22,049 --> 00:19:19,990

shows or sitting at home and doing it

474

00:19:23,369 --> 00:19:22,059

but they're different yeah your point of

475

00:19:25,470 --> 00:19:23,379

view the different beasts they are

476

00:19:26,759 --> 00:19:25,480

different beasts I like the mix I like

477

00:19:29,159 --> 00:19:26,769

you know you do your bread and butter

478

00:19:30,749 --> 00:19:29,169

your home every week and then a handful

479

00:19:33,149 --> 00:19:30,759

of times a year you go out and that I

480

00:19:35,310 --> 00:19:33,159

like I like that mix the live audience

481

00:19:38,009 --> 00:19:35,320

is a little bit more stressful for me I

482

00:19:40,049 --> 00:19:38,019

still get a little nervous I still over

483

00:19:41,789 --> 00:19:40,059

prepare you'll if you if you if you

484

00:19:43,200 --> 00:19:41,799

watch me before we go on stage I'm

485

00:19:44,879 --> 00:19:43,210

pacing back and forth looking at my

486

00:19:46,710 --> 00:19:44,889

notes trying to internalize everything

487

00:19:48,779 --> 00:19:46,720

so that I want to get on stage I can

488

00:19:50,609 --> 00:19:48,789

relax and not think of what's the next

489

00:19:52,320 --> 00:19:50,619

topic I want to hit but it's just

490

00:19:54,239 --> 00:19:52,330

already there and I can focus more on

491

00:19:56,009 --> 00:19:54,249

engaging the audience and not worrying

492

00:19:58,259 --> 00:19:56,019

about slipping up so it's a little bit

493

00:20:01,049 --> 00:19:58,269

stressful but I do love it and but I do

494

00:20:02,279 --> 00:20:01,059

prepare very very what's very wise

495

00:20:04,109 --> 00:20:02,289

because you don't want to be sitting on

496

00:20:05,399 --> 00:20:04,119

stage and stuck for something to say but

497

00:20:08,369 --> 00:20:05,409

it reminds me of the strange situation

498

00:20:09,930 --> 00:20:08,379

when I was a guest rogue when you were

499

00:20:11,940 --> 00:20:09,940

in Sydney last time and we were that

500

00:20:14,369 --> 00:20:11,950

giant auditorium for the Australian

501  
00:20:16,080 --> 00:20:14,379  
skeptics convention and we're on sitting

502  
00:20:19,080 --> 00:20:16,090  
on the stage and big things and the

503  
00:20:20,759 --> 00:20:19,090  
speakers and we couldn't quite hear each

504  
00:20:22,680 --> 00:20:20,769  
other sitting on stage because of the

505  
00:20:24,419 --> 00:20:22,690  
echoing do you remember that I can't

506  
00:20:25,700 --> 00:20:24,429  
thanks for reminding me I hadn't thought

507  
00:20:28,049 --> 00:20:25,710  
about it in a while but that was

508  
00:20:30,659 --> 00:20:28,059  
incredibly frustrating because there was

509  
00:20:33,029 --> 00:20:30,669  
this weird delay and whenever somebody

510  
00:20:35,100 --> 00:20:33,039  
else was talking it was a disconnected

511  
00:20:37,080 --> 00:20:35,110  
it was actually interesting in the way

512  
00:20:39,269 --> 00:20:37,090  
that it actually short-circuited your

513  
00:20:41,759 --> 00:20:39,279

brain so you had to like try to

514

00:20:43,440 --> 00:20:41,769

disengage yourself from that weird audio

515

00:20:44,940 --> 00:20:43,450

effect that was happening so that you

516

00:20:46,590 --> 00:20:44,950

could actually have a conversation and

517

00:20:48,450 --> 00:20:46,600

we were just sitting there each of us

518

00:20:50,100 --> 00:20:48,460

were hoping oh please I hope that the

519

00:20:52,710 --> 00:20:50,110

audience doesn't detect this because it

520

00:20:54,419 --> 00:20:52,720

was really a jarring experience but we

521

00:20:56,460 --> 00:20:54,429

got past it after that initial they kind

522

00:20:58,529 --> 00:20:56,470

of fixed it but that was a weird like 10

523

00:21:00,690 --> 00:20:58,539

minutes like damn what is that it's okay

524

00:21:03,749 --> 00:21:00,700

I'm sitting here thinking I hope the

525

00:21:05,009 --> 00:21:03,759

audience doesn't think I'm sort of drunk

526  
00:21:06,539 --> 00:21:05,019  
or something because I'm not I'm not

527  
00:21:08,430 --> 00:21:06,549  
replying and I was looking down the

528  
00:21:11,279 --> 00:21:08,440  
other end of the table to Steve trying

529  
00:21:12,509 --> 00:21:11,289  
to read his lips decide exactly and it's

530  
00:21:14,549 --> 00:21:12,519  
the kind of thing that it's hard to

531  
00:21:15,180 --> 00:21:14,559  
anticipate you know you suck you eye who

532  
00:21:16,919 --> 00:21:15,190  
would have thought

533  
00:21:19,169 --> 00:21:16,929  
wait let's have people on the stage and

534  
00:21:20,970 --> 00:21:19,179  
do a test chat to make sure that the

535  
00:21:22,560 --> 00:21:20,980  
echo doesn't short-circuit your mind

536  
00:21:24,419 --> 00:21:22,570  
like who woulda thought to have done

537  
00:21:26,519 --> 00:21:24,429  
that but that's what happened is this

538  
00:21:27,659 --> 00:21:26,529

weird echo they you know you can't

539

00:21:29,249 --> 00:21:27,669

anticipate that just gotta roll with it

540

00:21:31,200 --> 00:21:29,259

just could have a roll you do and that's

541

00:21:31,840 --> 00:21:31,210

one of the the joys and frustrations are

542

00:21:33,610 --> 00:21:31,850

doing

543

00:21:35,830 --> 00:21:33,620

right absolutely Oh God don't we talk

544

00:21:38,140 --> 00:21:35,840

about a V you know a V problem to that

545

00:21:41,020 --> 00:21:38,150

Center well Bob novella thank you very

546

00:21:43,600 --> 00:21:41,030

much and I'm looking forward to well I

547

00:21:45,160 --> 00:21:43,610

guess just about an hour a now it's time

548

00:21:46,780 --> 00:21:45,170

we'll be live on stage it's gonna be

549

00:21:48,840 --> 00:21:46,790

great looking forward to it thanks look

550

00:21:58,560 --> 00:21:48,850

for to have yarn Richard thank you

551  
00:22:02,950 --> 00:22:00,430  
greetings listeners

552  
00:22:04,840 --> 00:22:02,960  
it's me Captain disillusion on my

553  
00:22:07,150 --> 00:22:04,850  
youtube channel called captain

554  
00:22:09,610 --> 00:22:07,160  
disillusion aye captain disillusion

555  
00:22:11,890 --> 00:22:09,620  
analyzed viral videos of the strange and

556  
00:22:14,320 --> 00:22:11,900  
unbelievable I explained how interframe

557  
00:22:16,360 --> 00:22:14,330  
video compression 3d motion tracking and

558  
00:22:18,670 --> 00:22:16,370  
stock the effects elements proved that

559  
00:22:20,920 --> 00:22:18,680  
Justin Bieber is not a secret reptilian

560  
00:22:23,020 --> 00:22:20,930  
alien that those videos of ghost cars

561  
00:22:25,060 --> 00:22:23,030  
are just unintentional optical illusions

562  
00:22:26,470 --> 00:22:25,070  
and that lightning did not strike a few

563  
00:22:29,170 --> 00:22:26,480

feet away from a girl on a beach as we

564

00:22:32,550 --> 00:22:29,180

saw in the news I'm real fun at parties

565

00:22:34,630 --> 00:22:32,560

my best friend is a lens flare

566

00:22:36,580 --> 00:22:34,640

disillusion I do know other people

567

00:22:39,220 --> 00:22:36,590

sometimes they even show up in my videos

568

00:22:41,590 --> 00:22:39,230

people like skepticisms grandpa James

569

00:22:43,660 --> 00:22:41,600

Randi serve de Soleil Acrobat Erica

570

00:22:45,820 --> 00:22:43,670

Lin's weight loss enthusiast Penn

571

00:22:47,950 --> 00:22:45,830

Jillette and the actual Beekman from

572

00:22:49,990 --> 00:22:47,960

Beakman's world I hope you'll check out

573

00:22:52,120 --> 00:22:50,000

my adventures interact with me in a

574

00:22:54,910 --> 00:22:52,130

platonic way and even consider becoming

575

00:22:57,520 --> 00:22:54,920

a patron of my work you can do all that

576

00:23:00,120 --> 00:22:57,530

and more on YouTube or at Captain

577

00:23:02,570 --> 00:23:00,130

disillusion calm

578

00:23:06,270 --> 00:23:02,580

[Music]

579

00:23:07,860 --> 00:23:06,280

and now direct from the cafe and

580

00:23:11,370 --> 00:23:07,870

Australia's Science Channel

581

00:23:14,550 --> 00:23:11,380

it's brouhaha science in less time that

582

00:23:19,980 --> 00:23:14,560

it takes to order a coffee with such a

583

00:23:22,200 --> 00:23:19,990

as Shefali when the first astronauts

584

00:23:24,060 --> 00:23:22,210

land on Mars their top priority will be

585

00:23:26,820 --> 00:23:24,070

to put a radiation shield between them

586

00:23:30,000 --> 00:23:26,830

and harmful cosmic rays that's why NASA

587

00:23:32,310 --> 00:23:30,010

wants your origami expertise but they're

588

00:23:34,620 --> 00:23:32,320

not talking delicate paper cranes NASA

589

00:23:36,180 --> 00:23:34,630

is calling for 3d folding concepts they

590

00:23:39,450 --> 00:23:36,190

can use when it's time to pack for the

591

00:23:41,370 --> 00:23:39,460

trip science loves origami there are

592

00:23:43,500 --> 00:23:41,380

robots that stop flat and assemble

593

00:23:46,080 --> 00:23:43,510

themselves who folds and hinges to scoot

594

00:23:47,700 --> 00:23:46,090

around small places airbags that are

595

00:23:49,590 --> 00:23:47,710

designed to deploy with just the right

596

00:23:51,840 --> 00:23:49,600

amount of force to protect the passenger

597

00:23:54,030 --> 00:23:51,850

without hurting them and even medical

598

00:23:56,250 --> 00:23:54,040

devices like hots vents that fit through

599

00:23:57,990 --> 00:23:56,260

a catheter in their folded form and then

600

00:24:01,020 --> 00:23:58,000

expand when they're inserted into an

601  
00:24:03,870 --> 00:24:01,030  
artery nASA has been inspired by origami

602  
00:24:06,930 --> 00:24:03,880  
before as well there are space antennas

603  
00:24:09,690 --> 00:24:06,940  
space mirrors space solar panels space

604  
00:24:12,900 --> 00:24:09,700  
Sun shields even space radiators which

605  
00:24:15,270 --> 00:24:12,910  
can be unfold into their food world but

606  
00:24:17,730 --> 00:24:15,280  
for the next generation of space origami

607  
00:24:19,650 --> 00:24:17,740  
it's up to you X but folders and creases

608  
00:24:20,790 --> 00:24:19,660  
to add new valleys and mountains to the

609  
00:24:23,950 --> 00:24:20,800  
Red Planet

610  
00:24:37,960 --> 00:24:26,919  
for more brouhaha and Australian science

611  
00:25:02,080 --> 00:24:59,789  
[Music]

612  
00:25:05,080 --> 00:25:02,090  
Haile Robertson from the Northern Rivers

613  
00:25:09,359 --> 00:25:05,090

vaccination supporters this report comes

614

00:25:11,799 --> 00:25:09,369

to you from Bangalow soccer fields

615

00:25:14,950 --> 00:25:11,809

currently sitting in my car watching my

616

00:25:19,930 --> 00:25:14,960

kids run around playing soccer so there

617

00:25:21,730 --> 00:25:19,940

might be some background noise the topic

618

00:25:24,519 --> 00:25:21,740

of this report comes to you as a result

619

00:25:27,460 --> 00:25:24,529

of a listener suggestion thank you Dave

620

00:25:29,230 --> 00:25:27,470

Dave saw a post on the ABC North Coast

621

00:25:31,960 --> 00:25:29,240

Facebook page a couple of weeks ago

622

00:25:34,989 --> 00:25:31,970

about a horse contracting the Hendra

623

00:25:37,180 --> 00:25:34,999

virus and noted how there was an anti

624

00:25:40,149 --> 00:25:37,190

vaccination sentiment amongst horse

625

00:25:42,369 --> 00:25:40,159

owners in which some believed that the

626

00:25:45,159 --> 00:25:42,379

risk to their horses from the vaccine

627

00:25:48,810 --> 00:25:45,169

was greater than the risk of the disease

628

00:25:52,119 --> 00:25:48,820

itself this is something we see commonly

629

00:25:55,570 --> 00:25:52,129

with vaccination deniers

630

00:25:59,409 --> 00:25:55,580

I remember the post as I commented on it

631

00:26:01,779 --> 00:25:59,419

myself at the time firstly some

632

00:26:03,690 --> 00:26:01,789

information about the Hendra virus and

633

00:26:09,399 --> 00:26:03,700

this comes from the Australian

634

00:26:13,480 --> 00:26:09,409

veterinary association website Hendra

635

00:26:15,999 --> 00:26:13,490

virus HIV is an emerging virus disease

636

00:26:18,909 --> 00:26:16,009

that was first identified in a large

637

00:26:23,409 --> 00:26:18,919

outbreak of highly lethal disease in

638

00:26:26,980 --> 00:26:23,419

racehorses in 1994 in two adjoining

639

00:26:31,419 --> 00:26:26,990

Brisbane racing stables where 13 horses

640

00:26:34,989 --> 00:26:31,429

either died or were humanely euthanized

641

00:26:36,700 --> 00:26:34,999

and seven horses recovered but were

642

00:26:40,539 --> 00:26:36,710

subsequently euthanized

643

00:26:44,200 --> 00:26:40,549

a trainer died from multi organ failure

644

00:26:47,560 --> 00:26:44,210

and his stable hand became ill but

645

00:26:50,710 --> 00:26:47,570

recovered Hendra virus infections have

646

00:26:54,880 --> 00:26:50,720

been confirmed in flying foxes horses

647

00:26:58,779 --> 00:26:54,890

and dogs other animals known to be

648

00:27:02,529 --> 00:26:58,789

susceptible include cats ferrets pigs

649

00:27:03,370 --> 00:27:02,539

guinea pigs hamsters and non-human

650

00:27:08,200 --> 00:27:03,380

primates

651  
00:27:11,169 --> 00:27:08,210  
a recent study confirmed that flying fox

652  
00:27:14,230 --> 00:27:11,179  
urine is the most significant route of

653  
00:27:17,649 --> 00:27:14,240  
HIV excretion in wild caught black

654  
00:27:20,500 --> 00:27:17,659  
flying foxes transmission pathways

655  
00:27:23,289 --> 00:27:20,510  
facilitating a spillover to horses via a

656  
00:27:26,700 --> 00:27:23,299  
urinary contamination of pasture feed

657  
00:27:29,230 --> 00:27:26,710  
and water sources is highly plausible

658  
00:27:32,200 --> 00:27:29,240  
routine observation of the abundance of

659  
00:27:34,090 --> 00:27:32,210  
flying fox urine feces and food debris

660  
00:27:36,700 --> 00:27:34,100  
underneath trees in which they are

661  
00:27:38,850 --> 00:27:36,710  
feeding suggests that horses have a high

662  
00:27:41,200 --> 00:27:38,860  
likelihood of direct physical

663  
00:27:44,500 --> 00:27:41,210

contamination with potentially

664

00:27:46,720 --> 00:27:44,510

infectious material at these sites the

665

00:27:49,330 --> 00:27:46,730

clinical signs of Hendra virus in horses

666

00:27:52,000 --> 00:27:49,340

are mainly respiratory and or

667

00:27:54,789 --> 00:27:52,010

neurological usually with a rapid

668

00:27:59,260 --> 00:27:54,799

progression to death and with a 79

669

00:28:02,380 --> 00:27:59,270

percent mortality rate Hendra virus is a

670

00:28:05,289 --> 00:28:02,390

rare disease in humans there have been

671

00:28:09,159 --> 00:28:05,299

seven known cases with four deaths a

672

00:28:11,860 --> 00:28:09,169

case fatality rate of 57 percent the

673

00:28:14,260 --> 00:28:11,870

human cases have all occurred by close

674

00:28:17,370 --> 00:28:14,270

contact with the secretions or body

675

00:28:21,190 --> 00:28:17,380

fluids of infected horses which act as

676  
00:28:23,110 --> 00:28:21,200  
amplifiers of the virus one person

677  
00:28:25,630 --> 00:28:23,120  
became infected from a horse in the late

678  
00:28:28,389 --> 00:28:25,640  
incubation stage before it showed

679  
00:28:30,399 --> 00:28:28,399  
clinical signs the Australian Veterinary

680  
00:28:33,039 --> 00:28:30,409  
Association believes that the Hendra

681  
00:28:35,139 --> 00:28:33,049  
vaccine is the single most effective way

682  
00:28:38,080 --> 00:28:35,149  
of reducing the risk of Hendra virus

683  
00:28:40,060 --> 00:28:38,090  
infection in horses and therefore of

684  
00:28:45,399 --> 00:28:40,070  
preventing disease transmission to

685  
00:28:49,240 --> 00:28:45,409  
people now here is the post that ABC

686  
00:28:50,080 --> 00:28:49,250  
north coast put up on their page on July

687  
00:28:55,029 --> 00:28:50,090  
the ninth

688  
00:28:57,190 --> 00:28:55,039

20-17 Hendra has struck in the region

689

00:28:59,950 --> 00:28:57,200

for the first time this year with a

690

00:29:02,350 --> 00:28:59,960

horse neil is more euthanize last night

691

00:29:05,110 --> 00:29:02,360

by the local Land Services District vet

692

00:29:07,570 --> 00:29:05,120

following confirmation of the bat borne

693

00:29:09,460 --> 00:29:07,580

disease the 11 year old gelding was

694

00:29:12,159 --> 00:29:09,470

unvaccinated against the Hendra virus

695

00:29:14,320 --> 00:29:12,169

and the property has now been placed

696

00:29:17,950 --> 00:29:14,330

under movement restrictions by local

697

00:29:20,140 --> 00:29:17,960

Land Services the New South Wales chief

698

00:29:22,600 --> 00:29:20,150

veterinary officer dr. Christine

699

00:29:25,120 --> 00:29:22,610

Middlemiss said samples from the horse

700

00:29:27,519 --> 00:29:25,130

tested at the DPI's Elizabeth MacArthur

701  
00:29:30,669 --> 00:29:27,529  
agricultural Institute confirmed the

702  
00:29:33,940 --> 00:29:30,679  
virus the horse was noticed to be

703  
00:29:36,430 --> 00:29:33,950  
lethargic on Thursday July the 6th the

704  
00:29:39,460 --> 00:29:36,440  
Friday July the 7th the horse was not

705  
00:29:42,220 --> 00:29:39,470  
eating and was wobbly on its feet she

706  
00:29:45,130 --> 00:29:42,230  
said there has been a case of Hendra

707  
00:29:47,260 --> 00:29:45,140  
virus in the area before all known

708  
00:29:49,330 --> 00:29:47,270  
Hendra virus cases have occurred in

709  
00:29:52,000 --> 00:29:49,340  
Queensland or northern New South Wales

710  
00:29:54,549 --> 00:29:52,010  
but cases could occur wherever there are

711  
00:29:56,740 --> 00:29:54,559  
flying foxes or in horses that had

712  
00:29:58,889 --> 00:29:56,750  
recent contact with flying foxes prior

713  
00:30:01,450 --> 00:29:58,899

to movement

714

00:30:03,190 --> 00:30:01,460

dr. Middlemiss said that vaccination

715

00:30:05,560 --> 00:30:03,200

remains the most effective way of

716

00:30:09,730 --> 00:30:05,570

reducing the risk of Hendra virus of

717

00:30:12,250 --> 00:30:09,740

infection in horses but good biosecurity

718

00:30:14,320 --> 00:30:12,260

and personal hygiene measures should

719

00:30:14,860 --> 00:30:14,330

always be practiced in conjunction with

720

00:30:17,980 --> 00:30:14,870

it

721

00:30:20,169 --> 00:30:17,990

she said horses should also be kept away

722

00:30:23,139 --> 00:30:20,179

from flowering and fruiting trees that

723

00:30:26,110 --> 00:30:23,149

are attractive to bats do not place feed

724

00:30:28,450 --> 00:30:26,120

and water under trees and cover feed and

725

00:30:30,760 --> 00:30:28,460

water containers with a shelter so that

726  
00:30:32,019 --> 00:30:30,770  
they cannot be contaminated from above

727  
00:30:34,960 --> 00:30:32,029  
the DPI

728  
00:30:36,580 --> 00:30:34,970  
advises that if your horse is unwell to

729  
00:30:38,560 --> 00:30:36,590  
keep it away from people and other

730  
00:30:41,230 --> 00:30:38,570  
animals and to call your private vet

731  
00:30:43,630 --> 00:30:41,240  
immediately there were definitely cases

732  
00:30:46,690 --> 00:30:43,640  
of people advocating and defending the

733  
00:30:48,700 --> 00:30:46,700  
use of the vaccine under this post but

734  
00:30:51,940 --> 00:30:48,710  
the number of anti vaccination comments

735  
00:30:55,899 --> 00:30:51,950  
was disappointing here are some of the

736  
00:30:57,490 --> 00:30:55,909  
comments luke said it's Lismore you

737  
00:31:00,039 --> 00:30:57,500  
could give these people and Ebola

738  
00:31:02,460 --> 00:31:00,049

outbreak and they would still protest

739

00:31:04,010 --> 00:31:02,470

that vaccination is an evil conspiracy

740

00:31:08,060 --> 00:31:04,020

perpetrated by Mon

741

00:31:10,460 --> 00:31:08,070

Santo and Illuminati Marion then chimed

742

00:31:13,090 --> 00:31:10,470

in more horses are injured from the

743

00:31:15,920 --> 00:31:13,100

vaccine than the Hendra virus itself

744

00:31:18,950 --> 00:31:15,930

Hendra is extremely difficult to catch

745

00:31:21,590 --> 00:31:18,960

both horse and human much higher chance

746

00:31:25,520 --> 00:31:21,600

of death from snakebite car accident

747

00:31:28,900 --> 00:31:25,530

riding accident etc that comment

748

00:31:32,990 --> 00:31:28,910

depressingly got 30 people liking it

749

00:31:35,420 --> 00:31:33,000

Robi then said what is a vaccine injury

750

00:31:39,230 --> 00:31:35,430

did the needle break off or something

751  
00:31:41,750 --> 00:31:39,240  
never heard of it then we have the usual

752  
00:31:45,980 --> 00:31:41,760  
do your research statement from a

753  
00:31:48,110 --> 00:31:45,990  
vaccine denier please all do some

754  
00:31:50,740 --> 00:31:48,120  
research on this vaccination and you

755  
00:31:54,590 --> 00:31:50,750  
will see why people don't vaccinate

756  
00:31:58,820 --> 00:31:54,600  
another some horses have died gotten

757  
00:32:02,150 --> 00:31:58,830  
sick from the vaccine another but or no

758  
00:32:05,480 --> 00:32:02,160  
bat wheels within wheels everything from

759  
00:32:08,330 --> 00:32:05,490  
bees to whales is getting lame or worse

760  
00:32:11,630 --> 00:32:08,340  
what is happening need to look beyond

761  
00:32:15,140 --> 00:32:11,640  
bats and how bats are to blame Hendra

762  
00:32:17,270 --> 00:32:15,150  
air quotes virus can the medics really

763  
00:32:20,690 --> 00:32:17,280

keep up with the way the cookies are

764

00:32:24,710 --> 00:32:20,700

crumbling sea dairy cows agrobacterium

765

00:32:28,700 --> 00:32:24,720

Morgellons CDC cover-up water treatment

766

00:32:34,760 --> 00:32:28,710

microbes bacterial co-infection biofilm

767

00:32:38,180 --> 00:32:34,770

and then came surely the Hendra vac is

768

00:32:40,790 --> 00:32:38,190

more lethal than the virus no human ever

769

00:32:43,400 --> 00:32:40,800

has contracted Hendra from casual

770

00:32:45,860 --> 00:32:43,410

contact this is another case of big

771

00:32:50,120 --> 00:32:45,870

pharma working on scare tactics

772

00:32:53,300 --> 00:32:50,130

later on surely again i lot of people

773

00:32:56,960 --> 00:32:53,310

commenting here need to know some real

774

00:32:59,660 --> 00:32:56,970

facts about Hendra and Hendra vac before

775

00:33:02,200 --> 00:32:59,670

commenting too many side effects from

776

00:33:06,290 --> 00:33:02,210

vaccine for my liking

777

00:33:10,460 --> 00:33:06,300

Dianne the vaccine also makes a lot of

778

00:33:13,370 --> 00:33:10,470

horse really sick and the never recover

779

00:33:16,160 --> 00:33:13,380

fully from that either quite a few have

780

00:33:17,779 --> 00:33:16,170

died from it as well so you are damned

781

00:33:21,739 --> 00:33:17,789

if you do and

782

00:33:24,200 --> 00:33:21,749

damned if you don't so there you have it

783

00:33:27,169 --> 00:33:24,210

northern New South Wales with the lowest

784

00:33:28,759 --> 00:33:27,179

vaccination rates in Australia also has

785

00:33:31,849 --> 00:33:28,769

people who refuse to vaccinate their

786

00:33:33,249 --> 00:33:31,859

horses which sadly comes as no real

787

00:33:36,320 --> 00:33:33,259

surprise

788

00:33:39,499 --> 00:33:36,330

thanks again Dave for your suggestion

789

00:33:41,930 --> 00:33:39,509

for this report and until next time this

790

00:33:44,970 --> 00:33:41,940

has been Heidi Robertson from the

791

00:34:01,989 --> 00:33:44,980

Northern Rivers vaccination supporters

792

00:34:06,289 --> 00:34:04,519

good gosh poor Gabbard well you must

793

00:34:07,789 --> 00:34:06,299

sceptic wish - to shock a desolate is

794

00:34:10,159 --> 00:34:07,799

just skeptic we serve as a tech elbow

795

00:34:12,079 --> 00:34:10,169

Python a channel Garnica meet the

796

00:34:13,909 --> 00:34:12,089

skeptics on podcast hall go to a vision

797

00:34:15,440 --> 00:34:13,919

heritage from dr. Torres are to the

798

00:34:17,629 --> 00:34:15,450

manual cock-up shortage heavy like what

799

00:34:20,240 --> 00:34:17,639

she touched a critical go in vodka - -

800

00:34:21,950 --> 00:34:20,250

on an excel sheet a I said let me

801  
00:34:24,319 --> 00:34:21,960  
raise 20 and then we can shake member

802  
00:34:26,659 --> 00:34:24,329  
travelhob solitude or dvd bond skeptic

803  
00:34:28,970 --> 00:34:26,669  
we start to sharpen tool but as info at

804  
00:34:30,589 --> 00:34:28,980  
skeptic push bond Hootie man - Barbara

805  
00:34:32,780 --> 00:34:30,599  
Allen film and the Facebook hold on in

806  
00:34:34,750 --> 00:34:32,790  
Kurdish Amita Facebook bond compare

807  
00:34:38,829 --> 00:34:34,760  
skeptic gustar Shakti mandalas

808  
00:34:42,200 --> 00:34:38,839  
volunteering Sarita dharamdas Vinayagam

809  
00:34:44,359 --> 00:34:42,210  
hi this is Gavroche co-president of the

810  
00:34:46,129 --> 00:34:44,369  
hungarian skeptics society and chairman

811  
00:34:48,980 --> 00:34:46,139  
of the European Council of skeptical

812  
00:34:51,319 --> 00:34:48,990  
organizations a solicitor of the sceptic

813  
00:34:53,299 --> 00:34:51,329

zone you probably agree that educating

814

00:34:56,329 --> 00:34:53,309

others about pseudoscience and critical

815

00:34:57,920 --> 00:34:56,339

thinking is an important task if you are

816

00:34:59,750 --> 00:34:57,930

eager to take part in either of these

817

00:35:03,460 --> 00:34:59,760

activities we would be happy to hear

818

00:35:09,020 --> 00:35:03,470

from you don't hesitate to contact us at

819

00:35:10,880 --> 00:35:09,030

[www.sceeto.com](http://www.sceeto.com) for at sceptical hu we

820

00:35:13,640 --> 00:35:10,890

also recommend you visiting our Facebook

821

00:35:18,580 --> 00:35:13,650

page skeptic which - Rashaad or simply

822

00:35:18,590 --> 00:35:27,680

[Music]

823

00:35:34,560 --> 00:35:31,710

and now we bring you part two of our

824

00:35:36,780 --> 00:35:34,570

series of interviews with and read the

825

00:35:39,150 --> 00:35:36,790

director of the National Center for

826

00:35:42,420 --> 00:35:39,160

Science education based in Oakland

827

00:35:44,910 --> 00:35:42,430

California this week and discusses some

828

00:35:47,040 --> 00:35:44,920

of the issues revolving teaching climate

829

00:35:49,620 --> 00:35:47,050

change especially when it comes to

830

00:35:51,720 --> 00:35:49,630

political implications trying to reach

831

00:35:53,280 --> 00:35:51,730

the hearts and minds of teachers and the

832

00:35:55,380 --> 00:35:53,290

general public who sometimes have a

833

00:35:59,070 --> 00:35:55,390

negative view of science and why the

834

00:35:59,930 --> 00:35:59,080

idea of a climate change hoax is so

835

00:36:07,430 --> 00:35:59,940

entrenched

836

00:36:11,640 --> 00:36:07,440

[Music]

837

00:36:14,730 --> 00:36:11,650

of course because we now say we the

838

00:36:16,670 --> 00:36:14,740

skeptical movement has been battling

839

00:36:21,030 --> 00:36:16,680

creationism for a very long time

840

00:36:23,580 --> 00:36:21,040

probably about 6,000 planet and it's one

841

00:36:26,160 --> 00:36:23,590

of the reasons that initially the

842

00:36:29,120 --> 00:36:26,170

Australian skeptics were very prominent

843

00:36:31,440 --> 00:36:29,130

it was battling this and we've got this

844

00:36:33,720 --> 00:36:31,450

interesting transition now where we hear

845

00:36:37,080 --> 00:36:33,730

the same arguments in regard to climate

846

00:36:38,760 --> 00:36:37,090

change and you probably have the same

847

00:36:40,410 --> 00:36:38,770

situation in this country where I've

848

00:36:42,840 --> 00:36:40,420

noticed a lot of the shall I say

849

00:36:45,870 --> 00:36:42,850

conservative media outlets in Australia

850

00:36:47,490 --> 00:36:45,880

are on the hoax bandwagon yeah that's

851  
00:36:50,820 --> 00:36:47,500  
the same thing here I am oh absolutely

852  
00:36:53,610 --> 00:36:50,830  
in fact I think the US has probably gone

853  
00:36:56,370 --> 00:36:53,620  
the furthest down the road of rejecting

854  
00:36:58,710 --> 00:36:56,380  
climate science has become a part of the

855  
00:37:02,070 --> 00:36:58,720  
identity of one of our parties that it's

856  
00:37:04,620 --> 00:37:02,080  
the official stance to the point that

857  
00:37:08,340 --> 00:37:04,630  
the candidates how many did we start out

858  
00:37:10,230 --> 00:37:08,350  
with 17 oh I married quite a candidate

859  
00:37:11,550 --> 00:37:10,240  
slight a few yeah none of them were

860  
00:37:13,350 --> 00:37:11,560  
willing to just come right out and say

861  
00:37:16,320 --> 00:37:13,360  
climate change is happening and humans

862  
00:37:19,410 --> 00:37:16,330  
are responsible now so it that's how

863  
00:37:21,360 --> 00:37:19,420

much of a plank in the Republican

864

00:37:24,480 --> 00:37:21,370

platform it's become yeah and that's a

865

00:37:26,550 --> 00:37:24,490

real problem because most people get

866

00:37:28,500 --> 00:37:26,560

their take their opinion about climate

867

00:37:29,450 --> 00:37:28,510

change from their cultural

868

00:37:32,930 --> 00:37:29,460

identification

869

00:37:34,520 --> 00:37:32,940

rather than from I didn't hmm sir if

870

00:37:36,470 --> 00:37:34,530

exploring the science I guess you could

871

00:37:38,510 --> 00:37:36,480

say that about many things in life it's

872

00:37:39,620 --> 00:37:38,520

true yes I think and we all do it it's

873

00:37:43,579 --> 00:37:39,630

not just though conservatives are

874

00:37:46,730 --> 00:37:43,589

uniquely sheep like we all are we all

875

00:37:48,200 --> 00:37:46,740

you know if I don't know something about

876

00:37:51,680 --> 00:37:48,210

a particular policy

877

00:37:53,810 --> 00:37:51,690

I'll look I'm a Democrat I'll say well

878

00:37:55,579 --> 00:37:53,820

what is you know what does the

879

00:37:59,240 --> 00:37:55,589

Democratic Party say about it what's the

880

00:38:01,220 --> 00:37:59,250

house you know caucus on that issue say

881

00:38:02,960 --> 00:38:01,230

about it and I'm likely to say okay well

882

00:38:04,609 --> 00:38:02,970

that sounds reasonable to me I they know

883

00:38:08,210 --> 00:38:04,619

a lot about it I don't I usually agree

884

00:38:10,670 --> 00:38:08,220

with them not always but but largely we

885

00:38:13,250 --> 00:38:10,680

do take our cues on issues that we can't

886

00:38:14,170 --> 00:38:13,260

research ourselves yes from people we

887

00:38:17,290 --> 00:38:14,180

trust

888

00:38:19,849 --> 00:38:17,300

being human absolutely I do it I'm sure

889

00:38:22,220 --> 00:38:19,859

everybody does that I mean it would be

890

00:38:24,589 --> 00:38:22,230

difficult to live life any other way

891

00:38:27,530 --> 00:38:24,599

yeah I think about it yeah you have to

892

00:38:31,720 --> 00:38:27,540

rely on but should we say expert opinion

893

00:38:33,740 --> 00:38:31,730

and that's why our focus on teachers

894

00:38:35,599 --> 00:38:33,750

gives us such an enormous opportunity

895

00:38:37,730 --> 00:38:35,609

because teachers do have a lot of

896

00:38:40,130 --> 00:38:37,740

credibility and Trust and they come from

897

00:38:42,550 --> 00:38:40,140

the communities usually they come from

898

00:38:45,140 --> 00:38:42,560

the communities where they teach so they

899

00:38:46,940 --> 00:38:45,150

you know that sort of communications

900

00:38:49,310 --> 00:38:46,950

mantra that to get to change people's

901  
00:38:51,560 --> 00:38:49,320  
minds you need a simple message repeated

902  
00:38:54,740 --> 00:38:51,570  
often from a variety of trusted sources

903  
00:38:56,030 --> 00:38:54,750  
and teachers are one of those sources

904  
00:38:59,750 --> 00:38:56,040  
science teachers are one of those

905  
00:39:03,740 --> 00:38:59,760  
sources that people can really trust so

906  
00:39:05,750 --> 00:39:03,750  
our goal is to make it easier for

907  
00:39:08,170 --> 00:39:05,760  
teachers and and to raise the

908  
00:39:12,290 --> 00:39:08,180  
expectations on teachers that they

909  
00:39:17,060 --> 00:39:12,300  
handle these topics competently and

910  
00:39:18,620 --> 00:39:17,070  
confidently yes even if they're in

911  
00:39:21,290 --> 00:39:18,630  
communities where they expect a lot of

912  
00:39:23,510 --> 00:39:21,300  
pushback and what we need to acknowledge

913  
00:39:26,000 --> 00:39:23,520

is we not we can't from ncsc we can't

914

00:39:28,730 --> 00:39:26,010

suddenly turn every science teacher in

915

00:39:30,560 --> 00:39:28,740

the country into a Bay Area liberal

916

00:39:33,440 --> 00:39:30,570

skeptic you know that's not going to

917

00:39:35,329 --> 00:39:33,450

happen most teachers are reflective

918

00:39:38,030 --> 00:39:35,339

communities that they live in they're

919

00:39:39,740 --> 00:39:38,040

very religious and religious parts of

920

00:39:41,450 --> 00:39:39,750

the country they're very Republican and

921

00:39:43,340 --> 00:39:41,460

Republican parts of the country but

922

00:39:45,800 --> 00:39:43,350

science teachers generally

923

00:39:48,050 --> 00:39:45,810

when they're surveyed they tend to agree

924

00:39:51,380 --> 00:39:48,060

with the scientific consensus more than

925

00:39:53,870 --> 00:39:51,390

whatever other community they belong to

926  
00:39:56,300 --> 00:39:53,880  
so even very religious teachers are much

927  
00:39:57,860 --> 00:39:56,310  
more likely to accept evolution even

928  
00:39:59,810 --> 00:39:57,870  
Republican teachers are much more likely

929  
00:40:03,170 --> 00:39:59,820  
to accept climate changes learning so

930  
00:40:08,960 --> 00:40:03,180  
those are the teachers that we really

931  
00:40:11,480 --> 00:40:08,970  
want to reach and help them teach the

932  
00:40:12,320 --> 00:40:11,490  
science more confidently I think just

933  
00:40:14,390 --> 00:40:12,330  
getting back to the point you're making

934  
00:40:16,550 --> 00:40:14,400  
about the the simple message repeated

935  
00:40:19,250 --> 00:40:16,560  
often by trusted sources this is exactly

936  
00:40:21,590 --> 00:40:19,260  
what the hoax people are doing it's

937  
00:40:24,080 --> 00:40:21,600  
repeated speaking about Australia of

938  
00:40:27,200 --> 00:40:24,090

course it's repeated often in the media

939

00:40:31,220 --> 00:40:27,210

you hear it a lot and you hear it from

940

00:40:34,250 --> 00:40:31,230

famous people and I can see how that

941

00:40:35,930 --> 00:40:34,260

would work but it really gets to me that

942

00:40:37,520 --> 00:40:35,940

they keep repeating it's a hoax it's a

943

00:40:39,170 --> 00:40:37,530

hoax to hope without realising well if

944

00:40:41,960 --> 00:40:39,180

you can perpetrate a hoax of that

945

00:40:44,750 --> 00:40:41,970

magnitude that requires huge logistics

946

00:40:46,340 --> 00:40:44,760

apart from anything else but that

947

00:40:47,150 --> 00:40:46,350

doesn't matter because all they hear is

948

00:40:48,290 --> 00:40:47,160

it's a hoax

949

00:40:50,990 --> 00:40:48,300

and they don't have to think any more

950

00:40:52,400 --> 00:40:51,000

about it right we have in our country

951  
00:40:55,610 --> 00:40:52,410  
and I I imagine it's the same in

952  
00:40:58,750 --> 00:40:55,620  
Australia that most people don't have

953  
00:41:01,750 --> 00:40:58,760  
any particular identification or

954  
00:41:04,490 --> 00:41:01,760  
facility or even comfort with science

955  
00:41:07,670 --> 00:41:04,500  
for the vast majority of people the last

956  
00:41:10,180 --> 00:41:07,680  
time they directly had an experience

957  
00:41:12,620 --> 00:41:10,190  
with science was in high school you know

958  
00:41:15,320 --> 00:41:12,630  
it might be even younger because you

959  
00:41:17,000 --> 00:41:15,330  
track earlier right so they're imagined

960  
00:41:19,550 --> 00:41:17,010  
are a lot of people who don't take high

961  
00:41:21,830 --> 00:41:19,560  
school science is that true if it well

962  
00:41:23,750 --> 00:41:21,840  
my limited knowledge going back thirty

963  
00:41:26,060 --> 00:41:23,760

years when I did high school the first

964

00:41:29,000 --> 00:41:26,070

four years I know that you hire

965

00:41:30,440 --> 00:41:29,010

scientists is mandatory and I'm sure

966

00:41:32,480 --> 00:41:30,450

listeners will correct me if I'm wrong I

967

00:41:34,940 --> 00:41:32,490

think the last two years you need to

968

00:41:37,460 --> 00:41:34,950

take it down science at point being that

969

00:41:40,510 --> 00:41:37,470

certainly by the time people either

970

00:41:42,500 --> 00:41:40,520

leave high school and don't go on to

971

00:41:44,450 --> 00:41:42,510

university or they do go on to

972

00:41:46,070 --> 00:41:44,460

university a huge number of people who

973

00:41:47,960 --> 00:41:46,080

go to the University don't really take

974

00:41:50,210 --> 00:41:47,970

much in the way of science some schools

975

00:41:51,290 --> 00:41:50,220

have a some sort of distribution

976

00:41:53,990 --> 00:41:51,300

requirement where they have to take

977

00:41:57,080 --> 00:41:54,000

something but they don't have any

978

00:41:59,720 --> 00:41:57,090

hands-on real engagement with

979

00:42:02,300 --> 00:41:59,730

after the time they're 18 years old they

980

00:42:05,570 --> 00:42:02,310

and and their experience of science may

981

00:42:07,190 --> 00:42:05,580

well have not been very positive I guess

982

00:42:09,230 --> 00:42:07,200

for some of them it was just to get

983

00:42:11,210 --> 00:42:09,240

through the system right and they found

984

00:42:13,010 --> 00:42:11,220

interested yeah I don't know if you I

985

00:42:15,020 --> 00:42:13,020

find this all the time that when I say

986

00:42:18,800 --> 00:42:15,030

I'm a scientist I often get the reaction

987

00:42:20,870 --> 00:42:18,810

oh I was terrible at science you must be

988

00:42:23,450 --> 00:42:20,880

really smart I wasn't good at science I

989

00:42:25,220 --> 00:42:23,460

thought it was really boring just lots

990

00:42:27,920 --> 00:42:25,230

and lots of people their experience in

991

00:42:30,680 --> 00:42:27,930

high school at with science was not all

992

00:42:32,600 --> 00:42:30,690

that positive so their motivation to go

993

00:42:34,280 --> 00:42:32,610

out and dig into science and figure

994

00:42:36,050 --> 00:42:34,290

something out for themselves is pretty

995

00:42:38,210 --> 00:42:36,060

low yeah

996

00:42:40,280 --> 00:42:38,220

and they often what they do see of

997

00:42:42,620 --> 00:42:40,290

science what they identify as science in

998

00:42:46,100 --> 00:42:42,630

their world is very often things like

999

00:42:48,620 --> 00:42:46,110

nutrition studies which are it's

1000

00:42:50,240 --> 00:42:48,630

particularly problematic because it's so

1001

00:42:53,810 --> 00:42:50,250

hard to do really good nutrition

1002

00:42:55,310 --> 00:42:53,820

research so you do get this red wine is

1003

00:42:56,990 --> 00:42:55,320

good for you and then five years later

1004

00:42:59,600 --> 00:42:57,000

red wine is bad for you and you should

1005

00:43:03,500 --> 00:42:59,610

know you shouldn't yes you should latest

1006

00:43:05,810 --> 00:43:03,510

one was coffee I think yeah any coffee

1007

00:43:07,460 --> 00:43:05,820

yeah so you hear this all the time that

1008

00:43:08,960 --> 00:43:07,470

uh scientists they don't know what

1009

00:43:10,460 --> 00:43:08,970

they're talking about you know last year

1010

00:43:12,560 --> 00:43:10,470

they said butter was bad now they say

1011

00:43:15,890 --> 00:43:12,570

it's okay so when someone says to them

1012

00:43:17,570 --> 00:43:15,900

yes like our president says you know no

1013

00:43:22,070 --> 00:43:17,580

one really knows if the climate is

1014

00:43:23,270 --> 00:43:22,080

changing yeah that resonates as yeah no

1015

00:43:25,790 --> 00:43:23,280

one really knows where the coffee is

1016

00:43:27,140 --> 00:43:25,800

good for you yeah yes well interestingly

1017

00:43:31,280 --> 00:43:27,150

enough that these are the same are you

1018

00:43:33,530 --> 00:43:31,290

inside I've been subjected to from all

1019

00:43:36,230 --> 00:43:33,540

sorts of areas including the paranormal

1020

00:43:37,640 --> 00:43:36,240

Oh science keeps changing its mind next

1021

00:43:40,130 --> 00:43:37,650

year it'll say this what do you know

1022

00:43:43,630 --> 00:43:40,140

right same thing right yeah right and

1023

00:43:48,080 --> 00:43:43,640

and the way science is taught especially

1024

00:43:50,480 --> 00:43:48,090

under the in the K through 12 years it's

1025

00:43:52,070 --> 00:43:50,490

often taught as a box effects here's the

1026

00:43:54,230 --> 00:43:52,080

textbook learn everything in this

1027

00:43:56,480 --> 00:43:54,240

textbook now you know all about science

1028

00:43:58,250 --> 00:43:56,490

of course it's not taught as a process

1029

00:44:00,539 --> 00:43:58,260

the process is a method as is that

1030

00:44:04,679 --> 00:44:00,549

here's something to use for inquiry

1031

00:44:06,120 --> 00:44:04,689

right yes ice online and so our new next

1032

00:44:08,910 --> 00:44:06,130

generation science standards that have

1033

00:44:12,089 --> 00:44:08,920

been adopted by about 20 states now are

1034

00:44:15,660 --> 00:44:12,099

based very heavily on research into how

1035

00:44:17,489 --> 00:44:15,670

people learn science and the main

1036

00:44:19,890 --> 00:44:17,499

take-home message is that people learn a

1037

00:44:22,140 --> 00:44:19,900

lot more science if they actually

1038

00:44:23,819 --> 00:44:22,150

experience how science is done this is

1039

00:44:25,439 --> 00:44:23,829

not new news people were saying that's

1040

00:44:27,479 --> 00:44:25,449

about how to teach science for a hundred

1041

00:44:30,870 --> 00:44:27,489

years but but these standards really do

1042

00:44:34,880 --> 00:44:30,880

try to embody that and give students an

1043

00:44:37,229 --> 00:44:34,890

experience of engaging with evidence

1044

00:44:39,120 --> 00:44:37,239

discussing the evidence discussing the

1045

00:44:41,039 --> 00:44:39,130

credibility of the evidence and the

1046

00:44:43,979 --> 00:44:41,049

relevance of the evidence and coming to

1047

00:44:45,359 --> 00:44:43,989

a conclusion about how things work so

1048

00:44:46,890 --> 00:44:45,369

there were there were two wonderful

1049

00:44:48,479 --> 00:44:46,900

articles a couple of weeks ago one in

1050

00:44:49,519 --> 00:44:48,489

The New York Times and one in The

1051  
00:44:52,109 --> 00:44:49,529  
Washington Post

1052  
00:44:53,660 --> 00:44:52,119  
talking to two high school teachers who

1053  
00:44:58,019 --> 00:44:53,670  
are teaching climate change in

1054  
00:45:00,719 --> 00:44:58,029  
communities that are very conservative

1055  
00:45:06,569 --> 00:45:00,729  
where there's a lot of skepticism about

1056  
00:45:06,959 --> 00:45:06,579  
the science skepticism he's that word

1057  
00:45:11,849 --> 00:45:06,969  
again

1058  
00:45:14,640 --> 00:45:11,859  
yeah yeah and one of them interestingly

1059  
00:45:17,609 --> 00:45:14,650  
one community was in Ohio and the

1060  
00:45:20,759 --> 00:45:17,619  
teacher was from Ohio but not from that

1061  
00:45:24,089 --> 00:45:20,769  
community mm-hmm he was from Akron the

1062  
00:45:27,650 --> 00:45:24,099  
big city of that area and but teaching

1063  
00:45:32,160 --> 00:45:27,660

in a very conservative more rural area

1064

00:45:35,999 --> 00:45:32,170

and the other teachers in Wyoming hmm

1065

00:45:39,929 --> 00:45:36,009

and what the Wyoming teacher did was

1066

00:45:42,799 --> 00:45:39,939

take the students out to the woods have

1067

00:45:45,569 --> 00:45:42,809

them do a core sample of trees right

1068

00:45:47,519 --> 00:45:45,579

calculate from the circumference of the

1069

00:45:50,150 --> 00:45:47,529

tree and the width of the annual ring

1070

00:45:53,519 --> 00:45:50,160

how much carbon dioxide had been

1071

00:45:57,419 --> 00:45:53,529

incorporated by that tree in that year

1072

00:45:59,880 --> 00:45:57,429

and then compare that to the emissions

1073

00:46:03,269 --> 00:45:59,890

of carbon dioxide from the car that the

1074

00:46:05,089 --> 00:46:03,279

kid drives to school so you're not

1075

00:46:08,789 --> 00:46:05,099

saying anything about climate change

1076  
00:46:10,859 --> 00:46:08,799  
you're just saying hey this is how trees

1077  
00:46:12,179 --> 00:46:10,869  
grow they the carbon in the tree comes

1078  
00:46:12,810 --> 00:46:12,189  
from the air which is something that a

1079  
00:46:17,610 --> 00:46:12,820  
minority

1080  
00:46:20,460 --> 00:46:17,620  
people know sort of shocking and and you

1081  
00:46:22,860 --> 00:46:20,470  
figure out how much carbon dioxide can

1082  
00:46:24,300 --> 00:46:22,870  
one tree absorb in one year and then you

1083  
00:46:27,000 --> 00:46:24,310  
figure out how much carbon dioxide does

1084  
00:46:30,810 --> 00:46:27,010  
your car MIT and the students start

1085  
00:46:33,090 --> 00:46:30,820  
having that moment of oh my gosh okay

1086  
00:46:34,350 --> 00:46:33,100  
but there would have to be I don't know

1087  
00:46:37,650 --> 00:46:34,360  
what the number turns out to be two

1088  
00:46:38,790 --> 00:46:37,660

hundred and twenty trees growing just to

1089

00:46:41,190 --> 00:46:38,800

take care of the carbon dioxide that

1090

00:46:42,930 --> 00:46:41,200

comes out of my one car and they quote

1091

00:46:44,820 --> 00:46:42,940

one of the students as saying I'm

1092

00:46:46,020 --> 00:46:44,830

starting to get the scale of this

1093

00:46:48,420 --> 00:46:46,030

problem mm-hmm

1094

00:46:50,310 --> 00:46:48,430

that's a really effective way to teach

1095

00:46:53,250 --> 00:46:50,320

climate change because you're the

1096

00:46:55,860 --> 00:46:53,260

students are engaging with the

1097

00:46:57,810 --> 00:46:55,870

scientific method on their own and and

1098

00:47:02,100 --> 00:46:57,820

they themselves can start to see the

1099

00:47:04,650 --> 00:47:02,110

implications of what they're doing so

1100

00:47:07,380 --> 00:47:04,660

what in your opinion and having looked

1101  
00:47:11,400 --> 00:47:07,390  
at this problem for some years now what

1102  
00:47:13,500 --> 00:47:11,410  
is the appeal of the conspiracy hoax

1103  
00:47:16,410 --> 00:47:13,510  
side of thing why are they so passionate

1104  
00:47:18,570 --> 00:47:16,420  
that this is the situation well I'm not

1105  
00:47:21,120 --> 00:47:18,580  
sure that it's the same for everybody

1106  
00:47:23,160 --> 00:47:21,130  
who passionately holds that position I

1107  
00:47:25,380 --> 00:47:23,170  
think that there for some people it's

1108  
00:47:27,180 --> 00:47:25,390  
just identity politics that this is what

1109  
00:47:29,850 --> 00:47:27,190  
makes me different from the other guys

1110  
00:47:32,550 --> 00:47:29,860  
that you know they think this and we

1111  
00:47:34,500 --> 00:47:32,560  
think this and we're the good guys we're

1112  
00:47:36,420 --> 00:47:34,510  
all the good guys right everybody thinks

1113  
00:47:37,800 --> 00:47:36,430

they're the good guys right yeah and and

1114

00:47:39,420 --> 00:47:37,810

in the u.s. I don't know if you have

1115

00:47:40,830 --> 00:47:39,430

this kind of polarization in Australia

1116

00:47:43,170 --> 00:47:40,840

as well it's just that's just getting

1117

00:47:46,440 --> 00:47:43,180

worse and worse that it's that there's

1118

00:47:48,000 --> 00:47:46,450

no expectation of almost humanity on the

1119

00:47:50,040 --> 00:47:48,010

other side hmm

1120

00:47:51,270 --> 00:47:50,050

then we think that they're they're evil

1121

00:47:54,150 --> 00:47:51,280

you know the people who don't agree with

1122

00:47:56,690 --> 00:47:54,160

us are evil yeah and so you know I I

1123

00:47:59,340 --> 00:47:56,700

reserved the evil designation for the

1124

00:48:03,750 --> 00:47:59,350

for the people at the top who do know

1125

00:48:06,780 --> 00:48:03,760

better I find it really difficult to

1126

00:48:10,350 --> 00:48:06,790

believe that that the the high level

1127

00:48:12,660 --> 00:48:10,360

politicians really truly believe that

1128

00:48:15,090 --> 00:48:12,670

the science is a big conspiracy they're

1129

00:48:17,280 --> 00:48:15,100

a slave to their their voters to an

1130

00:48:18,990 --> 00:48:17,290

extent what I mean by that is if they

1131

00:48:21,450 --> 00:48:19,000

want to get back into office they're not

1132

00:48:23,280 --> 00:48:21,460

going to tip the boat too much right I

1133

00:48:27,390 --> 00:48:23,290

mean the Koch brothers who made their

1134

00:48:29,880 --> 00:48:27,400

money from fossil fuels are quite open

1135

00:48:31,770 --> 00:48:29,890

about if you don't get on board with

1136

00:48:34,080 --> 00:48:31,780

being against doing anything about

1137

00:48:35,310 --> 00:48:34,090

climate change we will support someone

1138

00:48:38,100 --> 00:48:35,320

who will run against you in the next

1139

00:48:41,520 --> 00:48:38,110

primary hmm so they've kind of got a a

1140

00:48:44,520 --> 00:48:41,530

headlock on the party because of their

1141

00:48:48,750 --> 00:48:44,530

ability to fund opponents to these

1142

00:48:51,840 --> 00:48:48,760

Republican candidates it would take a

1143

00:48:53,670 --> 00:48:51,850

lot of courage for a Republican to come

1144

00:48:56,430 --> 00:48:53,680

out and say you know it's not a

1145

00:48:58,560 --> 00:48:56,440

conspiracy yeah yeah above politics is a

1146

00:49:00,780 --> 00:48:58,570

game of compromise of course but it's

1147

00:49:03,030 --> 00:49:00,790

sad to see that it has to be so in this

1148

00:49:04,440 --> 00:49:03,040

situation and when you when you combine

1149

00:49:06,870 --> 00:49:04,450

that with the fact that in the u.s.

1150

00:49:09,000 --> 00:49:06,880

voting districts are decided by a

1151

00:49:11,460 --> 00:49:09,010

redistricting process every ten years

1152

00:49:13,890 --> 00:49:11,470

based on the US Census and in the last

1153

00:49:15,300 --> 00:49:13,900

census the Republicans controlled that

1154

00:49:18,450 --> 00:49:15,310

redistricting process and a lot of

1155

00:49:19,590 --> 00:49:18,460

states so there are many more districts

1156

00:49:22,230 --> 00:49:19,600

than there used to be that are safe

1157

00:49:24,600 --> 00:49:22,240

Republican districts so there's no

1158

00:49:26,820 --> 00:49:24,610

longer any incentive for those

1159

00:49:29,010 --> 00:49:26,830

candidates to run from the center

1160

00:49:31,290 --> 00:49:29,020

because they don't have to appeal to any

1161

00:49:34,260 --> 00:49:31,300

Democrats or independents they they only

1162

00:49:35,400 --> 00:49:34,270

have to win the Republicans in their

1163

00:49:37,050 --> 00:49:35,410

district and then they're going to win

1164

00:49:38,970 --> 00:49:37,060

the seat which they going to do anyway

1165

00:49:40,530 --> 00:49:38,980

probably unless they say you know what

1166

00:49:42,060 --> 00:49:40,540

we got to stop lying about climate

1167

00:49:44,940 --> 00:49:42,070

change then someone's gonna run from

1168

00:49:47,480 --> 00:49:44,950

there right and or or says you know what

1169

00:49:50,400 --> 00:49:47,490

Obamacare turned out not to be that bad

1170

00:49:53,310 --> 00:49:50,410

you're gonna get a primary component and

1171

00:49:54,660 --> 00:49:53,320

you're gonna lose your seat so you know

1172

00:49:57,030 --> 00:49:54,670

I don't know when the fever's gonna

1173

00:49:58,680 --> 00:49:57,040

break with that because it's so

1174

00:50:01,140 --> 00:49:58,690

dysfunctional as you can see they get

1175

00:50:02,760 --> 00:50:01,150

they win the Senate and the house and

1176

00:50:04,710 --> 00:50:02,770

the presidency and they still can't do

1177

00:50:06,690 --> 00:50:04,720

anything it's tough isn't it because

1178

00:50:10,020 --> 00:50:06,700

they've just been the party of no yeah

1179

00:50:13,770 --> 00:50:10,030

yes so yeah so that's a real problem

1180

00:50:16,140 --> 00:50:13,780

when it comes to to climate change this

1181

00:50:18,150 --> 00:50:16,150

job is one frustration after another the

1182

00:50:20,580 --> 00:50:18,160

must haves but there must be nice pots

1183

00:50:24,570 --> 00:50:20,590

well again the idea of working with

1184

00:50:29,760 --> 00:50:24,580

teachers is so refreshing because most

1185

00:50:32,400 --> 00:50:29,770

of them want to teach the science and I

1186

00:50:36,120 --> 00:50:32,410

think what's what's really challenging

1187

00:50:40,380 --> 00:50:36,130

for NCSE is if we want to

1188

00:50:42,840 --> 00:50:40,390

make progress in on evolution in very

1189

00:50:45,930 --> 00:50:42,850

religious communities of which the

1190

00:50:47,900 --> 00:50:45,940

United States has many if we want to

1191

00:50:52,760 --> 00:50:47,910

make progress on climate change in

1192

00:50:56,270 --> 00:50:52,770

heavily Republican areas we have to

1193

00:51:00,720 --> 00:50:56,280

fiercely police ourselves from being a

1194

00:51:02,700 --> 00:51:00,730

good guy bad guy we just cannot be those

1195

00:51:05,610 --> 00:51:02,710

gosh-darn creationists they're they're

1196

00:51:07,200 --> 00:51:05,620

terrible they're there are anti science

1197

00:51:09,030 --> 00:51:07,210

they're in denial

1198

00:51:12,690 --> 00:51:09,040

yeah because too many people identify

1199

00:51:15,660 --> 00:51:12,700

with them and so to change our language

1200

00:51:19,830 --> 00:51:15,670

to be very inclusive to be very

1201  
00:51:23,430 --> 00:51:19,840  
respectful to be you know recognizing

1202  
00:51:27,110 --> 00:51:23,440  
that lots of people hold these what we

1203  
00:51:30,500 --> 00:51:27,120  
would call anti science views if you'll

1204  
00:51:34,470 --> 00:51:30,510  
accept my term in good faith yeah

1205  
00:51:37,200 --> 00:51:34,480  
they've come to them from not from a an

1206  
00:51:39,210 --> 00:51:37,210  
evil place but from a place that when

1207  
00:51:41,370 --> 00:51:39,220  
you look at it makes a lot of sense and

1208  
00:51:43,230 --> 00:51:41,380  
so if we want to try to change their

1209  
00:51:45,360 --> 00:51:43,240  
minds we have to gain their trust we

1210  
00:51:47,670 --> 00:51:45,370  
have to gain their respect and then we

1211  
00:51:50,790 --> 00:51:47,680  
can have the sort of earn the right to

1212  
00:51:53,730 --> 00:51:50,800  
start talking about the evidence and

1213  
00:51:56,490 --> 00:51:53,740

talking about it in a way that is not

1214

00:51:58,080 --> 00:51:56,500

top-down and not here I am Joe

1215

00:52:00,810 --> 00:51:58,090

scientists coming in and telling you

1216

00:52:05,130 --> 00:52:00,820

what to think but colleague to colleague

1217

00:52:06,630 --> 00:52:05,140

or you know teacher to student of hey

1218

00:52:08,880 --> 00:52:06,640

let's go out and measure some tree rings

1219

00:52:10,590 --> 00:52:08,890

mmm I'm gonna put the science in your

1220

00:52:13,560 --> 00:52:10,600

hands I'm not going to tell you what to

1221

00:52:15,780 --> 00:52:13,570

think I'm gonna have you engaged with

1222

00:52:18,870 --> 00:52:15,790

the evidence yourself how can people

1223

00:52:21,000 --> 00:52:18,880

find out more where can the NCSE calm on

1224

00:52:23,370 --> 00:52:21,010

the web we have lots of information

1225

00:52:23,910 --> 00:52:23,380

there and of course if you become a

1226  
00:52:26,670 --> 00:52:23,920  
member

1227  
00:52:28,890 --> 00:52:26,680  
mm-hmm you can get our newsletter every

1228  
00:52:30,600 --> 00:52:28,900  
three months and the newsletter now

1229  
00:52:32,580 --> 00:52:30,610  
really focuses on what are we doing for

1230  
00:52:34,680 --> 00:52:32,590  
teachers what how are our booster clubs

1231  
00:52:36,900 --> 00:52:34,690  
doing what kinds of flare-ups have we

1232  
00:52:40,350 --> 00:52:36,910  
dealt with and and what's been the

1233  
00:52:41,670 --> 00:52:40,360  
outcome of these legislation and across

1234  
00:52:44,280 --> 00:52:41,680  
the United States and sometimes around

1235  
00:52:48,810 --> 00:52:44,290  
the world so at the the newsletter is is

1236  
00:52:50,970 --> 00:52:48,820  
a great way to keep up to date with what

1237  
00:52:53,670 --> 00:52:50,980  
we're doing and and of course the

1238  
00:52:55,710 --> 00:52:53,680

website is very rich yeah well I think

1239

00:52:57,420 --> 00:52:55,720

it's applicable for science teachers no

1240

00:52:59,400 --> 00:52:57,430

matter where you are from Australia to

1241

00:53:01,470 --> 00:52:59,410

the United States to to everywhere

1242

00:53:03,630 --> 00:53:01,480

mm-hmm I think any science teacher would

1243

00:53:06,270 --> 00:53:03,640

do well to visit your site once again in

1244

00:53:15,060 --> 00:53:06,280

pleasure to be here thank you it's great

1245

00:53:17,340 --> 00:53:15,070

to see you again join us again next week

1246

00:53:20,550 --> 00:53:17,350

when Ann will discuss her work into

1247

00:53:23,980 --> 00:53:20,560

sequencing the genetic code of the 1918

1248

00:53:38,520 --> 00:53:23,990

Spanish flu epidemic

1249

00:53:43,420 --> 00:53:42,850

Tuesday the 1st of August 2017 at 7:30

1250

00:53:46,960 --> 00:53:43,430

p.m.

1251  
00:53:49,950 --> 00:53:46,970  
Morty skeptics in the pub its how do we

1252  
00:53:53,500 --> 00:53:49,960  
know if Australia is effectively

1253  
00:54:00,880 --> 00:53:53,510  
steaming along with stem a talk by dr.

1254  
00:54:03,100 --> 00:54:00,890  
Christine Redman our Australian

1255  
00:54:05,320 --> 00:54:03,110  
education standards dropping in science

1256  
00:54:08,110 --> 00:54:05,330  
and maths together we will examine what

1257  
00:54:10,810 --> 00:54:08,120  
STEM science technology engineering and

1258  
00:54:13,750 --> 00:54:10,820  
mathematics and STEM education means for

1259  
00:54:15,970 --> 00:54:13,760  
Australia today we will review two key

1260  
00:54:19,540 --> 00:54:15,980  
stem people's activities and products

1261  
00:54:23,440 --> 00:54:19,550  
and align these to the apparent 2017

1262  
00:54:25,360 --> 00:54:23,450  
visions for stem in Australia dr.

1263  
00:54:28,060 --> 00:54:25,370

Christine Redmond is a passionate

1264

00:54:30,010 --> 00:54:28,070

science educator she is senior lecturer

1265

00:54:32,350 --> 00:54:30,020

in science education at the Melbourne

1266

00:54:35,680 --> 00:54:32,360

Graduate School of Education University

1267

00:54:40,760 --> 00:54:37,970

always an interesting night out at the

1268

00:54:43,130 --> 00:54:40,770

Maury Alec skeptics in the pub more the

1269

00:54:47,240 --> 00:54:43,140

Alec Sporting Club this is Tuesday the

1270

00:54:49,970 --> 00:54:47,250

1st of August 2017 at 7:30 p.m. and for

1271

00:54:52,400 --> 00:54:49,980

more information visit Morrie skeptics

1272

00:54:55,850 --> 00:54:52,410

in the pub on meetup or just follow the

1273

00:55:12,660 --> 00:54:55,860

links from this week's show notes

1274

00:55:17,380 --> 00:55:15,099

thank you for listening to the skeptic

1275

00:55:18,640 --> 00:55:17,390

zone now a couple of notes to round off

1276

00:55:22,030 --> 00:55:18,650

this week's show

1277

00:55:25,000 --> 00:55:22,040

our reporter and friend and the

1278

00:55:27,790 --> 00:55:25,010

president of Australian skeptics here on

1279

00:55:30,190 --> 00:55:27,800

Segev has recently been a guest on a

1280

00:55:34,210 --> 00:55:30,200

show called space-time now this is a

1281

00:55:36,579 --> 00:55:34,220

science astronomy program online hosted

1282

00:55:38,740 --> 00:55:36,589

by Stuart Gary and for those people in

1283

00:55:41,740 --> 00:55:38,750

Australia you may remember Stuart had a

1284

00:55:44,859 --> 00:55:41,750

long-running program called star stuff

1285

00:55:50,710 --> 00:55:44,869

on ABC News radio well now he's moved

1286

00:55:53,859 --> 00:55:50,720

online and he has a regular astronomy

1287

00:55:56,290 --> 00:55:53,869

based science based podcasts so I will

1288

00:55:58,780 --> 00:55:56,300

put a link in the show notes and you can

1289

00:56:01,690 --> 00:55:58,790

hear that terrific podcast and enjoy the

1290

00:56:04,180 --> 00:56:01,700

contributions by Iran so give speaking

1291

00:56:06,099 --> 00:56:04,190

about being on the radio I'll also add

1292

00:56:09,130 --> 00:56:06,109

another link in this week's show notes

1293

00:56:10,839 --> 00:56:09,140

to my recent appearance here on Sydney

1294

00:56:13,180 --> 00:56:10,849

radio which is syndicated around the

1295

00:56:16,120 --> 00:56:13,190

country it's an early morning very early

1296

00:56:19,510 --> 00:56:16,130

morning really early morning radio show

1297

00:56:22,660 --> 00:56:19,520

but it's nice to be on the air so to

1298

00:56:24,130 --> 00:56:22,670

speak and heard around the country now

1299

00:56:27,069 --> 00:56:24,140

it's worth noting and we might be

1300

00:56:29,770 --> 00:56:27,079

chasing this story up that the VAX

1301

00:56:31,960 --> 00:56:29,780

bus or team or something like that I

1302

00:56:34,450 --> 00:56:31,970

here in Australia at the moment causing

1303

00:56:37,780 --> 00:56:34,460

controversy which is what they want to

1304

00:56:40,180 --> 00:56:37,790

do going around the country screening

1305

00:56:44,530 --> 00:56:40,190

the movie the documentary the

1306

00:56:46,870 --> 00:56:44,540

pseudo-documentary waxed and I noticed

1307

00:56:50,859 --> 00:56:46,880

dr. Aichi in fact put a couple of videos

1308

00:56:52,599 --> 00:56:50,869

up online of the VAX team basically

1309

00:56:54,190 --> 00:56:52,609

whinging and whining that they're not

1310

00:56:56,800 --> 00:56:54,200

getting the press coverage they deserve

1311

00:56:59,530 --> 00:56:56,810

and yada yada yada I think that might be

1312

00:57:01,480 --> 00:56:59,540

a story we'll be looking at pretty soon

1313

00:57:04,630 --> 00:57:01,490

another thank you for those kind people

1314

00:57:06,730 --> 00:57:04,640

who use patreon or PayPal micro payments

1315

00:57:08,620 --> 00:57:06,740

to help support the sceptic zone of

1316

00:57:12,550 --> 00:57:08,630

course there would be no show without

1317

00:57:15,309 --> 00:57:12,560

you so you know what all those people

1318

00:57:17,050 --> 00:57:15,319

who did contribute or do contribute on

1319

00:57:20,140 --> 00:57:17,060

an ongoing basis I think you deserve

1320

00:57:22,359 --> 00:57:20,150

something really nice mmm nice to eat

1321

00:57:24,609 --> 00:57:22,369

something maybe a bit chocolatey what

1322

00:57:24,819 --> 00:57:24,619

the hell why not so why don't you all go

1323

00:57:28,509 --> 00:57:24,829

out

1324

00:57:30,039 --> 00:57:28,519

buy yourself a nice easter egg until

1325

00:57:37,479 --> 00:57:30,049

next week this is Richard Saunders

1326

00:57:39,099 --> 00:57:37,489

signing off from Sydney Australia you've

1327

00:57:43,120 --> 00:57:39,109

been listening to the skeptic zone

1328

00:57:45,999 --> 00:57:43,130

podcast visit our website at WWF eggs on

1329

00:57:49,900 --> 00:57:46,009

TV for contacts an archive of all

1330

00:57:52,180 --> 00:57:49,910

episodes since 2008 and our online store

1331

00:57:54,900 --> 00:57:52,190

please support the skeptic zone by

1332

00:57:57,910 --> 00:57:54,910

following us on twitter at skeptic zone

1333

00:57:59,289 --> 00:57:57,920

liking us on facebook and leaving a

1334

00:58:01,509 --> 00:57:59,299

review on itunes

1335

00:58:04,299 --> 00:58:01,519

you can also show your support by

1336

00:58:07,930 --> 00:58:04,309

subscribing via paypal for as little as

1337

00:58:10,120 --> 00:58:07,940

99 cents a week the skeptic zone is an

1338

00:58:12,039 --> 00:58:10,130

independent production the views and

1339

00:58:14,259 --> 00:58:12,049

opinions expressed on the skeptic zone

1340

00:58:17,109 --> 00:58:14,269

are not necessarily those of Australian

1341

00:58:20,650 --> 00:58:17,119

skeptic League or any other sceptical

1342

00:58:30,550 --> 00:58:28,810

I may not hit don't you go anywhere

1343

00:58:32,680 --> 00:58:30,560

don't touch that forward button don't ah

1344

00:58:34,740 --> 00:58:32,690

we've got something for you some people

1345

00:58:37,930 --> 00:58:34,750

call it an easter egg let's call this a

1346

00:58:41,590 --> 00:58:37,940

Maynard egg cast your mind back uh no

1347

00:58:44,260 --> 00:58:41,600

like just go in the time machine back to

1348

00:58:48,310 --> 00:58:44,270

a time before reason a time before

1349

00:58:51,330 --> 00:58:48,320

electricity a time before auto-tuning

1350

00:58:55,180 --> 00:58:51,340

for lead vocals Sunday the 12th of April

1351  
00:59:19,120 --> 00:58:55,190  
1992 the place triple j the show Sunday

1352  
00:59:20,650 --> 00:59:19,130  
afternoon fever I am well into the new

1353  
00:59:25,720 --> 00:59:20,660  
album from there might be giant Apollo

1354  
00:59:27,730 --> 00:59:25,730  
18 but then the show took a very strange

1355  
00:59:30,160 --> 00:59:27,740  
turn just after three o'clock just as I

1356  
00:59:31,540 --> 00:59:30,170  
was about to interview a born-again to

1357  
00:59:33,490 --> 00:59:31,550  
do their last interview before they went

1358  
00:59:35,530 --> 00:59:33,500  
to the UK to become fabulously

1359  
00:59:37,330 --> 00:59:35,540  
successful my producer Anne Murray

1360  
00:59:39,520 --> 00:59:37,340  
signaled me and there was a caller

1361  
00:59:41,710 --> 00:59:39,530  
called Rachel on the line who want to

1362  
00:59:45,640 --> 00:59:41,720  
tell me something she'd recently done

1363  
00:59:48,770 --> 00:59:45,650

that was very very exciting

1364

00:59:51,530 --> 00:59:48,780

[Music]

1365

00:59:53,000 --> 00:59:51,540

am I wrong again is that Rachel hi right

1366

00:59:55,910 --> 00:59:53,010

so you've had a mind-blowing experience

1367

00:59:57,350 --> 00:59:55,920

over the week I have dreams they make

1368

00:59:59,270 --> 00:59:57,360

please you've had three mind-blowing

1369

01:00:01,100 --> 00:59:59,280

experiences hey I want your dealers

1370

01:00:03,200 --> 01:00:01,110

number what's the story Rachel I've been

1371

01:00:05,180 --> 01:00:03,210

Neil Diamond three times Maynard Neil

1372

01:00:08,390 --> 01:00:05,190

Diamond three times and you went back

1373

01:00:10,280 --> 01:00:08,400

for the second and the third yes I did

1374

01:00:11,660 --> 01:00:10,290

now you did you work with the hell is

1375

01:00:13,670 --> 01:00:11,670

that why you saw him so often oh yeah

1376

01:00:15,380 --> 01:00:13,680

but I would have paid if I had to you

1377

01:00:17,780 --> 01:00:15,390

would have paid twice I wouldn't pay

1378

01:00:20,960 --> 01:00:17,790

three times insane it was so wild about

1379

01:00:22,400 --> 01:00:20,970

Neil Diamond he's very sexy sexy after

1380

01:00:23,630 --> 01:00:22,410

all this time not telling anything I

1381

01:00:25,280 --> 01:00:23,640

don't know there whenever people think

1382

01:00:27,470 --> 01:00:25,290

of sex I think of Neil Diamond

1383

01:00:29,030 --> 01:00:27,480

immediately definitely know what

1384

01:00:31,040 --> 01:00:29,040

actually did make me so sexy this time

1385

01:00:33,590 --> 01:00:31,050

around there was no underpants involved

1386

01:00:35,420 --> 01:00:33,600

which was a surprise but mama I know it

1387

01:00:37,520 --> 01:00:35,430

was above a bit I don't know he's just

1388

01:00:39,410 --> 01:00:37,530

got this aura around him may not and

1389

01:00:41,150 --> 01:00:39,420

everyone screamed and it was just wild

1390

01:00:45,050 --> 01:00:41,160

people screamed at Neil Diamond

1391

01:00:47,330 --> 01:00:45,060

absolutely all that screaming yeah no no

1392

01:00:49,130 --> 01:00:47,340

no not get off just I don't know Neil

1393

01:00:51,440 --> 01:00:49,140

probably what was the highlight of the

1394

01:00:53,360 --> 01:00:51,450

evening oh that's a hard one I mean

1395

01:00:55,730 --> 01:00:53,370

songs on blue was wild

1396

01:00:57,260 --> 01:00:55,740

and hot ogres no it was definitely very

1397

01:00:59,030 --> 01:00:57,270

hot and sexy but of course the question

1398

01:01:00,470 --> 01:00:59,040

I want answered me because losing me

1399

01:01:02,630 --> 01:01:00,480

this doesn't get tickets and gonca

1400

01:01:08,380 --> 01:01:02,640

tickets gets all over but I tell you did

1401

01:01:15,070 --> 01:01:11,000

sweeties best song I know the lyrics

1402

01:01:20,000 --> 01:01:16,850

because look at the long introduction

1403

01:01:22,010 --> 01:01:20,010

you guys did it and then he sort of

1404

01:01:25,250 --> 01:01:22,020

wanders on the stage oh yeah the one you

1405

01:01:27,050 --> 01:01:25,260

play before day for a day yeah oh you

1406

01:01:28,670 --> 01:01:27,060

just said he didn't I know I'm lying he

1407

01:01:30,110 --> 01:01:28,680

did and it was wild look you could be

1408

01:01:32,720 --> 01:01:30,120

like me Mon I've even seen you could

1409

01:01:36,170 --> 01:01:32,730

just be pulling my cousin I mean I would

1410

01:01:37,310 --> 01:01:36,180

no I'm not okay well look that Neil was

1411

01:01:38,750 --> 01:01:37,320

pretty big look we looked around the

1412

01:01:39,680 --> 01:01:38,760

triple del RB in a few minutes we had

1413

01:01:41,000 --> 01:01:39,690

while you're on the phone we couldn't

1414

01:01:43,430 --> 01:01:41,010

find any nail Diamond we could even find

1415

01:01:45,290 --> 01:01:43,440

ups and downs doing style true man find

1416

01:01:47,240 --> 01:01:45,300

anything but I understand the cure are a

1417

01:01:49,640 --> 01:01:47,250

supporting new line takes European to us

1418

01:01:50,960 --> 01:01:49,650

we're gonna buy them like they're

1419

01:01:52,220 --> 01:01:50,970

fighting over who gets top billing but

1420

01:01:53,900 --> 01:01:52,230

you know I think they'll probably win it

1421

01:01:55,220 --> 01:01:53,910

out there oh I think it's my fake face

1422

01:01:59,600 --> 01:01:55,230

so in one word well how would you

1423

01:02:01,370 --> 01:01:59,610

describe nailed are me sexy dr. Rachel

1424

01:02:04,220 --> 01:02:01,380

can't lead say it proud

1425

01:02:07,580 --> 01:02:04,230

I love Neil Diamond all the way from

1426

01:02:10,220 --> 01:02:07,590

1992 to you you can hear more on Sunday

1427

01:02:12,350 --> 01:02:10,230

afternoon fever at Manor calm dot are

1428

01:02:14,270 --> 01:02:12,360

you but I think dr. H was only on the

1429

01:02:16,220 --> 01:02:14,280

one show I mean I know she rang wants to