

1
00:00:00,000 --> 00:00:09,099
[Music]

2
00:00:06,009 --> 00:00:11,849
welcome to the skeptic zone the podcast

3
00:00:09,099 --> 00:00:13,919
from Australia for science and reason

4
00:00:11,849 --> 00:00:16,960
[Music]

5
00:00:13,919 --> 00:00:16,960
[Applause]

6
00:00:22,009 --> 00:00:32,009
yes it's the skeptic zone episode number

7
00:00:26,839 --> 00:00:33,890
458 for the 30th of July 2017 Richardson

8
00:00:32,009 --> 00:00:36,509
is here with you from Sydney Australia

9
00:00:33,890 --> 00:00:39,480
now just this morning on the radio news

10
00:00:36,509 --> 00:00:41,670
I heard that today in Sydney is expected

11
00:00:39,479 --> 00:00:44,698
to be a record-breaking heat day

12
00:00:41,670 --> 00:00:48,239
something like 26 degrees they're

13
00:00:44,698 --> 00:00:51,689
expecting 26 degrees Celsius of course

14
00:00:48,238 --> 00:00:52,378
well that will be it will be nice I

15
00:00:51,689 --> 00:00:54,599
guess

16
00:00:52,378 --> 00:00:57,238
a nice warm sort of day for this time of

17
00:00:54,600 --> 00:00:58,980
the year with a low humidity yes and I

18
00:00:57,238 --> 00:01:00,599
think I can tolerate that might be a

19
00:00:58,979 --> 00:01:03,299
nice day for a walk in the park

20
00:01:00,600 --> 00:01:04,948
listening to a podcast or two if you're

21
00:01:03,299 --> 00:01:07,200
having a walk in the park listening to

22
00:01:04,948 --> 00:01:10,140
this podcast what you can expect to hear

23
00:01:07,200 --> 00:01:12,000
over the next hour or so we're gonna

24
00:01:10,140 --> 00:01:14,700
kick off with an interview with Michael

25
00:01:12,000 --> 00:01:17,069
Marshall from the good thinking society

26
00:01:14,700 --> 00:01:18,899
and the Merseyside skeptics he's gonna

27
00:01:17,069 --> 00:01:21,478
be filling us in on the latest news

28
00:01:18,899 --> 00:01:24,868
where it comes to homeopathy and the

29

00:01:21,478 --> 00:01:27,539
prescribing of homeopathy and access to

30
00:01:24,868 --> 00:01:30,359
homeopathy in the UK it seems the

31
00:01:27,539 --> 00:01:32,670
government could be making some moves

32
00:01:30,359 --> 00:01:35,819
there in the right direction like here

33
00:01:32,670 --> 00:01:39,390
in Australia where it's quite possible

34
00:01:35,819 --> 00:01:42,590
that not too far down the track laws

35
00:01:39,390 --> 00:01:47,670
will be changing in regards to this

36
00:01:42,590 --> 00:01:50,429
classic of quackery after that I catch

37
00:01:47,670 --> 00:01:52,679
up with my old friend Bob novella from

38
00:01:50,429 --> 00:01:54,239
the skeptics guide to the universe now

39
00:01:52,679 --> 00:01:56,849
Bob and the rest of the skeptics guide

40
00:01:54,239 --> 00:01:59,719
people were in New York just a couple of

41
00:01:56,849 --> 00:02:04,770
weeks ago for the Nexxus convention and

42
00:01:59,719 --> 00:02:08,280
I was very lucky to be a guest to rogue

43
00:02:04,769 --> 00:02:10,709

on the SGU for a live recording in New

44

00:02:08,280 --> 00:02:13,199

York but before we go on stage I catch

45

00:02:10,709 --> 00:02:16,170

up with Bob novella to chat about what's

46

00:02:13,199 --> 00:02:18,869

it like to go live with the skeptics

47

00:02:16,169 --> 00:02:21,000

guide as opposed to do you two each week

48

00:02:18,870 --> 00:02:22,230

from their home so that's Bob novella

49

00:02:21,000 --> 00:02:24,330

coming up a bit later on

50

00:02:22,229 --> 00:02:26,459

following that it's the raw skeptic

51

00:02:24,330 --> 00:02:30,690

report this week Heidi Robinson

52

00:02:26,459 --> 00:02:32,490

reporting from her car again she likes

53

00:02:30,689 --> 00:02:34,259

reporting from her car this time the car

54

00:02:32,490 --> 00:02:35,969

isn't moving however Heidi

55

00:02:34,259 --> 00:02:38,669

going to be telling us about the Hendra

56

00:02:35,969 --> 00:02:42,000

virus when it comes to horses and issues

57

00:02:38,669 --> 00:02:44,609

regarding vaccine there so of course

58
00:02:42,000 --> 00:02:47,489
vaccines aren't only beneficial for

59
00:02:44,610 --> 00:02:50,400
humans but well your local vet will

60
00:02:47,489 --> 00:02:52,439
certainly tell you also as ever

61
00:02:50,400 --> 00:02:55,769
brouhaha science from Australia's

62
00:02:52,439 --> 00:02:57,539
science channel this week origami hey

63
00:02:55,769 --> 00:03:00,269
the topic close to my heart

64
00:02:57,539 --> 00:03:02,818
origami and space travel origami and

65
00:03:00,269 --> 00:03:04,859
space travel folding in space heads

66
00:03:02,818 --> 00:03:06,389
coming up a bit later on and then to

67
00:03:04,859 --> 00:03:08,310
round off the show part two of a series

68
00:03:06,389 --> 00:03:10,318
of interviews with Anne Reed the

69
00:03:08,310 --> 00:03:12,150
director of the National Center for

70
00:03:10,318 --> 00:03:16,048
Science education based in Oakland

71
00:03:12,150 --> 00:03:19,829
California this week n discusses the ups

72
00:03:16,049 --> 00:03:21,620
and downs the the warmth and the cooling

73
00:03:19,829 --> 00:03:24,689
when it comes to the climate change

74
00:03:21,620 --> 00:03:27,090
science issue some of the arguments that

75
00:03:24,689 --> 00:03:30,150
have been used over the years and why

76
00:03:27,090 --> 00:03:33,090
some people are so shall we say stubborn

77
00:03:30,150 --> 00:03:35,280
when it comes to accepting the science

78
00:03:33,090 --> 00:03:37,229
when it comes to climate change a packed

79
00:03:35,280 --> 00:03:39,689
show a packed show a few little

80
00:03:37,229 --> 00:03:42,628
announcements before we begin and then a

81
00:03:39,689 --> 00:03:45,239
couple more at the end of the show now

82
00:03:42,628 --> 00:03:50,310
last week I reviewed the book nibbling

83
00:03:45,239 --> 00:03:53,430
on Einstein's brain and I went to order

84
00:03:50,310 --> 00:03:55,799
another coffee myself only to discover

85
00:03:53,430 --> 00:03:58,889
that the Book Depository currently is

86

00:03:55,799 --> 00:04:00,870
out of stock I wonder why hmm I wonder

87
00:03:58,889 --> 00:04:03,359
why hopefully it's because lots of

88
00:04:00,870 --> 00:04:06,060
skeptics and fans were clicking on that

89
00:04:03,359 --> 00:04:07,829
site to order the book I put my name on

90
00:04:06,060 --> 00:04:09,780
their list and they'll email me when

91
00:04:07,829 --> 00:04:11,549
that book is available again but I guess

92
00:04:09,780 --> 00:04:13,919
if you google the book and hunt around

93
00:04:11,549 --> 00:04:15,689
you might be able to find a copy from

94
00:04:13,919 --> 00:04:17,939
somewhere else or you could put your

95
00:04:15,689 --> 00:04:19,649
name on the list and they'll let you

96
00:04:17,939 --> 00:04:21,988
know when that book is available and

97
00:04:19,649 --> 00:04:24,029
just before we start I hope to see

98
00:04:21,988 --> 00:04:27,598
Sydneyiders at Sydney's skeptics in the

99
00:04:24,029 --> 00:04:30,899
pub this Thursday at the Occidental

100
00:04:27,598 --> 00:04:33,449

hotel near Wynyard station and I'll put

101

00:04:30,899 --> 00:04:36,929

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

102

00:04:33,449 --> 00:04:39,629

ah this week this time this month

103

00:04:36,930 --> 00:04:42,150

Ian Bryce the chief investigator of

104

00:04:39,629 --> 00:04:44,129

Australian skeptics our committee member

105

00:04:42,149 --> 00:04:46,620

Jessica Hazard White and myself will be

106

00:04:44,129 --> 00:04:50,909

conducting three classic

107

00:04:46,620 --> 00:04:52,530

psychic tests on the audience so if you

108

00:04:50,910 --> 00:04:55,220

come along he can be part of the fun

109

00:04:52,529 --> 00:04:57,629

give your psychic abilities ago and

110

00:04:55,220 --> 00:04:59,790

there'll be prizes along the way so

111

00:04:57,629 --> 00:05:01,800

that's water divining test we're going

112

00:04:59,790 --> 00:05:03,540

to be doing a classic we're going to be

113

00:05:01,800 --> 00:05:08,220

doing it serious a test with Zener cards

114

00:05:03,540 --> 00:05:10,980

and also predicting the future lots of

115
00:05:08,220 --> 00:05:13,740
fun Sydney skeptics in the pub but now

116
00:05:10,980 --> 00:05:17,100
it's time for me to run downstairs being

117
00:05:13,740 --> 00:05:19,079
careful to to not trip over the cats who

118
00:05:17,100 --> 00:05:20,939
are just waiting outside the door here

119
00:05:19,079 --> 00:05:23,939
of the studio because I just had to kick

120
00:05:20,939 --> 00:05:25,560
them out they promised me that be quiet

121
00:05:23,939 --> 00:05:26,939
but as soon as I started recording they

122
00:05:25,560 --> 00:05:29,610
were jumping around and playing with

123
00:05:26,939 --> 00:05:30,959
things and as cats like to do so I'll

124
00:05:29,610 --> 00:05:34,639
run down the stairs being very careful

125
00:05:30,959 --> 00:05:36,419
open up the cupboard get out some lovely

126
00:05:34,639 --> 00:05:39,629
fresh bagels

127
00:05:36,420 --> 00:05:41,400
why not toast up the bagels and yes I'm

128
00:05:39,629 --> 00:05:43,800
going for the classics of classics when

129
00:05:41,399 --> 00:05:49,339
it comes to me anyway but of creamed

130
00:05:43,800 --> 00:05:52,710
cheese on the bagel and peanut butter Oh

131
00:05:49,339 --> 00:05:55,739
peanut butter they should write songs

132
00:05:52,709 --> 00:05:58,139
about you mmm crunchy of course while I

133
00:05:55,740 --> 00:05:59,170
do that and I hope you enjoy this

134
00:05:58,139 --> 00:06:21,430
sceptic zone

135
00:05:59,170 --> 00:06:21,430
[Music]

136
00:06:22,040 --> 00:06:27,060
joining me now all the way from

137
00:06:24,360 --> 00:06:28,560
Liverpool and well he occasionally does

138
00:06:27,060 --> 00:06:29,910
join the sceptic zone all the way look

139
00:06:28,560 --> 00:06:33,629
from Liverpool it's none other than

140
00:06:29,910 --> 00:06:35,580
Michael Marshall hello Marshall climate

141
00:06:33,629 --> 00:06:38,129
kid always pleasure to be here thank you

142
00:06:35,579 --> 00:06:39,569
yes you're our sort of unofficial UK

143

00:06:38,129 --> 00:06:42,899
reporter I think you've been on the show

144
00:06:39,569 --> 00:06:44,639
enough times to qualify for that oh yeah

145
00:06:42,899 --> 00:06:46,379
I think so I think I'm maybe only a

146
00:06:44,639 --> 00:06:47,939
couple more appearances away from

147
00:06:46,379 --> 00:06:50,728
getting my official badge through the

148
00:06:47,939 --> 00:06:52,740
post I'm looking for any day now I'll

149
00:06:50,728 --> 00:06:54,779
send it tomorrow now mash a couple of

150
00:06:52,740 --> 00:06:57,269
things first of all I was listening to

151
00:06:54,779 --> 00:06:59,399
that fabulous podcast skeptics with a

152
00:06:57,269 --> 00:07:01,529
Kay just this morning in fact and

153
00:06:59,399 --> 00:07:04,409
catching up on some Beckett back

154
00:07:01,529 --> 00:07:07,799
episodes and can you give our listeners

155
00:07:04,410 --> 00:07:09,270
a quick overview of what you told your

156
00:07:07,800 --> 00:07:13,710
listeners about the current news

157
00:07:09,269 --> 00:07:15,389

regarding homeopathy in the UK yeah

158

00:07:13,709 --> 00:07:16,168
absolutely so there was a big

159

00:07:15,389 --> 00:07:18,410
announcement

160

00:07:16,168 --> 00:07:22,049
from NHS England which is one of the

161

00:07:18,410 --> 00:07:23,400
many myriad bodies that runs the the

162

00:07:22,050 --> 00:07:26,009
National Health Service here in the UK

163

00:07:23,399 --> 00:07:27,810
but the big announcement was that there

164

00:07:26,009 --> 00:07:29,879
is going to be a consultation on whether

165

00:07:27,810 --> 00:07:31,589
homeopathic prescriptions homeopathic

166

00:07:29,879 --> 00:07:34,348
remedies are going to be banned from

167

00:07:31,589 --> 00:07:36,810
prescription so GPS here in the UK

168

00:07:34,348 --> 00:07:38,610
aren't allowed to prescribe homeopathic

169

00:07:36,810 --> 00:07:40,410
remedies and then have them reimbursed

170

00:07:38,610 --> 00:07:42,060
from the the tax payer for National

171

00:07:40,410 --> 00:07:44,220
Health Service so this is actually

172
00:07:42,060 --> 00:07:46,560
pretty significant news now the

173
00:07:44,220 --> 00:07:49,530
consultation isn't done yet I'm a lot of

174
00:07:46,560 --> 00:07:51,478
the newspapers reported this as gp's are

175
00:07:49,529 --> 00:07:53,698
now banned from prescribing homeopathy

176
00:07:51,478 --> 00:07:56,038
and I think a lot of people reacted like

177
00:07:53,699 --> 00:07:59,189
this was the total end of homeopathy on

178
00:07:56,038 --> 00:08:00,839
the NHS it's not quite there yet but it

179
00:07:59,189 --> 00:08:02,939
is pretty significant because we have

180
00:08:00,839 --> 00:08:05,429
this consultation now that's all for

181
00:08:02,939 --> 00:08:06,930
three months everybody in the UK and

182
00:08:05,430 --> 00:08:08,370
possibly even beyond is welcome to

183
00:08:06,930 --> 00:08:10,470
submit their thoughts as to whether they

184
00:08:08,370 --> 00:08:12,180
think it's a good idea that GPS should

185
00:08:10,470 --> 00:08:14,610
be prevented from prescribing homeopathy

186
00:08:12,180 --> 00:08:15,990
and then hopefully by something like the

187
00:08:14,610 --> 00:08:17,220
end of the era or a little bit after

188
00:08:15,990 --> 00:08:20,038
that we should see the results the

189
00:08:17,220 --> 00:08:22,530
consultation which I'm hoping very

190
00:08:20,038 --> 00:08:23,969
strongly and it certainly looks like all

191
00:08:22,529 --> 00:08:25,709
indications are in the direction that

192
00:08:23,970 --> 00:08:28,139
homeopathy will then be banned from

193
00:08:25,709 --> 00:08:30,180
prescription and that will stop a

194
00:08:28,139 --> 00:08:32,759
reasonable amount of homeopathic

195
00:08:30,180 --> 00:08:35,039
spending here on the in the UK on the on

196
00:08:32,759 --> 00:08:36,960
the NHS there'll be still

197
00:08:35,039 --> 00:08:38,639
be other ways to get it funded so that's

198
00:08:36,960 --> 00:08:40,710
where your GP instead of giving you a

199
00:08:38,639 --> 00:08:42,720
prescription for homeopathy they send

200

00:08:40,710 --> 00:08:44,220
you off to their local homeopathy

201
00:08:42,720 --> 00:08:47,100
service or after the homeopathic

202
00:08:44,220 --> 00:08:50,790
hospital ridiculously - to get treatment

203
00:08:47,100 --> 00:08:52,440
but if we get a big definitive clearly a

204
00:08:50,789 --> 00:08:54,240
message from NHS England that

205
00:08:52,440 --> 00:08:58,290
homeopathic prescriptions are no longer

206
00:08:54,240 --> 00:09:00,360
allowed that would be a huge huge

207
00:08:58,289 --> 00:09:02,579
symbolic win when it comes to ending

208
00:09:00,360 --> 00:09:04,169
homeopathic services around the rest of

209
00:09:02,580 --> 00:09:06,330
the country which obviously as you know

210
00:09:04,169 --> 00:09:08,339
we've been working on that that side of

211
00:09:06,330 --> 00:09:10,590
things with good thinking for three or

212
00:09:08,340 --> 00:09:12,330
four years now and it feels like there's

213
00:09:10,590 --> 00:09:15,030
some real momentum happening it does

214
00:09:12,330 --> 00:09:16,710

indeed and it's a similar sort of in way

215

00:09:15,029 --> 00:09:18,419

situation to what's happening here in

216

00:09:16,710 --> 00:09:21,120

Australia with an interim report coming

217

00:09:18,419 --> 00:09:23,849

up suggesting that or putting it out

218

00:09:21,120 --> 00:09:27,539

there that homeopathy be now no longer

219

00:09:23,850 --> 00:09:30,120

supported via sales in pharmacies and

220

00:09:27,539 --> 00:09:32,490

all these are adding up they're adding

221

00:09:30,120 --> 00:09:34,799

up they're adding up because each one is

222

00:09:32,490 --> 00:09:36,600

a victory if it comes through of course

223

00:09:34,799 --> 00:09:37,919

but even if it's being considered I

224

00:09:36,600 --> 00:09:41,040

think that that's that's quite

225

00:09:37,919 --> 00:09:43,589

remarkable but once and let's look on

226

00:09:41,039 --> 00:09:46,139

the bright side let's say that in both

227

00:09:43,590 --> 00:09:48,629

our countries the situation arises as we

228

00:09:46,139 --> 00:09:50,809

hope that sends a powerful message to

229
00:09:48,629 --> 00:09:53,399
our colleagues around the planet I think

230
00:09:50,809 --> 00:09:58,409
yeah it really does and I think one of

231
00:09:53,399 --> 00:10:00,329
the the really indicative aspects of

232
00:09:58,409 --> 00:10:02,250
this is that when these consultations

233
00:10:00,330 --> 00:10:04,620
are being talked about in the media now

234
00:10:02,250 --> 00:10:06,539
the media isn't taking the angle of Oh

235
00:10:04,620 --> 00:10:08,250
homeopathy is going to be banned that's

236
00:10:06,539 --> 00:10:09,599
a shame homeopathy is wonderful here are

237
00:10:08,250 --> 00:10:12,509
10 holy paths to tell you how amazing

238
00:10:09,600 --> 00:10:13,980
homeopathy is the media is is pretty

239
00:10:12,509 --> 00:10:15,720
much on board with this and that shows a

240
00:10:13,980 --> 00:10:18,420
huge sea change with the web that these

241
00:10:15,720 --> 00:10:20,100
stories are treated either within the

242
00:10:18,419 --> 00:10:23,099
media within society more generally I

243
00:10:20,100 --> 00:10:24,240
think people are now more and more aware

244
00:10:23,100 --> 00:10:25,889
that home you know that the Holy

245
00:10:24,240 --> 00:10:27,930
Catholic remedies aren't effective that

246
00:10:25,889 --> 00:10:30,569
they aren't really anything beyond sugar

247
00:10:27,929 --> 00:10:32,549
and water so I think that's a testament

248
00:10:30,570 --> 00:10:35,850
to the work that sceptics have been

249
00:10:32,549 --> 00:10:38,819
doing for decades I would say and it's

250
00:10:35,850 --> 00:10:40,909
it's really encouraging when the the

251
00:10:38,820 --> 00:10:44,430
story about NHS prescriptions was first

252
00:10:40,909 --> 00:10:45,870
mentioned in March here in the UK they

253
00:10:44,429 --> 00:10:47,309
didn't mention homeopathy initially

254
00:10:45,870 --> 00:10:48,480
because it wasn't one of the 10 biggest

255
00:10:47,309 --> 00:10:49,828
spends

256
00:10:48,480 --> 00:10:51,480
so they just talk about the ten biggest

257

00:10:49,828 --> 00:10:52,528
things is there's a whole consultation

258
00:10:51,480 --> 00:10:54,240
about other products that are going to

259
00:10:52,528 --> 00:10:56,278
be banned from prescription for not

260
00:10:54,240 --> 00:10:59,039
being effective - I'm not being cost

261
00:10:56,278 --> 00:11:00,409
effective so when that consultation is

262
00:10:59,039 --> 00:11:03,299
being talked about back in March

263
00:11:00,409 --> 00:11:05,399
newspapers and radio shows were actually

264
00:11:03,299 --> 00:11:07,708
bringing up homeopathy themselves to say

265
00:11:05,399 --> 00:11:09,120
why isn't homeopathy included and I

266
00:11:07,708 --> 00:11:11,250
think that's a remarkable position to be

267
00:11:09,120 --> 00:11:12,509
in that that when you when people are

268
00:11:11,250 --> 00:11:14,519
talking about treatments that aren't

269
00:11:12,509 --> 00:11:16,470
effective the media are spontaneously

270
00:11:14,519 --> 00:11:18,959
bringing up homeopathy is an example of

271
00:11:16,470 --> 00:11:20,759

that so it really goes sure how far the

272

00:11:18,958 --> 00:11:22,528

discourse on homeopathy has come and I

273

00:11:20,759 --> 00:11:25,049

think that's a huge contributing factor

274

00:11:22,528 --> 00:11:27,600

to softening the ground for

275

00:11:25,049 --> 00:11:30,088

consultations like this and steps by

276

00:11:27,600 --> 00:11:32,339

bodies like the NHS and pharmacies over

277

00:11:30,089 --> 00:11:34,410

there in Australia to take these very

278

00:11:32,339 --> 00:11:37,110

necessary steps to stop funding

279

00:11:34,409 --> 00:11:38,819

homeopathy to stop wasting money on it

280

00:11:37,110 --> 00:11:41,940

and to stop supporting it it's

281

00:11:38,820 --> 00:11:43,740

encouraging news indeed Marshall and and

282

00:11:41,940 --> 00:11:45,360

tip of the hat to you and the good

283

00:11:43,740 --> 00:11:47,610

thinking society of course and all your

284

00:11:45,360 --> 00:11:49,740

colleagues in the UK who are working

285

00:11:47,610 --> 00:11:52,500

hard towards the ascent and and as I

286
00:11:49,740 --> 00:11:54,659
said I was really brought up-to-date

287
00:11:52,500 --> 00:11:57,419
with a lot more information by listening

288
00:11:54,659 --> 00:11:59,309
to skeptics with a k and that podcast is

289
00:11:57,419 --> 00:12:02,729
sailing along quite well hello is that

290
00:11:59,309 --> 00:12:05,669
been going now oh gosh I think he might

291
00:12:02,730 --> 00:12:07,528
started something like August 2009

292
00:12:05,669 --> 00:12:09,179
something like that

293
00:12:07,528 --> 00:12:11,610
it's a fortnightly show and I think one

294
00:12:09,179 --> 00:12:19,229
episode 203 which obviously is hugely

295
00:12:11,610 --> 00:12:20,818
dwarfed by the number of it yeah you

296
00:12:19,230 --> 00:12:23,399
certainly do and it's a very enjoyable

297
00:12:20,818 --> 00:12:24,899
show folks I'll put a link to skeptics

298
00:12:23,399 --> 00:12:27,269
with a K in the show notes or you can

299
00:12:24,899 --> 00:12:29,879
just google skeptics with a K and before

300
00:12:27,269 --> 00:12:33,629
we go Marsh it's not so long now before

301
00:12:29,879 --> 00:12:36,689
the wonderful QED in Manchester the

302
00:12:33,629 --> 00:12:38,730
convention how's that shaping up yeah

303
00:12:36,690 --> 00:12:40,829
it's all coming together really well I

304
00:12:38,730 --> 00:12:42,778
think whenever you're involved in

305
00:12:40,828 --> 00:12:45,359
putting together conferences it doesn't

306
00:12:42,778 --> 00:12:47,278
get any easier have seven years in it

307
00:12:45,360 --> 00:12:50,100
still takes time but we're pretty

308
00:12:47,278 --> 00:12:51,899
excited about it I think it's um last

309
00:12:50,100 --> 00:12:55,259
year's was the biggest and most kind of

310
00:12:51,899 --> 00:12:57,509
varied QED that we've ever had and this

311
00:12:55,259 --> 00:12:59,188
is looking to be the same really so yeah

312
00:12:57,509 --> 00:13:00,568
I'm very very excited about that and if

313
00:12:59,188 --> 00:13:02,370
people want to find out what what's

314

00:13:00,568 --> 00:13:05,309
happening at QD they've got a QD car

315
00:13:02,370 --> 00:13:07,830
dot org we actually have a month left if

316
00:13:05,309 --> 00:13:09,809
people are looking to bring their

317
00:13:07,830 --> 00:13:11,910
children to QED and want to access the

318
00:13:09,809 --> 00:13:14,338
crash facilities who have affordable

319
00:13:11,909 --> 00:13:16,879
child care that we that we fund while

320
00:13:14,339 --> 00:13:18,960
we're at QED so for the price of a

321
00:13:16,879 --> 00:13:20,639
concession ticket you can actually have

322
00:13:18,960 --> 00:13:22,200
full child care throughout the entire

323
00:13:20,639 --> 00:13:23,730
weekend so we've got a month left if

324
00:13:22,200 --> 00:13:25,020
people do want to use that facility they

325
00:13:23,730 --> 00:13:27,000
need to get in quick because at some

326
00:13:25,019 --> 00:13:28,980
point we have to shut it so we know how

327
00:13:27,000 --> 00:13:30,990
many kids were dealing with so yeah

328
00:13:28,980 --> 00:13:33,000

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

329

00:13:30,990 --> 00:13:35,009

why you need someone like me there to be

330

00:13:33,000 --> 00:13:36,839

there making origami for all the kids I

331

00:13:35,009 --> 00:13:44,939

should send over a truckload of DVD

332

00:13:36,839 --> 00:13:48,180

origami DVDs for them all on YouTube oh

333

00:13:44,940 --> 00:13:50,550

yeah I think I probably do well Marsh

334

00:13:48,179 --> 00:13:54,299

thank you once again congratulations so

335

00:13:50,549 --> 00:13:57,149

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

336

00:13:54,299 --> 00:14:00,269

quite yet but I think and you'll have to

337

00:13:57,149 --> 00:14:02,000

agree things are looking positive yeah

338

00:14:00,269 --> 00:14:04,319

absolutely I think they really are and

339

00:14:02,000 --> 00:14:06,600

great stuff in in Australia too

340

00:14:04,320 --> 00:14:08,820

hopefully that will all pan out to the

341

00:14:06,600 --> 00:14:11,159

pharmacy stuff and we can all make a

342

00:14:08,820 --> 00:14:12,510

stride into a more reasonable world it

343
00:14:11,159 --> 00:14:15,360
at least did that particular aspect

344
00:14:12,509 --> 00:14:18,059
together at least so Marsh thank you

345
00:14:15,360 --> 00:14:19,539
once again thanks a lot Richard always

346
00:14:18,059 --> 00:14:33,819
places peachy guys

347
00:14:19,539 --> 00:14:33,819
[Music]

348
00:14:34,309 --> 00:14:38,339
hi this is Ben Radford and this is

349
00:14:36,690 --> 00:14:40,530
Pascual Romero from the squaring the

350
00:14:38,340 --> 00:14:42,450
strange podcast every week my co-host

351
00:14:40,529 --> 00:14:44,789
and I cast a skeptical eye at a

352
00:14:42,450 --> 00:14:46,740
different topic monsters ghosts demons

353
00:14:44,789 --> 00:14:48,809
mysteries and even current events are

354
00:14:46,740 --> 00:14:50,850
dissected and discussed with a fun

355
00:14:48,809 --> 00:14:52,379
unscripted and skeptical take that

356
00:14:50,850 --> 00:14:54,960
you're sure to enjoy find this is

357
00:14:52,379 --> 00:14:58,220
squirting strange calm iTunes or on your

358
00:14:54,960 --> 00:14:58,220
favorite podcast platform

359
00:15:03,529 --> 00:15:18,028
[Music]

360
00:15:15,320 --> 00:15:19,740
it's behind the scenes here at the

361
00:15:18,028 --> 00:15:22,080
Northeast Conference of science and

362
00:15:19,740 --> 00:15:23,820
skepticism were in the green room which

363
00:15:22,080 --> 00:15:25,649
is in green it's a bit green it's green

364
00:15:23,820 --> 00:15:28,440
rabbits do some green plants around the

365
00:15:25,649 --> 00:15:30,179
edges and we're just getting ready for

366
00:15:28,440 --> 00:15:33,000
the skeptics guide to the universe live

367
00:15:30,179 --> 00:15:35,370
I'm with Bob novella hi Bob hey Richard

368
00:15:33,000 --> 00:15:38,070
how are you I'm okay every now and then

369
00:15:35,370 --> 00:15:40,589
I get the creepy jetlag feeling but it's

370
00:15:38,070 --> 00:15:41,760
okay I'm in there you've been there yeah

371

00:15:40,589 --> 00:15:43,649
but not like you you're an old hand at

372
00:15:41,759 --> 00:15:45,028
this you travels on the other side of

373
00:15:43,649 --> 00:15:46,620
the planet it seems like every month

374
00:15:45,028 --> 00:15:48,570
you're like okay time to travel on the

375
00:15:46,620 --> 00:15:49,980
other side of the world so I'm thinking

376
00:15:48,570 --> 00:15:51,720
you're probably used to it by now but

377
00:15:49,980 --> 00:15:54,240
you're not right done you don't get used

378
00:15:51,720 --> 00:15:56,790
to it you know what you're gonna get so

379
00:15:54,240 --> 00:15:58,379
you sort of are aware of it but no you

380
00:15:56,789 --> 00:15:59,458
never quite get you have to work around

381
00:15:58,379 --> 00:16:02,039
you know there are I'm going to need to

382
00:15:59,458 --> 00:16:06,088
nap here I'm gonna need to do this there

383
00:16:02,039 --> 00:16:07,349
and adapt you adapt you try to adapt I

384
00:16:06,089 --> 00:16:11,670
thought I have a quick chat with you

385
00:16:07,350 --> 00:16:13,920

about the difference between between

386

00:16:11,669 --> 00:16:16,679

doing is to you every week from your

387

00:16:13,919 --> 00:16:20,099

home and a live experience because they

388

00:16:16,679 --> 00:16:22,528

are similar but very different huh there

389

00:16:20,100 --> 00:16:24,480

are different beasts at home when we do

390

00:16:22,528 --> 00:16:25,950

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

391

00:16:24,480 --> 00:16:28,800

on you know we're on a conference call

392

00:16:25,950 --> 00:16:30,360

on skype together chatting and and so

393

00:16:28,799 --> 00:16:32,519

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

394

00:16:30,360 --> 00:16:33,839

we do our podcast but when we're all

395

00:16:32,519 --> 00:16:35,458

together in the same room especially

396

00:16:33,839 --> 00:16:38,370

care is here from what from the other

397

00:16:35,458 --> 00:16:40,949

side of the the United States the the

398

00:16:38,370 --> 00:16:43,139

synergy and the dynamic between us I

399

00:16:40,950 --> 00:16:44,970

think amps up a little bit and it's al

400
00:16:43,139 --> 00:16:47,309
it's a lot more fun and they're they're

401
00:16:44,970 --> 00:16:49,860
great shows plus we also optimized the

402
00:16:47,309 --> 00:16:52,919
show for stage to be to be a little

403
00:16:49,860 --> 00:16:54,600
pickier a little quicker you know we try

404
00:16:52,919 --> 00:16:55,979
to have some visual aids you know some

405
00:16:54,600 --> 00:16:57,750
visual images that are funny on the

406
00:16:55,980 --> 00:16:59,759
screen so it's a it's a little bit of a

407
00:16:57,750 --> 00:17:01,828
kind of a variant of the podcast that's

408
00:16:59,759 --> 00:17:03,778
optimized for a live audience and it's

409
00:17:01,828 --> 00:17:04,980
fun it's a it's a lot of fun we always

410
00:17:03,778 --> 00:17:07,230
look forward to doing that yeah because

411
00:17:04,980 --> 00:17:08,549
you also get the when you hear the

412
00:17:07,230 --> 00:17:10,170
recordings they're me it's sitting at

413
00:17:08,549 --> 00:17:12,690
home or whatever hitting hearing your

414
00:17:10,170 --> 00:17:14,220
of the live shows you get that feeling

415
00:17:12,690 --> 00:17:15,779
of the audience because they're laughing

416
00:17:14,220 --> 00:17:17,970
and they're shouting out things and

417
00:17:15,779 --> 00:17:19,889
whatever yeah it's it's a complete is a

418
00:17:17,970 --> 00:17:22,740
very different experience and and

419
00:17:19,890 --> 00:17:24,089
happier translates well on to the to the

420
00:17:22,740 --> 00:17:25,920
people listening and they know yeah

421
00:17:24,088 --> 00:17:27,389
that's a live show oh maybe maybe I'll

422
00:17:25,920 --> 00:17:28,890
go to a live show one day and see what

423
00:17:27,390 --> 00:17:30,300
it's like so that'd be great because

424
00:17:28,890 --> 00:17:34,980
when you were in Australia

425
00:17:30,299 --> 00:17:37,289
twice now yes in 2010 2014 I think it

426
00:17:34,980 --> 00:17:39,480
was you did a series of life shows

427
00:17:37,289 --> 00:17:42,149
around the country time flies and trying

428

00:17:39,480 --> 00:17:44,849
to remember you've done them all over

429
00:17:42,150 --> 00:17:46,470
Steve Steve he's spoken in the UK he was

430
00:17:44,849 --> 00:17:48,809
in Vienna we've done him on though on

431
00:17:46,470 --> 00:17:50,700
the west coast we've done them you know

432
00:17:48,809 --> 00:17:52,319
yeah a lot of different places but we

433
00:17:50,700 --> 00:17:55,769
wanted to go more and more we want to go

434
00:17:52,319 --> 00:17:57,629
to the UK and do and do a QED eventually

435
00:17:55,769 --> 00:17:59,490
we're gonna go back to Australia within

436
00:17:57,630 --> 00:18:01,530
probably a couple years we can't wait to

437
00:17:59,490 --> 00:18:04,470
do that and probably New Zealand as well

438
00:18:01,529 --> 00:18:06,899
and who knows who knows where else Hong

439
00:18:04,470 --> 00:18:08,400
Kong you know we've got different places

440
00:18:06,900 --> 00:18:11,550
in our sights and we'll get there

441
00:18:08,400 --> 00:18:12,960
eventually it's wonderful when when I've

442
00:18:11,549 --> 00:18:16,669

seen you do the live shows in Australia

443

00:18:12,960 --> 00:18:19,110

the audience it's like they've been

444

00:18:16,670 --> 00:18:20,519

transplanted from the United States when

445

00:18:19,109 --> 00:18:22,469

I see the audience in your live shows

446

00:18:20,519 --> 00:18:23,970

here tam or whatever then the audience

447

00:18:22,470 --> 00:18:26,880

are enthusiastic and they love it and

448

00:18:23,970 --> 00:18:28,440

that same feeling is exactly what you

449

00:18:26,880 --> 00:18:30,030

get when you do it around the world yeah

450

00:18:28,440 --> 00:18:32,070

it's a little bit extra special because

451

00:18:30,029 --> 00:18:33,509

you know we do Nexus every year on the

452

00:18:32,069 --> 00:18:36,869

East Coast we've been on the west coast

453

00:18:33,509 --> 00:18:39,029

of Tam and for four years as well so a

454

00:18:36,869 --> 00:18:40,319

lot of people if you pull any audience I

455

00:18:39,029 --> 00:18:42,059

think you'll find a good chunk of them

456

00:18:40,319 --> 00:18:43,829

they've seen us been there kind of done

457
00:18:42,059 --> 00:18:45,960
that and hopefully they're still they're

458
00:18:43,829 --> 00:18:47,549
not getting bored of us but uh but when

459
00:18:45,960 --> 00:18:48,900
we were in Australia that was like the

460
00:18:47,549 --> 00:18:51,180
other the other side of the world so a

461
00:18:48,900 --> 00:18:52,860
lot of those people like when are they

462
00:18:51,180 --> 00:18:54,120
gonna see us live because they live

463
00:18:52,859 --> 00:18:55,619
literally on the other side of the

464
00:18:54,119 --> 00:18:57,329
planet so there's a little bit of extra

465
00:18:55,619 --> 00:18:58,949
enthusiasm I think but is it very

466
00:18:57,329 --> 00:19:01,669
similar but a little bit extra like oh

467
00:18:58,950 --> 00:19:03,840
wow you know the guys are down here and

468
00:19:01,670 --> 00:19:05,970
and hopefully they'll see us again in a

469
00:19:03,839 --> 00:19:08,609
couple years so yeah it's it was such a

470
00:19:05,970 --> 00:19:10,740
memorable trip when we went to two times

471
00:19:08,609 --> 00:19:12,119
I can't wait to go back we just all fell

472
00:19:10,740 --> 00:19:14,670
in love with Australia can't wait to go

473
00:19:12,119 --> 00:19:16,139
back so I it would be wrong to say what

474
00:19:14,670 --> 00:19:17,640
what would you rather do would you

475
00:19:16,140 --> 00:19:18,429
rather do or you're more comfortable

476
00:19:17,640 --> 00:19:19,990
doing the

477
00:19:18,429 --> 00:19:22,059
shows or sitting at home and doing it

478
00:19:19,990 --> 00:19:23,378
but they're different yeah your point of

479
00:19:22,058 --> 00:19:25,480
view the different beasts they are

480
00:19:23,378 --> 00:19:26,769
different beasts I like the mix I like

481
00:19:25,480 --> 00:19:29,169
you know you do your bread and butter

482
00:19:26,769 --> 00:19:30,759
your home every week and then a handful

483
00:19:29,169 --> 00:19:33,159
of times a year you go out and that I

484
00:19:30,759 --> 00:19:35,319
like I like that mix the live audience

485

00:19:33,159 --> 00:19:38,019
is a little bit more stressful for me I

486
00:19:35,319 --> 00:19:40,058
still get a little nervous I still over

487
00:19:38,019 --> 00:19:41,798
prepare you'll if you if you if you

488
00:19:40,058 --> 00:19:43,210
watch me before we go on stage I'm

489
00:19:41,798 --> 00:19:44,888
pacing back and forth looking at my

490
00:19:43,210 --> 00:19:46,720
notes trying to internalize everything

491
00:19:44,888 --> 00:19:48,788
so that I want to get on stage I can

492
00:19:46,720 --> 00:19:50,618
relax and not think of what's the next

493
00:19:48,788 --> 00:19:52,329
topic I want to hit but it's just

494
00:19:50,618 --> 00:19:54,249
already there and I can focus more on

495
00:19:52,329 --> 00:19:56,019
engaging the audience and not worrying

496
00:19:54,249 --> 00:19:58,269
about slipping up so it's a little bit

497
00:19:56,019 --> 00:20:01,058
stressful but I do love it and but I do

498
00:19:58,269 --> 00:20:02,288
prepare very very what's very wise

499
00:20:01,058 --> 00:20:04,118

because you don't want to be sitting on

500

00:20:02,288 --> 00:20:05,408

stage and stuck for something to say but

501

00:20:04,118 --> 00:20:08,378

it reminds me of the strange situation

502

00:20:05,409 --> 00:20:09,940

when I was a guest rogue when you were

503

00:20:08,378 --> 00:20:11,949

in Sydney last time and we were that

504

00:20:09,940 --> 00:20:14,379

giant auditorium for the Australian

505

00:20:11,950 --> 00:20:16,090

skeptics convention and we're on sitting

506

00:20:14,378 --> 00:20:19,089

on the stage and big things and the

507

00:20:16,089 --> 00:20:20,769

speakers and we couldn't quite hear each

508

00:20:19,089 --> 00:20:22,689

other sitting on stage because of the

509

00:20:20,769 --> 00:20:24,429

echoing do you remember that I can't

510

00:20:22,690 --> 00:20:25,710

thanks for reminding me I hadn't thought

511

00:20:24,429 --> 00:20:28,059

about it in a while but that was

512

00:20:25,710 --> 00:20:30,669

incredibly frustrating because there was

513

00:20:28,058 --> 00:20:33,038

this weird delay and whenever somebody

514
00:20:30,669 --> 00:20:35,110
else was talking it was a disconnected

515
00:20:33,038 --> 00:20:37,089
it was actually interesting in the way

516
00:20:35,109 --> 00:20:39,278
that it actually short-circuited your

517
00:20:37,089 --> 00:20:41,769
brain so you had to like try to

518
00:20:39,278 --> 00:20:43,450
disengage yourself from that weird audio

519
00:20:41,769 --> 00:20:44,950
effect that was happening so that you

520
00:20:43,450 --> 00:20:46,600
could actually have a conversation and

521
00:20:44,950 --> 00:20:48,460
we were just sitting there each of us

522
00:20:46,599 --> 00:20:50,109
were hoping oh please I hope that the

523
00:20:48,460 --> 00:20:52,720
audience doesn't detect this because it

524
00:20:50,109 --> 00:20:54,428
was really a jarring experience but we

525
00:20:52,720 --> 00:20:56,470
got past it after that initial they kind

526
00:20:54,429 --> 00:20:58,538
of fixed it but that was a weird like 10

527
00:20:56,470 --> 00:21:00,700
minutes like damn what is that it's okay

528
00:20:58,538 --> 00:21:03,759
I'm sitting here thinking I hope the

529
00:21:00,700 --> 00:21:05,019
audience doesn't think I'm sort of drunk

530
00:21:03,759 --> 00:21:06,548
or something because I'm not I'm not

531
00:21:05,019 --> 00:21:08,440
replying and I was looking down the

532
00:21:06,548 --> 00:21:11,288
other end of the table to Steve trying

533
00:21:08,440 --> 00:21:12,519
to read his lips decide exactly and it's

534
00:21:11,288 --> 00:21:14,558
the kind of thing that it's hard to

535
00:21:12,519 --> 00:21:15,190
anticipate you know you suck you eye who

536
00:21:14,558 --> 00:21:16,928
would have thought

537
00:21:15,190 --> 00:21:19,179
wait let's have people on the stage and

538
00:21:16,929 --> 00:21:20,980
do a test chat to make sure that the

539
00:21:19,179 --> 00:21:22,570
echo doesn't short-circuit your mind

540
00:21:20,980 --> 00:21:24,429
like who woulda thought to have done

541
00:21:22,569 --> 00:21:26,528
that but that's what happened is this

542

00:21:24,429 --> 00:21:27,669
weird echo they you know you can't

543
00:21:26,528 --> 00:21:29,259
anticipate that just gotta roll with it

544
00:21:27,669 --> 00:21:31,210
just could have a roll you do and that's

545
00:21:29,259 --> 00:21:31,849
one of the the joys and frustrations are

546
00:21:31,210 --> 00:21:33,620
doing

547
00:21:31,849 --> 00:21:35,839
right absolutely Oh God don't we talk

548
00:21:33,619 --> 00:21:38,149
about a V you know a V problem to that

549
00:21:35,839 --> 00:21:41,029
Center well Bob novella thank you very

550
00:21:38,150 --> 00:21:43,610
much and I'm looking forward to well I

551
00:21:41,029 --> 00:21:45,170
guess just about an hour a now it's time

552
00:21:43,609 --> 00:21:46,789
we'll be live on stage it's gonna be

553
00:21:45,170 --> 00:21:48,850
great looking forward to it thanks look

554
00:21:46,789 --> 00:21:56,578
for to have yarn Richard thank you

555
00:21:48,849 --> 00:21:56,578
[Music]

556
00:21:58,569 --> 00:22:02,960

greetings listeners

557

00:22:00,440 --> 00:22:04,850
it's me Captain disillusion on my

558

00:22:02,960 --> 00:22:07,160
youtube channel called captain

559

00:22:04,849 --> 00:22:09,619
disillusion aye captain disillusion

560

00:22:07,160 --> 00:22:11,900
analyzed viral videos of the strange and

561

00:22:09,619 --> 00:22:14,329
unbelievable I explained how interframe

562

00:22:11,900 --> 00:22:16,370
video compression 3d motion tracking and

563

00:22:14,329 --> 00:22:18,679
stock the effects elements proved that

564

00:22:16,369 --> 00:22:20,929
Justin Bieber is not a secret reptilian

565

00:22:18,680 --> 00:22:23,029
alien that those videos of ghost cars

566

00:22:20,930 --> 00:22:25,070
are just unintentional optical illusions

567

00:22:23,029 --> 00:22:26,480
and that lightning did not strike a few

568

00:22:25,069 --> 00:22:29,179
feet away from a girl on a beach as we

569

00:22:26,480 --> 00:22:32,559
saw in the news I'm real fun at parties

570

00:22:29,180 --> 00:22:34,640
my best friend is a lens flare

571
00:22:32,559 --> 00:22:36,589
disillusion I do know other people

572
00:22:34,640 --> 00:22:39,230
sometimes they even show up in my videos

573
00:22:36,589 --> 00:22:41,599
people like skepticisms grandpa James

574
00:22:39,230 --> 00:22:43,670
Randi serve de Soleil Acrobat Erica

575
00:22:41,599 --> 00:22:45,829
Lin's weight loss enthusiast Penn

576
00:22:43,670 --> 00:22:47,960
Jillette and the actual Beekman from

577
00:22:45,829 --> 00:22:50,000
Beakman's world I hope you'll check out

578
00:22:47,960 --> 00:22:52,130
my adventures interact with me in a

579
00:22:50,000 --> 00:22:54,920
platonic way and even consider becoming

580
00:22:52,130 --> 00:22:57,530
a patron of my work you can do all that

581
00:22:54,920 --> 00:23:00,130
and more on YouTube or at Captain

582
00:22:57,529 --> 00:23:02,579
disillusion calm

583
00:23:00,130 --> 00:23:06,280
[Music]

584
00:23:02,579 --> 00:23:07,869
and now direct from the cafe and

585
00:23:06,279 --> 00:23:11,379
Australia's Science Channel

586
00:23:07,869 --> 00:23:14,559
it's brouhaha science in less time that

587
00:23:11,380 --> 00:23:19,990
it takes to order a coffee with such a

588
00:23:14,559 --> 00:23:22,210
as Shefali when the first astronauts

589
00:23:19,990 --> 00:23:24,069
land on Mars their top priority will be

590
00:23:22,210 --> 00:23:26,829
to put a radiation shield between them

591
00:23:24,069 --> 00:23:30,009
and harmful cosmic rays that's why NASA

592
00:23:26,829 --> 00:23:32,319
wants your origami expertise but they're

593
00:23:30,009 --> 00:23:34,629
not talking delicate paper cranes NASA

594
00:23:32,319 --> 00:23:36,189
is calling for 3d folding concepts they

595
00:23:34,630 --> 00:23:39,460
can use when it's time to pack for the

596
00:23:36,190 --> 00:23:41,380
trip science loves origami there are

597
00:23:39,460 --> 00:23:43,509
robots that stop flat and assemble

598
00:23:41,380 --> 00:23:46,090
themselves who folds and hinges to scoot

599

00:23:43,509 --> 00:23:47,710
around small places airbags that are

600
00:23:46,089 --> 00:23:49,599
designed to deploy with just the right

601
00:23:47,710 --> 00:23:51,850
amount of force to protect the passenger

602
00:23:49,599 --> 00:23:54,039
without hurting them and even medical

603
00:23:51,849 --> 00:23:56,259
devices like hots vents that fit through

604
00:23:54,039 --> 00:23:58,000
a catheter in their folded form and then

605
00:23:56,259 --> 00:24:01,029
expand when they're inserted into an

606
00:23:58,000 --> 00:24:03,880
artery nASA has been inspired by origami

607
00:24:01,029 --> 00:24:06,940
before as well there are space antennas

608
00:24:03,880 --> 00:24:09,700
space mirrors space solar panels space

609
00:24:06,940 --> 00:24:12,910
Sun shields even space radiators which

610
00:24:09,700 --> 00:24:15,279
can be unfold into their food world but

611
00:24:12,910 --> 00:24:17,740
for the next generation of space origami

612
00:24:15,279 --> 00:24:19,660
it's up to you X but folders and creases

613
00:24:17,740 --> 00:24:20,799

to add new valleys and mountains to the

614

00:24:19,660 --> 00:24:23,880

Red Planet

615

00:24:20,799 --> 00:24:23,879

[Music]

616

00:24:23,960 --> 00:24:30,308

for more brouhaha and Australian science

617

00:24:26,929 --> 00:24:30,309

visit w-w-w

618

00:24:37,970 --> 00:25:02,089

[Music]

619

00:24:59,798 --> 00:25:05,089

Haile Robertson from the Northern Rivers

620

00:25:02,089 --> 00:25:09,368

vaccination supporters this report comes

621

00:25:05,089 --> 00:25:11,808

to you from Bangalow soccer fields

622

00:25:09,368 --> 00:25:14,959

currently sitting in my car watching my

623

00:25:11,808 --> 00:25:19,940

kids run around playing soccer so there

624

00:25:14,960 --> 00:25:21,740

might be some background noise the topic

625

00:25:19,940 --> 00:25:24,528

of this report comes to you as a result

626

00:25:21,740 --> 00:25:27,470

of a listener suggestion thank you Dave

627

00:25:24,528 --> 00:25:29,240

Dave saw a post on the ABC North Coast

628
00:25:27,470 --> 00:25:31,970
Facebook page a couple of weeks ago

629
00:25:29,240 --> 00:25:34,999
about a horse contracting the Hendra

630
00:25:31,970 --> 00:25:37,190
virus and noted how there was an anti

631
00:25:34,999 --> 00:25:40,159
vaccination sentiment amongst horse

632
00:25:37,190 --> 00:25:42,379
owners in which some believed that the

633
00:25:40,159 --> 00:25:45,169
risk to their horses from the vaccine

634
00:25:42,378 --> 00:25:48,819
was greater than the risk of the disease

635
00:25:45,169 --> 00:25:52,129
itself this is something we see commonly

636
00:25:48,819 --> 00:25:55,579
with vaccination deniers

637
00:25:52,128 --> 00:25:59,418
I remember the post as I commented on it

638
00:25:55,579 --> 00:26:01,788
myself at the time firstly some

639
00:25:59,419 --> 00:26:03,700
information about the Hendra virus and

640
00:26:01,788 --> 00:26:09,408
this comes from the Australian

641
00:26:03,700 --> 00:26:13,490
veterinary association website Hendra

642
00:26:09,409 --> 00:26:16,009
virus HIV is an emerging virus disease

643
00:26:13,490 --> 00:26:18,919
that was first identified in a large

644
00:26:16,009 --> 00:26:23,419
outbreak of highly lethal disease in

645
00:26:18,919 --> 00:26:26,990
racehorses in 1994 in two adjoining

646
00:26:23,419 --> 00:26:31,429
Brisbane racing stables where 13 horses

647
00:26:26,990 --> 00:26:34,999
either died or were humanely euthanized

648
00:26:31,429 --> 00:26:36,710
and seven horses recovered but were

649
00:26:34,999 --> 00:26:40,548
subsequently euthanized

650
00:26:36,710 --> 00:26:44,210
a trainer died from multi organ failure

651
00:26:40,548 --> 00:26:47,569
and his stable hand became ill but

652
00:26:44,210 --> 00:26:50,720
recovered Hendra virus infections have

653
00:26:47,569 --> 00:26:54,889
been confirmed in flying foxes horses

654
00:26:50,720 --> 00:26:58,788
and dogs other animals known to be

655
00:26:54,890 --> 00:27:02,538
susceptible include cats ferrets pigs

656

00:26:58,788 --> 00:27:03,379
guinea pigs hamsters and non-human

657
00:27:02,538 --> 00:27:08,210
primates

658
00:27:03,380 --> 00:27:11,179
a recent study confirmed that flying fox

659
00:27:08,210 --> 00:27:14,240
urine is the most significant route of

660
00:27:11,179 --> 00:27:17,659
HIV excretion in wild caught black

661
00:27:14,240 --> 00:27:20,509
flying foxes transmission pathways

662
00:27:17,659 --> 00:27:23,299
facilitating a spillover to horses via a

663
00:27:20,509 --> 00:27:26,710
urinary contamination of pasture feed

664
00:27:23,298 --> 00:27:29,240
and water sources is highly plausible

665
00:27:26,710 --> 00:27:32,210
routine observation of the abundance of

666
00:27:29,240 --> 00:27:34,099
flying fox urine feces and food debris

667
00:27:32,210 --> 00:27:36,710
underneath trees in which they are

668
00:27:34,099 --> 00:27:38,859
feeding suggests that horses have a high

669
00:27:36,710 --> 00:27:41,210
likelihood of direct physical

670
00:27:38,859 --> 00:27:44,509

contamination with potentially

671

00:27:41,210 --> 00:27:46,730

infectious material at these sites the

672

00:27:44,509 --> 00:27:49,339

clinical signs of Hendra virus in horses

673

00:27:46,730 --> 00:27:52,009

are mainly respiratory and or

674

00:27:49,339 --> 00:27:54,798

neurological usually with a rapid

675

00:27:52,009 --> 00:27:59,269

progression to death and with a 79

676

00:27:54,798 --> 00:28:02,389

percent mortality rate Hendra virus is a

677

00:27:59,269 --> 00:28:05,298

rare disease in humans there have been

678

00:28:02,390 --> 00:28:09,169

seven known cases with four deaths a

679

00:28:05,298 --> 00:28:11,869

case fatality rate of 57 percent the

680

00:28:09,169 --> 00:28:14,270

human cases have all occurred by close

681

00:28:11,869 --> 00:28:17,379

contact with the secretions or body

682

00:28:14,269 --> 00:28:21,200

fluids of infected horses which act as

683

00:28:17,380 --> 00:28:23,120

amplifiers of the virus one person

684

00:28:21,200 --> 00:28:25,640

became infected from a horse in the late

685
00:28:23,119 --> 00:28:28,398
incubation stage before it showed

686
00:28:25,640 --> 00:28:30,409
clinical signs the Australian Veterinary

687
00:28:28,398 --> 00:28:33,048
Association believes that the Hendra

688
00:28:30,409 --> 00:28:35,149
vaccine is the single most effective way

689
00:28:33,048 --> 00:28:38,089
of reducing the risk of Hendra virus

690
00:28:35,148 --> 00:28:40,069
infection in horses and therefore of

691
00:28:38,089 --> 00:28:45,408
preventing disease transmission to

692
00:28:40,069 --> 00:28:49,250
people now here is the post that ABC

693
00:28:45,409 --> 00:28:50,090
north coast put up on their page on July

694
00:28:49,250 --> 00:28:55,038
the ninth

695
00:28:50,089 --> 00:28:57,199
20-17 Hendra has struck in the region

696
00:28:55,038 --> 00:28:59,960
for the first time this year with a

697
00:28:57,200 --> 00:29:02,360
horse neil is more euthanize last night

698
00:28:59,960 --> 00:29:05,120
by the local Land Services District vet

699
00:29:02,359 --> 00:29:07,579
following confirmation of the bat borne

700
00:29:05,119 --> 00:29:09,469
disease the 11 year old gelding was

701
00:29:07,579 --> 00:29:12,168
unvaccinated against the Hendra virus

702
00:29:09,470 --> 00:29:14,329
and the property has now been placed

703
00:29:12,169 --> 00:29:17,960
under movement restrictions by local

704
00:29:14,329 --> 00:29:20,149
Land Services the New South Wales chief

705
00:29:17,960 --> 00:29:22,610
veterinary officer dr. Christine

706
00:29:20,150 --> 00:29:25,130
Middlemiss said samples from the horse

707
00:29:22,609 --> 00:29:27,528
tested at the DPI's Elizabeth MacArthur

708
00:29:25,130 --> 00:29:30,679
agricultural Institute confirmed the

709
00:29:27,528 --> 00:29:33,950
virus the horse was noticed to be

710
00:29:30,679 --> 00:29:36,440
lethargic on Thursday July the 6th the

711
00:29:33,950 --> 00:29:39,470
Friday July the 7th the horse was not

712
00:29:36,440 --> 00:29:42,230
eating and was wobbly on its feet she

713

00:29:39,470 --> 00:29:45,140
said there has been a case of Hendra

714
00:29:42,230 --> 00:29:47,269
virus in the area before all known

715
00:29:45,140 --> 00:29:49,340
Hendra virus cases have occurred in

716
00:29:47,269 --> 00:29:52,009
Queensland or northern New South Wales

717
00:29:49,339 --> 00:29:54,558
but cases could occur wherever there are

718
00:29:52,009 --> 00:29:56,750
flying foxes or in horses that had

719
00:29:54,558 --> 00:29:58,898
recent contact with flying foxes prior

720
00:29:56,750 --> 00:30:01,460
to movement

721
00:29:58,898 --> 00:30:03,199
dr. Middlemiss said that vaccination

722
00:30:01,460 --> 00:30:05,569
remains the most effective way of

723
00:30:03,200 --> 00:30:09,740
reducing the risk of Hendra virus of

724
00:30:05,569 --> 00:30:12,259
infection in horses but good biosecurity

725
00:30:09,740 --> 00:30:14,329
and personal hygiene measures should

726
00:30:12,259 --> 00:30:14,869
always be practiced in conjunction with

727
00:30:14,329 --> 00:30:17,990

it

728

00:30:14,869 --> 00:30:20,178

she said horses should also be kept away

729

00:30:17,990 --> 00:30:23,149

from flowering and fruiting trees that

730

00:30:20,179 --> 00:30:26,120

are attractive to bats do not place feed

731

00:30:23,148 --> 00:30:28,459

and water under trees and cover feed and

732

00:30:26,119 --> 00:30:30,769

water containers with a shelter so that

733

00:30:28,460 --> 00:30:32,028

they cannot be contaminated from above

734

00:30:30,769 --> 00:30:34,970

the DPI

735

00:30:32,028 --> 00:30:36,589

advises that if your horse is unwell to

736

00:30:34,970 --> 00:30:38,569

keep it away from people and other

737

00:30:36,589 --> 00:30:41,240

animals and to call your private vet

738

00:30:38,569 --> 00:30:43,639

immediately there were definitely cases

739

00:30:41,240 --> 00:30:46,700

of people advocating and defending the

740

00:30:43,640 --> 00:30:48,710

use of the vaccine under this post but

741

00:30:46,700 --> 00:30:51,950

the number of anti vaccination comments

742
00:30:48,710 --> 00:30:55,909
was disappointing here are some of the

743
00:30:51,950 --> 00:30:57,500
comments luke said it's Lismore you

744
00:30:55,909 --> 00:31:00,049
could give these people and Ebola

745
00:30:57,500 --> 00:31:02,470
outbreak and they would still protest

746
00:31:00,048 --> 00:31:04,019
that vaccination is an evil conspiracy

747
00:31:02,470 --> 00:31:08,069
perpetrated by Mon

748
00:31:04,019 --> 00:31:10,470
Santo and Illuminati Marion then chimed

749
00:31:08,069 --> 00:31:13,099
in more horses are injured from the

750
00:31:10,470 --> 00:31:15,930
vaccine than the Hendra virus itself

751
00:31:13,099 --> 00:31:18,959
Hendra is extremely difficult to catch

752
00:31:15,930 --> 00:31:21,600
both horse and human much higher chance

753
00:31:18,960 --> 00:31:25,529
of death from snakebite car accident

754
00:31:21,599 --> 00:31:28,909
riding accident etc that comment

755
00:31:25,529 --> 00:31:33,000
depressingly got 30 people liking it

756
00:31:28,910 --> 00:31:35,430
Robi then said what is a vaccine injury

757
00:31:33,000 --> 00:31:39,240
did the needle break off or something

758
00:31:35,430 --> 00:31:41,759
never heard of it then we have the usual

759
00:31:39,240 --> 00:31:45,990
do your research statement from a

760
00:31:41,759 --> 00:31:48,119
vaccine denier please all do some

761
00:31:45,990 --> 00:31:50,750
research on this vaccination and you

762
00:31:48,119 --> 00:31:54,599
will see why people don't vaccinate

763
00:31:50,750 --> 00:31:58,829
another some horses have died gotten

764
00:31:54,599 --> 00:32:02,159
sick from the vaccine another but or no

765
00:31:58,829 --> 00:32:05,490
bat wheels within wheels everything from

766
00:32:02,160 --> 00:32:08,340
bees to whales is getting lame or worse

767
00:32:05,490 --> 00:32:11,640
what is happening need to look beyond

768
00:32:08,339 --> 00:32:15,149
bats and how bats are to blame Hendra

769
00:32:11,640 --> 00:32:17,280
air quotes virus can the medics really

770

00:32:15,150 --> 00:32:20,700
keep up with the way the cookies are

771
00:32:17,279 --> 00:32:24,720
crumbling sea dairy cows agrobacterium

772
00:32:20,700 --> 00:32:28,710
Morgellons CDC cover-up water treatment

773
00:32:24,720 --> 00:32:34,769
microbes bacterial co-infection biofilm

774
00:32:28,710 --> 00:32:38,190
and then came surely the Hendra vac is

775
00:32:34,769 --> 00:32:40,799
more lethal than the virus no human ever

776
00:32:38,190 --> 00:32:43,410
has contracted Hendra from casual

777
00:32:40,799 --> 00:32:45,869
contact this is another case of big

778
00:32:43,410 --> 00:32:50,130
pharma working on scare tactics

779
00:32:45,869 --> 00:32:53,309
later on surely again i lot of people

780
00:32:50,130 --> 00:32:56,970
commenting here need to know some real

781
00:32:53,309 --> 00:32:59,669
facts about Hendra and Hendra vac before

782
00:32:56,970 --> 00:33:02,210
commenting too many side effects from

783
00:32:59,670 --> 00:33:06,300
vaccine for my liking

784
00:33:02,210 --> 00:33:10,470

Dianne the vaccine also makes a lot of

785

00:33:06,299 --> 00:33:13,379

horse really sick and the never recover

786

00:33:10,470 --> 00:33:16,170

fully from that either quite a few have

787

00:33:13,380 --> 00:33:17,789

died from it as well so you are damned

788

00:33:16,170 --> 00:33:21,749

if you do and

789

00:33:17,788 --> 00:33:24,210

damned if you don't so there you have it

790

00:33:21,749 --> 00:33:27,179

northern New South Wales with the lowest

791

00:33:24,210 --> 00:33:28,769

vaccination rates in Australia also has

792

00:33:27,179 --> 00:33:31,859

people who refuse to vaccinate their

793

00:33:28,769 --> 00:33:33,259

horses which sadly comes as no real

794

00:33:31,858 --> 00:33:36,329

surprise

795

00:33:33,259 --> 00:33:39,509

thanks again Dave for your suggestion

796

00:33:36,329 --> 00:33:41,939

for this report and until next time this

797

00:33:39,509 --> 00:33:44,980

has been Heidi Robertson from the

798

00:33:41,940 --> 00:34:01,328

Northern Rivers vaccination supporters

799

00:33:44,980 --> 00:34:01,328

[Music]

800

00:34:01,999 --> 00:34:06,298

good gosh poor Gabbard well you must

801

00:34:04,528 --> 00:34:07,798

sceptic wish - to shock a desolate is

802

00:34:06,298 --> 00:34:10,168

just skeptic we serve as a tech elbow

803

00:34:07,798 --> 00:34:12,088

Python a channel Garnica meet the

804

00:34:10,168 --> 00:34:13,918

skeptics on podcast hall go to a vision

805

00:34:12,088 --> 00:34:15,449

heritage from dr. Torres are to the

806

00:34:13,918 --> 00:34:17,638

manual cock-up shortage heavy like what

807

00:34:15,449 --> 00:34:20,250

she touched a critical go in vodka - -

808

00:34:17,639 --> 00:34:21,960

on an excel sheet a I said let me

809

00:34:20,250 --> 00:34:24,329

raise 20 and then we can shake member

810

00:34:21,960 --> 00:34:26,668

travelhob solitude or dvd bond skeptic

811

00:34:24,329 --> 00:34:28,980

we start to sharpen tool but as info at

812

00:34:26,668 --> 00:34:30,598

skeptic push bond Hootie man - Barbara

813
00:34:28,980 --> 00:34:32,789
Allen film and the Facebook hold on in

814
00:34:30,599 --> 00:34:34,760
Kurdish Amita Facebook bond compare

815
00:34:32,789 --> 00:34:38,838
skeptical gustar Shakti mandalas

816
00:34:34,760 --> 00:34:42,210
volunteering Sarita dharamdas Vinayagam

817
00:34:38,838 --> 00:34:44,369
hi this is Gavroche co-president of the

818
00:34:42,210 --> 00:34:46,139
hungarian skeptics society and chairman

819
00:34:44,369 --> 00:34:48,990
of the European Council of skeptical

820
00:34:46,139 --> 00:34:51,329
organizations a solicitor of the sceptic

821
00:34:48,989 --> 00:34:53,308
zone you probably agree that educating

822
00:34:51,329 --> 00:34:56,339
others about pseudoscience and critical

823
00:34:53,309 --> 00:34:57,930
thinking is an important task if you are

824
00:34:56,338 --> 00:34:59,759
eager to take part in either of these

825
00:34:57,929 --> 00:35:03,469
activities we would be happy to hear

826
00:34:59,760 --> 00:35:09,030
from you don't hesitate to contact us at

827

00:35:03,469 --> 00:35:10,889
www.sceeto.com for at sceptical hu we

828
00:35:09,030 --> 00:35:13,650
also recommend you visiting our Facebook

829
00:35:10,889 --> 00:35:17,239
page skeptic which - Rashaad or simply

830
00:35:13,650 --> 00:35:17,240
come and join us at one of our events

831
00:35:18,590 --> 00:35:25,979
[Music]

832
00:35:27,690 --> 00:35:34,570
and now we bring you part two of our

833
00:35:31,719 --> 00:35:36,789
series of interviews with and read the

834
00:35:34,570 --> 00:35:39,160
director of the National Center for

835
00:35:36,789 --> 00:35:42,429
Science education based in Oakland

836
00:35:39,159 --> 00:35:44,920
California this week and discusses some

837
00:35:42,429 --> 00:35:47,049
of the issues revolving teaching climate

838
00:35:44,920 --> 00:35:49,630
change especially when it comes to

839
00:35:47,050 --> 00:35:51,730
political implications trying to reach

840
00:35:49,630 --> 00:35:53,289
the hearts and minds of teachers and the

841
00:35:51,730 --> 00:35:55,389

general public who sometimes have a

842

00:35:53,289 --> 00:35:59,079

negative view of science and why the

843

00:35:55,389 --> 00:35:59,940

idea of a climate change hoax is so

844

00:35:59,079 --> 00:36:07,440

entrenched

845

00:35:59,940 --> 00:36:11,650

[Music]

846

00:36:07,440 --> 00:36:14,740

of course because we now say we the

847

00:36:11,650 --> 00:36:16,680

skeptical movement has been battling

848

00:36:14,739 --> 00:36:21,039

creationism for a very long time

849

00:36:16,679 --> 00:36:23,589

probably about 6,000 planet and it's one

850

00:36:21,039 --> 00:36:26,170

of the reasons that initially the

851

00:36:23,590 --> 00:36:29,130

Australian skeptics were very prominent

852

00:36:26,170 --> 00:36:31,450

it was battling this and we've got this

853

00:36:29,130 --> 00:36:33,730

interesting transition now where we hear

854

00:36:31,449 --> 00:36:37,089

the same arguments in regard to climate

855

00:36:33,730 --> 00:36:38,769

change and you probably have the same

856
00:36:37,090 --> 00:36:40,420
situation in this country where I've

857
00:36:38,769 --> 00:36:42,849
noticed a lot of the shall I say

858
00:36:40,420 --> 00:36:45,880
conservative media outlets in Australia

859
00:36:42,849 --> 00:36:47,500
are on the hoax bandwagon yeah that's

860
00:36:45,880 --> 00:36:50,829
the same thing here I am oh absolutely

861
00:36:47,500 --> 00:36:53,619
in fact I think the US has probably gone

862
00:36:50,829 --> 00:36:56,380
the furthest down the road of rejecting

863
00:36:53,619 --> 00:36:58,719
climate science has become a part of the

864
00:36:56,380 --> 00:37:02,079
identity of one of our parties that it's

865
00:36:58,719 --> 00:37:04,629
the official stance to the point that

866
00:37:02,079 --> 00:37:08,349
the candidates how many did we start out

867
00:37:04,630 --> 00:37:10,240
with 17 oh I married quite a candidate

868
00:37:08,349 --> 00:37:11,559
slight a few yeah none of them were

869
00:37:10,239 --> 00:37:13,359
willing to just come right out and say

870
00:37:11,559 --> 00:37:16,329
climate change is happening and humans

871
00:37:13,360 --> 00:37:19,420
are responsible now so it that's how

872
00:37:16,329 --> 00:37:21,369
much of a plank in the Republican

873
00:37:19,420 --> 00:37:24,490
platform it's become yeah and that's a

874
00:37:21,369 --> 00:37:26,559
real problem because most people get

875
00:37:24,489 --> 00:37:28,509
their take their opinion about climate

876
00:37:26,559 --> 00:37:29,460
change from their cultural

877
00:37:28,510 --> 00:37:32,940
identification

878
00:37:29,460 --> 00:37:34,530
rather than from I didn't hmm sir if

879
00:37:32,940 --> 00:37:36,480
exploring the science I guess you could

880
00:37:34,530 --> 00:37:38,519
say that about many things in life it's

881
00:37:36,480 --> 00:37:39,630
true yes I think and we all do it it's

882
00:37:38,519 --> 00:37:43,588
not just though conservatives are

883
00:37:39,630 --> 00:37:46,740
uniquely sheep like we all are we all

884

00:37:43,588 --> 00:37:48,210
you know if I don't know something about

885
00:37:46,739 --> 00:37:51,689
a particular policy

886
00:37:48,210 --> 00:37:53,820
I'll look I'm a Democrat I'll say well

887
00:37:51,690 --> 00:37:55,588
what is you know what does the

888
00:37:53,820 --> 00:37:59,250
Democratic Party say about it what's the

889
00:37:55,588 --> 00:38:01,230
house you know caucus on that issue say

890
00:37:59,250 --> 00:38:02,969
about it and I'm likely to say okay well

891
00:38:01,230 --> 00:38:04,619
that sounds reasonable to me I they know

892
00:38:02,969 --> 00:38:08,219
a lot about it I don't I usually agree

893
00:38:04,619 --> 00:38:10,680
with them not always but but largely we

894
00:38:08,219 --> 00:38:13,259
do take our cues on issues that we can't

895
00:38:10,679 --> 00:38:14,179
research ourselves yes from people we

896
00:38:13,260 --> 00:38:17,300
trust

897
00:38:14,179 --> 00:38:19,858
being human absolutely I do it I'm sure

898
00:38:17,300 --> 00:38:22,230

everybody does that I mean it would be

899

00:38:19,858 --> 00:38:24,598

difficult to live life any other way

900

00:38:22,230 --> 00:38:27,539

yeah I think about it yeah you have to

901

00:38:24,599 --> 00:38:31,730

rely on but should we say expert opinion

902

00:38:27,539 --> 00:38:33,750

and that's why our focus on teachers

903

00:38:31,730 --> 00:38:35,608

gives us such an enormous opportunity

904

00:38:33,750 --> 00:38:37,739

because teachers do have a lot of

905

00:38:35,608 --> 00:38:40,139

credibility and Trust and they come from

906

00:38:37,739 --> 00:38:42,559

the communities usually they come from

907

00:38:40,139 --> 00:38:45,150

the communities where they teach so they

908

00:38:42,559 --> 00:38:46,949

you know that sort of communications

909

00:38:45,150 --> 00:38:49,320

mantra that to get to change people's

910

00:38:46,949 --> 00:38:51,569

minds you need a simple message repeated

911

00:38:49,320 --> 00:38:54,750

often from a variety of trusted sources

912

00:38:51,570 --> 00:38:56,039

and teachers are one of those sources

913
00:38:54,750 --> 00:38:59,760
science teachers are one of those

914
00:38:56,039 --> 00:39:03,750
sources that people can really trust so

915
00:38:59,760 --> 00:39:05,760
our goal is to make it easier for

916
00:39:03,750 --> 00:39:08,179
teachers and and to raise the

917
00:39:05,760 --> 00:39:12,300
expectations on teachers that they

918
00:39:08,179 --> 00:39:17,069
handle these topics competently and

919
00:39:12,300 --> 00:39:18,630
confidently yes even if they're in

920
00:39:17,070 --> 00:39:21,300
communities where they expect a lot of

921
00:39:18,630 --> 00:39:23,519
pushback and what we need to acknowledge

922
00:39:21,300 --> 00:39:26,010
is we not we can't from ncsc we can't

923
00:39:23,519 --> 00:39:28,739
suddenly turn every science teacher in

924
00:39:26,010 --> 00:39:30,570
the country into a Bay Area liberal

925
00:39:28,739 --> 00:39:33,449
skeptic you know that's not going to

926
00:39:30,570 --> 00:39:35,338
happen most teachers are reflective

927
00:39:33,449 --> 00:39:38,039
communities that they live in they're

928
00:39:35,338 --> 00:39:39,750
very religious and religious parts of

929
00:39:38,039 --> 00:39:41,460
the country they're very Republican and

930
00:39:39,750 --> 00:39:43,349
Republican parts of the country but

931
00:39:41,460 --> 00:39:45,809
science teachers generally

932
00:39:43,349 --> 00:39:48,059
when they're surveyed they tend to agree

933
00:39:45,809 --> 00:39:51,389
with the scientific consensus more than

934
00:39:48,059 --> 00:39:53,880
whatever other community they belong to

935
00:39:51,389 --> 00:39:56,309
so even very religious teachers are much

936
00:39:53,880 --> 00:39:57,869
more likely to accept evolution even

937
00:39:56,309 --> 00:39:59,820
Republican teachers are much more likely

938
00:39:57,869 --> 00:40:03,179
to accept climate changes learning so

939
00:39:59,820 --> 00:40:08,970
those are the teachers that we really

940
00:40:03,179 --> 00:40:11,489
want to reach and help them teach the

941

00:40:08,969 --> 00:40:12,329
science more confidently I think just

942
00:40:11,489 --> 00:40:14,399
getting back to the point you're making

943
00:40:12,329 --> 00:40:16,559
about the the simple message repeated

944
00:40:14,400 --> 00:40:19,260
often by trusted sources this is exactly

945
00:40:16,559 --> 00:40:21,599
what the hoax people are doing it's

946
00:40:19,260 --> 00:40:24,090
repeated speaking about Australia of

947
00:40:21,599 --> 00:40:27,210
course it's repeated often in the media

948
00:40:24,090 --> 00:40:31,230
you hear it a lot and you hear it from

949
00:40:27,210 --> 00:40:34,260
famous people and I can see how that

950
00:40:31,230 --> 00:40:35,940
would work but it really gets to me that

951
00:40:34,260 --> 00:40:37,530
they keep repeating it's a hoax it's a

952
00:40:35,940 --> 00:40:39,179
hoax to hope without realising well if

953
00:40:37,530 --> 00:40:41,970
you can perpetrate a hoax of that

954
00:40:39,179 --> 00:40:44,759
magnitude that requires huge logistics

955
00:40:41,969 --> 00:40:46,349

apart from anything else but that

956

00:40:44,760 --> 00:40:47,160

doesn't matter because all they hear is

957

00:40:46,349 --> 00:40:48,299

it's a hoax

958

00:40:47,159 --> 00:40:51,000

and they don't have to think any more

959

00:40:48,300 --> 00:40:52,410

about it right we have in our country

960

00:40:51,000 --> 00:40:55,619

and I I imagine it's the same in

961

00:40:52,409 --> 00:40:58,759

Australia that most people don't have

962

00:40:55,619 --> 00:41:01,759

any particular identification or

963

00:40:58,760 --> 00:41:04,500

facility or even comfort with science

964

00:41:01,760 --> 00:41:07,680

for the vast majority of people the last

965

00:41:04,500 --> 00:41:10,190

time they directly had an experience

966

00:41:07,679 --> 00:41:12,629

with science was in high school you know

967

00:41:10,190 --> 00:41:15,329

it might be even younger because you

968

00:41:12,630 --> 00:41:17,010

track earlier right so they're imagined

969

00:41:15,329 --> 00:41:19,559

are a lot of people who don't take high

970
00:41:17,010 --> 00:41:21,840
school science is that true if it well

971
00:41:19,559 --> 00:41:23,759
my limited knowledge going back thirty

972
00:41:21,840 --> 00:41:26,070
years when I did high school the first

973
00:41:23,760 --> 00:41:29,010
four years I know that you hire

974
00:41:26,070 --> 00:41:30,450
scientists is mandatory and I'm sure

975
00:41:29,010 --> 00:41:32,490
listeners will correct me if I'm wrong I

976
00:41:30,449 --> 00:41:34,949
think the last two years you need to

977
00:41:32,489 --> 00:41:37,469
take it down science at point being that

978
00:41:34,949 --> 00:41:40,519
certainly by the time people either

979
00:41:37,469 --> 00:41:42,509
leave high school and don't go on to

980
00:41:40,519 --> 00:41:44,460
university or they do go on to

981
00:41:42,510 --> 00:41:46,080
university a huge number of people who

982
00:41:44,460 --> 00:41:47,970
go to the University don't really take

983
00:41:46,079 --> 00:41:50,219
much in the way of science some schools

984
00:41:47,969 --> 00:41:51,299
have a some sort of distribution

985
00:41:50,219 --> 00:41:54,000
requirement where they have to take

986
00:41:51,300 --> 00:41:57,090
something but they don't have any

987
00:41:54,000 --> 00:41:59,730
hands-on real engagement with

988
00:41:57,090 --> 00:42:02,309
after the time they're 18 years old they

989
00:41:59,730 --> 00:42:05,579
and and their experience of science may

990
00:42:02,309 --> 00:42:07,199
well have not been very positive I guess

991
00:42:05,579 --> 00:42:09,239
for some of them it was just to get

992
00:42:07,199 --> 00:42:11,219
through the system right and they found

993
00:42:09,239 --> 00:42:13,019
interested yeah I don't know if you I

994
00:42:11,219 --> 00:42:15,029
find this all the time that when I say

995
00:42:13,019 --> 00:42:18,809
I'm a scientist I often get the reaction

996
00:42:15,030 --> 00:42:20,880
oh I was terrible at science you must be

997
00:42:18,809 --> 00:42:23,460
really smart I wasn't good at science I

998

00:42:20,880 --> 00:42:25,230
thought it was really boring just lots

999
00:42:23,460 --> 00:42:27,929
and lots of people their experience in

1000
00:42:25,230 --> 00:42:30,690
high school at with science was not all

1001
00:42:27,929 --> 00:42:32,609
that positive so their motivation to go

1002
00:42:30,690 --> 00:42:34,289
out and dig into science and figure

1003
00:42:32,610 --> 00:42:36,059
something out for themselves is pretty

1004
00:42:34,289 --> 00:42:38,219
low yeah

1005
00:42:36,059 --> 00:42:40,289
and they often what they do see of

1006
00:42:38,219 --> 00:42:42,629
science what they identify as science in

1007
00:42:40,289 --> 00:42:46,110
their world is very often things like

1008
00:42:42,630 --> 00:42:48,630
nutrition studies which are it's

1009
00:42:46,110 --> 00:42:50,250
particularly problematic because it's so

1010
00:42:48,630 --> 00:42:53,820
hard to do really good nutrition

1011
00:42:50,250 --> 00:42:55,320
research so you do get this red wine is

1012
00:42:53,820 --> 00:42:57,000

good for you and then five years later

1013

00:42:55,320 --> 00:42:59,610

red wine is bad for you and you should

1014

00:42:57,000 --> 00:43:03,510

know you shouldn't yes you should latest

1015

00:42:59,610 --> 00:43:05,820

one was coffee I think yeah any coffee

1016

00:43:03,510 --> 00:43:07,470

yeah so you hear this all the time that

1017

00:43:05,820 --> 00:43:08,970

uh scientists they don't know what

1018

00:43:07,469 --> 00:43:10,469

they're talking about you know last year

1019

00:43:08,969 --> 00:43:12,569

they said butter was bad now they say

1020

00:43:10,469 --> 00:43:15,899

it's okay so when someone says to them

1021

00:43:12,570 --> 00:43:17,580

yes like our president says you know no

1022

00:43:15,900 --> 00:43:22,079

one really knows if the climate is

1023

00:43:17,579 --> 00:43:23,279

changing yeah that resonates as yeah no

1024

00:43:22,079 --> 00:43:25,799

one really knows where the coffee is

1025

00:43:23,280 --> 00:43:27,150

good for you yeah yes well interestingly

1026

00:43:25,800 --> 00:43:31,289

enough that these are the same are you

1027
00:43:27,150 --> 00:43:33,539
inside I've been subjected to from all

1028
00:43:31,289 --> 00:43:36,239
sorts of areas including the paranormal

1029
00:43:33,539 --> 00:43:37,650
Oh science keeps changing its mind next

1030
00:43:36,239 --> 00:43:40,139
year it'll say this what do you know

1031
00:43:37,650 --> 00:43:43,639
right same thing right yeah right and

1032
00:43:40,139 --> 00:43:48,089
and the way science is taught especially

1033
00:43:43,639 --> 00:43:50,489
under the in the K through 12 years it's

1034
00:43:48,090 --> 00:43:52,079
often taught as a box effects here's the

1035
00:43:50,489 --> 00:43:54,239
textbook learn everything in this

1036
00:43:52,079 --> 00:43:56,489
textbook now you know all about science

1037
00:43:54,239 --> 00:43:58,259
of course it's not taught as a process

1038
00:43:56,489 --> 00:44:00,548
the process is a method as is that

1039
00:43:58,260 --> 00:44:04,689
here's something to use for inquiry

1040
00:44:00,548 --> 00:44:06,130
right yes ice online and so our new next

1041
00:44:04,688 --> 00:44:08,920
generation science standards that have

1042
00:44:06,130 --> 00:44:12,099
been adopted by about 20 states now are

1043
00:44:08,920 --> 00:44:15,670
based very heavily on research into how

1044
00:44:12,099 --> 00:44:17,499
people learn science and the main

1045
00:44:15,670 --> 00:44:19,900
take-home message is that people learn a

1046
00:44:17,498 --> 00:44:22,149
lot more science if they actually

1047
00:44:19,900 --> 00:44:23,829
experience how science is done this is

1048
00:44:22,150 --> 00:44:25,449
not new news people were saying that's

1049
00:44:23,829 --> 00:44:27,489
about how to teach science for a hundred

1050
00:44:25,449 --> 00:44:30,880
years but but these standards really do

1051
00:44:27,489 --> 00:44:34,889
try to embody that and give students an

1052
00:44:30,880 --> 00:44:37,239
experience of engaging with evidence

1053
00:44:34,889 --> 00:44:39,129
discussing the evidence discussing the

1054
00:44:37,239 --> 00:44:41,048
credibility of the evidence and the

1055

00:44:39,130 --> 00:44:43,989
relevance of the evidence and coming to

1056
00:44:41,048 --> 00:44:45,369
a conclusion about how things work so

1057
00:44:43,989 --> 00:44:46,900
there were there were two wonderful

1058
00:44:45,369 --> 00:44:48,489
articles a couple of weeks ago one in

1059
00:44:46,900 --> 00:44:49,528
The New York Times and one in The

1060
00:44:48,489 --> 00:44:52,119
Washington Post

1061
00:44:49,528 --> 00:44:53,670
talking to two high school teachers who

1062
00:44:52,119 --> 00:44:58,028
are teaching climate change in

1063
00:44:53,670 --> 00:45:00,729
communities that are very conservative

1064
00:44:58,028 --> 00:45:06,579
where there's a lot of skepticism about

1065
00:45:00,728 --> 00:45:06,968
the science skepticism he's that word

1066
00:45:06,579 --> 00:45:11,859
again

1067
00:45:06,969 --> 00:45:14,650
yeah yeah and one of them interestingly

1068
00:45:11,858 --> 00:45:17,619
one community was in Ohio and the

1069
00:45:14,650 --> 00:45:20,769

teacher was from Ohio but not from that

1070

00:45:17,619 --> 00:45:24,099

community mm-hmm he was from Akron the

1071

00:45:20,768 --> 00:45:27,659

big city of that area and but teaching

1072

00:45:24,099 --> 00:45:32,170

in a very conservative more rural area

1073

00:45:27,659 --> 00:45:36,009

and the other teachers in Wyoming hmm

1074

00:45:32,170 --> 00:45:39,938

and what the Wyoming teacher did was

1075

00:45:36,009 --> 00:45:42,809

take the students out to the woods have

1076

00:45:39,938 --> 00:45:45,578

them do a core sample of trees right

1077

00:45:42,809 --> 00:45:47,528

calculate from the circumference of the

1078

00:45:45,579 --> 00:45:50,160

tree and the width of the annual ring

1079

00:45:47,528 --> 00:45:53,528

how much carbon dioxide had been

1080

00:45:50,159 --> 00:45:57,428

incorporated by that tree in that year

1081

00:45:53,528 --> 00:45:59,889

and then compare that to the emissions

1082

00:45:57,429 --> 00:46:03,278

of carbon dioxide from the car that the

1083

00:45:59,889 --> 00:46:05,098

kid drives to school so you're not

1084
00:46:03,278 --> 00:46:08,798
saying anything about climate change

1085
00:46:05,099 --> 00:46:10,869
you're just saying hey this is how trees

1086
00:46:08,798 --> 00:46:12,188
grow they the carbon in the tree comes

1087
00:46:10,869 --> 00:46:12,820
from the air which is something that a

1088
00:46:12,188 --> 00:46:17,619
minority

1089
00:46:12,820 --> 00:46:20,470
people know sort of shocking and and you

1090
00:46:17,619 --> 00:46:22,869
figure out how much carbon dioxide can

1091
00:46:20,469 --> 00:46:24,309
one tree absorb in one year and then you

1092
00:46:22,869 --> 00:46:27,009
figure out how much carbon dioxide does

1093
00:46:24,309 --> 00:46:30,820
your car MIT and the students start

1094
00:46:27,010 --> 00:46:33,100
having that moment of oh my gosh okay

1095
00:46:30,820 --> 00:46:34,360
but there would have to be I don't know

1096
00:46:33,099 --> 00:46:37,659
what the number turns out to be two

1097
00:46:34,360 --> 00:46:38,800
hundred and twenty trees growing just to

1098
00:46:37,659 --> 00:46:41,199
take care of the carbon dioxide that

1099
00:46:38,800 --> 00:46:42,940
comes out of my one car and they quote

1100
00:46:41,199 --> 00:46:44,829
one of the students as saying I'm

1101
00:46:42,940 --> 00:46:46,030
starting to get the scale of this

1102
00:46:44,829 --> 00:46:48,429
problem mm-hmm

1103
00:46:46,030 --> 00:46:50,320
that's a really effective way to teach

1104
00:46:48,429 --> 00:46:53,259
climate change because you're the

1105
00:46:50,320 --> 00:46:55,870
students are engaging with the

1106
00:46:53,260 --> 00:46:57,820
scientific method on their own and and

1107
00:46:55,869 --> 00:47:02,109
they themselves can start to see the

1108
00:46:57,820 --> 00:47:04,660
implications of what they're doing so

1109
00:47:02,110 --> 00:47:07,390
what in your opinion and having looked

1110
00:47:04,659 --> 00:47:11,409
at this problem for some years now what

1111
00:47:07,389 --> 00:47:13,509
is the appeal of the conspiracy hoax

1112

00:47:11,409 --> 00:47:16,420
side of thing why are they so passionate

1113
00:47:13,510 --> 00:47:18,580
that this is the situation well I'm not

1114
00:47:16,420 --> 00:47:21,130
sure that it's the same for everybody

1115
00:47:18,579 --> 00:47:23,170
who passionately holds that position I

1116
00:47:21,130 --> 00:47:25,390
think that there for some people it's

1117
00:47:23,170 --> 00:47:27,190
just identity politics that this is what

1118
00:47:25,389 --> 00:47:29,859
makes me different from the other guys

1119
00:47:27,190 --> 00:47:32,559
that you know they think this and we

1120
00:47:29,860 --> 00:47:34,510
think this and we're the good guys we're

1121
00:47:32,559 --> 00:47:36,429
all the good guys right everybody thinks

1122
00:47:34,510 --> 00:47:37,810
they're the good guys right yeah and and

1123
00:47:36,429 --> 00:47:39,429
in the u.s. I don't know if you have

1124
00:47:37,809 --> 00:47:40,840
this kind of polarization in Australia

1125
00:47:39,429 --> 00:47:43,179
as well it's just that's just getting

1126
00:47:40,840 --> 00:47:46,450

worse and worse that it's that there's

1127

00:47:43,179 --> 00:47:48,009

no expectation of almost humanity on the

1128

00:47:46,449 --> 00:47:50,049

other side hmm

1129

00:47:48,010 --> 00:47:51,280

then we think that they're they're evil

1130

00:47:50,050 --> 00:47:54,160

you know the people who don't agree with

1131

00:47:51,280 --> 00:47:56,700

us are evil yeah and so you know I I

1132

00:47:54,159 --> 00:47:59,349

reserved the evil designation for the

1133

00:47:56,699 --> 00:48:03,759

for the people at the top who do know

1134

00:47:59,349 --> 00:48:06,789

better I find it really difficult to

1135

00:48:03,760 --> 00:48:10,360

believe that that the the high level

1136

00:48:06,789 --> 00:48:12,670

politicians really truly believe that

1137

00:48:10,360 --> 00:48:15,099

the science is a big conspiracy they're

1138

00:48:12,670 --> 00:48:17,289

a slave to their their voters to an

1139

00:48:15,099 --> 00:48:19,000

extent what I mean by that is if they

1140

00:48:17,289 --> 00:48:21,460

want to get back into office they're not

1141
00:48:19,000 --> 00:48:23,289
going to tip the boat too much right I

1142
00:48:21,460 --> 00:48:27,400
mean the Koch brothers who made their

1143
00:48:23,289 --> 00:48:29,889
money from fossil fuels are quite open

1144
00:48:27,400 --> 00:48:31,780
about if you don't get on board with

1145
00:48:29,889 --> 00:48:34,089
being against doing anything about

1146
00:48:31,780 --> 00:48:35,320
climate change we will support someone

1147
00:48:34,090 --> 00:48:38,110
who will run against you in the next

1148
00:48:35,320 --> 00:48:41,530
primary hmm so they've kind of got a a

1149
00:48:38,110 --> 00:48:44,530
headlock on the party because of their

1150
00:48:41,530 --> 00:48:48,760
ability to fund opponents to these

1151
00:48:44,530 --> 00:48:51,850
Republican candidates it would take a

1152
00:48:48,760 --> 00:48:53,680
lot of courage for a Republican to come

1153
00:48:51,849 --> 00:48:56,440
out and say you know it's not a

1154
00:48:53,679 --> 00:48:58,569
conspiracy yeah yeah above politics is a

1155
00:48:56,440 --> 00:49:00,789
game of compromise of course but it's

1156
00:48:58,570 --> 00:49:03,039
sad to see that it has to be so in this

1157
00:49:00,789 --> 00:49:04,449
situation and when you when you combine

1158
00:49:03,039 --> 00:49:06,880
that with the fact that in the u.s.

1159
00:49:04,449 --> 00:49:09,009
voting districts are decided by a

1160
00:49:06,880 --> 00:49:11,470
redistricting process every ten years

1161
00:49:09,010 --> 00:49:13,900
based on the US Census and in the last

1162
00:49:11,469 --> 00:49:15,309
census the Republicans controlled that

1163
00:49:13,900 --> 00:49:18,460
redistricting process and a lot of

1164
00:49:15,309 --> 00:49:19,599
states so there are many more districts

1165
00:49:18,460 --> 00:49:22,240
than there used to be that are safe

1166
00:49:19,599 --> 00:49:24,610
Republican districts so there's no

1167
00:49:22,239 --> 00:49:26,829
longer any incentive for those

1168
00:49:24,610 --> 00:49:29,019
candidates to run from the center

1169

00:49:26,829 --> 00:49:31,299
because they don't have to appeal to any

1170
00:49:29,019 --> 00:49:34,269
Democrats or independents they they only

1171
00:49:31,300 --> 00:49:35,410
have to win the Republicans in their

1172
00:49:34,269 --> 00:49:37,059
district and then they're going to win

1173
00:49:35,409 --> 00:49:38,980
the seat which they going to do anyway

1174
00:49:37,059 --> 00:49:40,539
probably unless they say you know what

1175
00:49:38,980 --> 00:49:42,070
we got to stop lying about climate

1176
00:49:40,539 --> 00:49:44,949
change then someone's gonna run from

1177
00:49:42,070 --> 00:49:47,490
there right and or or says you know what

1178
00:49:44,949 --> 00:49:50,409
Obamacare turned out not to be that bad

1179
00:49:47,489 --> 00:49:53,319
you're gonna get a primary component and

1180
00:49:50,409 --> 00:49:54,670
you're gonna lose your seat so you know

1181
00:49:53,320 --> 00:49:57,039
I don't know when the fever's gonna

1182
00:49:54,670 --> 00:49:58,690
break with that because it's so

1183
00:49:57,039 --> 00:50:01,150

dysfunctional as you can see they get

1184

00:49:58,690 --> 00:50:02,769

they win the Senate and the house and

1185

00:50:01,150 --> 00:50:04,720

the presidency and they still can't do

1186

00:50:02,769 --> 00:50:06,699

anything it's tough isn't it because

1187

00:50:04,719 --> 00:50:10,029

they've just been the party of no yeah

1188

00:50:06,699 --> 00:50:13,779

yes so yeah so that's a real problem

1189

00:50:10,030 --> 00:50:16,150

when it comes to to climate change this

1190

00:50:13,780 --> 00:50:18,160

job is one frustration after another the

1191

00:50:16,150 --> 00:50:20,590

must have but there must be nice pots

1192

00:50:18,159 --> 00:50:24,579

well again the idea of working with

1193

00:50:20,590 --> 00:50:29,769

teachers is so refreshing because most

1194

00:50:24,579 --> 00:50:32,409

of them want to teach the science and I

1195

00:50:29,769 --> 00:50:36,130

think what's what's really challenging

1196

00:50:32,409 --> 00:50:40,389

for NCSE is if we want to

1197

00:50:36,130 --> 00:50:42,849

make progress in on evolution in very

1198
00:50:40,389 --> 00:50:45,940
religious communities of which the

1199
00:50:42,849 --> 00:50:47,909
United States has many if we want to

1200
00:50:45,940 --> 00:50:52,769
make progress on climate change in

1201
00:50:47,909 --> 00:50:56,279
heavily Republican areas we have to

1202
00:50:52,769 --> 00:51:00,730
fiercely police ourselves from being a

1203
00:50:56,280 --> 00:51:02,710
good guy bad guy we just cannot be those

1204
00:51:00,730 --> 00:51:05,619
gosh-darn creationists they're they're

1205
00:51:02,710 --> 00:51:07,210
terrible they're there are anti science

1206
00:51:05,619 --> 00:51:09,039
they're in denial

1207
00:51:07,210 --> 00:51:12,699
yeah because too many people identify

1208
00:51:09,039 --> 00:51:15,670
with them and so to change our language

1209
00:51:12,699 --> 00:51:19,839
to be very inclusive to be very

1210
00:51:15,670 --> 00:51:23,440
respectful to be you know recognizing

1211
00:51:19,840 --> 00:51:27,120
that lots of people hold these what we

1212
00:51:23,440 --> 00:51:30,510
would call anti science views if you'll

1213
00:51:27,119 --> 00:51:34,480
accept my term in good faith yeah

1214
00:51:30,510 --> 00:51:37,210
they've come to them from not from a an

1215
00:51:34,480 --> 00:51:39,219
evil place but from a place that when

1216
00:51:37,210 --> 00:51:41,380
you look at it makes a lot of sense and

1217
00:51:39,219 --> 00:51:43,239
so if we want to try to change their

1218
00:51:41,380 --> 00:51:45,369
minds we have to gain their trust we

1219
00:51:43,239 --> 00:51:47,679
have to gain their respect and then we

1220
00:51:45,369 --> 00:51:50,799
can have the sort of earn the right to

1221
00:51:47,679 --> 00:51:53,739
start talking about the evidence and

1222
00:51:50,800 --> 00:51:56,500
talking about it in a way that is not

1223
00:51:53,739 --> 00:51:58,089
top-down and not here I am Joe

1224
00:51:56,500 --> 00:52:00,820
scientists coming in and telling you

1225
00:51:58,090 --> 00:52:05,140
what to think but colleague to colleague

1226

00:52:00,820 --> 00:52:06,640
or you know teacher to student of hey

1227
00:52:05,139 --> 00:52:08,889
let's go out and measure some tree rings

1228
00:52:06,639 --> 00:52:10,599
mmm I'm gonna put the science in your

1229
00:52:08,889 --> 00:52:13,569
hands I'm not going to tell you what to

1230
00:52:10,599 --> 00:52:15,789
think I'm gonna have you engaged with

1231
00:52:13,570 --> 00:52:18,880
the evidence yourself how can people

1232
00:52:15,789 --> 00:52:21,009
find out more where can the NCSE calm on

1233
00:52:18,880 --> 00:52:23,380
the web we have lots of information

1234
00:52:21,010 --> 00:52:23,920
there and of course if you become a

1235
00:52:23,380 --> 00:52:26,680
member

1236
00:52:23,920 --> 00:52:28,900
mm-hmm you can get our newsletter every

1237
00:52:26,679 --> 00:52:30,609
three months and the newsletter now

1238
00:52:28,900 --> 00:52:32,590
really focuses on what are we doing for

1239
00:52:30,610 --> 00:52:34,690
teachers what how are our booster clubs

1240
00:52:32,590 --> 00:52:36,910

doing what kinds of flare-ups have we

1241

00:52:34,690 --> 00:52:40,360

dealt with and and what's been the

1242

00:52:36,909 --> 00:52:41,679

outcome of these legislation and across

1243

00:52:40,360 --> 00:52:44,289

the United States and sometimes around

1244

00:52:41,679 --> 00:52:48,819

the world so at the the newsletter is is

1245

00:52:44,289 --> 00:52:50,980

a great way to keep up to date with what

1246

00:52:48,820 --> 00:52:53,680

we're doing and and of course the

1247

00:52:50,980 --> 00:52:55,719

website is very rich yeah well I think

1248

00:52:53,679 --> 00:52:57,429

it's applicable for science teachers no

1249

00:52:55,719 --> 00:52:59,409

matter where you are from Australia to

1250

00:52:57,429 --> 00:53:01,480

the United States to to everywhere

1251

00:52:59,409 --> 00:53:03,639

mm-hmm I think any science teacher would

1252

00:53:01,480 --> 00:53:06,280

do well to visit your site once again in

1253

00:53:03,639 --> 00:53:15,069

pleasure to be here thank you it's great

1254

00:53:06,280 --> 00:53:17,350

to see you again join us again next week

1255
00:53:15,070 --> 00:53:20,559
when Ann will discuss her work into

1256
00:53:17,349 --> 00:53:23,989
sequencing the genetic code of the 1918

1257
00:53:20,559 --> 00:53:38,438
Spanish flu epidemic

1258
00:53:23,989 --> 00:53:38,438
[Music]

1259
00:53:38,530 --> 00:53:43,430
Tuesday the 1st of August 2017 at 7:30

1260
00:53:42,860 --> 00:53:46,970
p.m.

1261
00:53:43,429 --> 00:53:49,960
Morty skeptics in the pub its how do we

1262
00:53:46,969 --> 00:53:53,509
know if Australia is effectively

1263
00:53:49,960 --> 00:54:00,889
steaming along with stem a talk by dr.

1264
00:53:53,510 --> 00:54:03,110
Christine Redman our Australian

1265
00:54:00,889 --> 00:54:05,329
education standards dropping in science

1266
00:54:03,110 --> 00:54:08,120
and maths together we will examine what

1267
00:54:05,329 --> 00:54:10,819
STEM science technology engineering and

1268
00:54:08,119 --> 00:54:13,759
mathematics and STEM education means for

1269
00:54:10,820 --> 00:54:15,980
Australia today we will review two key

1270
00:54:13,760 --> 00:54:19,550
stem people's activities and products

1271
00:54:15,980 --> 00:54:23,449
and align these to the apparent 2017

1272
00:54:19,550 --> 00:54:25,370
visions for stem in Australia dr.

1273
00:54:23,449 --> 00:54:28,069
Christine Redmond is a passionate

1274
00:54:25,369 --> 00:54:30,019
science educator she is senior lecturer

1275
00:54:28,070 --> 00:54:32,360
in science education at the Melbourne

1276
00:54:30,019 --> 00:54:35,170
Graduate School of Education University

1277
00:54:32,360 --> 00:54:35,170
of Melbourne

1278
00:54:35,690 --> 00:54:40,769
always an interesting night out at the

1279
00:54:37,980 --> 00:54:43,139
Maury Alec skeptics in the pub more the

1280
00:54:40,769 --> 00:54:47,250
Alec Sporting Club this is Tuesday the

1281
00:54:43,139 --> 00:54:49,980
1st of August 2017 at 7:30 p.m. and for

1282
00:54:47,250 --> 00:54:52,409
more information visit Morrie skeptics

1283

00:54:49,980 --> 00:54:55,860
in the pub on meetup or just follow the

1284
00:54:52,409 --> 00:55:07,009
links from this week's show notes

1285
00:54:55,860 --> 00:55:07,010
[Music]

1286
00:55:12,670 --> 00:55:17,389
thank you for listening to the skeptic

1287
00:55:15,108 --> 00:55:18,650
zone now a couple of notes to round off

1288
00:55:17,389 --> 00:55:22,039
this week's show

1289
00:55:18,650 --> 00:55:25,010
our reporter and friend and the

1290
00:55:22,039 --> 00:55:27,800
president of Australian skeptics here on

1291
00:55:25,010 --> 00:55:30,200
Segev has recently been a guest on a

1292
00:55:27,800 --> 00:55:34,220
show called space-time now this is a

1293
00:55:30,199 --> 00:55:36,588
science astronomy program online hosted

1294
00:55:34,219 --> 00:55:38,750
by Stuart Gary and for those people in

1295
00:55:36,588 --> 00:55:41,750
Australia you may remember Stuart had a

1296
00:55:38,750 --> 00:55:44,869
long-running program called star stuff

1297
00:55:41,750 --> 00:55:50,719

on ABC News radio well now he's moved

1298

00:55:44,869 --> 00:55:53,869

online and he has a regular astronomy

1299

00:55:50,719 --> 00:55:56,299

based science based podcasts so I will

1300

00:55:53,869 --> 00:55:58,789

put a link in the show notes and you can

1301

00:55:56,300 --> 00:56:01,700

hear that terrific podcast and enjoy the

1302

00:55:58,789 --> 00:56:04,190

contributions by Iran so give speaking

1303

00:56:01,699 --> 00:56:06,108

about being on the radio I'll also add

1304

00:56:04,190 --> 00:56:09,139

another link in this week's show notes

1305

00:56:06,108 --> 00:56:10,848

to my recent appearance here on Sydney

1306

00:56:09,139 --> 00:56:13,190

radio which is syndicated around the

1307

00:56:10,849 --> 00:56:16,130

country it's an early morning very early

1308

00:56:13,190 --> 00:56:19,519

morning really early morning radio show

1309

00:56:16,130 --> 00:56:22,670

but it's nice to be on the air so to

1310

00:56:19,519 --> 00:56:24,139

speak and heard around the country now

1311

00:56:22,670 --> 00:56:27,079

it's worth noting and we might be

1312
00:56:24,139 --> 00:56:29,779
chasing this story up that the VAX

1313
00:56:27,079 --> 00:56:31,970
bus or team or something like that I

1314
00:56:29,780 --> 00:56:34,460
here in Australia at the moment causing

1315
00:56:31,969 --> 00:56:37,789
controversy which is what they want to

1316
00:56:34,460 --> 00:56:40,190
do going around the country screening

1317
00:56:37,789 --> 00:56:44,539
the movie the documentary the

1318
00:56:40,190 --> 00:56:46,880
pseudo-documentary waxed and I noticed

1319
00:56:44,539 --> 00:56:50,869
dr. Aichi in fact put a couple of videos

1320
00:56:46,880 --> 00:56:52,608
up online of the VAX team basically

1321
00:56:50,869 --> 00:56:54,200
whinging and whining that they're not

1322
00:56:52,608 --> 00:56:56,809
getting the press coverage they deserve

1323
00:56:54,199 --> 00:56:59,539
and yada yada yada I think that might be

1324
00:56:56,809 --> 00:57:01,489
a story we'll be looking at pretty soon

1325
00:56:59,539 --> 00:57:04,639
another thank you for those kind people

1326
00:57:01,489 --> 00:57:06,739
who use patreon or PayPal micro payments

1327
00:57:04,639 --> 00:57:08,629
to help support the sceptic zone of

1328
00:57:06,739 --> 00:57:12,559
course there would be no show without

1329
00:57:08,630 --> 00:57:15,318
you so you know what all those people

1330
00:57:12,559 --> 00:57:17,059
who did contribute or do contribute on

1331
00:57:15,318 --> 00:57:20,150
an ongoing basis I think you deserve

1332
00:57:17,059 --> 00:57:22,369
something really nice mmm nice to eat

1333
00:57:20,150 --> 00:57:24,619
something maybe a bit chocolatey what

1334
00:57:22,369 --> 00:57:24,829
the hell why not so why don't you all go

1335
00:57:24,619 --> 00:57:28,519
out

1336
00:57:24,829 --> 00:57:30,048
buy yourself a nice easter egg until

1337
00:57:28,518 --> 00:57:37,488
next week this is Richard Saunders

1338
00:57:30,048 --> 00:57:39,108
signing off from Sydney Australia you've

1339
00:57:37,489 --> 00:57:43,130
been listening to the skeptic zone

1340

00:57:39,108 --> 00:57:46,009
podcast visit our website at WWF eggs on

1341
00:57:43,130 --> 00:57:49,910
TV for contacts an archive of all

1342
00:57:46,009 --> 00:57:52,190
episodes since 2008 and our online store

1343
00:57:49,909 --> 00:57:54,909
please support the skeptic zone by

1344
00:57:52,190 --> 00:57:57,920
following us on twitter at skeptic zone

1345
00:57:54,909 --> 00:57:59,298
liking us on facebook and leaving a

1346
00:57:57,920 --> 00:58:01,519
review on itunes

1347
00:57:59,298 --> 00:58:04,309
you can also show your support by

1348
00:58:01,518 --> 00:58:07,939
subscribing via paypal for as little as

1349
00:58:04,309 --> 00:58:10,130
99 cents a week the skeptic zone is an

1350
00:58:07,940 --> 00:58:12,048
independent production the views and

1351
00:58:10,130 --> 00:58:14,269
opinions expressed on the skeptic zone

1352
00:58:12,048 --> 00:58:17,119
are not necessarily those of Australian

1353
00:58:14,268 --> 00:58:19,958
skeptic League or any other sceptical

1354
00:58:17,119 --> 00:58:19,959

organisation

1355

00:58:20,659 --> 00:58:30,559

I may not hit don't you go anywhere

1356

00:58:28,820 --> 00:58:32,690

don't touch that forward button don't ah

1357

00:58:30,559 --> 00:58:34,750

we've got something for you some people

1358

00:58:32,690 --> 00:58:37,940

call it an easter egg let's call this a

1359

00:58:34,750 --> 00:58:41,599

Maynard egg cast your mind back uh no

1360

00:58:37,940 --> 00:58:44,269

like just go in the time machine back to

1361

00:58:41,599 --> 00:58:48,319

a time before reason a time before

1362

00:58:44,269 --> 00:58:51,340

electricity a time before auto-tuning

1363

00:58:48,320 --> 00:58:55,190

for lead vocals Sunday the 12th of April

1364

00:58:51,340 --> 00:59:19,130

1992 the place triple j the show Sunday

1365

00:58:55,190 --> 00:59:20,659

afternoon fever I am well into the new

1366

00:59:19,130 --> 00:59:25,730

album from there might be giant Apollo

1367

00:59:20,659 --> 00:59:27,739

18 but then the show took a very strange

1368

00:59:25,730 --> 00:59:30,170

turn just after three o'clock just as I

1369
00:59:27,739 --> 00:59:31,549
was about to interview a born-again to

1370
00:59:30,170 --> 00:59:33,500
do their last interview before they went

1371
00:59:31,550 --> 00:59:35,539
to the UK to become fabulously

1372
00:59:33,500 --> 00:59:37,340
successful my producer Anne Murray

1373
00:59:35,539 --> 00:59:39,529
signaled me and there was a caller

1374
00:59:37,340 --> 00:59:41,720
called Rachel on the line who want to

1375
00:59:39,530 --> 00:59:45,650
tell me something she'd recently done

1376
00:59:41,719 --> 00:59:48,779
that was very very exciting

1377
00:59:45,650 --> 00:59:51,539
[Music]

1378
00:59:48,780 --> 00:59:53,010
am I wrong again is that Rachel hi right

1379
00:59:51,539 --> 00:59:55,920
so you've had a mind-blowing experience

1380
00:59:53,010 --> 00:59:57,360
over the week I have dreams they make

1381
00:59:55,920 --> 00:59:59,280
please you've had three mind-blowing

1382
00:59:57,360 --> 01:00:01,110
experiences hey I want your dealers

1383
00:59:59,280 --> 01:00:03,210
number what's the story Rachel I've been

1384
01:00:01,110 --> 01:00:05,190
Neil Diamond three times Maynard Neil

1385
01:00:03,210 --> 01:00:08,400
Diamond three times and you went back

1386
01:00:05,190 --> 01:00:10,289
for the second and the third yes I did

1387
01:00:08,400 --> 01:00:11,670
now you did you work with the hell is

1388
01:00:10,289 --> 01:00:13,679
that why you saw him so often oh yeah

1389
01:00:11,670 --> 01:00:15,389
but I would have paid if I had to you

1390
01:00:13,679 --> 01:00:17,789
would have paid twice I wouldn't pay

1391
01:00:15,389 --> 01:00:20,969
three times insane it was so wild about

1392
01:00:17,789 --> 01:00:22,409
Neil Diamond he's very sexy sexy after

1393
01:00:20,969 --> 01:00:23,639
all this time not telling anything I

1394
01:00:22,409 --> 01:00:25,289
don't know there whenever people think

1395
01:00:23,639 --> 01:00:27,480
of sex I think of Neil Diamond

1396
01:00:25,289 --> 01:00:29,039
immediately definitely know what

1397

01:00:27,480 --> 01:00:31,050
actually did make me so sexy this time

1398
01:00:29,039 --> 01:00:33,599
around there was no underpants involved

1399
01:00:31,050 --> 01:00:35,430
which was a surprise but mama I know it

1400
01:00:33,599 --> 01:00:37,529
was above a bit I don't know he's just

1401
01:00:35,429 --> 01:00:39,419
got this aura around him may not and

1402
01:00:37,530 --> 01:00:41,160
everyone screamed and it was just wild

1403
01:00:39,420 --> 01:00:45,059
people screamed at Neil Diamond

1404
01:00:41,159 --> 01:00:47,339
absolutely all that screaming yeah no no

1405
01:00:45,059 --> 01:00:49,139
no not get off just I don't know Neil

1406
01:00:47,340 --> 01:00:51,450
probably what was the highlight of the

1407
01:00:49,139 --> 01:00:53,369
evening oh that's a hard one I mean

1408
01:00:51,449 --> 01:00:55,739
songs on blue was wild

1409
01:00:53,369 --> 01:00:57,269
and hot ogres no it was definitely very

1410
01:00:55,739 --> 01:00:59,039
hot and sexy but of course the question

1411
01:00:57,269 --> 01:01:00,480

I want answered me because losing me

1412

01:00:59,039 --> 01:01:02,639

this doesn't get tickets and gonca

1413

01:01:00,480 --> 01:01:05,690

tickets gets all over but I tell you did

1414

01:01:02,639 --> 01:01:05,690

he open with the crunchy granola

1415

01:01:08,389 --> 01:01:14,269

sweeties best song I know the lyrics

1416

01:01:11,010 --> 01:01:14,270

don't come into that halfway through

1417

01:01:15,079 --> 01:01:20,009

because look at the long introduction

1418

01:01:16,860 --> 01:01:22,019

you guys did it and then he sort of

1419

01:01:20,010 --> 01:01:25,260

wanders on the stage oh yeah the one you

1420

01:01:22,019 --> 01:01:27,059

play before day for a day yeah oh you

1421

01:01:25,260 --> 01:01:28,680

just said he didn't I know I'm lying he

1422

01:01:27,059 --> 01:01:30,119

did and it was wild look you could be

1423

01:01:28,679 --> 01:01:32,730

like me Mon I've even seen you could

1424

01:01:30,119 --> 01:01:36,179

just be pulling my cousin I mean I would

1425

01:01:32,730 --> 01:01:37,320

no I'm not okay well look that Neil was

1426
01:01:36,179 --> 01:01:38,759
pretty big look we looked around the

1427
01:01:37,320 --> 01:01:39,690
triple del RB in a few minutes we had

1428
01:01:38,760 --> 01:01:41,010
while you're on the phone we couldn't

1429
01:01:39,690 --> 01:01:43,440
find any nail Diamond we could even find

1430
01:01:41,010 --> 01:01:45,300
ups and downs doing style true man find

1431
01:01:43,440 --> 01:01:47,250
anything but I understand the cure are a

1432
01:01:45,300 --> 01:01:49,650
supporting new line takes European to us

1433
01:01:47,250 --> 01:01:50,969
we're gonna buy them like they're

1434
01:01:49,650 --> 01:01:52,230
fighting over who gets top billing but

1435
01:01:50,969 --> 01:01:53,909
you know I think they'll probably win it

1436
01:01:52,230 --> 01:01:55,230
out there oh I think it's my fake face

1437
01:01:53,909 --> 01:01:59,609
so in one word well how would you

1438
01:01:55,230 --> 01:02:01,380
describe nailed are me sexy dr. Rachel

1439
01:01:59,610 --> 01:02:04,230
cyan't lead say it proud

1440
01:02:01,380 --> 01:02:07,590
I love Neil Diamond all the way from

1441
01:02:04,230 --> 01:02:10,230
1992 to you can hear more on Sunday

1442
01:02:07,590 --> 01:02:12,360
afternoon fever at Manor calm dot are

1443
01:02:10,230 --> 01:02:14,280
you but I think dr. H was only on the

1444
01:02:12,360 --> 01:02:16,230
one show I mean I know she rang wants to

1445
01:02:14,280 --> 01:02:20,600
tell me about her undies but that story

1446
01:02:16,230 --> 01:02:20,599
boys and girls is for another time