

**SKEPTIC
ZONE**



**THINKING CAPS
MUST BE WORN
IN THIS AREA**

The
Podcast
from
Australia
for
Science
and
Reason

www.skepticzone.tv

1
00:00:27,790 --> 00:00:23,360
hello and welcome to the skeptics own

2
00:00:30,800 --> 00:00:27,800
episode number 36 for the 26th of june

3
00:00:32,659 --> 00:00:30,810
2009 Richard Saunders here with you in

4
00:00:35,630 --> 00:00:32,669
today's episode we have an interview

5
00:00:38,960 --> 00:00:35,640
with Theo Clark now Theo Clark and his

6
00:00:42,440 --> 00:00:38,970
dad Jeff Clark produce a podcast called

7
00:00:43,790 --> 00:00:42,450
hunting humbug 101 all about logical

8
00:00:47,000 --> 00:00:43,800
fallacies and we'll get to that

9
00:00:49,280 --> 00:00:47,010
interview soon and after that we have a

10
00:00:52,729 --> 00:00:49,290
talk by Kylie Sturgis a talk she gave

11
00:00:55,640 --> 00:00:52,739
last year belief in weird things recent

12
00:00:58,340 --> 00:00:55,650
developments and educational directions

13
00:01:11,240 --> 00:00:58,350

so sit back have a glass of nice cold

14

00:01:16,170 --> 00:01:14,130

Theo Clark is a former teacher who now

15

00:01:18,600 --> 00:01:16,180

writes science curriculum in the state

16

00:01:21,480 --> 00:01:18,610

of Queensland Australia he is co-author

17

00:01:24,270 --> 00:01:21,490

of humbug skeptics guide to spotting

18

00:01:27,630 --> 00:01:24,280

fallacies in thinking and produces a

19

00:01:29,430 --> 00:01:27,640

podcast hunting humbug 101 he still

20

00:01:33,020 --> 00:01:29,440

tells people he's a teacher rather than

21

00:01:41,490 --> 00:01:33,030

a bureaucrat you can check him out at ww

22

00:01:44,040 --> 00:01:41,500

skeptics field guide net and joining me

23

00:01:46,680 --> 00:01:44,050

now from sunny Brisbane in Queensland

24

00:01:48,960 --> 00:01:46,690

Australia is Theo Clark hello Theo g'day

25

00:01:51,510 --> 00:01:48,970

Richard it's great to be with you yeah

26
00:01:52,860 --> 00:01:51,520
about time too I and your pot I've been

27
00:01:55,770 --> 00:01:52,870
listening to your podcast for quite a

28
00:01:58,050 --> 00:01:55,780
long time now the hunting humbug 101 a

29
00:02:00,000 --> 00:01:58,060
couple of questions now this is based on

30
00:02:02,910 --> 00:02:00,010
the book the skeptics guide to spotting

31
00:02:05,790 --> 00:02:02,920
fallacies in thinking what what what

32
00:02:09,000 --> 00:02:05,800
made you and your dad Jeff decide to

33
00:02:11,699 --> 00:02:09,010
create such a book yeah well it's kind

34
00:02:13,979 --> 00:02:11,709
of an ongoing project i guess and dad

35
00:02:17,040 --> 00:02:13,989
was probably my father jeff was probably

36
00:02:19,320 --> 00:02:17,050
one who instigated it in some of the

37
00:02:22,620 --> 00:02:19,330
courses he was teaching at a particular

38
00:02:25,020 --> 00:02:22,630

University up here in Brisbane woollen

39

00:02:29,310 --> 00:02:25,030

malulu let's call it that for now and

40

00:02:31,350 --> 00:02:29,320

and basically you know marking students

41

00:02:33,479 --> 00:02:31,360

essays and so on he explained to them in

42

00:02:35,190 --> 00:02:33,489

detail why they were making mistakes and

43

00:02:36,540 --> 00:02:35,200

reasoning and instead of just being able

44

00:02:38,759 --> 00:02:36,550

to use a single term he'd have to you

45

00:02:39,990 --> 00:02:38,769

know outline it and repeat it and he

46

00:02:42,449 --> 00:02:40,000

just got sick of it happening so he

47

00:02:45,630 --> 00:02:42,459

initially made a small kind of you know

48

00:02:47,310 --> 00:02:45,640

worksheet on fallacies and then from

49

00:02:50,160 --> 00:02:47,320

just our conversations we had when I

50

00:02:53,430 --> 00:02:50,170

came back from teaching overseas on the

51
00:02:55,100 --> 00:02:53,440
UK in 2004 we just just started building

52
00:02:57,390 --> 00:02:55,110
up and said why don't we write a book

53
00:03:00,050 --> 00:02:57,400
you know because all the other logic

54
00:03:04,380 --> 00:03:00,060
books you see a very dry and technical

55
00:03:05,520 --> 00:03:04,390
and they and you know there was very

56
00:03:07,110 --> 00:03:05,530
good books out there but a lot of them

57
00:03:09,630 --> 00:03:07,120
are quite expensive too so the lessons

58
00:03:11,490 --> 00:03:09,640
make any expensive guidebook and we

59
00:03:13,410 --> 00:03:11,500
framed it around the idea of just you

60
00:03:15,630 --> 00:03:13,420
know you're hunting for fallacies you're

61
00:03:17,970 --> 00:03:15,640
looking for fallacies and more of a

62
00:03:19,650 --> 00:03:17,980
sport I suppose than the necessary the

63
00:03:22,950 --> 00:03:19,660

whole philosophical background from

64

00:03:24,840 --> 00:03:22,960

fallacies en right and it's interesting

65

00:03:28,620 --> 00:03:24,850

i have a very early copy of your book

66

00:03:31,260 --> 00:03:28,630

here in front of me now the there are

67

00:03:33,060 --> 00:03:31,270

many logical fallacies as described in

68

00:03:36,210 --> 00:03:33,070

the book and and your podcast which

69

00:03:38,820 --> 00:03:36,220

we'll get to in a moment did you and

70

00:03:41,040 --> 00:03:38,830

your dad come up with the terms for

71

00:03:43,620 --> 00:03:41,050

these fallacies or they known already

72

00:03:46,410 --> 00:03:43,630

know I'm example because it we've got

73

00:03:48,530 --> 00:03:46,420

the the false compromise the burden of

74

00:03:51,930 --> 00:03:48,540

proof gibberish moving the goalpost

75

00:03:56,610 --> 00:03:51,940

special pleading cultural origins false

76
00:03:58,860 --> 00:03:56,620
analogy and so on and goes so these were

77
00:04:00,270 --> 00:03:58,870
sort of known yeah I mean they're out

78
00:04:01,880 --> 00:04:00,280
there and there's many different ways of

79
00:04:04,410 --> 00:04:01,890
classifying and we just went from

80
00:04:06,930 --> 00:04:04,420
alphabetical order and then decide terms

81
00:04:09,960 --> 00:04:06,940
we just thought well let's just we use

82
00:04:11,880 --> 00:04:09,970
either common ones or we went for just

83
00:04:14,010 --> 00:04:11,890
versions of them that we found appealing

84
00:04:15,120 --> 00:04:14,020
or more memorable but yes certainly or

85
00:04:17,400 --> 00:04:15,130
like all those ones you listed yeah

86
00:04:19,890 --> 00:04:17,410
they're well-known terms are some of the

87
00:04:22,290 --> 00:04:19,900
other ones we went for such as false

88
00:04:24,750 --> 00:04:22,300

positioning that's more commonly known

89

00:04:28,140 --> 00:04:24,760

as straw man so in the ebook edition of

90

00:04:29,250 --> 00:04:28,150

the book which is on the web we went for

91

00:04:30,060 --> 00:04:29,260

straw man because we thought well

92

00:04:32,250 --> 00:04:30,070

actually it's a better description

93

00:04:34,560 --> 00:04:32,260

anyway it's more memorable so yeah I

94

00:04:36,330 --> 00:04:34,570

mean we haven't in the book we haven't

95

00:04:40,230 --> 00:04:36,340

really come up with any too many new

96

00:04:42,720 --> 00:04:40,240

ones but probably I think the Internet

97

00:04:46,290 --> 00:04:42,730

has spawned people have come up with new

98

00:04:47,610 --> 00:04:46,300

ways of speaking rubbish and so the

99

00:04:49,050 --> 00:04:47,620

Internet has spawned two new one so

100

00:04:51,180 --> 00:04:49,060

we've coined some more satirical ones

101
00:04:53,340 --> 00:04:51,190
too like WTF fallacy which is you know

102
00:04:55,740 --> 00:04:53,350
technically not a fallacy yes just when

103
00:04:56,909 --> 00:04:55,750
people are making absolutely rubbish she

104
00:04:58,650 --> 00:04:56,919
just there's a certain perfect we've

105
00:05:02,040 --> 00:04:58,660
gotta withdraw otherwise you don't go to

106
00:05:03,210 --> 00:05:02,050
sleep so you can claim wtfm on but

107
00:05:04,740 --> 00:05:03,220
that's you know that's a bit more

108
00:05:06,930 --> 00:05:04,750
satirical bit tongue-in-cheek but I

109
00:05:08,909 --> 00:05:06,940
think yeah I mean these are well-known

110
00:05:10,110 --> 00:05:08,919
out there and there's probably many

111
00:05:12,240 --> 00:05:10,120
different ways of classifying many

112
00:05:14,159 --> 00:05:12,250
different terms and one of the things we

113
00:05:16,140 --> 00:05:14,169

talk to students about two is don't get

114

00:05:18,090 --> 00:05:16,150

hung up on the name get hung up on

115

00:05:20,670 --> 00:05:18,100

explaining why their reasoning is poor

116

00:05:22,320 --> 00:05:20,680

the name is how do you remember it and

117

00:05:23,490 --> 00:05:22,330

he classified but really the important

118

00:05:25,830 --> 00:05:23,500

thing is to actually think about where

119

00:05:27,240 --> 00:05:25,840

the error in reasoning is so that's

120

00:05:29,880 --> 00:05:27,250

probably the focus so i suppose in our

121

00:05:31,620 --> 00:05:29,890

podcast to is to you know these things

122

00:05:33,100 --> 00:05:31,630

aren't black and white which particular

123

00:05:35,380 --> 00:05:33,110

fallacy someone is because people

124

00:05:37,510 --> 00:05:35,390

sum up so just try and reflect on the

125

00:05:40,330 --> 00:05:37,520

reason or lack of in someone's argument

126
00:05:42,220 --> 00:05:40,340
and that's what comes through certainly

127
00:05:44,290 --> 00:05:42,230
the podcast and probably on our website

128
00:05:45,850 --> 00:05:44,300
and the books you know just meant to be

129
00:05:48,460 --> 00:05:45,860
a fun way to introduce people so that I

130
00:05:50,530 --> 00:05:48,470
suppose so yes the podcast is

131
00:05:52,690 --> 00:05:50,540
fascinating because really every episode

132
00:05:55,870 --> 00:05:52,700
looks at a different fallacy and

133
00:05:57,880 --> 00:05:55,880
thinking or logical fallacy so you read

134
00:06:00,820 --> 00:05:57,890
a little bit from the book you and your

135
00:06:03,790 --> 00:06:00,830
dad Jeff yep and then you go on with a

136
00:06:05,830 --> 00:06:03,800
more in-depth explanation as to why this

137
00:06:09,070 --> 00:06:05,840
is a fallacy and thinking yeah well I

138
00:06:11,200 --> 00:06:09,080

think the internet you know first of all

139

00:06:13,300 --> 00:06:11,210

when it started you know really taking

140

00:06:14,940 --> 00:06:13,310

off with web 2.0 with blogs and psalm

141

00:06:17,170 --> 00:06:14,950

was a really good way to start off the

142

00:06:20,200 --> 00:06:17,180

explaining fallacies in more detail and

143

00:06:21,820 --> 00:06:20,210

using um real examples because that's

144

00:06:23,620 --> 00:06:21,830

one thing we try and do is use real

145

00:06:24,580 --> 00:06:23,630

examples whereas again a lot of

146

00:06:26,620 --> 00:06:24,590

textbooks and that they're made-up

147

00:06:28,600 --> 00:06:26,630

contrived example so they're not really

148

00:06:30,700 --> 00:06:28,610

that useful for the real world because

149

00:06:32,160 --> 00:06:30,710

the real world is more complicated so

150

00:06:35,500 --> 00:06:32,170

that's where it started and then

151
00:06:36,880 --> 00:06:35,510
essentially the podcast was you know we

152
00:06:39,160 --> 00:06:36,890
have these conversations I'm sure you're

153
00:06:40,390 --> 00:06:39,170
the same you need is you think taking

154
00:06:41,740 --> 00:06:40,400
the pub and you have these conversations

155
00:06:43,210 --> 00:06:41,750
with people you think is a great

156
00:06:45,880 --> 00:06:43,220
conversation if only more people could

157
00:06:48,480 --> 00:06:45,890
hear it very a testicle of course but

158
00:06:51,520 --> 00:06:48,490
that's probably where it came from and

159
00:06:53,050 --> 00:06:51,530
in terms of elucidating or explaining

160
00:06:55,330 --> 00:06:53,060
something when you're right it takes a

161
00:06:57,640 --> 00:06:55,340
long time but when you speak it's very

162
00:06:59,710 --> 00:06:57,650
short now in hindsight editing a podcast

163
00:07:02,080 --> 00:06:59,720

I know I don't need to tell you okay

164

00:07:03,760 --> 00:07:02,090

that's actually takes some time but I

165

00:07:05,440 --> 00:07:03,770

think it's just it's more engaging and

166

00:07:06,700 --> 00:07:05,450

more interesting so even just the amount

167

00:07:09,460 --> 00:07:06,710

of feedback we've gotten from people

168

00:07:11,050 --> 00:07:09,470

just been doing a podcast it's you know

169

00:07:12,550 --> 00:07:11,060

I haven't done a proper scientific study

170

00:07:13,720 --> 00:07:12,560

and I've got my own personal biases but

171

00:07:15,490 --> 00:07:13,730

certainly I've gotten a lot more

172

00:07:17,170 --> 00:07:15,500

feedback in the short time I've been

173

00:07:18,280 --> 00:07:17,180

doing a podcast and we're just from the

174

00:07:20,470 --> 00:07:18,290

website which you've had up for about

175

00:07:22,720 --> 00:07:20,480

three or four years so I think that

176

00:07:24,640 --> 00:07:22,730

medium just allows you to really get

177

00:07:27,190 --> 00:07:24,650

into the nuts and bolts of it quicker

178

00:07:29,020 --> 00:07:27,200

and with more detail if not as

179

00:07:31,210 --> 00:07:29,030

necessarily and well thought out because

180

00:07:32,290 --> 00:07:31,220

I'm sure you agree sometimes when you

181

00:07:34,150 --> 00:07:32,300

listen back to some of the things you

182

00:07:36,610 --> 00:07:34,160

say you think what did I say that too

183

00:07:40,600 --> 00:07:36,620

late well I at least get to edit out my

184

00:07:44,230 --> 00:07:40,610

bits because I duality and are yeah my

185

00:07:46,000 --> 00:07:44,240

stack the deck nicely I see I see she

186

00:07:46,870 --> 00:07:46,010

actually said that if I should have said

187

00:07:49,930 --> 00:07:46,880

that you're using

188

00:07:53,370 --> 00:07:49,940

I mean it's very important I think for

189

00:07:56,980 --> 00:07:53,380

people interested in skepticism to

190

00:07:58,150 --> 00:07:56,990

listen to your podcast and have access

191

00:08:00,670 --> 00:07:58,160

to your book now your books available

192

00:08:03,100 --> 00:08:00,680

online as an e-book yeah as an e-book

193

00:08:05,020 --> 00:08:03,110

yeah that was again we thought you know

194

00:08:07,930 --> 00:08:05,030

the Internet has really changed the

195

00:08:10,810 --> 00:08:07,940

dynamic of how you are get information

196

00:08:12,190 --> 00:08:10,820

out there and you know the old models of

197

00:08:13,570 --> 00:08:12,200

trying to make money off stuff don't

198

00:08:16,660 --> 00:08:13,580

really work the way they used to use

199

00:08:18,580 --> 00:08:16,670

people want information for free and we

200

00:08:20,710 --> 00:08:18,590

didn't write the book you know to get

201
00:08:23,110 --> 00:08:20,720
minted from it off boog on fallacies and

202
00:08:25,750 --> 00:08:23,120
not really probably making much money so

203
00:08:27,580 --> 00:08:25,760
once we thought we'll put up the e-book

204
00:08:29,590 --> 00:08:27,590
version so people can use to get to the

205
00:08:32,200 --> 00:08:29,600
fallacies and so on it is a little bit

206
00:08:34,420 --> 00:08:32,210
dead like the introductions gone the

207
00:08:36,670 --> 00:08:34,430
introduction in the paperbacks are more

208
00:08:38,680 --> 00:08:36,680
detailed and so on but you know it's

209
00:08:41,320 --> 00:08:38,690
let's get it out there if people want to

210
00:08:42,430 --> 00:08:41,330
use it in lectures or at schools and

211
00:08:44,400 --> 00:08:42,440
things like that they can print off a

212
00:08:46,810 --> 00:08:44,410
particular fallacy and look at it

213
00:08:48,400 --> 00:08:46,820

because at the end of the day as you

214

00:08:50,740 --> 00:08:48,410

said it's so important that we have

215

00:08:53,020 --> 00:08:50,750

people starting to think critically

216

00:08:56,920 --> 00:08:53,030

about things and being a bit skeptical i

217

00:08:59,290 --> 00:08:56,930

think so i think it's it's very good to

218

00:09:01,090 --> 00:08:59,300

know and and i'm trying to remember if

219

00:09:03,630 --> 00:09:01,100

you made this point in your podcast you

220

00:09:07,030 --> 00:09:03,640

probably have felt a greater pork okay

221

00:09:10,590 --> 00:09:07,040

that we as skeptics and critical

222

00:09:13,600 --> 00:09:10,600

thinkers should be familiar with these

223

00:09:16,120 --> 00:09:13,610

logical fallacies in order if nothing

224

00:09:19,570 --> 00:09:16,130

else in order that we don't commit them

225

00:09:21,670 --> 00:09:19,580

ourselves absolutely yeah and and not

226

00:09:23,410 --> 00:09:21,680

that's certainly one major thing and

227

00:09:26,290 --> 00:09:23,420

that's what we said an introduction to

228

00:09:28,090 --> 00:09:26,300

the book is that you know one of the

229

00:09:30,250 --> 00:09:28,100

things about constructing an argument

230

00:09:32,200 --> 00:09:30,260

now there's those books on how to

231

00:09:34,390 --> 00:09:32,210

construct name or we week went the other

232

00:09:36,100 --> 00:09:34,400

way we thought well if you learn how to

233

00:09:38,080 --> 00:09:36,110

get rid of the bad point of an argument

234

00:09:40,480 --> 00:09:38,090

kind of by default you're only left with

235

00:09:42,910 --> 00:09:40,490

the good ones so that's a bit of a

236

00:09:44,980 --> 00:09:42,920

shortcut to making sure an argument that

237

00:09:46,450 --> 00:09:44,990

you're constructing is is valid one of

238

00:09:49,390 --> 00:09:46,460

course you can use it for devious ends

239

00:09:51,520 --> 00:09:49,400

to done deliberately employ them for

240

00:09:53,620 --> 00:09:51,530

your own benefit but you know at the end

241

00:09:54,910 --> 00:09:53,630

of the day even if you're just aware of

242

00:09:56,380 --> 00:09:54,920

their there are these things called

243

00:09:58,030 --> 00:09:56,390

fallacies out there because a lot of

244

00:10:00,160 --> 00:09:58,040

people you talk to them they don't even

245

00:10:00,690 --> 00:10:00,170

realize there's things you can you can

246

00:10:03,030 --> 00:10:00,700

make a

247

00:10:04,590 --> 00:10:03,040

document that is gonna go I have a gut

248

00:10:06,150 --> 00:10:04,600

feeling that someone's telling them

249

00:10:08,070 --> 00:10:06,160

rubbish but they don't really understand

250

00:10:09,960 --> 00:10:08,080

that you can construct an argument based

251
00:10:13,170 --> 00:10:09,970
on premises and have a conclusion and

252
00:10:14,670 --> 00:10:13,180
things like that so it's it's I suppose

253
00:10:16,410 --> 00:10:14,680
it's just like a language another

254
00:10:19,230 --> 00:10:16,420
language to speak and adds another tool

255
00:10:20,840 --> 00:10:19,240
to your intellectual toolkit I guess if

256
00:10:24,750 --> 00:10:20,850
you if you're aware of these fallacies

257
00:10:27,450 --> 00:10:24,760
and just just the general idea of trying

258
00:10:30,360 --> 00:10:27,460
to put links together to make an

259
00:10:33,030 --> 00:10:30,370
argument make sense and since listening

260
00:10:35,130 --> 00:10:33,040
to your podcast and reading your book it

261
00:10:38,520 --> 00:10:35,140
is difficult i will have to admit it is

262
00:10:40,020 --> 00:10:38,530
difficult to keep all these in mind when

263
00:10:41,640 --> 00:10:40,030

you're talking to somebody and quite

264

00:10:43,350 --> 00:10:41,650

often someone will make a logical

265

00:10:45,150 --> 00:10:43,360

fallacy although employ something like

266

00:10:46,470 --> 00:10:45,160

the browbeating which you explain in

267

00:10:49,920 --> 00:10:46,480

your book or whatever the case may be

268

00:10:51,770 --> 00:10:49,930

and quite often it's very hard to catch

269

00:10:53,880 --> 00:10:51,780

it as it happens because you absolutely

270

00:10:55,500 --> 00:10:53,890

concentrating on the on the conversation

271

00:10:57,270 --> 00:10:55,510

or the argument you're trying to think

272

00:10:59,460 --> 00:10:57,280

of your point of view and suddenly

273

00:11:02,220 --> 00:10:59,470

they'll sneak in even without knowing it

274

00:11:03,270 --> 00:11:02,230

some outrageous logical fallacy and yes

275

00:11:05,610 --> 00:11:03,280

they can go right over your head

276

00:11:07,590 --> 00:11:05,620

sometimes yeah I'm and that's the thing

277

00:11:10,560 --> 00:11:07,600

is to not get hung up on it on the in

278

00:11:12,690 --> 00:11:10,570

the actual point in time and also to be

279

00:11:14,190 --> 00:11:12,700

happy to say something look I've taken

280

00:11:15,810 --> 00:11:14,200

on what you're saying but I really can't

281

00:11:17,090 --> 00:11:15,820

respond to at this point I need a bit of

282

00:11:19,860 --> 00:11:17,100

time to think about what you're saying

283

00:11:22,190 --> 00:11:19,870

because in the heat of an argument you

284

00:11:24,510 --> 00:11:22,200

know people don't often think to do that

285

00:11:26,550 --> 00:11:24,520

but also yeah i mean really don't get

286

00:11:28,110 --> 00:11:26,560

hung up on the terms so much just just

287

00:11:30,390 --> 00:11:28,120

try and think about why what did they

288

00:11:33,150 --> 00:11:30,400

say that didn't make much sense can i

289

00:11:34,440 --> 00:11:33,160

dissect it probably the main thing when

290

00:11:37,380 --> 00:11:34,450

you're actually discussing something

291

00:11:38,400 --> 00:11:37,390

with someone in real time the number one

292

00:11:40,470 --> 00:11:38,410

thing I've noticed especially when I

293

00:11:42,150 --> 00:11:40,480

listen to you know debates between

294

00:11:43,670 --> 00:11:42,160

prominent thinkers let like you know

295

00:11:46,830 --> 00:11:43,680

Richard Dawkins and somebody or what

296

00:11:49,890 --> 00:11:46,840

they really let them go off topic

297

00:11:50,970 --> 00:11:49,900

straight away and so that's probably

298

00:11:52,740 --> 00:11:50,980

that's what you know moving the

299

00:11:54,030 --> 00:11:52,750

goalposts and that's will be the main

300

00:11:55,410 --> 00:11:54,040

tactic people you so that's really

301

00:11:57,360 --> 00:11:55,420

important it's just say no this was a

302

00:11:58,920 --> 00:11:57,370

point we're addressing you have an

303

00:12:00,870 --> 00:11:58,930

answer that yet stay on it so you know

304

00:12:03,060 --> 00:12:00,880

good journals journals will do that with

305

00:12:04,800 --> 00:12:03,070

politicians you know how try to do if

306

00:12:06,600 --> 00:12:04,810

they try to do a politician not although

307

00:12:07,680 --> 00:12:06,610

they'll admit defeat they'll go okay

308

00:12:09,120 --> 00:12:07,690

you're not going to answer that but at

309

00:12:11,730 --> 00:12:09,130

least they've said you haven't answered

310

00:12:12,690 --> 00:12:11,740

that whereas the slippery people the one

311

00:12:14,380 --> 00:12:12,700

so you just shift the conversation

312

00:12:15,640 --> 00:12:14,390

slowly and you don't

313

00:12:17,950 --> 00:12:15,650

lies that you've actually moved off

314

00:12:20,200 --> 00:12:17,960

topic so there's some little tactics but

315

00:12:22,750 --> 00:12:20,210

again when I wrote the book for example

316

00:12:25,810 --> 00:12:22,760

I wasn't as good at it as good at it as

317

00:12:28,090 --> 00:12:25,820

I am now and that's just because by

318

00:12:30,070 --> 00:12:28,100

doing a website and practicing it and

319

00:12:31,600 --> 00:12:30,080

looking at it and doing it over time you

320

00:12:35,080 --> 00:12:31,610

just get better you know you hope you

321

00:12:36,520 --> 00:12:35,090

get better anyway so yeah I people don't

322

00:12:38,440 --> 00:12:36,530

you know don't stress over just think

323

00:12:40,390 --> 00:12:38,450

it's an ongoing thing you know lifelong

324

00:12:41,920 --> 00:12:40,400

learning all that kind of stuff you're

325

00:12:43,600 --> 00:12:41,930

the sort of person i wish i had by my

326

00:12:45,130 --> 00:12:43,610

side when I was filming the the

327

00:12:47,140 --> 00:12:45,140

television show the one last year

328

00:12:49,810 --> 00:12:47,150

because I was hearing an awful lot of

329

00:12:52,300 --> 00:12:49,820

interesting arguments so to speak and I

330

00:12:53,860 --> 00:12:52,310

know there was logical fallacies being

331

00:12:56,200 --> 00:12:53,870

thrown left right and center but it is

332

00:12:58,960 --> 00:12:56,210

very difficult to keep up yeah actually

333

00:13:00,310 --> 00:12:58,970

why I you know cuz i watch the one and I

334

00:13:02,260 --> 00:13:00,320

thought I you're a rock and a hard place

335

00:13:04,450 --> 00:13:02,270

because you did the exact right thing

336

00:13:07,450 --> 00:13:04,460

which is what again if you read any

337

00:13:10,060 --> 00:13:07,460

research on debates the point people

338

00:13:12,550 --> 00:13:10,070

make our irrelevant it's how likable you

339

00:13:14,110 --> 00:13:12,560

are yes I on that sense you watch if

340

00:13:16,060 --> 00:13:14,120

what you do you did very well because

341

00:13:17,530 --> 00:13:16,070

people don't they don't care that they

342

00:13:20,140 --> 00:13:17,540

just like the look of you and what you

343

00:13:21,520 --> 00:13:20,150

sound like it's sad but that's just

344

00:13:23,710 --> 00:13:21,530

that's one side sad that's just how

345

00:13:25,600 --> 00:13:23,720

humans are all right with you easier to

346

00:13:27,550 --> 00:13:25,610

your advantage here good me it's very

347

00:13:30,580 --> 00:13:27,560

sad look well I've got you there there's

348

00:13:34,350 --> 00:13:30,590

one that comes I find comes up quite a

349

00:13:37,570 --> 00:13:34,360

lot and since simply what I mean is

350

00:13:39,220 --> 00:13:37,580

especially recently we've been arguing a

351

00:13:41,470 --> 00:13:39,230

lot with people who believe that you

352

00:13:43,300 --> 00:13:41,480

shouldn't vaccinate babies for example

353

00:13:45,790 --> 00:13:43,310

yeah this is a big big issue at the

354

00:13:48,940 --> 00:13:45,800

moment and quite often they will throw

355

00:13:50,800 --> 00:13:48,950

up which is listed in your book here the

356

00:13:52,900 --> 00:13:50,810

earlier version i have is floor number

357

00:13:54,340 --> 00:13:52,910

eight the false dichotomy could you

358

00:13:55,990 --> 00:13:54,350

spend really explaining that one because

359

00:13:58,810 --> 00:13:56,000

i think that's a very important issue

360

00:14:01,960 --> 00:13:58,820

yeah i mean the false dichotomy or false

361

00:14:03,940 --> 00:14:01,970

dilemma is one people use all the time

362

00:14:05,830 --> 00:14:03,950

and basically it's either it's black or

363

00:14:07,360 --> 00:14:05,840

white reasoning so either you do this

364

00:14:10,690 --> 00:14:07,370

one thing or you don't do this other

365

00:14:12,490 --> 00:14:10,700

thing and and so they split things up

366

00:14:14,110 --> 00:14:12,500

where well why can't we go in the middle

367

00:14:17,290 --> 00:14:14,120

you know what why isn't then is so your

368

00:14:20,710 --> 00:14:17,300

middle decision to make or is there a

369

00:14:22,800 --> 00:14:20,720

third option so and it's very often it's

370

00:14:25,600 --> 00:14:22,810

just deliberately done it's a tactic

371

00:14:27,710 --> 00:14:25,610

unconsciously often but a good example i

372

00:14:29,300 --> 00:14:27,720

can think of

373

00:14:30,800 --> 00:14:29,310

because we did a podcast in this one so

374

00:14:32,920 --> 00:14:30,810

these are the examples of top of my head

375

00:14:34,970 --> 00:14:32,930

but you know the Large Hadron Collider

376

00:14:37,670 --> 00:14:34,980

though all these people that came out on

377

00:14:39,019 --> 00:14:37,680

a spending 20 billion dollars on this

378

00:14:40,670 --> 00:14:39,029

thing you know it's 20 billion dollars

379

00:14:43,160 --> 00:14:40,680

over ten years why aren't they spending

380

00:14:46,129 --> 00:14:43,170

it on x y&z it's like why can't they

381

00:14:48,230 --> 00:14:46,139

spend on this end on XY and Z so unless

382

00:14:50,090 --> 00:14:48,240

you tell me why we can't do one or the

383

00:14:52,090 --> 00:14:50,100

other why we can't do them both then

384

00:14:56,030 --> 00:14:52,100

you're creating a false dichotomy and

385

00:14:58,069 --> 00:14:56,040

the anti-vaxxers their classic one they

386

00:15:01,309 --> 00:14:58,079

kind of do is something like it's a

387

00:15:03,619 --> 00:15:01,319

choice between either immunizing your

388

00:15:06,550 --> 00:15:03,629

yours child which will then give them

389

00:15:08,900 --> 00:15:06,560

autism which is you know rubbish yeah or

390

00:15:11,150 --> 00:15:08,910

doing it some alternative way like

391

00:15:12,889 --> 00:15:11,160

exposing your children to measles when

392

00:15:15,050 --> 00:15:12,899

there's a measles outbreak around and

393

00:15:18,199 --> 00:15:15,060

it's like well first of all you're

394

00:15:20,269 --> 00:15:18,209

creating this false dilemma where you're

395

00:15:22,009 --> 00:15:20,279

actually basing it on a factoid that's

396

00:15:23,749 --> 00:15:22,019

incorrect you're basically on something

397

00:15:27,499 --> 00:15:23,759

that's been demonstrated in the

398

00:15:28,670 --> 00:15:27,509

literature over time to be incorrect the

399

00:15:30,829 --> 00:15:28,680

other one they're really good at doing

400

00:15:32,900 --> 00:15:30,839

and this is one we've already done the

401

00:15:34,189 --> 00:15:32,910

podcast and this one but I'm doing it

402

00:15:37,759 --> 00:15:34,199

again on talk about this one which is

403

00:15:39,920 --> 00:15:37,769

they stack the deck so by stacking the

404

00:15:41,990 --> 00:15:39,930

deck is they don't they should they give

405

00:15:43,610 --> 00:15:42,000

put the cards in an order that means

406

00:15:46,220 --> 00:15:43,620

that their argument looks strong and by

407

00:15:48,290 --> 00:15:46,230

what they actually do is all they ever

408

00:15:50,360 --> 00:15:48,300

talk about with autism is the supposed

409

00:15:53,269 --> 00:15:50,370

link with vaccines they never mention

410

00:15:55,579 --> 00:15:53,279

any of the actual research being on done

411

00:15:57,170 --> 00:15:55,589

on autism and you know when this started

412

00:15:58,490 --> 00:15:57,180

happening I thought or go and have a

413

00:16:00,679 --> 00:15:58,500

look at some of the actual things about

414

00:16:02,569 --> 00:16:00,689

autism what's going on and there's so

415

00:16:04,429 --> 00:16:02,579

much evidence out there about the actual

416

00:16:06,439 --> 00:16:04,439

cause about the genetic causes of it

417

00:16:07,809 --> 00:16:06,449

things like that about some studies that

418

00:16:10,780 --> 00:16:07,819

now done where they can even identify

419

00:16:13,309 --> 00:16:10,790

with about eighty percent accuracy of

420

00:16:16,129 --> 00:16:13,319

children's behavior at the age of six

421

00:16:17,480 --> 00:16:16,139

months by their lack of eye contact and

422

00:16:19,069 --> 00:16:17,490

whether they've got autism or not now

423

00:16:22,009 --> 00:16:19,079

they're not getting the MMR vaccine into

424

00:16:23,869 --> 00:16:22,019

what two years old so you know there's

425

00:16:25,249 --> 00:16:23,879

so much evidence but they never talk

426

00:16:27,829 --> 00:16:25,259

about that so if you go to some of the

427

00:16:30,259 --> 00:16:27,839

big autism vaccine blogs and you search

428

00:16:32,090 --> 00:16:30,269

for those things they're never there so

429

00:16:33,889 --> 00:16:32,100

that's a classic one just ignore any

430

00:16:37,160 --> 00:16:33,899

counter evidence and just focus on your

431

00:16:39,470 --> 00:16:37,170

particular um you know thing you're into

432

00:16:40,980 --> 00:16:39,480

so in this case hating softer says look

433

00:16:42,870 --> 00:16:40,990

as the case may be

434

00:16:45,000 --> 00:16:42,880

it's it's interesting to another thing

435

00:16:47,040 --> 00:16:45,010

that comes up and I wonder if this is

436

00:16:48,720 --> 00:16:47,050

sort of associated with it and again

437

00:16:52,019 --> 00:16:48,730

it's showing my ignorance here trying to

438

00:16:54,810 --> 00:16:52,029

to keep all these fallacies in mind is

439

00:16:57,060 --> 00:16:54,820

where they'll bring up the concept of

440

00:17:00,150 --> 00:16:57,070

balance let's let's take the

441

00:17:01,560 --> 00:17:00,160

anti-vaxxers again so there's this the

442

00:17:03,780 --> 00:17:01,570

the line that we should vaccinate our

443

00:17:06,750 --> 00:17:03,790

kids to prevent these these diseases etc

444

00:17:08,699 --> 00:17:06,760

and I'll say oh yes but we want balance

445

00:17:11,370 --> 00:17:08,709

we want the other side of the story

446

00:17:14,520 --> 00:17:11,380

shown now as you and I both know there

447

00:17:15,809 --> 00:17:14,530

is no other side way that is insane we

448

00:17:16,829 --> 00:17:15,819

haven't done the podcast on that one but

449

00:17:19,710 --> 00:17:16,839

I probably is that'll be false

450

00:17:21,750 --> 00:17:19,720

compromise so false my compromise where

451
00:17:23,429 --> 00:17:21,760
you're making us compromise between so a

452
00:17:25,290 --> 00:17:23,439
journalist might make a false compromise

453
00:17:29,310 --> 00:17:25,300
and say oh let's do both sides and treat

454
00:17:32,100 --> 00:17:29,320
them equally now balance means about you

455
00:17:33,570 --> 00:17:32,110
are fair in your investigation of what's

456
00:17:35,370 --> 00:17:33,580
going on and you're balancing your

457
00:17:37,440 --> 00:17:35,380
investigation that doesn't mean you

458
00:17:39,140 --> 00:17:37,450
present to unequal side that's going to

459
00:17:42,150 --> 00:17:39,150
be you know if you have any debate about

460
00:17:43,440 --> 00:17:42,160
whether the earth is you know how all

461
00:17:45,270 --> 00:17:43,450
the earth is you're not going to bother

462
00:17:47,760 --> 00:17:45,280
inviting a young earth creationist there

463
00:17:49,890 --> 00:17:47,770

because we know the evidence says

464

00:17:51,330 --> 00:17:49,900

they're completely and utterly wrong so

465

00:17:52,680 --> 00:17:51,340

why would you do the same the fact the

466

00:17:54,299 --> 00:17:52,690

anti-vaxxers the any reason is good as

467

00:17:56,640 --> 00:17:54,309

interesting controversy that's the only

468

00:17:59,190 --> 00:17:56,650

reason journalists do it yeah there's no

469

00:18:00,810 --> 00:17:59,200

I mean and and the other one they do of

470

00:18:03,510 --> 00:18:00,820

course is bad faith and being completely

471

00:18:04,799 --> 00:18:03,520

disingenuous so on that channel 7 thing

472

00:18:07,169 --> 00:18:04,809

that we had recently that you guys went

473

00:18:10,740 --> 00:18:07,179

to you know the doctor that got up there

474

00:18:12,870 --> 00:18:10,750

and she said I'm not anti vaccines but

475

00:18:14,880 --> 00:18:12,880

I'm pro-choice but if I hang on have you

476
00:18:17,910 --> 00:18:14,890
ever given a vaccine so if someone came

477
00:18:21,120 --> 00:18:17,920
into your your practice and said I want

478
00:18:23,160 --> 00:18:21,130
a vaccination would she do it no so

479
00:18:25,530 --> 00:18:23,170
completely disingenuous in the way she

480
00:18:27,210 --> 00:18:25,540
acts as well so if you're pro-choice you

481
00:18:28,560 --> 00:18:27,220
would you would allow you would you

482
00:18:31,380 --> 00:18:28,570
would you would give some the vaccine if

483
00:18:33,780 --> 00:18:31,390
they wanted it so you know it they're

484
00:18:36,600 --> 00:18:33,790
very disingenuous and the way they argue

485
00:18:39,090 --> 00:18:36,610
as well so it's good it's good to know

486
00:18:40,799 --> 00:18:39,100
and it's again for any skeptic out there

487
00:18:43,140 --> 00:18:40,809
who's especially getting into this field

488
00:18:45,810 --> 00:18:43,150

or the season skeptic I can silly

489

00:18:48,240 --> 00:18:45,820

sincerely recommend you value yourself

490

00:18:50,400 --> 00:18:48,250

of this great information now the

491

00:18:52,350 --> 00:18:50,410

podcast how can people hear your podcast

492

00:18:53,970 --> 00:18:52,360

well the best way to see all the stuff

493

00:18:54,640 --> 00:18:53,980

is just together well if you're good

494

00:18:56,470 --> 00:18:54,650

you're mine

495

00:18:59,200 --> 00:18:56,480

Theo Clark I'm actually the number one

496

00:19:00,670 --> 00:18:59,210

goofy o'clock on Google possibly because

497

00:19:04,360 --> 00:19:00,680

of my first name gives me an unfair

498

00:19:06,880 --> 00:19:04,370

advantage but yeah the ww skeptics field

499

00:19:08,500 --> 00:19:06,890

guide or one word net and that skeptics

500

00:19:10,630 --> 00:19:08,510

with a capital K because I like the look

501
00:19:12,040 --> 00:19:10,640
of it better to ya even though in

502
00:19:15,280 --> 00:19:12,050
Australia technically women's built the

503
00:19:16,990 --> 00:19:15,290
sea yeah and that's where you can go to

504
00:19:19,360 --> 00:19:17,000
have a look and then it's pretty obvious

505
00:19:21,400 --> 00:19:19,370
from there there's links everywhere the

506
00:19:24,340 --> 00:19:21,410
ebooks down the bottom of the page as a

507
00:19:26,020 --> 00:19:24,350
PDF it's on scribed com so you can get

508
00:19:27,520 --> 00:19:26,030
it from there as well and download it

509
00:19:31,090 --> 00:19:27,530
and print it off and bind it or whatever

510
00:19:32,710 --> 00:19:31,100
you want to do we're also selling the

511
00:19:33,940 --> 00:19:32,720
actual paperback for twenty dollars

512
00:19:36,310 --> 00:19:33,950
Australian and there's a link there on

513
00:19:38,230 --> 00:19:36,320

the website for that as well even posted

514

00:19:39,700 --> 00:19:38,240

overseas that will cost you a little bit

515

00:19:41,560 --> 00:19:39,710

more of the postage but Australian

516

00:19:43,990 --> 00:19:41,570

dollars so weak anyway fee yeah the

517

00:19:46,150 --> 00:19:44,000

American listeners out there no problems

518

00:19:47,680 --> 00:19:46,160

for you guys to buy it yeah so that

519

00:19:49,800 --> 00:19:47,690

that's the other option to as well and

520

00:19:53,290 --> 00:19:49,810

yeah all it's all there on the website

521

00:19:55,420 --> 00:19:53,300

and there before I go Richard in before

522

00:19:58,390 --> 00:19:55,430

we end this I have a little plug I want

523

00:20:00,910 --> 00:19:58,400

to do to all Australians out there in my

524

00:20:03,070 --> 00:20:00,920

job which is as a science curriculum or

525

00:20:04,720 --> 00:20:03,080

a writer in queensland and i get i get

526

00:20:06,430 --> 00:20:04,730

to enjoy looking at the science

527

00:20:08,770 --> 00:20:06,440

curriculum and so on which is obviously

528

00:20:11,380 --> 00:20:08,780

the skeptics were pretty concerned about

529

00:20:14,680 --> 00:20:11,390

and the moment australia is writing a

530

00:20:16,300 --> 00:20:14,690

national curriculum and there at the

531

00:20:18,070 --> 00:20:16,310

moment they're writing it and they'll

532

00:20:21,220 --> 00:20:18,080

the draft versions of the curriculum

533

00:20:23,380 --> 00:20:21,230

will be out at the beginning of 2010 so

534

00:20:26,770 --> 00:20:23,390

i encourage all skeptics australian

535

00:20:28,720 --> 00:20:26,780

skeptics to get on the website for the

536

00:20:31,510 --> 00:20:28,730

Australian Curriculum and reporting

537

00:20:33,040 --> 00:20:31,520

authority and when those drafts come out

538

00:20:34,540 --> 00:20:33,050

make sure you read them and give them

539

00:20:36,040 --> 00:20:34,550

some feedback some positive feedback

540

00:20:37,990 --> 00:20:36,050

about the good things they're doing in

541

00:20:40,480 --> 00:20:38,000

questions on the dodgy things because

542

00:20:42,490 --> 00:20:40,490

they specifically say in the aims of the

543

00:20:45,400 --> 00:20:42,500

australian science curriculum the words

544

00:20:46,990 --> 00:20:45,410

skepticism is there and then they

545

00:20:49,060 --> 00:20:47,000

actually say students should be able to

546

00:20:50,380 --> 00:20:49,070

engage in communication of in about

547

00:20:52,840 --> 00:20:50,390

science and value evidence and

548

00:20:55,660 --> 00:20:52,850

skepticism and question scientific

549

00:20:57,130 --> 00:20:55,670

claims made by others so i think there's

550

00:20:59,530 --> 00:20:57,140

an opportunity there for skeptics to

551
00:21:01,510 --> 00:20:59,540
really try and push that word to be in

552
00:21:03,210 --> 00:21:01,520
the curriculum and to really say it's a

553
00:21:05,620 --> 00:21:03,220
good positive word out there because

554
00:21:07,810 --> 00:21:05,630
again as we know that word is often

555
00:21:08,460 --> 00:21:07,820
confused with cynicism and if we can

556
00:21:10,710 --> 00:21:08,470
actually get

557
00:21:12,930 --> 00:21:10,720
language into our science curriculum and

558
00:21:14,940 --> 00:21:12,940
have that being a term that's used and

559
00:21:17,039 --> 00:21:14,950
talked about in science classrooms

560
00:21:18,149 --> 00:21:17,049
because support unsurprisingly I suppose

561
00:21:20,669 --> 00:21:18,159
a lot of science teachers aren't

562
00:21:22,470 --> 00:21:20,679
particularly skeptical going to be

563
00:21:23,990 --> 00:21:22,480

fantastic if we get that an Australian

564

00:21:25,919 --> 00:21:24,000

Curriculum so I really encourage

565

00:21:31,080 --> 00:21:25,929

everyone to go to the Australian

566

00:21:34,740 --> 00:21:31,090

Curriculum website that's WWE called you

567

00:21:36,000 --> 00:21:34,750

a you so takara and when their drafts

568

00:21:37,169 --> 00:21:36,010

come out get on there have a look at

569

00:21:38,880 --> 00:21:37,179

them and give them some positive

570

00:21:41,220 --> 00:21:38,890

feedback about that word skepticism

571

00:21:42,840 --> 00:21:41,230

great idea absolutely i encourage

572

00:21:44,820 --> 00:21:42,850

everybody to do that and i also

573

00:21:48,960 --> 00:21:44,830

encourage everybody to grab a copy of

574

00:21:50,940 --> 00:21:48,970

humbug the skeptics guide to spotting

575

00:21:52,980 --> 00:21:50,950

fallacies in thinking listen to the

576

00:21:55,380 --> 00:21:52,990

podcast because each podcast breaks down

577

00:21:57,000 --> 00:21:55,390

a different fallacy and how many of you

578

00:22:00,690 --> 00:21:57,010

got up there by now must be a big number

579

00:22:01,890 --> 00:22:00,700

we're on I saw that you were working on

580

00:22:03,930 --> 00:22:01,900

the zone and I've been working on my

581

00:22:07,080 --> 00:22:03,940

podcast and be number 29 going out we're

582

00:22:08,669 --> 00:22:07,090

getting a bit slack at home trying to

583

00:22:12,060 --> 00:22:08,679

get them up but we're doing about once

584

00:22:15,149 --> 00:22:12,070

every fortnight and I'm trying to

585

00:22:16,680 --> 00:22:15,159

hopefully get them all done before the

586

00:22:19,250 --> 00:22:16,690

end of August because that's when I'm

587

00:22:21,840 --> 00:22:19,260

expecting another child and so I don't

588

00:22:24,630 --> 00:22:21,850

be worried about my output after that

589

00:22:25,860 --> 00:22:24,640

point but yeah so we're doing about once

590

00:22:29,100 --> 00:22:25,870

every fortnight at the moment and we're

591

00:22:32,100 --> 00:22:29,110

up to 29 so I imagine we'll get up in

592

00:22:33,840 --> 00:22:32,110

the high 30s at least before we run out

593

00:22:35,250 --> 00:22:33,850

of fallacies to talk about and then we

594

00:22:37,110 --> 00:22:35,260

might just pick out some random ones

595

00:22:38,610 --> 00:22:37,120

here and there to look at that's

596

00:22:40,710 --> 00:22:38,620

excellent of course it's not only a

597

00:22:42,180 --> 00:22:40,720

discussion about the fallacies you do

598

00:22:44,310 --> 00:22:42,190

other things in your podcast to I

599

00:22:46,529 --> 00:22:44,320

remember there was a memorable memorable

600

00:22:48,390 --> 00:22:46,539

time where you were talking to a psychic

601
00:22:50,100 --> 00:22:48,400
oh you want to see yeah yeah yep yep

602
00:22:51,750 --> 00:22:50,110
yeah and we've got a we've got another

603
00:22:54,149 --> 00:22:51,760
one up in a similar vein it's not

604
00:22:55,440 --> 00:22:54,159
specifically about a fallacy we're going

605
00:22:56,760 --> 00:22:55,450
to sit down with a couple of skeptical

606
00:22:58,770 --> 00:22:56,770
people I know we're going to come up

607
00:23:01,590 --> 00:22:58,780
with a list of all the things we've

608
00:23:02,880 --> 00:23:01,600
changed our mind about because one of

609
00:23:04,680 --> 00:23:02,890
the things you get as a skeptic of

610
00:23:05,610 --> 00:23:04,690
course is all your clothes minded you

611
00:23:08,190 --> 00:23:05,620
wouldn't change your mind about anything

612
00:23:09,570 --> 00:23:08,200
and it's really annoying because it's

613
00:23:11,669 --> 00:23:09,580

one of those ones where when I walk away

614

00:23:13,140 --> 00:23:11,679

as you're saying before you haven't

615

00:23:15,029 --> 00:23:13,150

thought about these things and you don't

616

00:23:16,560 --> 00:23:15,039

have an answer on the spot and I walk

617

00:23:18,659 --> 00:23:16,570

waiting SI haven't changed my mind about

618

00:23:21,740 --> 00:23:18,669

this this and that but it's too late so

619

00:23:24,380 --> 00:23:21,750

that if I come up with a list good to go

620

00:23:25,550 --> 00:23:24,390

sorry I'm gonna do when we're gonna sit

621

00:23:27,290 --> 00:23:25,560

down and work out some things I changed

622

00:23:30,800 --> 00:23:27,300

my was wrong once I remember having back

623

00:23:32,450 --> 00:23:30,810

in nineteen eighty yes nice that's a

624

00:23:33,980 --> 00:23:32,460

planner I'll encourage all skeptics to

625

00:23:35,360 --> 00:23:33,990

come up with at least say if you're good

626
00:23:37,280 --> 00:23:35,370
to go when some of the keys you've been

627
00:23:39,710 --> 00:23:37,290
closed-minded an excellent idea now I

628
00:23:42,500 --> 00:23:39,720
hope I will see you in Brisbane in

629
00:23:43,810 --> 00:23:42,510
November for the ECHL invention yep

630
00:23:46,970 --> 00:23:43,820
absolutely i'm looking forward to that

631
00:23:49,160 --> 00:23:46,980
excellent well look thanks Theo keep up

632
00:23:51,080 --> 00:23:49,170
your excellent podcast I do enjoy

633
00:23:53,300 --> 00:23:51,090
listening to it I try to remember as

634
00:23:54,860 --> 00:23:53,310
much as possible and my regards to your

635
00:23:57,920 --> 00:23:54,870
dad Jeff who helps you out on the

636
00:23:59,600 --> 00:23:57,930
podcast of course and I just can I just

637
00:24:01,340 --> 00:23:59,610
reaffirm everything you say about me

638
00:24:03,950 --> 00:24:01,350

right back at you Richard fantastic

639

00:24:06,290 --> 00:24:03,960

thank you and thank you for being our

640

00:24:14,430 --> 00:24:06,300

guest today on the skeptic zone thank

641

00:24:22,300 --> 00:24:18,270

help re-establish the herd immunity of

642

00:24:24,400 --> 00:24:22,310

Nevada tam seven is fast approaching and

643

00:24:25,990 --> 00:24:24,410

those of you who have already signed up

644

00:24:27,700 --> 00:24:26,000

may have noticed something a bit

645

00:24:30,580 --> 00:24:27,710

different about the bottom of the

646

00:24:33,190 --> 00:24:30,590

registration page this year the James

647

00:24:35,230 --> 00:24:33,200

Randi Educational Foundation is working

648

00:24:39,130 --> 00:24:35,240

with the Southern Nevada Health District

649

00:24:42,430 --> 00:24:39,140

as in HD to provide vaccinations for

650

00:24:51,280 --> 00:24:42,440

children in Nevada to help support this

651
00:24:54,340 --> 00:24:51,290
worthy cause please visit WWE so that's

652
00:24:56,530 --> 00:24:54,350
why you can't eat her okay I was just

653
00:24:57,850 --> 00:24:56,540
talking to the students here now look

654
00:25:00,670 --> 00:24:57,860
I'm supposed to tell you about something

655
00:25:04,240 --> 00:25:00,680
the cosmic tea party a new science

656
00:25:05,880 --> 00:25:04,250
podcast podcast the hose it at any rate

657
00:25:08,650 --> 00:25:05,890
it's about science and mathematics

658
00:25:11,710 --> 00:25:08,660
sounds rather dull oh hang on I open it

659
00:25:14,530 --> 00:25:11,720
and says here not done so there you have

660
00:25:17,500 --> 00:25:14,540
it the cosmic tea party podcast ww

661
00:25:26,850 --> 00:25:17,510
cosmic Tea Party or or search for them

662
00:25:32,799 --> 00:25:29,770
all right now this next segment is

663
00:25:35,669 --> 00:25:32,809

presented by our reporter Kylie Sturgis

664

00:25:39,310 --> 00:25:35,679

when she spoke last year at the perth

665

00:25:42,490 --> 00:25:39,320

atheists earth atheists try saying that

666

00:25:44,560 --> 00:25:42,500

three times quickly Perth is very much

667

00:25:46,750 --> 00:25:44,570

on our mind at the moment because the

668

00:25:50,020 --> 00:25:46,760

University of Western Australia is

669

00:25:52,419 --> 00:25:50,030

hosting a secular week in August and dr.

670

00:25:56,350 --> 00:25:52,429

Richie dr. Rachel Dunlop and myself are

671

00:26:00,520 --> 00:25:56,360

planning on doing a talk at UWA atheists

672

00:26:02,740 --> 00:26:00,530

and agnostics society we are looking for

673

00:26:06,850 --> 00:26:02,750

help to get over to Perth and thanks to

674

00:26:10,600 --> 00:26:06,860

UWA atheists and agnostics society Perth

675

00:26:13,150 --> 00:26:10,610

atheists and wa humanist society we're

676

00:26:15,159 --> 00:26:13,160

brainstorming ideas if you'd like to

677

00:26:17,590 --> 00:26:15,169

help donate for flights to Perth or

678

00:26:20,740 --> 00:26:17,600

support the skeptic zone the paypal

679

00:26:24,370 --> 00:26:20,750

button is on our site at wwc a petting

680

00:26:26,770 --> 00:26:24,380

zoo TV in the meantime thanks very much

681

00:26:29,409 --> 00:26:26,780

to the Perth atheists for allowing us to

682

00:26:33,310 --> 00:26:29,419

use the audio from kylie's talk last

683

00:26:36,700 --> 00:26:33,320

year all about belief in weird things

684

00:26:44,570 --> 00:26:36,710

recent developments and educational

685

00:26:50,960 --> 00:26:48,139

my name is Kylie Sturgis but most of the

686

00:26:52,730 --> 00:26:50,970

time i'm known as Sturge a studio where

687

00:26:55,250 --> 00:26:52,740

you do it over there stage Oh have an

688

00:26:56,659 --> 00:26:55,260

ending my homework studio if the

689

00:26:59,029 --> 00:26:56,669

students have been particularly not

690

00:27:00,950 --> 00:26:59,039

annoying they call me Stewart which in

691

00:27:04,039 --> 00:27:00,960

my mind sort of comes across as of a

692

00:27:07,070 --> 00:27:04,049

disease a cow would get like um it died

693

00:27:09,080 --> 00:27:07,080

a brucellosis and stood so rotting away

694

00:27:10,610 --> 00:27:09,090

there so stir Joe's fine I've responded

695

00:27:13,159 --> 00:27:10,620

to that for about the last 10 years as a

696

00:27:14,930 --> 00:27:13,169

teacher the presentation i have is

697

00:27:16,340 --> 00:27:14,940

primarily about definitions for the

698

00:27:18,379 --> 00:27:16,350

first part and I've got a bit of reading

699

00:27:20,389 --> 00:27:18,389

to do but it does hold some ideas about

700

00:27:22,730 --> 00:27:20,399

possible strategies for atheists within

701
00:27:24,259 --> 00:27:22,740
their community although being skeptical

702
00:27:27,379 --> 00:27:24,269
is not something I think is necessary

703
00:27:29,389 --> 00:27:27,389
for an atheist to be I do think there is

704
00:27:31,549 --> 00:27:29,399
some common ground regarding what I have

705
00:27:32,779 --> 00:27:31,559
personally experienced in education that

706
00:27:35,149 --> 00:27:32,789
perhaps atheists can voice their

707
00:27:36,680 --> 00:27:35,159
opinions upon finally I would like to

708
00:27:39,649 --> 00:27:36,690
encourage those who are teachers other

709
00:27:41,120 --> 00:27:39,659
any teachers you know cool even

710
00:27:43,580 --> 00:27:41,130
interested in education in one way or

711
00:27:45,980 --> 00:27:43,590
another about the future of our young in

712
00:27:47,690 --> 00:27:45,990
our community if you know teachers have

713
00:27:49,100 --> 00:27:47,700

a stake hold in the school like it might

714

00:27:52,100 --> 00:27:49,110

live near a school have the opportunity

715

00:27:53,659 --> 00:27:52,110

to view a school it's useful to have an

716

00:27:54,919 --> 00:27:53,669

interest in education today maybe have a

717

00:27:56,990 --> 00:27:54,929

say in what's going to happen next

718

00:28:00,340 --> 00:27:57,000

generation one of the first things that

719

00:28:03,310 --> 00:28:00,350

I usually do is say what is skepticism

720

00:28:06,799 --> 00:28:03,320

and skepticism is of course

721

00:28:09,470 --> 00:28:06,809

mean-spirited naysayers debunkers people

722

00:28:11,509 --> 00:28:09,480

who usually stay most of the time in the

723

00:28:12,409 --> 00:28:11,519

kitchen at parties or worse they're

724

00:28:14,629 --> 00:28:12,419

behind the bar because they're the only

725

00:28:16,039 --> 00:28:14,639

sober ones and they make sure that the

726

00:28:17,389 --> 00:28:16,049

police come and get you when things get

727

00:28:19,129 --> 00:28:17,399

too rowdy just throw in the kitchen a

728

00:28:21,620 --> 00:28:19,139

party there you go you're you're

729

00:28:24,080 --> 00:28:21,630

skeptical person now this obviously

730

00:28:25,850 --> 00:28:24,090

isn't true but it is generally the sort

731

00:28:28,669 --> 00:28:25,860

of reputation that's people who are

732

00:28:30,259 --> 00:28:28,679

skeptically minded get I would point out

733

00:28:33,049 --> 00:28:30,269

that I don't normally go around calling

734

00:28:34,460 --> 00:28:33,059

myself a skeptic dr. Michael Sherman

735

00:28:36,289 --> 00:28:34,470

who's going to be chewing here soon who

736

00:28:37,669 --> 00:28:36,299

has a magazine called skeptic he doesn't

737

00:28:40,600 --> 00:28:37,679

often call himself a skeptic either

738

00:28:44,269 --> 00:28:40,610

because skepticism is about a process

739

00:28:46,580 --> 00:28:44,279

it's a label which often has negative

740

00:28:47,810 --> 00:28:46,590

connotations as I demonstrated and most

741

00:28:50,389 --> 00:28:47,820

of the time I just call myself an

742

00:28:52,310 --> 00:28:50,399

educator I'm female I'm a research

743

00:28:54,740 --> 00:28:52,320

assistant I'm a student of anomalistic

744

00:28:56,240 --> 00:28:54,750

psychology which I'll go into in a bit

745

00:28:58,580 --> 00:28:56,250

more detail later

746

00:29:00,950 --> 00:28:58,590

also study educational measurement of

747

00:29:03,230 --> 00:29:00,960

paranormal beliefs my experience and

748

00:29:05,660 --> 00:29:03,240

background 10 years as a teacher I have

749

00:29:07,250 --> 00:29:05,670

a Bachelor of Arts in English literature

750

00:29:09,740 --> 00:29:07,260

and philosophy I've deployment of

751

00:29:11,180 --> 00:29:09,750

education my first MF was in special

752

00:29:13,460 --> 00:29:11,190

learning needs education because of

753

00:29:16,280 --> 00:29:13,470

gifted and talented kids and my second

754

00:29:18,830 --> 00:29:16,290

Emmett is probably more tending towards

755

00:29:20,600 --> 00:29:18,840

educational psych since skepticism is

756

00:29:21,950 --> 00:29:20,610

something that's done it always seems a

757

00:29:24,260 --> 00:29:21,960

little bit weird to call myself a

758

00:29:26,480 --> 00:29:24,270

skeptic in one radio interview for

759

00:29:27,830 --> 00:29:26,490

example the radio interview just off the

760

00:29:29,270 --> 00:29:27,840

top of that his head said so what are

761

00:29:31,550 --> 00:29:29,280

you a critical thinker a skeptic and I

762

00:29:33,230 --> 00:29:31,560

said critical thinker if he gave me or

763

00:29:35,000 --> 00:29:33,240

more options I probably would have

764

00:29:36,170 --> 00:29:35,010

chosen more options but skeptic just

765

00:29:38,630 --> 00:29:36,180

didn't seem to come to mind which is

766

00:29:40,940 --> 00:29:38,640

rather odd scepticism derives from the

767

00:29:42,680 --> 00:29:40,950

Greek its original meaning was inquiry

768

00:29:44,950 --> 00:29:42,690

and doubt which is a pretty good

769

00:29:48,050 --> 00:29:44,960

approximation of a definition it means

770

00:29:49,420 --> 00:29:48,060

engendering inquiry and down later

771

00:29:52,310 --> 00:29:49,430

philosophers used the word to mean

772

00:29:54,110 --> 00:29:52,320

philosophical doubt the notion of all

773

00:29:56,330 --> 00:29:54,120

pretense to knowledge is mere hubris

774

00:29:58,370 --> 00:29:56,340

attempting to ascertain that there is

775

00:29:59,480 --> 00:29:58,380

true reality in the world is incredibly

776

00:30:01,550 --> 00:29:59,490

arrogant in you can never know the

777

00:30:03,050 --> 00:30:01,560

reality of anything in other words we

778

00:30:06,230 --> 00:30:03,060

know nothing and can know nothing

779

00:30:09,260 --> 00:30:06,240

apparently piro one of the great fathers

780

00:30:11,810 --> 00:30:09,270

of skepticism was very fond of walking

781

00:30:12,950 --> 00:30:11,820

off cliffs because he just denied that

782

00:30:14,240 --> 00:30:12,960

it was there and all his followers of

783

00:30:17,140 --> 00:30:14,250

trying to grab me but make sure you do

784

00:30:19,370 --> 00:30:17,150

it a lot in contemporary vernacular

785

00:30:21,380 --> 00:30:19,380

someone who is skeptical generally means

786

00:30:23,660 --> 00:30:21,390

someone who questions conventional

787

00:30:26,330 --> 00:30:23,670

wisdom someone who bitterly or

788

00:30:28,580 --> 00:30:26,340

excessively doubts it's often used as a

789

00:30:29,990 --> 00:30:28,590

pejorative means close-minded and it's

790

00:30:32,420 --> 00:30:30,000

the baggage that we just have to deal

791

00:30:34,310 --> 00:30:32,430

with essentially some more modern

792

00:30:36,290 --> 00:30:34,320

skeptical minded people like Richard

793

00:30:37,730 --> 00:30:36,300

Wiseman is trying they're trying to

794

00:30:40,370 --> 00:30:37,740

reinvent the word they come up with

795

00:30:42,320 --> 00:30:40,380

books like quirkology which look at a

796

00:30:44,360 --> 00:30:42,330

wide variety of quirky things in

797

00:30:47,300 --> 00:30:44,370

psychology and try to step away from the

798

00:30:49,550 --> 00:30:47,310

notion of skeptical together so what

799

00:30:51,170 --> 00:30:49,560

does skepticism involve skepticism

800

00:30:52,940 --> 00:30:51,180

involves favoring conclusions that are

801
00:30:55,010 --> 00:30:52,950
valid and consistently reliable rather

802
00:30:57,320 --> 00:30:55,020
than convenience sake you can probably

803
00:30:59,420 --> 00:30:57,330
all read it there that definition comes

804
00:31:01,170 --> 00:30:59,430
from dr. Steve novella who has a podcast

805
00:31:04,260 --> 00:31:01,180
and

806
00:31:06,750 --> 00:31:04,270
he also contributes quite regularly to a

807
00:31:09,180 --> 00:31:06,760
variety of magazines he contributes to

808
00:31:11,160 --> 00:31:09,190
his own blog called neurologica and is a

809
00:31:13,920 --> 00:31:11,170
member of quack watch he's primarily

810
00:31:15,540 --> 00:31:13,930
interested in investigating medical

811
00:31:18,480 --> 00:31:15,550
claims due to his background at Yale

812
00:31:20,010 --> 00:31:18,490
University scientific skepticism is an

813
00:31:21,900 --> 00:31:20,020

approach to knowledge and is tied

814

00:31:23,640 --> 00:31:21,910

strongly to scientific knowledge it

815

00:31:26,310 --> 00:31:23,650

involves following a methodology based

816

00:31:28,590 --> 00:31:26,320

on scientific inquiry it's not a set of

817

00:31:30,630 --> 00:31:28,600

conclusions or there is an ultimate

818

00:31:32,340 --> 00:31:30,640

truth skepticism is about what do we

819

00:31:34,260 --> 00:31:32,350

know now and there's always the

820

00:31:35,940 --> 00:31:34,270

potential that things could change in

821

00:31:38,130 --> 00:31:35,950

the future now that's an important

822

00:31:40,160 --> 00:31:38,140

distinction to be made one of the most

823

00:31:43,260 --> 00:31:40,170

detailed lectures that I've attended

824

00:31:46,260 --> 00:31:43,270

online upon this subject was in fact by

825

00:31:48,510 --> 00:31:46,270

dr. Steven novella to paraphrase him you

826

00:31:50,820 --> 00:31:48,520

don't assume that there is or isn't an

827

00:31:53,900 --> 00:31:50,830

existence of the supernatural but what

828

00:31:57,030 --> 00:31:53,910

can be observed so far is what you go by

829

00:31:58,860 --> 00:31:57,040

so basically being skeptical means you

830

00:32:01,200 --> 00:31:58,870

investigate nature as if it's

831

00:32:02,550 --> 00:32:01,210

naturalistic or materialistic and you

832

00:32:04,650 --> 00:32:02,560

follow a methodology within that

833

00:32:06,420 --> 00:32:04,660

paradigm in this way we can see how

834

00:32:08,760 --> 00:32:06,430

scepticism contributes to understanding

835

00:32:11,130 --> 00:32:08,770

a process behind what do we know about

836

00:32:12,600 --> 00:32:11,140

what we know in psychology there's a

837

00:32:16,050 --> 00:32:12,610

variety of contributions from

838

00:32:17,790 --> 00:32:16,060

anomalistic psychology and even power

839

00:32:20,280 --> 00:32:17,800

psychology you can look at cognitive

840

00:32:22,140 --> 00:32:20,290

biases for example there's dozens of

841

00:32:24,360 --> 00:32:22,150

these the vonahrish will staff effect

842

00:32:26,010 --> 00:32:24,370

for example things that stick out like a

843

00:32:27,840 --> 00:32:26,020

sore thumb you're more likely to notice

844

00:32:30,420 --> 00:32:27,850

them we started talking about one

845

00:32:31,920 --> 00:32:30,430

earlier as well about how you can have

846

00:32:34,170 --> 00:32:31,930

visual illusions but you're going to

847

00:32:35,730 --> 00:32:34,180

serve all illusions illusions of the ear

848

00:32:38,070 --> 00:32:35,740

where you start thinking that what is

849

00:32:40,500 --> 00:32:38,080

being said in garbled tones is something

850

00:32:41,850 --> 00:32:40,510

really being said in English or a

851
00:32:43,830 --> 00:32:41,860
variety of other languages depending

852
00:32:46,110 --> 00:32:43,840
where you're from there's the gamblers

853
00:32:47,700 --> 00:32:46,120
fallacy you flipped a coin you've got

854
00:32:51,200 --> 00:32:47,710
five heads the next one is bound to be a

855
00:32:53,850 --> 00:32:51,210
tail and this is what keeps people

856
00:32:55,590 --> 00:32:53,860
making a lot of money the casinos the

857
00:32:57,300 --> 00:32:55,600
hope that the next one will be the

858
00:32:58,560 --> 00:32:57,310
winner there's personality factors

859
00:32:59,970 --> 00:32:58,570
involved in whether or not people

860
00:33:01,980 --> 00:32:59,980
believe in weird things there's

861
00:33:03,840 --> 00:33:01,990
developmental issues magical thinking

862
00:33:06,510 --> 00:33:03,850
how many of you used to believe that

863
00:33:08,760 --> 00:33:06,520

Teddy had feelings or better yet that

864

00:33:11,400 --> 00:33:08,770

kicking the door frame when it got in

865

00:33:13,530 --> 00:33:11,410

your way would punish the door that's a

866

00:33:14,749 --> 00:33:13,540

good example what prj would call magical

867

00:33:17,089 --> 00:33:14,759

thinking believing that things

868

00:33:18,829 --> 00:33:17,099

feelings and it even extends into modern

869

00:33:21,369 --> 00:33:18,839

day times there is a variation on it

870

00:33:23,989 --> 00:33:21,379

which was studied by a group of Helsinki

871

00:33:27,439 --> 00:33:23,999

psychologists where they offered people

872

00:33:29,539 --> 00:33:27,449

a jumper here would you wear this oh yes

873

00:33:31,930 --> 00:33:29,549

I'd wear that it used to be owned by

874

00:33:34,310 --> 00:33:31,940

mass murderer would you wear it no way

875

00:33:37,759 --> 00:33:34,320

it's not a jumper I'm not touching that

876

00:33:39,619 --> 00:33:37,769

it was owned by mass murder no Hitler's

877

00:33:41,329 --> 00:33:39,629

moustache brush was another one which

878

00:33:45,079 --> 00:33:41,339

came up would you touch it was mustered

879

00:33:46,789 --> 00:33:45,089

no I never would the nature of memory is

880

00:33:48,379 --> 00:33:46,799

another one that comes up again and

881

00:33:50,149 --> 00:33:48,389

again and we may have heard several

882

00:33:53,629 --> 00:33:50,159

times about how people's memory have

883

00:33:55,099 --> 00:33:53,639

been distorted through court cases yes I

884

00:33:57,439 --> 00:33:55,109

believe that that was the masked man

885

00:33:59,689 --> 00:33:57,449

there and yet we are notoriously

886

00:34:01,459 --> 00:33:59,699

unreliable one of my favorite papers

887

00:34:03,499 --> 00:34:01,469

came up by Prince epi and Smith this

888

00:34:05,689 --> 00:34:03,509

year it's called the truth the whole

889

00:34:07,639 --> 00:34:05,699

truth and nothing but the truth how

890

00:34:10,579 --> 00:34:07,649

belief in the tooth fairy can engender

891

00:34:12,440 --> 00:34:10,589

false memories do examine house

892

00:34:14,509 --> 00:34:12,450

children's fantasy beliefs can affect

893

00:34:16,129 --> 00:34:14,519

your memory for your experiences five

894

00:34:18,230 --> 00:34:16,139

and six-year-olds with differing levels

895

00:34:19,730 --> 00:34:18,240

of belief in the Tooth Fairy were asked

896

00:34:21,829 --> 00:34:19,740

to recall what they knew about the tooth

897

00:34:23,539 --> 00:34:21,839

fairy those who believed in it suddenly

898

00:34:24,919 --> 00:34:23,549

came up with amazing supernatural

899

00:34:27,349 --> 00:34:24,929

stories of what happened with their

900

00:34:29,299 --> 00:34:27,359

tooth got taken away those who knew that

901
00:34:30,829 --> 00:34:29,309
the Tooth Fairy is just a myth just gave

902
00:34:33,079 --> 00:34:30,839
straightforward factual explanations I

903
00:34:35,210 --> 00:34:33,089
look there wasn't gone there got money

904
00:34:38,480 --> 00:34:35,220
brought candy lots more teeth it was

905
00:34:40,519 --> 00:34:38,490
great the psychology of deception and

906
00:34:42,169 --> 00:34:40,529
self-deception magic tricks and this is

907
00:34:44,269 --> 00:34:42,179
probably one of the most popular things

908
00:34:46,009 --> 00:34:44,279
that you can get on stage whenever you

909
00:34:48,799 --> 00:34:46,019
go to a conference about anomalistic

910
00:34:50,240 --> 00:34:48,809
psychology parapsychology anything to do

911
00:34:52,069 --> 00:34:50,250
with skeptics you're going to get

912
00:34:54,710 --> 00:34:52,079
magicians up on the stage Penn and

913
00:34:57,549 --> 00:34:54,720

Teller is a popular one they have a show

914

00:34:59,420 --> 00:34:57,559

many people see it many people recorded

915

00:35:00,650 --> 00:34:59,430

many people are quite shocked by the

916

00:35:02,990 --> 00:35:00,660

language in it there's only one episode

917

00:35:04,490 --> 00:35:03,000

of the show that I can use and that is

918

00:35:07,609 --> 00:35:04,500

the one on the Ouija boards because they

919

00:35:08,599 --> 00:35:07,619

only swear twice I always talk to the

920

00:35:10,819 --> 00:35:08,609

students ahead of time so they're going

921

00:35:12,019 --> 00:35:10,829

to say too bad I'm really sorry and then

922

00:35:14,690 --> 00:35:12,029

they say we know more words in that I

923

00:35:17,569 --> 00:35:14,700

can get thanks cutie regret but

924

00:35:19,190 --> 00:35:17,579

self-deception and self-delusion it's a

925

00:35:20,870 --> 00:35:19,200

big one there are range of other

926

00:35:22,549 --> 00:35:20,880

psychological variables of study in

927

00:35:23,839 --> 00:35:22,559

regards to this I mean how claims are

928

00:35:25,910 --> 00:35:23,849

approached and of course you get

929

00:35:27,380 --> 00:35:25,920

overlaps all the time within normal

930

00:35:29,089 --> 00:35:27,390

psychology so there's two

931

00:35:31,910 --> 00:35:29,099

areas for skeptics is one thing that has

932

00:35:34,339 --> 00:35:31,920

been argued by a popular skeptic the man

933

00:35:37,190 --> 00:35:34,349

who writes junior skeptic Daniel Loxton

934

00:35:39,140 --> 00:35:37,200

on the podcast skeptic ality says that

935

00:35:40,910 --> 00:35:39,150

one is the promotion of science literacy

936

00:35:42,650 --> 00:35:40,920

and critical thinking and the other is

937

00:35:45,099 --> 00:35:42,660

consumer protection in fringe science

938

00:35:47,269 --> 00:35:45,109

areas in regards to paranormal claims

939

00:35:49,430 --> 00:35:47,279

now I must admit that there was the

940

00:35:52,130 --> 00:35:49,440

consumer protection idea that first drew

941

00:35:53,839 --> 00:35:52,140

me into looking at skeptical ideas

942

00:35:55,490 --> 00:35:53,849

possibly due to an interest in

943

00:35:56,930 --> 00:35:55,500

documentaries there was a TV show back

944

00:35:58,490 --> 00:35:56,940

in the 80s called the investigators

945

00:36:01,160 --> 00:35:58,500

involving people who are being ripped

946

00:36:02,930 --> 00:36:01,170

off by frauds and scams and the idea

947

00:36:05,569 --> 00:36:02,940

that people could watch out for this

948

00:36:07,130 --> 00:36:05,579

that the con man could be taken apart

949

00:36:09,500 --> 00:36:07,140

and shown to have several techniques

950

00:36:14,349 --> 00:36:09,510

that it was using that you could protect

951
00:36:19,880 --> 00:36:17,690
yes I believe they've taken gullible out

952
00:36:21,410 --> 00:36:19,890
of the dictionary and they've said god

953
00:36:25,609 --> 00:36:21,420
you're an idiot and you turn to idiot

954
00:36:27,220 --> 00:36:25,619
and it says not you again oh there we

955
00:36:29,660 --> 00:36:27,230
are studies our beliefs on weird things

956
00:36:32,029 --> 00:36:29,670
that's not a limited list by the way

957
00:36:33,289 --> 00:36:32,039
this is probably the most popular list

958
00:36:36,109 --> 00:36:33,299
of things that you'll get for weird

959
00:36:37,549 --> 00:36:36,119
things ESP peak a psychic readings

960
00:36:38,990 --> 00:36:37,559
psychic healing alternative and

961
00:36:40,759 --> 00:36:39,000
complementary medicine out-of-body and

962
00:36:42,259 --> 00:36:40,769
near death experiences astrology and

963
00:36:45,620 --> 00:36:42,269

other divinatory techniques

964

00:36:48,380 --> 00:36:45,630

reincarnation UFOs and aliens ghosts

965

00:36:50,960 --> 00:36:48,390

poltergeists crystal power dowsing two

966

00:36:53,569 --> 00:36:50,970

of my favorite ones include sports

967

00:36:57,559 --> 00:36:53,579

superstitions and theater superstitions

968

00:36:59,299 --> 00:36:57,569

and whenever I find myself approached by

969

00:37:01,069 --> 00:36:59,309

someone who I think is going to be

970

00:37:02,690 --> 00:37:01,079

resisting the idea of looking at these

971

00:37:03,680 --> 00:37:02,700

beliefs I medley start off by saying

972

00:37:05,329 --> 00:37:03,690

well let's have a look at theater

973

00:37:06,559 --> 00:37:05,339

superstitions and if I guess oh wow yeah

974

00:37:07,999 --> 00:37:06,569

like you have to turn around the top to

975

00:37:10,279 --> 00:37:08,009

hit five times I'm gonna do if you say

976

00:37:13,970 --> 00:37:10,289

the word Macbeth on a state Macbeth

977

00:37:17,509 --> 00:37:13,980

Macbeth nothing happened then you're

978

00:37:18,769 --> 00:37:17,519

going wearing the same socks again and

979

00:37:20,930 --> 00:37:18,779

again and again if you're a hockey

980

00:37:22,519 --> 00:37:20,940

player the people in the audience have

981

00:37:24,920 --> 00:37:22,529

certain rituals that they must do

982

00:37:27,859 --> 00:37:24,930

otherwise the cricketers not going to

983

00:37:30,259 --> 00:37:27,869

get the match fascinating the most

984

00:37:32,900 --> 00:37:30,269

research that you'll find on particular

985

00:37:34,880 --> 00:37:32,910

superstitious beliefs it's sports again

986

00:37:38,960 --> 00:37:34,890

and again again there are many famous

987

00:37:40,560 --> 00:37:38,970

sports people's generally in baseball

988

00:37:43,200 --> 00:37:40,570

because baseball is incredibly popular

989

00:37:45,270 --> 00:37:43,210

last time in America they just go wild

990

00:37:47,780 --> 00:37:45,280

go backstage and ask every baseball ok

991

00:37:50,600 --> 00:37:47,790

which about you use which foot rooting I

992

00:37:53,010 --> 00:37:50,610

remember when I first handed in my

993

00:37:54,840 --> 00:37:53,020

proposal to my professor at UWA if you

994

00:37:56,760 --> 00:37:54,850

said you're using too many abbreviations

995

00:37:59,220 --> 00:37:56,770

I don't know what they mean and I said

996

00:38:00,450 --> 00:37:59,230

oh you mean like PK psychokinesis the

997

00:38:02,010 --> 00:38:00,460

belief that you can move something like

998

00:38:05,610 --> 00:38:02,020

just using your mind he said no I don't

999

00:38:07,380 --> 00:38:05,620

know what OCD means I said

1000

00:38:09,150 --> 00:38:07,390

obsessive-compulsive disorder so why is

1001
00:38:10,560 --> 00:38:09,160
that important because people get

1002
00:38:12,210 --> 00:38:10,570
worried whether or not you're saying

1003
00:38:14,280 --> 00:38:12,220
someone has a particular ritual again

1004
00:38:16,500 --> 00:38:14,290
and again before they go up to the bat

1005
00:38:18,840 --> 00:38:16,510
or to hit the ball is it ritual because

1006
00:38:19,770 --> 00:38:18,850
of superstition or is it OCD these are

1007
00:38:22,920 --> 00:38:19,780
the sort of things that you have to

1008
00:38:25,470 --> 00:38:22,930
start going into now I personally define

1009
00:38:28,200 --> 00:38:25,480
atheism as a lack of belief in a date he

1010
00:38:29,670 --> 00:38:28,210
of any sort defined or not now there's a

1011
00:38:31,500 --> 00:38:29,680
variety of reasons why someone might

1012
00:38:34,380 --> 00:38:31,510
call themselves an atheist sometimes it

1013
00:38:35,850 --> 00:38:34,390

might be personal experience sometimes

1014

00:38:37,860 --> 00:38:35,860

people have gone through a massive

1015

00:38:41,190 --> 00:38:37,870

experience in their lives and reasoned

1016

00:38:43,590 --> 00:38:41,200

it out it varies there's so many how I

1017

00:38:45,840 --> 00:38:43,600

came to be accounts and it'd be lovely

1018

00:38:48,360 --> 00:38:45,850

to see more books on this skepticism

1019

00:38:50,490 --> 00:38:48,370

however rarely takes on fundamental

1020

00:38:51,930 --> 00:38:50,500

religion claims directly and certainly

1021

00:38:54,480 --> 00:38:51,940

not within the bounds of their normal

1022

00:38:56,370 --> 00:38:54,490

skeptical investigations the essay by

1023

00:38:58,470 --> 00:38:56,380

Daniel Loxton where do we go from here

1024

00:39:00,390 --> 00:38:58,480

discuss the important of dealing with

1025

00:39:02,670 --> 00:39:00,400

this core business of skepticism because

1026
00:39:04,560 --> 00:39:02,680
there are groups like atheists humanists

1027
00:39:06,390 --> 00:39:04,570
secular humanists and so forth who are

1028
00:39:08,220 --> 00:39:06,400
doing a massively popular job on

1029
00:39:09,810 --> 00:39:08,230
investigating a variety of things that

1030
00:39:13,320 --> 00:39:09,820
fundamentalists do and that religions

1031
00:39:15,150 --> 00:39:13,330
too big one at the moment protests about

1032
00:39:16,950 --> 00:39:15,160
World Youth Day I know that there's been

1033
00:39:19,200 --> 00:39:16,960
quite a lot of organization in regards

1034
00:39:20,730 --> 00:39:19,210
to protesting how right to human rights

1035
00:39:23,190 --> 00:39:20,740
have been taken away due to world youth

1036
00:39:25,230 --> 00:39:23,200
today yet an atheist can still believe

1037
00:39:27,390 --> 00:39:25,240
that their horoscope is true an atheist

1038
00:39:29,130 --> 00:39:27,400

can quite easily believe that human

1039

00:39:30,600 --> 00:39:29,140

beings never landed on the moon you can

1040

00:39:32,340 --> 00:39:30,610

have all sorts of conspiracy theory

1041

00:39:34,950 --> 00:39:32,350

beliefs that are believed by a variety

1042

00:39:36,570 --> 00:39:34,960

of people I've had students who were

1043

00:39:38,550 --> 00:39:36,580

Buddhists tell me that their tarot cards

1044

00:39:40,380 --> 00:39:38,560

could tell them the future and I've had

1045

00:39:42,420 --> 00:39:40,390

atheists tell me that the moon makes

1046

00:39:44,700 --> 00:39:42,430

people more crazy than usual of course

1047

00:39:47,040 --> 00:39:44,710

it does full moon people go crazy they

1048

00:39:49,230 --> 00:39:47,050

go nuts crime rates skyrocket there's

1049

00:39:50,820 --> 00:39:49,240

been study after study after study after

1050

00:39:51,930 --> 00:39:50,830

study showing that this isn't true but

1051

00:39:53,730 --> 00:39:51,940

yeah

1052

00:39:55,140 --> 00:39:53,740

it's just something about the moon kids

1053

00:39:57,110 --> 00:39:55,150

turn into Wells you look at them in a

1054

00:39:59,340 --> 00:39:57,120

playground they're just going bonkers

1055

00:40:01,350 --> 00:39:59,350

yeah there must be something in it

1056

00:40:03,780 --> 00:40:01,360

likewise skepticism isn't a belief

1057

00:40:05,580 --> 00:40:03,790

system what matters is the evidence you

1058

00:40:07,440 --> 00:40:05,590

can see how the two there are elements

1059

00:40:09,810 --> 00:40:07,450

within skepticism that would certainly

1060

00:40:12,540 --> 00:40:09,820

appeal to atheists and yet I still see

1061

00:40:14,730 --> 00:40:12,550

the two is distinct certainly a close-up

1062

00:40:17,670 --> 00:40:14,740

Venn diagram at times but in my mind

1063

00:40:18,930 --> 00:40:17,680

distinct as a teacher there are certain

1064

00:40:20,910 --> 00:40:18,940

elements that I've come up against which

1065

00:40:23,010 --> 00:40:20,920

are just examples of sheer bad science

1066

00:40:24,660 --> 00:40:23,020

and it didn't matter if that science

1067

00:40:27,990 --> 00:40:24,670

teachers are working with were the

1068

00:40:29,730 --> 00:40:28,000

Muslim Christian atheist never told me

1069

00:40:31,920 --> 00:40:29,740

there were things in which we were just

1070

00:40:33,620 --> 00:40:31,930

got our water I've got to that I'll

1071

00:40:35,790 --> 00:40:33,630

discuss which might be of interest you

1072

00:40:38,010 --> 00:40:35,800

not just those who are atheists or

1073

00:40:39,390 --> 00:40:38,020

skeptic or whatever but in the interest

1074

00:40:40,440 --> 00:40:39,400

of education of young people there's

1075

00:40:42,840 --> 00:40:40,450

some pretty shocking things that are

1076

00:40:44,790 --> 00:40:42,850

going out there as a final point what's

1077

00:40:46,140 --> 00:40:44,800

critical thinking taking a skeptical

1078

00:40:48,390 --> 00:40:46,150

approach is not the only way that we can

1079

00:40:49,800 --> 00:40:48,400

think there's introspection you can

1080

00:40:52,740 --> 00:40:49,810

develop your reasoning based upon

1081

00:40:54,600 --> 00:40:52,750

emotions there's postmodernist ideas

1082

00:40:56,460 --> 00:40:54,610

involved in social construction creating

1083

00:40:58,080 --> 00:40:56,470

and narrative of what is truth you get

1084

00:41:00,060 --> 00:40:58,090

this and literary criticism all the time

1085

00:41:02,010 --> 00:41:00,070

there's a variety approaches in

1086

00:41:04,220 --> 00:41:02,020

philosophy to thinking and all of these

1087

00:41:06,420 --> 00:41:04,230

should be taught in philosophy classes

1088

00:41:08,310 --> 00:41:06,430

critical thinking is defined by Greg

1089

00:41:11,160 --> 00:41:08,320

Haskins in a practical guide to critical

1090

00:41:12,720 --> 00:41:11,170

thinking as a process by which we use

1091

00:41:14,220 --> 00:41:12,730

our knowledge and intelligence to

1092

00:41:16,140 --> 00:41:14,230

effectively arrive at the most

1093

00:41:18,930 --> 00:41:16,150

reasonable and justifiable position on

1094

00:41:22,140 --> 00:41:18,940

issues this may not be the most reasoned

1095

00:41:23,700 --> 00:41:22,150

way but certainly becomes across the one

1096

00:41:25,890 --> 00:41:23,710

as reasonable you could defend it and

1097

00:41:27,420 --> 00:41:25,900

which endeavours to identify and

1098

00:41:29,010 --> 00:41:27,430

overcome the numerous hindrances to

1099

00:41:30,870 --> 00:41:29,020

rational thinking regarding the

1100

00:41:33,510 --> 00:41:30,880

philosophical approach to skepticism as

1101

00:41:36,210 --> 00:41:33,520

i mentioned that radical skepticism such

1102

00:41:38,490 --> 00:41:36,220

as shown by pyro it has the notion that

1103

00:41:40,140 --> 00:41:38,500

we know nothing at all regarding schools

1104

00:41:42,000 --> 00:41:40,150

and education within the philosophy and

1105

00:41:44,010 --> 00:41:42,010

ethics course which only started this

1106

00:41:45,420 --> 00:41:44,020

year for you eleven students next year

1107

00:41:47,640 --> 00:41:45,430

will be open for your twelve students

1108

00:41:49,650 --> 00:41:47,650

and within the education in general yes

1109

00:41:51,720 --> 00:41:49,660

students should be allowed to are

1110

00:41:53,730 --> 00:41:51,730

skeptical questions put constructive

1111

00:41:55,920 --> 00:41:53,740

answers in reply feel free to go either

1112

00:41:57,360 --> 00:41:55,930

way play the devil's advocate to take a

1113

00:41:59,520 --> 00:41:57,370

sign that they don't necessarily believe

1114

00:42:01,860 --> 00:41:59,530

in it's all part of education as far as

1115

00:42:03,450 --> 00:42:01,870

I'm concerned the goal of critical

1116

00:42:05,190 --> 00:42:03,460

thinking is not to create clever clever

1117

00:42:07,470 --> 00:42:05,200

elitist to go around knocking

1118

00:42:10,410 --> 00:42:07,480

things down I've got a favorite short

1119

00:42:12,780 --> 00:42:10,420

story love as a fallacy imagines himself

1120

00:42:14,609 --> 00:42:12,790

to be such an elitist that he can

1121

00:42:17,849 --> 00:42:14,619

convince the young woman that he can

1122

00:42:20,310 --> 00:42:17,859

fall in love with him just do to logical

1123

00:42:23,220 --> 00:42:20,320

reasoning it doesn't work eventually she

1124

00:42:24,660 --> 00:42:23,230

shows him ah eventually she shows and

1125

00:42:27,180 --> 00:42:24,670

that in the end the hearts going to win

1126

00:42:28,800 --> 00:42:27,190

out it's a nice cute story and all but

1127

00:42:31,140 --> 00:42:28,810

certainly one that we like to discuss

1128

00:42:32,880 --> 00:42:31,150

with students that very few philosophers

1129

00:42:34,829 --> 00:42:32,890

are actually skeptics and to study

1130

00:42:37,500 --> 00:42:34,839

critical thinking philosophy logical

1131

00:42:38,849 --> 00:42:37,510

reasoning and to remove a huge bulk of

1132

00:42:40,740 --> 00:42:38,859

the tradition would be doing a

1133

00:42:43,050 --> 00:42:40,750

disservice it would become a very boring

1134

00:42:45,329 --> 00:42:43,060

course I think quite frankly so although

1135

00:42:47,400 --> 00:42:45,339

we distinguish skepticism as a process

1136

00:42:48,960 --> 00:42:47,410

we see evidence and make good arguments

1137

00:42:51,329 --> 00:42:48,970

of all claims usually related to the

1138

00:42:52,530 --> 00:42:51,339

paranormal pseudoscience important to

1139

00:42:54,750 --> 00:42:52,540

realize that there's other elements

1140

00:42:57,359 --> 00:42:54,760

weird things ladies and gentlemen in

1141

00:42:59,460 --> 00:42:57,369

front of you is a copy of today's

1142

00:43:00,990 --> 00:42:59,470

horoscope well it would be today's

1143

00:43:03,480 --> 00:43:01,000

horoscope if it wasn't for the fact that

1144

00:43:06,599 --> 00:43:03,490

Aries Sagittarius cancer Capricorn

1145

00:43:08,280 --> 00:43:06,609

they've all been removed can you spot

1146

00:43:10,859 --> 00:43:08,290

yourself after experiencing what you

1147

00:43:12,210 --> 00:43:10,869

went through today there's one or two on

1148

00:43:14,339 --> 00:43:12,220

there that which are really quite nasty

1149

00:43:17,069 --> 00:43:14,349

which shocked me and put me in fact in

1150

00:43:20,099 --> 00:43:17,079

mind of Douglas Adams and other famous

1151

00:43:22,650 --> 00:43:20,109

atheists who in his stories about Dirk

1152

00:43:24,839 --> 00:43:22,660

Gently had the sad experience of Dirk

1153

00:43:27,780 --> 00:43:24,849

Gently who managed to very much annoy a

1154

00:43:29,700 --> 00:43:27,790

local horoscope writer and so because

1155

00:43:31,440 --> 00:43:29,710

the horoscope right in you Gentiles

1156

00:43:33,900 --> 00:43:31,450

birthday would always purposely make

1157

00:43:35,880 --> 00:43:33,910

that particular horoscope sign the worst

1158

00:43:37,800 --> 00:43:35,890

one ever it's like you're going to die

1159

00:43:39,450 --> 00:43:37,810

in a hole but people would write in the

1160

00:43:40,559 --> 00:43:39,460

newspaper complaining how come cancer is

1161

00:43:42,839 --> 00:43:40,569

saying that i'm going to die in a hole

1162

00:43:44,430 --> 00:43:42,849

were burning plane crash and pope i get

1163

00:43:45,809 --> 00:43:44,440

eaten by piranhas but he would just keep

1164

00:43:47,520 --> 00:43:45,819

on doing it just to annoy Dirk Gently

1165

00:43:49,980 --> 00:43:47,530

this ladies and gentlemen was

1166

00:43:52,829 --> 00:43:49,990

essentially what my high school has come

1167

00:43:55,589 --> 00:43:52,839

up with they got a sheet of paper cut

1168

00:43:58,890 --> 00:43:55,599

out all the elements which identified

1169

00:44:01,440 --> 00:43:58,900

who was what gave it out to students in

1170

00:44:03,210 --> 00:44:01,450

the playground and said who are you and

1171

00:44:05,309 --> 00:44:03,220

they found out how many people were able

1172

00:44:07,170 --> 00:44:05,319

to accurately figure out who they were I

1173

00:44:09,720 --> 00:44:07,180

think they had a success rate of about

1174

00:44:12,210 --> 00:44:09,730

out of a hundred students two percent

1175

00:44:14,910 --> 00:44:12,220

this is how they studied the notion of

1176

00:44:17,140 --> 00:44:14,920

the Barnum effect or the for effect

1177

00:44:19,029 --> 00:44:17,150

which is you put out a nice

1178

00:44:21,279 --> 00:44:19,039

blanket statement which could apply to

1179

00:44:23,549 --> 00:44:21,289

anyone and people will automatically

1180

00:44:26,200 --> 00:44:23,559

start to say oh yes this could be me

1181

00:44:28,630 --> 00:44:26,210

there is another experiment which james

1182

00:44:30,220 --> 00:44:28,640

randi does in one of his famous videos

1183

00:44:32,410 --> 00:44:30,230

that you can find online thanks to the

1184

00:44:36,339 --> 00:44:32,420

wonder of YouTube and it's marvelous

1185

00:44:38,319 --> 00:44:36,349

disregard for copyright where he hands

1186

00:44:39,730 --> 00:44:38,329

out a for effect statement to a variety

1187

00:44:41,620 --> 00:44:39,740

of people telling them this was

1188

00:44:43,359 --> 00:44:41,630

specially made for you and then he asked

1189

00:44:45,700 --> 00:44:43,369

for handed up how many people think that

1190

00:44:48,099 --> 00:44:45,710

out of accuracy this is a 4 out of 5

1191

00:44:49,930 --> 00:44:48,109

most people put the hands up five out of

1192

00:44:54,640 --> 00:44:49,940

five the rest of the class but the hands

1193

00:44:56,140 --> 00:44:54,650

up please derren brown's another

1194

00:44:57,490 --> 00:44:56,150

fabulous one again thanks to the

1195

00:44:58,930 --> 00:44:57,500

wonderful disregard a copyright on

1196

00:45:01,029 --> 00:44:58,940

youtube you can find it yourself with a

1197

00:45:05,039 --> 00:45:01,039

couple of search angels prepare to get

1198

00:45:08,589 --> 00:45:05,049

the unicycle potential yet talipes

1199

00:45:10,180 --> 00:45:08,599

astrological chart is out so far because

1200

00:45:13,690 --> 00:45:10,190

of the ships of the year that is huggies

1201

00:45:15,849 --> 00:45:13,700

i think is 26 degrees food but i think

1202

00:45:17,620 --> 00:45:15,859

it's that much it means that all your

1203

00:45:20,319 --> 00:45:17,630

astrological charts are so far out that

1204

00:45:22,660 --> 00:45:20,329

they're talking about yes and the sign

1205

00:45:24,819 --> 00:45:22,670

of a fuchsias is missing as well the

1206

00:45:27,010 --> 00:45:24,829

idea that pattalam ease chart doesn't

1207

00:45:29,170 --> 00:45:27,020

accurately match what is happening now

1208

00:45:30,849 --> 00:45:29,180

in 2008 yes that's true they're so

1209

00:45:33,250 --> 00:45:30,859

illogical bodies have moved over time

1210

00:45:34,809 --> 00:45:33,260

and so how much relevance is has a god

1211

00:45:36,130 --> 00:45:34,819

and there's the missing sign of fuchsias

1212

00:45:37,539 --> 00:45:36,140

which I would usually show to the

1213

00:45:39,609 --> 00:45:37,549

students and point out to them that in

1214

00:45:41,680 --> 00:45:39,619

fact the astrological sign had often

1215

00:45:44,349 --> 00:45:41,690

shifted by one or two places northern

1216

00:45:47,859 --> 00:45:44,359

and northern hemisphere as well yeah so

1217

00:45:49,420 --> 00:45:47,869

there's a variety of things which yes

1218

00:45:51,069 --> 00:45:49,430

and it's something that students can

1219

00:45:54,130 --> 00:45:51,079

write a lot about which is fabulous

1220

00:45:56,650 --> 00:45:54,140

they're able to research write it out in

1221

00:45:58,539 --> 00:45:56,660

a logical manner do surveys do the stats

1222

00:46:00,220 --> 00:45:58,549

behind it come back to a wonderful

1223

00:46:02,440 --> 00:46:00,230

presentation from the class it's great

1224

00:46:04,269 --> 00:46:02,450

and yet there's issues with this this

1225

00:46:06,279 --> 00:46:04,279

was a simple activity that I could do

1226
00:46:07,690 --> 00:46:06,289
with high school students and yet you

1227
00:46:09,640 --> 00:46:07,700
have to realize the sort of culture that

1228
00:46:11,079 --> 00:46:09,650
we live in people make money out of

1229
00:46:13,240 --> 00:46:11,089
these people make a lot of money on

1230
00:46:16,150 --> 00:46:13,250
people managed to get themselves in

1231
00:46:17,500 --> 00:46:16,160
women's day for the entire career just

1232
00:46:19,269 --> 00:46:17,510
based on the ability to come up with

1233
00:46:21,489 --> 00:46:19,279
those poor infected items

1234
00:46:23,380 --> 00:46:21,499
and in some cases yes they furman

1235
00:46:25,630 --> 00:46:23,390
believe in it entire families depend

1236
00:46:27,880 --> 00:46:25,640
upon it and as Daniel Loxton himself

1237
00:46:29,919 --> 00:46:27,890
says about some of the more recent stats

1238
00:46:32,019 --> 00:46:29,929

it's emphatically the case the

1239

00:46:33,789 --> 00:46:32,029

paranormal police are widespread the

1240

00:46:35,769 --> 00:46:33,799

notion that traditional paranormal

1241

00:46:37,509 --> 00:46:35,779

topics are dead it flies in the face of

1242

00:46:39,699 --> 00:46:37,519

the fact that according to a gallup poll

1243

00:46:41,799 --> 00:46:39,709

in 2005 three-quarters of Americans

1244

00:46:44,140 --> 00:46:41,809

believe at least one claim from a list

1245

00:46:45,699 --> 00:46:44,150

of 10 classic paranormal items for

1246

00:46:47,109 --> 00:46:45,709

example if you have no opinion regarding

1247

00:46:48,549 --> 00:46:47,119

astrology although the position and

1248

00:46:50,439 --> 00:46:48,559

stars and planets can affect people's

1249

00:46:52,439 --> 00:46:50,449

lives fully twenty five percent of

1250

00:46:54,969 --> 00:46:52,449

americans say they believe in astrology

1251
00:46:57,939 --> 00:46:54,979
and if you're keeping count that's 75

1252
00:47:00,009 --> 00:46:57,949
million people in the US alone my own

1253
00:47:02,049 --> 00:47:00,019
research the most recent major

1254
00:47:06,399 --> 00:47:02,059
paranormal research that's come out is

1255
00:47:08,499 --> 00:47:06,409
from the UK the ipsos mori in 2007 held

1256
00:47:10,120 --> 00:47:08,509
in the UK the third of people believe

1257
00:47:12,279 --> 00:47:10,130
that governments around the world are

1258
00:47:15,640 --> 00:47:12,289
concealing evidence of extraterrestrial

1259
00:47:17,049 --> 00:47:15,650
beings nine percent yeah nine percent

1260
00:47:19,659 --> 00:47:17,059
believe that crop circles are the work

1261
00:47:21,939 --> 00:47:19,669
of extraterrestrial forces my year

1262
00:47:24,279 --> 00:47:21,949
eights created a crop circle on the

1263
00:47:26,049 --> 00:47:24,289

front lawn by simply using planks of

1264

00:47:28,269 --> 00:47:26,059

wood and by getting it was a class of

1265

00:47:29,890 --> 00:47:28,279

about 22 they just stomped on it they

1266

00:47:31,870 --> 00:47:29,900

stomped and stomped and stomped until

1267

00:47:35,259 --> 00:47:31,880

they created a big beautiful smiley face

1268

00:47:37,029 --> 00:47:35,269

in the lawn their very own crop circle

1269

00:47:39,999 --> 00:47:37,039

it was that easy we took photographic

1270

00:47:41,739 --> 00:47:40,009

evidence and yet people still continue

1271

00:47:46,319 --> 00:47:41,749

to write books I found one recently say

1272

00:47:48,699 --> 00:47:46,329

crop circles are the work of aliens I

1273

00:47:49,929 --> 00:47:48,709

know that by the time they hit year nine

1274

00:47:51,309 --> 00:47:49,939

so they probably started acting like

1275

00:47:54,159 --> 00:47:51,319

aliens but until then there were minor

1276

00:47:55,809 --> 00:47:54,169

eight students therefore we have worries

1277

00:47:57,819 --> 00:47:55,819

that students are learning of truths my

1278

00:47:59,919 --> 00:47:57,829

daughter created a crop circle don't you

1279

00:48:04,689 --> 00:47:59,929

know that she is making fun of the

1280

00:48:07,349 --> 00:48:04,699

aliens and their artwork and and her dad

1281

00:48:09,999 --> 00:48:07,359

was abducted by an alien he thinks and

1282

00:48:11,660 --> 00:48:10,009

therefore what are you doing mocking his

1283

00:48:15,300 --> 00:48:11,670

beliefs as well

1284

00:48:16,680 --> 00:48:15,310

yeah exactly students are going to be

1285

00:48:19,080 --> 00:48:16,690

panicked about ghosts if you talk about

1286

00:48:21,530 --> 00:48:19,090

ghosts students are going to call up the

1287

00:48:23,370 --> 00:48:21,540

demons if you use in a Ouija board

1288

00:48:24,810 --> 00:48:23,380

doesn't matter that they made it

1289

00:48:26,910 --> 00:48:24,820

themselves out of a couple of golf balls

1290

00:48:29,550 --> 00:48:26,920

and bit of cardboard no this is going to

1291

00:48:32,160 --> 00:48:29,560

be a conduit to the other side and for

1292

00:48:33,630 --> 00:48:32,170

them absolutely perfectly reasonable

1293

00:48:36,600 --> 00:48:33,640

they can make a case to the school in

1294

00:48:39,210 --> 00:48:36,610

the school most likely back off this has

1295

00:48:41,520 --> 00:48:39,220

been recorded before in let me see i

1296

00:48:44,010 --> 00:48:41,530

believe it was 1997 in The Skeptical

1297

00:48:45,960 --> 00:48:44,020

Inquirer a man named Larry barrio who

1298

00:48:47,310 --> 00:48:45,970

wrote about how permissions were given

1299

00:48:48,810 --> 00:48:47,320

by the school for him to do this with

1300

00:48:51,000 --> 00:48:48,820

his primary school class and then just

1301
00:48:52,800 --> 00:48:51,010
as rapidly taken away so what do you do

1302
00:48:55,320 --> 00:48:52,810
keeping that less than my mind from the

1303
00:48:57,210 --> 00:48:55,330
very beginning my own approach is pretty

1304
00:48:59,970 --> 00:48:57,220
straightforward I told everybody what I

1305
00:49:02,280 --> 00:48:59,980
was doing absolutely everybody I didn't

1306
00:49:04,980 --> 00:49:02,290
shut up about it I told the school

1307
00:49:06,450 --> 00:49:04,990
counselors the deputy principal the

1308
00:49:07,950 --> 00:49:06,460
science teachers the maths teachers

1309
00:49:09,270 --> 00:49:07,960
particularly regarding stats that are

1310
00:49:10,620 --> 00:49:09,280
really helpful when you know you don't

1311
00:49:12,120 --> 00:49:10,630
often get an English teacher coming and

1312
00:49:14,610 --> 00:49:12,130
saying okay so that the binomial that we

1313
00:49:17,400 --> 00:49:14,620

got here will be possibly yet they just

1314

00:49:20,580 --> 00:49:17,410

went freaky out of that are people value

1315

00:49:23,010 --> 00:49:20,590

our subject cross curricula why not I

1316

00:49:25,050 --> 00:49:23,020

told fellow department members i told

1317

00:49:26,520 --> 00:49:25,060

the boarding house very important if

1318

00:49:28,260 --> 00:49:26,530

you've got a boarding house because the

1319

00:49:30,480 --> 00:49:28,270

kids live on school campus and so forth

1320

00:49:32,670 --> 00:49:30,490

away from mom and dad it's all part of

1321

00:49:34,320 --> 00:49:32,680

pastoral care I told the media group of

1322

00:49:36,720 --> 00:49:34,330

the school the students won recognition

1323

00:49:39,150 --> 00:49:36,730

for their for their investigations we

1324

00:49:41,940 --> 00:49:39,160

got in the newspaper about it and yet

1325

00:49:44,330 --> 00:49:41,950

there are still resistance it took two

1326

00:49:46,440 --> 00:49:44,340

years but there was still resistance

1327

00:49:47,790 --> 00:49:46,450

there's also the importance of

1328

00:49:49,890 --> 00:49:47,800

overarching curriculum I have to

1329

00:49:52,860 --> 00:49:49,900

emphasize but by creating lesson plans

1330

00:49:55,170 --> 00:49:52,870

it was a lot of work to do this to be

1331

00:49:56,940 --> 00:49:55,180

able to come up with the ideas to help

1332

00:49:59,100 --> 00:49:56,950

the students cut out the little pieces

1333

00:50:00,930 --> 00:49:59,110

it was it was more than that it was

1334

00:50:02,720 --> 00:50:00,940

digging out resources the fact that

1335

00:50:05,250 --> 00:50:02,730

youtube is blocked in many schools

1336

00:50:06,840 --> 00:50:05,260

getting videos from overseas and making

1337

00:50:09,480 --> 00:50:06,850

sure that level compatible on the system

1338

00:50:11,340 --> 00:50:09,490

at school a lot of reading a book sri

1339

00:50:12,480 --> 00:50:11,350

writing of articles and paraphrasing

1340

00:50:15,510 --> 00:50:12,490

them so it's suitable for a younger

1341

00:50:17,160 --> 00:50:15,520

audience it was massive in consultation

1342

00:50:19,980 --> 00:50:17,170

with other teachers finding resources in

1343

00:50:22,620 --> 00:50:19,990

both audio and visual some things just

1344

00:50:22,900 --> 00:50:22,630

aren't suitable Penn & Teller gone this

1345

00:50:24,339 --> 00:50:22,910

is

1346

00:50:26,710 --> 00:50:24,349

not to criticize Penn & Teller for what

1347

00:50:28,870 --> 00:50:26,720

they do what they do is fabulous it just

1348

00:50:30,520 --> 00:50:28,880

has a specific audience and it's not

1349

00:50:32,410 --> 00:50:30,530

kids they have done stuff for kids

1350

00:50:34,029 --> 00:50:32,420

before there's a fabulous series that

1351
00:50:35,289 --> 00:50:34,039
they did about art and there were

1352
00:50:37,480 --> 00:50:35,299
elements in that which I could have used

1353
00:50:39,220 --> 00:50:37,490
Penn & Teller are perfectly within their

1354
00:50:40,329 --> 00:50:39,230
right to create what they think suiting

1355
00:50:43,270 --> 00:50:40,339
the audience that they have out there

1356
00:50:44,890 --> 00:50:43,280
but for kids it's a bit tougher I ended

1357
00:50:48,190 --> 00:50:44,900
up turning to a wider framework in the

1358
00:50:50,549 --> 00:50:48,200
end no single website could support this

1359
00:50:52,779 --> 00:50:50,559
well enough as far as I thought and

1360
00:50:54,099 --> 00:50:52,789
because I was involved with philosophy

1361
00:50:55,329 --> 00:50:54,109
for children who are contributing to the

1362
00:50:57,940 --> 00:50:55,339
philosophy and ethics course which

1363
00:50:59,799 --> 00:50:57,950

started it was much easier to get

1364

00:51:01,779 --> 00:50:59,809

skepticism and critical thinking in this

1365

00:51:05,319 --> 00:51:01,789

particular aspect by using paranormal

1366

00:51:07,150 --> 00:51:05,329

claims into a formal framework the

1367

00:51:08,770 --> 00:51:07,160

philosophy and ethics course if you are

1368

00:51:10,329 --> 00:51:08,780

unfamiliar with it I've got copies of

1369

00:51:12,309 --> 00:51:10,339

the syllabus over there feel free to

1370

00:51:14,049 --> 00:51:12,319

look over them philosophy is meant to be

1371

00:51:15,760 --> 00:51:14,059

a practical activity we do philosophy

1372

00:51:17,289 --> 00:51:15,770

when we seek to define something when we

1373

00:51:19,569 --> 00:51:17,299

challenge assumptions where we construct

1374

00:51:21,099 --> 00:51:19,579

an argument it's going to be a skill

1375

00:51:23,770 --> 00:51:21,109

that's useful in our personal world our

1376

00:51:25,180 --> 00:51:23,780

social world world of work and in the

1377

00:51:27,039 --> 00:51:25,190

wider questions about how the world

1378

00:51:28,630 --> 00:51:27,049

works they learn skills that can be

1379

00:51:30,339 --> 00:51:28,640

transferred to many different situations

1380

00:51:31,750 --> 00:51:30,349

and contexts and students who do

1381

00:51:33,730 --> 00:51:31,760

philosophy and ethics can acquire these

1382

00:51:35,769 --> 00:51:33,740

skills and become thinkers who recognize

1383

00:51:37,359 --> 00:51:35,779

and reflect critically on issues in the

1384

00:51:40,000 --> 00:51:37,369

life of their own and others experiences

1385

00:51:42,250 --> 00:51:40,010

so pseudoscience an education this is

1386

00:51:44,890 --> 00:51:42,260

probably closer to the end of what I do

1387

00:51:46,690 --> 00:51:44,900

in terms of what I've discovered through

1388

00:51:48,460 --> 00:51:46,700

blogging pseudo science and education

1389

00:51:50,410 --> 00:51:48,470

has cropped up again and again and those

1390

00:51:52,510 --> 00:51:50,420

of you work in an industry where you

1391

00:51:53,740 --> 00:51:52,520

have pd days or where someone comes and

1392

00:51:55,779 --> 00:51:53,750

says right we're going to figure out the

1393

00:51:58,089 --> 00:51:55,789

personality of everybody here we're

1394

00:52:00,490 --> 00:51:58,099

going to do a lovely chart or four boxes

1395

00:52:01,960 --> 00:52:00,500

red green blue yellow and we're going to

1396

00:52:03,339 --> 00:52:01,970

figure out where your personality fits

1397

00:52:04,839 --> 00:52:03,349

into it and whether or not you're a team

1398

00:52:06,490 --> 00:52:04,849

player and who they're everyone like I

1399

00:52:07,329 --> 00:52:06,500

where you happen so yeah and eventually

1400

00:52:09,250 --> 00:52:07,339

you're just sitting there saying you

1401
00:52:11,019 --> 00:52:09,260
know I really could have just spent the

1402
00:52:13,210 --> 00:52:11,029
whole afternoon playing solitaire and

1403
00:52:15,430 --> 00:52:13,220
got more intellectual engagement out of

1404
00:52:17,349 --> 00:52:15,440
this it happens in the education

1405
00:52:18,579 --> 00:52:17,359
industry as well where people will say

1406
00:52:19,870 --> 00:52:18,589
we're going to be doing this particular

1407
00:52:21,789 --> 00:52:19,880
activity it's going to be fabulous for

1408
00:52:23,440 --> 00:52:21,799
kids and you're saying yeah but where's

1409
00:52:24,579 --> 00:52:23,450
the underpinning reason for this what

1410
00:52:27,120 --> 00:52:24,589
makes you think that the kids are going

1411
00:52:28,720 --> 00:52:27,130
to get in fact what sort of

1412
00:52:30,460 --> 00:52:28,730
qualifications do you have an

1413
00:52:32,470 --> 00:52:30,470

educational psych anyway where is this

1414

00:52:35,019 --> 00:52:32,480

coming from a variety of packages and

1415

00:52:35,280 --> 00:52:35,029

programs come out one particular one

1416

00:52:36,930 --> 00:52:35,290

that

1417

00:52:39,720 --> 00:52:36,940

ice personally have issues with is Eddie

1418

00:52:42,750 --> 00:52:39,730

door is one of the big bug gears that

1419

00:52:45,050 --> 00:52:42,760

I've come up across door simply came up

1420

00:52:48,840 --> 00:52:45,060

across because there are a few bloggers

1421

00:52:50,400 --> 00:52:48,850

investigating it door is a program

1422

00:52:51,600 --> 00:52:50,410

started by man called winter fur door

1423

00:52:54,900 --> 00:52:51,610

who had a daughter who suffered from

1424

00:52:57,030 --> 00:52:54,910

dyslexia incredibly sad story very

1425

00:52:59,580 --> 00:52:57,040

traumatized by the fact that she had

1426
00:53:02,960 --> 00:52:59,590
dyslexia he decided to come up with a

1427
00:53:06,360 --> 00:53:02,970
cure it involves balancing and juggling

1428
00:53:08,400 --> 00:53:06,370
I'm standing on a board he makes a lot

1429
00:53:10,530 --> 00:53:08,410
of money out of this door recently

1430
00:53:12,210 --> 00:53:10,540
collapsed in Australia in fact I'm I had

1431
00:53:14,670 --> 00:53:12,220
the opportunity to go to a meeting day

1432
00:53:16,350 --> 00:53:14,680
for it collapse in Australia first and

1433
00:53:18,540 --> 00:53:16,360
we in Australia the bloggers of a

1434
00:53:20,400 --> 00:53:18,550
network of about 50 I was the one

1435
00:53:21,450 --> 00:53:20,410
Australian in the group and so on the

1436
00:53:23,580 --> 00:53:21,460
day that they were going to have an open

1437
00:53:24,660 --> 00:53:23,590
day at door I contacted the bloggers and

1438
00:53:26,310 --> 00:53:24,670

said I just went past the building

1439

00:53:27,630 --> 00:53:26,320

they're shut down I said can you find

1440

00:53:29,460 --> 00:53:27,640

them it's ok phone and phoned about and

1441

00:53:31,830 --> 00:53:29,470

i said hi what's happening said oh we've

1442

00:53:33,480 --> 00:53:31,840

gone into financial disarray nough said

1443

00:53:34,950 --> 00:53:33,490

ah what does this mean if this

1444

00:53:36,300 --> 00:53:34,960

particular things is ok these are the

1445

00:53:37,470 --> 00:53:36,310

things that they have to go through if

1446

00:53:39,930 --> 00:53:37,480

they're saying this particular thing

1447

00:53:42,240 --> 00:53:39,940

fabulous blogged it immediately that

1448

00:53:44,730 --> 00:53:42,250

then went over to the UK was blogged on

1449

00:53:47,550 --> 00:53:44,740

their blogs and next thing you know Ben

1450

00:53:49,290 --> 00:53:47,560

Goldacre is coming out with a an article

1451
00:53:52,140 --> 00:53:49,300
in The Guardian saying these particular

1452
00:53:54,810 --> 00:53:52,150
bloggers broke the story door however is

1453
00:53:57,300 --> 00:53:54,820
a classic example of pseudoscience it is

1454
00:54:00,870 --> 00:53:57,310
now arising again as an independent

1455
00:54:02,370 --> 00:54:00,880
group without clinics as they used to

1456
00:54:04,350 --> 00:54:02,380
depend upon where they charge people

1457
00:54:06,450 --> 00:54:04,360
thousands of dollars just to come in for

1458
00:54:07,860 --> 00:54:06,460
a certain amount of time now it's an

1459
00:54:10,260 --> 00:54:07,870
independent program that can be sold out

1460
00:54:11,970 --> 00:54:10,270
to people which doesn't require people

1461
00:54:15,180 --> 00:54:11,980
standing over making sure the kids go

1462
00:54:17,040 --> 00:54:15,190
over the activities door won't stop many

1463
00:54:18,360 --> 00:54:17,050

projects that go on there's a lot of

1464

00:54:20,790 --> 00:54:18,370

money to be made out of people who

1465

00:54:22,590 --> 00:54:20,800

believed strongly even at the points

1466

00:54:25,440 --> 00:54:22,600

that some of the bloggers set up an

1467

00:54:27,420 --> 00:54:25,450

alternative forum so the parents who

1468

00:54:29,490 --> 00:54:27,430

were engaged in door who are at a loss

1469

00:54:31,650 --> 00:54:29,500

as to how the door for ins are shutting

1470

00:54:33,720 --> 00:54:31,660

down because the company was gone even

1471

00:54:36,480 --> 00:54:33,730

when a new forum was started up didn't

1472

00:54:38,130 --> 00:54:36,490

matter how much we would point out the

1473

00:54:39,900 --> 00:54:38,140

scientific evidence in the end their

1474

00:54:42,920 --> 00:54:39,910

belief was stronger ever heard of focus

1475

00:54:48,330 --> 00:54:45,900

this no apologies the truth about life

1476

00:54:50,010 --> 00:54:48,340

love and sex this is the sort of lovely

1477

00:54:52,080 --> 00:54:50,020

little book that gets handed out to and

1478

00:54:54,060 --> 00:54:52,090

a certain teachers year 11 students

1479

00:54:57,360 --> 00:54:54,070

telling them that abstinence-only

1480

00:55:00,060 --> 00:54:57,370

education is the only way this ended up

1481

00:55:02,100 --> 00:55:00,070

in the news after parents found out no

1482

00:55:04,920 --> 00:55:02,110

apologies is a classic example books

1483

00:55:06,570 --> 00:55:04,930

which are being put out there there are

1484

00:55:08,280 --> 00:55:06,580

religious education teachers who would

1485

00:55:10,620 --> 00:55:08,290

look at that and just piss themselves

1486

00:55:12,090 --> 00:55:10,630

laughing of course it is absurd all the

1487

00:55:13,770 --> 00:55:12,100

research points out that abstinence only

1488

00:55:15,180 --> 00:55:13,780

education is a massive failure and in

1489

00:55:18,210 --> 00:55:15,190

fact is incredibly damaging to a

1490

00:55:20,760 --> 00:55:18,220

community and yet books are still being

1491

00:55:23,520 --> 00:55:20,770

published such as this one and are able

1492

00:55:25,730 --> 00:55:23,530

to get into schools this one however I

1493

00:55:27,900 --> 00:55:25,740

don't know if you know about Creelman

1494

00:55:30,300 --> 00:55:27,910

seeing this if you have anyone who does

1495

00:55:34,020 --> 00:55:30,310

two years still program that's still

1496

00:55:36,150 --> 00:55:34,030

going out it promotes creationism it's a

1497

00:55:38,220 --> 00:55:36,160

study guide the last paragraph on

1498

00:55:39,720 --> 00:55:38,230

teaching creationism in schools the

1499

00:55:41,400 --> 00:55:39,730

reason for the amazing string of

1500

00:55:42,990 --> 00:55:41,410

successes we had with our Paulo flights

1501
00:55:44,610 --> 00:55:43,000
to the moon was that we never tried to

1502
00:55:46,170 --> 00:55:44,620
overlook anything it's in the same

1503
00:55:47,940 --> 00:55:46,180
matter of scientific honesty that I

1504
00:55:49,080 --> 00:55:47,950
endorse the presentation alternative

1505
00:55:53,340 --> 00:55:49,090
theories for the origin of the universe

1506
00:55:54,540 --> 00:55:53,350
life man in the science classroom it

1507
00:55:55,800 --> 00:55:54,550
would be an error to overlook the

1508
00:55:57,770 --> 00:55:55,810
possibility that the universe was

1509
00:56:00,360 --> 00:55:57,780
planned rather than happening by chance

1510
00:56:03,320 --> 00:56:00,370
adapted from an lamont 21 great

1511
00:56:05,880 --> 00:56:03,330
scientists who believe in the bible

1512
00:56:08,580 --> 00:56:05,890
career woman has about maybe 10 of these

1513
00:56:10,050 --> 00:56:08,590

out and he's been going since 2002 I

1514

00:56:11,880 --> 00:56:10,060

remember the first one that I picked up

1515

00:56:13,710 --> 00:56:11,890

in 2002 when I first started teaching

1516

00:56:16,290 --> 00:56:13,720

English and then I started realizing

1517

00:56:18,660 --> 00:56:16,300

that creelman has a very interesting

1518

00:56:20,910 --> 00:56:18,670

take on what education really should

1519

00:56:23,850 --> 00:56:20,920

mean it's very subtle just little

1520

00:56:26,580 --> 00:56:23,860

banners down the side last pages at the

1521

00:56:29,220 --> 00:56:26,590

end who the publishers supporters are a

1522

00:56:32,460 --> 00:56:29,230

variety of Christian youth group camps

1523

00:56:35,100 --> 00:56:32,470

yeah I listened to sunshine FM now and

1524

00:56:36,390 --> 00:56:35,110

then they have nice music but I'm not

1525

00:56:37,530 --> 00:56:36,400

entirely certain if they really should

1526

00:56:39,360 --> 00:56:37,540

be behind this sort of thing quite

1527

00:56:41,790 --> 00:56:39,370

frankly the thing that amuses me the

1528

00:56:43,860 --> 00:56:41,800

most is that the human biology textbook

1529

00:56:45,030 --> 00:56:43,870

has to teach them evolution and yet

1530

00:56:47,069 --> 00:56:45,040

there they are still with their little

1531

00:56:50,440 --> 00:56:47,079

message at the front

1532

00:56:54,130 --> 00:56:50,450

this stuff's leak-proof I bought this

1533

00:56:55,450 --> 00:56:54,140

today this has been out since 2002 I was

1534

00:56:57,249 --> 00:56:55,460

wondering when anyone could have noticed

1535

00:56:59,410 --> 00:56:57,259

that I've been sort of noticing it being

1536

00:57:02,410 --> 00:56:59,420

on a variety of booklets from a variety

1537

00:57:05,559 --> 00:57:02,420

of schools yeah this is creelman his

1538

00:57:07,180 --> 00:57:05,569

officers let me see they're out there

1539

00:57:09,160 --> 00:57:07,190

this is well known that's just two

1540

00:57:11,680 --> 00:57:09,170

examples of pseudoscience the overlap

1541

00:57:13,269 --> 00:57:11,690

between atheism and skepticism and quite

1542

00:57:15,640 --> 00:57:13,279

frankly as far as I'm concerned it's an

1543

00:57:17,589 --> 00:57:15,650

example of how education does deserve a

1544

00:57:19,539 --> 00:57:17,599

good keen eye because you never know

1545

00:57:21,579 --> 00:57:19,549

what's going to be up there probably my

1546

00:57:22,900 --> 00:57:21,589

best suggestion for anyone who may not

1547

00:57:24,549 --> 00:57:22,910

be a teacher and yet is still interest

1548

00:57:26,440 --> 00:57:24,559

in the education and future is get

1549

00:57:29,559 --> 00:57:26,450

involved with your schools turn up to

1550

00:57:31,870 --> 00:57:29,569

parent teacher open days is it possible

1551
00:57:33,519 --> 00:57:31,880
for religious schools to have open

1552
00:57:35,890 --> 00:57:33,529
minded broad discussions on philosophy

1553
00:57:37,210 --> 00:57:35,900
and ethics which does require looking at

1554
00:57:39,549 --> 00:57:37,220
a variety of subjects which may not

1555
00:57:41,140 --> 00:57:39,559
agree with the score yes it is possible

1556
00:57:42,549 --> 00:57:41,150
for a school to have this it is possible

1557
00:57:44,319 --> 00:57:42,559
for teachers to be open-minded enough

1558
00:57:47,319 --> 00:57:44,329
even if they happen to have a particular

1559
00:57:50,140 --> 00:57:47,329
religious background maybe there aren't

1560
00:58:06,340 --> 00:57:50,150
as many as there should be better be

1561
00:58:10,730 --> 00:58:08,660
astronomy cast it takes a fact space

1562
00:58:12,470 --> 00:58:10,740
journey through the cosmos as it offers

1563
00:58:15,140 --> 00:58:12,480

listeners weekly discussions on

1564

00:58:18,050 --> 00:58:15,150

astronomical topics ranging from planets

1565

00:58:20,360 --> 00:58:18,060

to cosmology hosted by Fraser Cain of

1566

00:58:21,350 --> 00:58:20,370

Universe Today and myself dr. Pamela

1567

00:58:24,020 --> 00:58:21,360

gave southern illinois university

1568

00:58:25,910 --> 00:58:24,030

edwardsville this show brings the

1569

00:58:28,340 --> 00:58:25,920

questions of an avid astronomy lover

1570

00:58:30,440 --> 00:58:28,350

directly to an astronomer together

1571

00:58:31,970 --> 00:58:30,450

Fraser and I explore what is known and

1572

00:58:34,730 --> 00:58:31,980

being discovered about the universe

1573

00:58:36,830 --> 00:58:34,740

around us join us each week as we take a

1574

00:58:52,370 --> 00:58:36,840

fact space journey through the cosmos at

1575

00:58:57,450 --> 00:58:55,080

thanks for joining me for the skeptic

1576
00:59:00,900 --> 00:58:57,460
zone our full episode is back next week

1577
00:59:02,870 --> 00:59:00,910
with Stefan of course dr. Richie reports

1578
00:59:06,390 --> 00:59:02,880
a grain of salt in the think tank and

1579
00:59:10,920 --> 00:59:06,400
before then why not go to our site at ww

1580
00:59:13,290 --> 00:59:10,930
skeptic zone TV scroll down and click on

1581
00:59:15,210 --> 00:59:13,300
the t-shirt icon you can buy skeptics

1582
00:59:17,990 --> 00:59:15,220
own t-shirts cups and all sorts of other

1583
00:59:20,280 --> 00:59:18,000
things just the thing to wear to Tam

1584
00:59:26,340 --> 00:59:20,290
until next week this is Richard Saunders

1585
00:59:28,740 --> 00:59:26,350
signing off from Sydney Australia you've

1586
00:59:33,390 --> 00:59:28,750
been listening to the skeptic zone visit

1587
00:59:35,820 --> 00:59:33,400
our website at wwc a petting zoo TV for

1588
00:59:38,770 --> 00:59:35,830

comments contacts and extra video

1589

00:59:38,780 --> 00:59:49,750

skits

1590

00:59:49,760 --> 00:59:52,510

Oh