

The Skeptic Zone

Show 252 - 18 Aug 2013

CE PUBLIC BOX

Maynard



1
00:00:27,710 --> 00:00:09,110
welcome to the skeptic zone the podcast

2
00:00:29,089 --> 00:00:27,720
from Australia for science and reason or

3
00:00:31,550 --> 00:00:29,099
we're going to be traveling in time and

4
00:00:33,590 --> 00:00:31,560
space today Richard hello me nada did

5
00:00:41,810 --> 00:00:33,600
you like my own I think the TARDIS is

6
00:00:44,060 --> 00:00:41,820
taking off again I was back now I'm glad

7
00:00:45,560 --> 00:00:44,070
we've managed to land here in the ABC

8
00:00:47,450 --> 00:00:45,570
building in Sydney Maynard for this

9
00:00:51,290 --> 00:00:47,460
episode of the skeptic Zone episode

10
00:00:52,880 --> 00:00:51,300
number 252 we are in ultimo at the

11
00:00:54,680 --> 00:00:52,890
doctor who exhibit which is looking at

12
00:00:57,799 --> 00:00:54,690
50 years of Doctor Who we've got a

13
00:00:59,779 --> 00:00:57,809

actual life-size plywood TARDIS in front

14

00:01:01,490 --> 00:00:59,789
of us here looking fantastic it is

15

00:01:03,170 --> 00:01:01,500
really nice to see a full-sized hardest

16

00:01:05,859 --> 00:01:03,180
one that makes the right noise I'm

17

00:01:08,120 --> 00:01:05,869
almost expecting it to her d materialise

18

00:01:10,130 --> 00:01:08,130
florist and then what's coming up on the

19

00:01:11,359 --> 00:01:10,140
show today Richard well we've got where

20

00:01:13,130 --> 00:01:11,369
you and I are going to have a little

21

00:01:15,109 --> 00:01:13,140
look around this exhibition and discuss

22

00:01:17,120 --> 00:01:15,119
them Doctor Who things for our skeptic

23

00:01:18,560 --> 00:01:17,130
zone Doctor Who type fans out there I've

24

00:01:20,090 --> 00:01:18,570
got some controversial things to say

25

00:01:23,240 --> 00:01:20,100
particularly about someone known as the

26
00:01:25,010 --> 00:01:23,250
unpopular Doctor Who I looked up oh yeah

27
00:01:26,120 --> 00:01:25,020
I can't read for that bit more about

28
00:01:28,130 --> 00:01:26,130
that later but what else has been going

29
00:01:30,440 --> 00:01:28,140
on The Skeptical world well just in this

30
00:01:32,270 --> 00:01:30,450
past week in bryce from the australian

31
00:01:34,789 --> 00:01:32,280
skeptics and I who do the mystery

32
00:01:36,319 --> 00:01:34,799
investigators along with dr. ohe with

33
00:01:38,210 --> 00:01:36,329
this time was Ian Bryce and I went to

34
00:01:41,149 --> 00:01:38,220
the Australian Museum and we interviewed

35
00:01:43,639 --> 00:01:41,159
lots of science educators and people

36
00:01:45,410 --> 00:01:43,649
doing science outreach for school

37
00:01:47,899 --> 00:01:45,420
students that's coming up on the show we

38
00:01:51,080 --> 00:01:47,909

also have other week in science from the

39

00:01:53,480 --> 00:01:51,090

Royal Institution of Australia a great

40

00:01:55,000 --> 00:01:53,490

little segment that is and we have a bit

41

00:01:56,980 --> 00:01:55,010

written by

42

00:02:01,120 --> 00:01:56,990

victorian skeptic by the name of mal

43

00:02:03,460 --> 00:02:01,130

Vickers all about psychic Sally ah now

44

00:02:05,920 --> 00:02:03,470

is that the English psychic Sally yes

45

00:02:07,210 --> 00:02:05,930

there might be other psychics Ali's out

46

00:02:10,200 --> 00:02:07,220

there but this one is about the english

47

00:02:12,130 --> 00:02:10,210

one who was recently in australia oh

48

00:02:13,780 --> 00:02:12,140

there's a little kid over there

49

00:02:15,790 --> 00:02:13,790

attacking a Dalek I don't know what he's

50

00:02:17,590 --> 00:02:15,800

getting into I I don't think it's going

51
00:02:20,200 --> 00:02:17,600
to end well for the kid all the darling

52
00:02:23,550 --> 00:02:20,210
garlic that's right so yes a bit about

53
00:02:27,250 --> 00:02:23,560
his thoughts on psychic Sally coming up

54
00:02:29,050 --> 00:02:27,260
episode 252 I tell you what let's get

55
00:02:30,430 --> 00:02:29,060
stuck into the show and it will come

56
00:02:53,710 --> 00:02:30,440
back after the first segment and we'll

57
00:02:58,810 --> 00:02:56,650
that noise you could hear folks it's a

58
00:03:00,280 --> 00:02:58,820
combined sound of hundreds of students

59
00:03:02,680 --> 00:03:00,290
here high school students at the

60
00:03:06,220 --> 00:03:02,690
Australian Museum here to enjoy science

61
00:03:09,610 --> 00:03:06,230
week there are volunteers here with real

62
00:03:11,770 --> 00:03:09,620
live Australian lizards like blue

63
00:03:13,060 --> 00:03:11,780

tongues and so on there's no I'm

64

00:03:14,890 --> 00:03:13,070

standing right near a stuffed koala

65

00:03:17,680 --> 00:03:14,900

there you go there's a stuffed one bet

66

00:03:19,720 --> 00:03:17,690

on the other side but just so many

67

00:03:22,390 --> 00:03:19,730

school students here to enjoy the

68

00:03:25,630 --> 00:03:22,400

exhibitions and exhibits and information

69

00:03:27,820 --> 00:03:25,640

booths for science I'm here with my good

70

00:03:29,260 --> 00:03:27,830

friend Ian Bryce to perform the mystery

71

00:03:32,260 --> 00:03:29,270

investigators a bit later on no I'm

72

00:03:34,510 --> 00:03:32,270

being surrounded by whoops sorry

73

00:03:38,020 --> 00:03:34,520

hundreds of students at the moment we're

74

00:03:40,000 --> 00:03:38,030

all going off somewhere it's a really

75

00:03:41,830 --> 00:03:40,010

it's really uplifting to see so many

76
00:03:45,280 --> 00:03:41,840
kids here so many school students here

77
00:03:48,400 --> 00:03:45,290
to find out more about science so I

78
00:03:50,410 --> 00:03:48,410
think I might wander around to one of

79
00:03:54,380 --> 00:03:50,420
the exhibition rooms where there are

80
00:04:01,699 --> 00:03:57,380
well we got here we've got energy we've

81
00:04:03,949 --> 00:04:01,709
got ANSTO people are here we have people

82
00:04:07,040 --> 00:04:03,959
demonstrating all sorts of things Youth

83
00:04:08,900 --> 00:04:07,050
robotics Biological Sciences the

84
00:04:11,860 --> 00:04:08,910
Australian Museum themselves have a

85
00:04:14,930 --> 00:04:11,870
little stand here jenolan caves jams

86
00:04:16,909 --> 00:04:14,940
jams oh I like the sound that I like jam

87
00:04:20,960 --> 00:04:16,919
which doesn't really mean jam does it

88
00:04:22,580 --> 00:04:20,970

hello hello yeah thank you hello Rebecca

89

00:04:24,800 --> 00:04:22,590

you're from jams doesn't mean you meet

90

00:04:28,040 --> 00:04:24,810

jams or what's the story we have a

91

00:04:30,170 --> 00:04:28,050

series of talks once a month basically

92

00:04:32,030 --> 00:04:30,180

on the theme of microbiology so what

93

00:04:34,220 --> 00:04:32,040

we're here for today is to get people

94

00:04:38,900 --> 00:04:34,230

thinking about things at a much smaller

95

00:04:41,420 --> 00:04:38,910

scale and gem stands for joint academic

96

00:04:43,760 --> 00:04:41,430

microbiology seminars i like i like it

97

00:04:45,920 --> 00:04:43,770

jams i like that and let's look at the

98

00:04:47,510 --> 00:04:45,930

table here we've got a microscope setup

99

00:04:50,510 --> 00:04:47,520

looks great we've got a little

100

00:04:52,310 --> 00:04:50,520

landscaping with kangaroos this is where

101
00:04:53,810 --> 00:04:52,320
you want to start so this is looking at

102
00:04:56,090 --> 00:04:53,820
what people think of when they think

103
00:04:59,060 --> 00:04:56,100
what is living in their back garden you

104
00:05:01,010 --> 00:04:59,070
can see the dogs and wallabies and

105
00:05:02,960 --> 00:05:01,020
things the kid but we're getting people

106
00:05:05,690 --> 00:05:02,970
to think about things at a much smaller

107
00:05:09,080 --> 00:05:05,700
level so in the microscope here we've

108
00:05:13,429 --> 00:05:09,090
got basically some moss suspension

109
00:05:16,080 --> 00:05:13,439
something Wiggly in there and connect

110
00:05:18,450 --> 00:05:16,090
our laptop here and you can see some

111
00:05:19,920 --> 00:05:18,460
nematodes and different things moving

112
00:05:21,809 --> 00:05:19,930
around so you can see it's quite dynamic

113
00:05:23,760 --> 00:05:21,819

I just beard through the microscope

114

00:05:24,929 --> 00:05:23,770

instead of looking at the laptop which I

115

00:05:26,279 --> 00:05:24,939

should have done but as soon as I period

116

00:05:29,700 --> 00:05:26,289

through those well there's another one

117

00:05:31,469 --> 00:05:29,710

I'm seeing these tiny little transparent

118

00:05:35,040 --> 00:05:31,479

creatures slithering across the screen

119

00:05:36,749 --> 00:05:35,050

that's quite something yes so that's we

120

00:05:39,749 --> 00:05:36,759

have a couple of samples people can come

121

00:05:41,010 --> 00:05:39,759

through and look at and yeah see on the

122

00:05:45,629 --> 00:05:41,020

screen that things are moving and

123

00:05:47,429 --> 00:05:45,639

there's a lot of small microbes when

124

00:05:49,769 --> 00:05:47,439

you're looking at a bigger structure and

125

00:05:51,029 --> 00:05:49,779

that's what you're looking at over here

126

00:05:53,249 --> 00:05:51,039

as well with the mushrooms you're

127

00:05:55,980 --> 00:05:53,259

looking at this what you can see on top

128

00:05:58,110 --> 00:05:55,990

and and that there's a lot more when you

129

00:05:59,790 --> 00:05:58,120

look up oh well there's a whole little

130

00:06:01,379 --> 00:05:59,800

bit of mushrooms here but the sides

131

00:06:03,839 --> 00:06:01,389

being cut away it's like a cross section

132

00:06:07,050 --> 00:06:03,849

I can look right down into the dirt here

133

00:06:09,390 --> 00:06:07,060

into the earth and see their root root

134

00:06:11,909 --> 00:06:09,400

structure structure down here and this

135

00:06:13,469 --> 00:06:11,919

is um a comparison Ezra like an apple

136

00:06:15,719 --> 00:06:13,479

tree that this isn't that basically the

137

00:06:17,490 --> 00:06:15,729

tree with their roots on top so when you

138

00:06:19,860 --> 00:06:17,500

see mushrooms grow on top that's just a

139

00:06:22,230 --> 00:06:19,870

small bit I had no idea that's quite

140

00:06:23,579 --> 00:06:22,240

amazing we have another form of

141

00:06:25,369 --> 00:06:23,589

microscope here that you can basically

142

00:06:27,959 --> 00:06:25,379

zoom in and look at the things on our

143

00:06:30,029 --> 00:06:27,969

table here we've got a sponge we've got

144

00:06:32,129 --> 00:06:30,039

some coral and we've got some different

145

00:06:34,409 --> 00:06:32,139

funghi some of it growing on agar plates

146

00:06:36,059 --> 00:06:34,419

and some you know your button mushrooms

147

00:06:37,769 --> 00:06:36,069

like you're used to seeing well this is

148

00:06:39,689 --> 00:06:37,779

just like it you see on TV there's an

149

00:06:42,089 --> 00:06:39,699

agar plate with penicillin it says

150

00:06:44,040 --> 00:06:42,099

growing on it it's just like those gross

151
00:06:45,929 --> 00:06:44,050
you see on those crime shows or the

152
00:06:47,850 --> 00:06:45,939
Mythbusters when they smear things yes

153
00:06:49,649 --> 00:06:47,860
and sometimes you can see not on this

154
00:06:51,719 --> 00:06:49,659
one at the moment the little droplets

155
00:06:55,140 --> 00:06:51,729
that are formed on the top

156
00:06:57,390 --> 00:06:55,150
our gems oh okay what microb you this

157
00:06:59,790 --> 00:06:57,400
little booklet this is all that we're

158
00:07:01,829 --> 00:06:59,800
doing this is what microbe are you we've

159
00:07:03,329 --> 00:07:01,839
got this booklet and it's asking you

160
00:07:06,779 --> 00:07:03,339
different questions do you like to be

161
00:07:09,719 --> 00:07:06,789
outdoors you're like being in a group is

162
00:07:12,420 --> 00:07:09,729
your hair all over the place that's a

163
00:07:15,299 --> 00:07:12,430

yes to me today and then when you get to

164

00:07:17,610 --> 00:07:15,309

the end you can identify which microbe

165

00:07:19,529 --> 00:07:17,620

you are I haven't identified who I am

166

00:07:22,829 --> 00:07:19,539

yet I don't know what I don't know what

167

00:07:24,719 --> 00:07:22,839

I are it on the side um here's hello

168

00:07:27,839 --> 00:07:24,729

bacterium solarium which is one of the

169

00:07:29,639 --> 00:07:27,849

things that I look at so you could we're

170

00:07:31,110 --> 00:07:29,649

going to see what is most popular today

171

00:07:34,589 --> 00:07:31,120

and in front of you we have a little

172

00:07:36,809 --> 00:07:34,599

basket of toy microbes germs and these

173

00:07:38,579 --> 00:07:36,819

are they some of the things that you

174

00:07:42,389 --> 00:07:38,589

maybe when you've worked out what

175

00:07:45,869 --> 00:07:42,399

microbe you are I found in our basket so

176

00:07:49,829 --> 00:07:45,879

here we have some salmonella ah so cute

177

00:07:51,420 --> 00:07:49,839

re version and some yeast and different

178

00:07:53,549 --> 00:07:51,430

things like that well what an

179

00:07:55,110 --> 00:07:53,559

interesting display and I'm lucky I'm

180

00:07:57,089 --> 00:07:55,120

just sort of between the waves of school

181

00:07:59,189 --> 00:07:57,099

children they come by on it there was

182

00:08:01,709 --> 00:07:59,199

some heading now everyone's here what

183

00:08:03,449 --> 00:08:01,719

they do show you is that microbes are

184

00:08:06,480 --> 00:08:03,459

very different they're not just small

185

00:08:08,309 --> 00:08:06,490

and similar shapes but you can see the

186

00:08:09,929 --> 00:08:08,319

variety that exists in the different

187

00:08:11,760 --> 00:08:09,939

structures that they have on them I love

188

00:08:13,199 --> 00:08:11,770

looking at this monitor here with the

189

00:08:15,089 --> 00:08:13,209

microscope and we can see them actually

190

00:08:18,119 --> 00:08:15,099

moving in their little environment oh

191

00:08:20,459 --> 00:08:18,129

wow it's like a multi-faceted one there

192

00:08:21,869 --> 00:08:20,469

and a quick swimming one there what an

193

00:08:23,909 --> 00:08:21,879

interesting thing and the kids enjoying

194

00:08:26,730 --> 00:08:23,919

it I hope they are yeah it's been pretty

195

00:08:29,519 --> 00:08:26,740

busy the last two days fantastic Rebecca

196

00:08:31,709 --> 00:08:29,529

thank you for giving me a little bit of

197

00:08:33,719 --> 00:08:31,719

your time to talk about jams and the

198

00:08:38,009 --> 00:08:33,729

website folks to learn more about gems

199

00:08:39,569 --> 00:08:38,019

is jams dot org dot a you yes and we

200

00:08:42,089 --> 00:08:39,579

meet him the museum once a month so

201
00:08:44,639 --> 00:08:42,099
people can come to the seminars here

202
00:08:47,759 --> 00:08:44,649
I'm walking around the corner here with

203
00:08:49,650 --> 00:08:47,769
lots of students in the far side and I

204
00:08:51,780 --> 00:08:49,660
just noticed this very interesting

205
00:08:53,639 --> 00:08:51,790
looking thing from me a new south wales

206
00:08:56,430 --> 00:08:53,649
institute of sport there's a lovely

207
00:08:58,499 --> 00:08:56,440
young lady now with funny sort of pads

208
00:09:02,100 --> 00:08:58,509
on her feet she's standing on this long

209
00:09:04,139 --> 00:09:02,110
board and what are you doing so this is

210
00:09:06,389 --> 00:09:04,149
called a slide board and i am simulating

211
00:09:12,840 --> 00:09:06,399
ice skating working on my skating stride

212
00:09:15,900 --> 00:09:12,850
and off she goes from side to side the

213
00:09:18,240 --> 00:09:15,910

back again and your body motion is

214

00:09:20,309 --> 00:09:18,250

exactly what you see going on the ice

215

00:09:22,230 --> 00:09:20,319

I'm exactly not going forward to going

216

00:09:23,910 --> 00:09:22,240

from side to side yeah so I mean

217

00:09:25,769 --> 00:09:23,920

obviously it's a little bit limited on

218

00:09:28,410 --> 00:09:25,779

the ice your feet would be going

219

00:09:30,480 --> 00:09:28,420

backwards a little bit so on an angle

220

00:09:32,579 --> 00:09:30,490

and this one is really just working on

221

00:09:34,230 --> 00:09:32,589

the skating muscles just improving on

222

00:09:36,540 --> 00:09:34,240

the stride so you're a better skater

223

00:09:38,730 --> 00:09:36,550

when you do get on the ice alright so if

224

00:09:41,220 --> 00:09:38,740

you do that for long enough and she's

225

00:09:42,660 --> 00:09:41,230

still doing it folks she's quite kin if

226

00:09:45,720 --> 00:09:42,670

you do that for long enough when you get

227

00:09:47,249 --> 00:09:45,730

on the ice your muscles are more well

228

00:09:49,110 --> 00:09:47,259

you've worked on the work any muscles

229

00:09:51,420 --> 00:09:49,120

forms you've developed those skating

230

00:09:52,679 --> 00:09:51,430

muscles and just getting them ready for

231

00:09:54,240 --> 00:09:52,689

when you're on the ice it's obviously a

232

00:09:55,439 --> 00:09:54,250

lot different to running so you do have

233

00:09:57,329 --> 00:09:55,449

slightly different muscles that are

234

00:10:00,030 --> 00:09:57,339

being worked out quite a workout you're

235

00:10:01,829 --> 00:10:00,040

doing them oh yes and I am ice hockey

236

00:10:03,929 --> 00:10:01,839

players and even this is still hard for

237

00:10:06,720 --> 00:10:03,939

me how popular is ice hockey in

238

00:10:08,730 --> 00:10:06,730

Australia I'll promote it while I'm at

239

00:10:12,059 --> 00:10:08,740

it so go for it we've got um probably

240

00:10:13,769 --> 00:10:12,069

around 4,000 members across Australia so

241

00:10:16,199 --> 00:10:13,779

I mean it is popular there's always

242

00:10:18,120 --> 00:10:16,209

plenty of room for growth with a we have

243

00:10:20,220 --> 00:10:18,130

ice rinks in pretty much all the states

244

00:10:21,809 --> 00:10:20,230

around the country New South Wales has

245

00:10:24,179 --> 00:10:21,819

the most I think we've got about six or

246

00:10:26,670 --> 00:10:24,189

seven I'm all the way up to coffs

247

00:10:29,060 --> 00:10:26,680

harbour even there's one nearly in fact

248

00:10:33,210 --> 00:10:31,920

MC you're great Canterbury yes my home

249

00:10:34,980 --> 00:10:33,220

rink I was there last night i'll be

250

00:10:36,690 --> 00:10:34,990

there tomorrow night as well Henry week

251
00:10:38,400 --> 00:10:36,700
I go there occasionally take my nieces

252
00:10:39,630 --> 00:10:38,410
and their views they love it yes so you

253
00:10:41,490 --> 00:10:39,640
need to get him as a hockey stick and

254
00:10:43,860 --> 00:10:41,500
teach him how to play hockey I can teach

255
00:10:46,620 --> 00:10:43,870
him that I coach when I was a very small

256
00:10:48,630 --> 00:10:46,630
boy i lived in canada and my first pair

257
00:10:51,060 --> 00:10:48,640
of skates were double bladed yeah and i

258
00:10:52,769 --> 00:10:51,070
used to go with like giant and pushing

259
00:10:55,769 --> 00:10:52,779
it and finish pushing a chair around as

260
00:10:57,300 --> 00:10:55,779
well and then we use it we used to live

261
00:11:00,930 --> 00:10:57,310
a little country area we used to go and

262
00:11:02,639 --> 00:11:00,940
play curling too oh no and there's a

263
00:11:04,290 --> 00:11:02,649

funny video of me running around with a

264

00:11:06,840 --> 00:11:04,300

big broom on the curling rink you know

265

00:11:10,110 --> 00:11:06,850

about four years old or sweeping the ice

266

00:11:12,600 --> 00:11:10,120

as you go so if people want to know more

267

00:11:14,670 --> 00:11:12,610

about hockey ice hockey where can they

268

00:11:18,030 --> 00:11:14,680

go what's the website I'm easiest thing

269

00:11:20,130 --> 00:11:18,040

to do is to go to IH eight or a you that

270

00:11:22,680 --> 00:11:20,140

some ice hockey Australia's website and

271

00:11:24,360 --> 00:11:22,690

if you go I'm sure it has state

272

00:11:25,949 --> 00:11:24,370

associations listed there you go to them

273

00:11:28,440 --> 00:11:25,959

it'll have all the contact details or

274

00:11:30,240 --> 00:11:28,450

just look it up on on facebook again it

275

00:11:31,829 --> 00:11:30,250

will be ice hockey australia if you are

276

00:11:33,660 --> 00:11:31,839

new south wales ice hockey new south

277

00:11:36,150 --> 00:11:33,670

wales does have their own Facebook page

278

00:11:38,160 --> 00:11:36,160

as well cool and for the New South Wales

279

00:11:40,079 --> 00:11:38,170

institute of sport where do we go for

280

00:11:41,639 --> 00:11:40,089

New South Wales institute of sport we

281

00:11:43,620 --> 00:11:41,649

have a facebook we have a twitter we

282

00:11:48,060 --> 00:11:43,630

also have a youtube account and our

283

00:11:50,639 --> 00:11:48,070

website is wwan SW is calm a you and

284

00:11:54,050 --> 00:11:50,649

your name is Sarah Sarah thank you very

285

00:12:01,110 --> 00:11:56,870

to give you a little bit of

286

00:12:04,470 --> 00:12:01,120

flavor what this is like this 20 30 40

287

00:12:06,870 --> 00:12:04,480

school students all young ladies as it

288

00:12:07,890 --> 00:12:06,880

happens from high school running around

289

00:12:10,740 --> 00:12:07,900

at the moment doing all sorts of

290

00:12:12,900 --> 00:12:10,750

experiments which is really great to see

291

00:12:16,730 --> 00:12:12,910

getting information about young

292

00:12:20,640 --> 00:12:16,740

scientists or physics outreach

293

00:12:23,010 --> 00:12:20,650

electricity hello again I'm just an old

294

00:12:25,140 --> 00:12:23,020

friend and I'm just here doing some

295

00:12:27,660 --> 00:12:25,150

reports for the skeptics own podcast and

296

00:12:29,220 --> 00:12:27,670

where are you from I am from the

297

00:12:31,800 --> 00:12:29,230

University of New South Wales I've just

298

00:12:35,790 --> 00:12:31,810

finished my master in magnetism research

299

00:12:38,100 --> 00:12:35,800

for data storage Oh ah I understand

300

00:12:40,530 --> 00:12:38,110

right yeah and our hard drives hard

301
00:12:42,690 --> 00:12:40,540
drives and you have some experience here

302
00:12:44,310 --> 00:12:42,700
today for the kids to enjoy we do

303
00:12:46,110 --> 00:12:44,320
certainly let's step over to the

304
00:12:49,020 --> 00:12:46,120
experiment vent well step oh it's

305
00:12:50,400 --> 00:12:49,030
another bench oh uh hello is my is my

306
00:12:52,980 --> 00:12:50,410
little recording device safe around

307
00:12:55,590 --> 00:12:52,990
these I hope so wow it's got lots of

308
00:12:57,510 --> 00:12:55,600
it's a battery there a big magnet what

309
00:13:00,180 --> 00:12:57,520
is this strange device it's a pendulum

310
00:13:01,740 --> 00:13:00,190
some if you like rollercoasters do you

311
00:13:03,690 --> 00:13:01,750
like roller coaster yes oh yes oh yes

312
00:13:05,400 --> 00:13:03,700
well on roller coasters they have a

313
00:13:07,590 --> 00:13:05,410

sneaky way to keep you safe even if you

314

00:13:08,760 --> 00:13:07,600

don't know it and it's used by magnets

315

00:13:11,130 --> 00:13:08,770

so this experiment is called

316

00:13:12,870 --> 00:13:11,140

electromagnetic braking is that the old

317

00:13:15,600 --> 00:13:12,880

braking I thought it was the harness no

318

00:13:18,300 --> 00:13:15,610

no the braking braking so if you just

319

00:13:20,070 --> 00:13:18,310

lift up this here yeah and so we're

320

00:13:21,600 --> 00:13:20,080

lifting up a little pendulum yes it's

321

00:13:23,760 --> 00:13:21,610

lifting up we're going to swing it

322

00:13:24,900 --> 00:13:23,770

between two solenoids and we're not

323

00:13:27,510 --> 00:13:24,910

going to touch either one of the

324

00:13:30,000 --> 00:13:27,520

solenoid so if you just let go swinging

325

00:13:31,140 --> 00:13:30,010

back and forth and back and forth and if

326

00:13:33,330 --> 00:13:31,150

we come around the other side and hold

327

00:13:35,060 --> 00:13:33,340

the button down yeah I'm walking around

328

00:13:38,370 --> 00:13:35,070

here and I'm gonna press this button oh

329

00:13:41,530 --> 00:13:38,380

and now we watch the pendulum it's

330

00:13:43,389 --> 00:13:41,540

coming to a grinding halt look at that

331

00:13:45,370 --> 00:13:43,399

what happened is by pressing the button

332

00:13:48,730 --> 00:13:45,380

we simply made current go through two

333

00:13:51,999 --> 00:13:48,740

solenoids and so those solenoids produce

334

00:13:53,829 --> 00:13:52,009

a magnetic field and our piece of our

335

00:13:55,900 --> 00:13:53,839

pendulum so is simply a piece of

336

00:13:58,150 --> 00:13:55,910

aluminium and when that aluminium comes

337

00:13:59,530 --> 00:13:58,160

close to the magnetic field it sees a

338

00:14:02,290 --> 00:13:59,540

changing magnetic field because it's

339

00:14:03,999 --> 00:14:02,300

becoming closer and closer and the

340

00:14:06,639 --> 00:14:04,009

magnetic field induces a little circular

341

00:14:08,889 --> 00:14:06,649

currents in the aluminium and circular

342

00:14:11,379 --> 00:14:08,899

current induces a magnetic field and

343

00:14:14,439 --> 00:14:11,389

Lenz's law said those two opposed and

344

00:14:16,360 --> 00:14:14,449

that's why it breaks good and it did it

345

00:14:18,850 --> 00:14:16,370

didn't it didn't come to a screeching

346

00:14:20,259 --> 00:14:18,860

halt but within a few swings that we're

347

00:14:22,600 --> 00:14:20,269

stopping that's quite interesting yeah

348

00:14:24,670 --> 00:14:22,610

so if you have a larger magnet yeah an

349

00:14:27,100 --> 00:14:24,680

take a large a larger amount of voltage

350

00:14:28,569 --> 00:14:27,110

to put through our solenoids then that

351

00:14:31,090 --> 00:14:28,579

could come to a grinding halt very

352

00:14:34,569 --> 00:14:31,100

easily it certainly could now what is

353

00:14:37,300 --> 00:14:34,579

this strange tube it's quite tall it's

354

00:14:40,300 --> 00:14:37,310

got two wires sticking up through it

355

00:14:42,790 --> 00:14:40,310

it's all encased in perspex so what

356

00:14:45,069 --> 00:14:42,800

this is is called a Crookes tube or

357

00:14:47,680 --> 00:14:45,079

plasma cannon plasma cannon I like that

358

00:14:49,210 --> 00:14:47,690

sounds way better I know so if we press

359

00:14:52,389 --> 00:14:49,220

the little green button here a little

360

00:14:56,260 --> 00:14:52,399

green button i'm bound the personal

361

00:14:59,920 --> 00:14:58,060

yeah well folks you know those old

362

00:15:02,650 --> 00:14:59,930

Frankenstein movies where you see the

363

00:15:03,970 --> 00:15:02,660

arc of light traveling up the two two

364

00:15:10,210 --> 00:15:03,980

metal rods that's what I'm looking at

365

00:15:12,730 --> 00:15:10,220

right now Wow so the what's happening is

366

00:15:15,610 --> 00:15:12,740

when you press the button 25,000 volts

367

00:15:18,430 --> 00:15:15,620

would allow electrons to jump from one

368

00:15:20,320 --> 00:15:18,440

piece of metal and smash into molecules

369

00:15:22,720 --> 00:15:20,330

in the air and then jump into the other

370

00:15:24,580 --> 00:15:22,730

piece of metal and so when we press the

371

00:15:26,470 --> 00:15:24,590

button we only ever see one piece of

372

00:15:28,270 --> 00:15:26,480

light going up at a time and so the

373

00:15:30,250 --> 00:15:28,280

light is white because it's smashing

374

00:15:32,770 --> 00:15:30,260

into these molecules and we only ever

375

00:15:34,450 --> 00:15:32,780

see one because the electrons want to

376

00:15:37,540 --> 00:15:34,460

travel in the path of least resistance

377

00:15:39,190 --> 00:15:37,550

and so instead of jumping into the air

378

00:15:40,570 --> 00:15:39,200

around the arc it wants to keep going

379

00:15:42,460 --> 00:15:40,580

through the arc because that acts as a

380

00:15:45,310 --> 00:15:42,470

channel where they can easily jump

381

00:15:47,710 --> 00:15:45,320

through its I've never seen one so close

382

00:15:49,330 --> 00:15:47,720

before but I'm looking at the reaction

383

00:15:53,350 --> 00:15:49,340

on the surface of each of the metal bars

384

00:15:57,880 --> 00:15:53,360

that's quite something Wow what fun yes

385

00:15:59,590 --> 00:15:57,890

you call this a job I love this job now

386

00:16:01,180 --> 00:15:59,600

with people want to find out more where

387

00:16:09,900 --> 00:16:01,190

can they contact you or find out more

388

00:16:15,250 --> 00:16:09,910

they can go to ww outreach phys phys

389

00:16:18,610 --> 00:16:15,260

unsw edu a you we also do public talks

390

00:16:21,010 --> 00:16:18,620

liquid nitrogen workshops and other fun

391

00:16:22,990 --> 00:16:21,020

events sounds too good to be true folks

392

00:16:28,030 --> 00:16:23,000

a career in sides it's got to be for you

393

00:16:30,310 --> 00:16:28,040

right physics physics yes hey your name

394

00:16:32,890 --> 00:16:30,320

was Nicole Reynolds Nicole thank you

395

00:16:35,200 --> 00:16:32,900

very much no worries thank you what else

396

00:16:37,600 --> 00:16:35,210

do we have here beyond zero admissions

397

00:16:39,190 --> 00:16:37,610

looks interesting solar energy and hello

398

00:16:41,650 --> 00:16:39,200

we have another standing hello so who

399

00:16:45,130 --> 00:16:41,660

you I'm qatar joshi from infinite energy

400

00:16:47,260 --> 00:16:45,140

and there's a wind turbine in the back

401
00:16:50,650 --> 00:16:47,270
of your exhibition here yes there is

402
00:16:52,870 --> 00:16:50,660
it's actually a powered wind turbine but

403
00:16:55,439 --> 00:16:52,880
this morning I attached a power meter to

404
00:16:56,609 --> 00:16:55,449
our exhibition stall

405
00:16:58,799 --> 00:16:56,619
it's all continuing about a hundred

406
00:17:01,049 --> 00:16:58,809
watts so it's not consuming a lot of

407
00:17:02,309 --> 00:17:01,059
power which is good hello this is

408
00:17:04,289 --> 00:17:02,319
interesting we've got a little solar

409
00:17:07,139 --> 00:17:04,299
cell set up here attached to a tiny

410
00:17:11,129 --> 00:17:07,149
little fan yes I popped by J car this

411
00:17:13,500 --> 00:17:11,139
morning and it's I don't suspect that is

412
00:17:16,259 --> 00:17:13,510
generating a lot probably in the milly

413
00:17:19,610 --> 00:17:16,269

wat range but it also leads up to a

414

00:17:22,110 --> 00:17:19,620

demonstration yeah and that I actually

415

00:17:25,289 --> 00:17:22,120

you can it up got a little fan on the

416

00:17:28,259 --> 00:17:25,299

solar panel the fan can power a little

417

00:17:30,600 --> 00:17:28,269

wind generator down here I'm still

418

00:17:32,879 --> 00:17:30,610

waiting on a little Moutie thing to get

419

00:17:34,830 --> 00:17:32,889

it working but it's cool to see solar

420

00:17:37,320 --> 00:17:34,840

power powering a fan which powers a wind

421

00:17:39,779 --> 00:17:37,330

turbine and makes a little guy on the

422

00:17:41,850 --> 00:17:39,789

top spin now you had an article in the

423

00:17:43,289 --> 00:17:41,860

most recent issue of the the skeptic

424

00:17:45,269 --> 00:17:43,299

magazine the journal from Australia

425

00:17:50,370 --> 00:17:45,279

skeptics what was that about that

426

00:17:52,409 --> 00:17:50,380

article was about a disease called wind

427

00:17:54,870 --> 00:17:52,419

turbine syndrome that's been obviously

428

00:17:58,649 --> 00:17:54,880

attributed to people living near wind

429

00:18:02,340 --> 00:17:58,659

turbines now the article itself was

430

00:18:05,460 --> 00:18:02,350

about how people can come up with a

431

00:18:08,909 --> 00:18:05,470

conclusion and then start investigating

432

00:18:10,470 --> 00:18:08,919

it so basically whatever they find it's

433

00:18:11,940 --> 00:18:10,480

going to support their conclusion and I

434

00:18:13,980 --> 00:18:11,950

think wind turbine syndrome is a good

435

00:18:16,019 --> 00:18:13,990

example of us yeah we see that a lot in

436

00:18:17,340 --> 00:18:16,029

the skeptical circles people start with

437

00:18:19,470 --> 00:18:17,350

the conclusion and look at all

438

00:18:20,730 --> 00:18:19,480

supporting evidence instead of looking

439

00:18:23,730 --> 00:18:20,740

at the evidence and see where that leads

440

00:18:25,409 --> 00:18:23,740

exactly right and it's pretty

441

00:18:27,899 --> 00:18:25,419

astonishing with with wind turbine

442

00:18:31,139 --> 00:18:27,909

syndrome lady who first investigating it

443

00:18:33,990 --> 00:18:31,149

investigated it Nina Pierpont's in quite

444

00:18:36,690 --> 00:18:34,000

literally states that before she began

445

00:18:40,500 --> 00:18:36,700

her research she had already decided

446

00:18:43,980 --> 00:18:40,510

that it was real and I really expected

447

00:18:45,750 --> 00:18:43,990

to kind of have to work a bit harder and

448

00:18:47,340 --> 00:18:45,760

dig into the archives a little bit but

449

00:18:50,190 --> 00:18:47,350

the first thing I found was her stating

450

00:18:51,509 --> 00:18:50,200

I had decided to this is real I began

451
00:18:54,029 --> 00:18:51,519
interviewing patients and published my

452
00:18:56,340 --> 00:18:54,039
research so it's pretty stunning through

453
00:18:57,690 --> 00:18:56,350
start you can read all about that folks

454
00:18:58,740 --> 00:18:57,700
in the latest issue of the skeptic

455
00:19:01,110 --> 00:18:58,750
magazine I think we're going to have to

456
00:19:04,020 --> 00:19:01,120
cut this short because the floodgates of

457
00:19:06,570 --> 00:19:04,030
there are hundreds of kids just pouring

458
00:19:08,850 --> 00:19:06,580
through the door I've never rip earth

459
00:19:10,890 --> 00:19:08,860
being swept away right now we really are

460
00:19:23,790 --> 00:19:10,900
so I better let you get on over thank

461
00:19:25,530 --> 00:19:23,800
you very much thanks thanks rich did you

462
00:19:27,690 --> 00:19:25,540
see that UFO sighting that made the news

463
00:19:29,970 --> 00:19:27,700

what did that latest study about

464

00:19:31,590 --> 00:19:29,980

alternative treatments really say is

465

00:19:34,560 --> 00:19:31,600

this photo making the rounds real or

466

00:19:36,450 --> 00:19:34,570

hoax duffel news is a unique website

467

00:19:38,580 --> 00:19:36,460

featuring news about pseudoscience the

468

00:19:40,280 --> 00:19:38,590

paranormal anomalies and questionable

469

00:19:43,260 --> 00:19:40,290

claims framed with the skeptical view

470

00:19:44,990 --> 00:19:43,270

come visit doubtful newscom every day

471

00:19:48,750 --> 00:19:45,000

for news about cryptozoology

472

00:19:51,660 --> 00:19:48,760

conspiracies shams scams and more follow

473

00:19:53,190 --> 00:19:51,670

us on twitter at doubtful news critical

474

00:19:55,500 --> 00:19:53,200

thinking is essential in assessing

475

00:20:05,120 --> 00:19:55,510

today's news duffel news helps you

476
00:20:10,200 --> 00:20:08,400
we here at the ABC FOIA in ultimo where

477
00:20:11,970 --> 00:20:10,210
the 50 years of Doctor Who exhibition is

478
00:20:14,820 --> 00:20:11,980
going on and it's on every day between

479
00:20:16,020 --> 00:20:14,830
ten and four I believe it is come along

480
00:20:17,880 --> 00:20:16,030
and have a look it's absolutely free to

481
00:20:19,710 --> 00:20:17,890
have a wander through and we're here

482
00:20:21,390 --> 00:20:19,720
right in front of a Dalek it's a real

483
00:20:24,000 --> 00:20:21,400
Dalek look at that i have seen real

484
00:20:26,070 --> 00:20:24,010
Daleks from time to time QED conference

485
00:20:27,930 --> 00:20:26,080
in Manchester a real Dalek normally

486
00:20:30,540 --> 00:20:27,940
turns up but here's one in Sydney look

487
00:20:32,730 --> 00:20:30,550
the most frightening ever bad bad guy

488
00:20:35,280 --> 00:20:32,740

bad person bad thing on doctor who was

489

00:20:37,470 --> 00:20:35,290

not the Daleks not the Salah the weeping

490

00:20:39,540 --> 00:20:37,480

angels are up there but I think there

491

00:20:41,910 --> 00:20:39,550

was a jon pertwee episode where there

492

00:20:43,919 --> 00:20:41,920

was a beanbag that eight people they had

493

00:20:45,630 --> 00:20:43,929

this plastics factory unit got involved

494

00:20:48,930 --> 00:20:45,640

with the whole thing I left left fridge

495

00:20:50,700 --> 00:20:48,940

to it was in fact the Autons it could

496

00:20:52,320 --> 00:20:50,710

have been but they had this guy they

497

00:20:54,240 --> 00:20:52,330

said I'll please sit on our bean bag and

498

00:20:55,980 --> 00:20:54,250

the bean bag just ate him swallowed him

499

00:20:57,540 --> 00:20:55,990

up how dangerous is that I remember that

500

00:20:59,460 --> 00:20:57,550

if we look behind us here there's a huge

501
00:21:01,860 --> 00:20:59,470
wall of Doctor Who which sort of charts

502
00:21:04,680 --> 00:21:01,870
all the years and major points in this

503
00:21:06,480 --> 00:21:04,690
there are panels everywhere so victory

504
00:21:08,640 --> 00:21:06,490
to the Daleks over there a Christmas

505
00:21:10,510 --> 00:21:08,650
invasion dollars you have a look and it

506
00:21:12,220 --> 00:21:10,520
says the reason why the

507
00:21:14,710 --> 00:21:12,230
has regenerated at various times

508
00:21:16,240 --> 00:21:14,720
throughout the series but the Tom Baker

509
00:21:19,210 --> 00:21:16,250
one will have to be one of the lamest of

510
00:21:21,790 --> 00:21:19,220
them all it says the doctor regenerates

511
00:21:23,470 --> 00:21:21,800
after a fall what does he have a bad hip

512
00:21:25,090 --> 00:21:23,480
or something he does it was getting old

513
00:21:28,990 --> 00:21:25,100

a bit and he fell off his know if he'll

514

00:21:31,360 --> 00:21:29,000

from am is phil from a radio telescope i

515

00:21:32,980 --> 00:21:31,370

seem to remember i'm sure as a big fall

516

00:21:35,500 --> 00:21:32,990

but also there's ones here to why

517

00:21:37,300 --> 00:21:35,510

various people why various partners

518

00:21:39,010 --> 00:21:37,310

decide to leave you can find out why any

519

00:21:41,380 --> 00:21:39,020

of his companions decides to leave

520

00:21:42,970 --> 00:21:41,390

there's one of the hero mana romana

521

00:21:46,210 --> 00:21:42,980

elects to leave the TARDIS to fight

522

00:21:48,910 --> 00:21:46,220

slavery in a space now she could have

523

00:21:50,770 --> 00:21:48,920

gone on foot slavery on ebay that would

524

00:21:53,140 --> 00:21:50,780

be much more effective that's right or

525

00:21:54,520 --> 00:21:53,150

um ll space you've got to wonder about a

526

00:21:56,950 --> 00:21:54,530

space don't you what do they do at

527

00:21:59,950 --> 00:21:56,960

eastbay particularly 1981 yeah oh yes

528

00:22:03,430 --> 00:21:59,960

very dodgy what is your favorite episode

529

00:22:05,050 --> 00:22:03,440

of doctor who ever have you got one no

530

00:22:07,210 --> 00:22:05,060

no of course not because when i started

531

00:22:08,830 --> 00:22:07,220

watching it was way back in the very

532

00:22:11,770 --> 00:22:08,840

early 70s in australia when we had

533

00:22:14,140 --> 00:22:11,780

patrickroughton and i remember those

534

00:22:17,590 --> 00:22:14,150

very well but I was very very fond of

535

00:22:19,150 --> 00:22:17,600

Jon Pertwee's doctor and I think some of

536

00:22:21,040 --> 00:22:19,160

those stories the green death I remember

537

00:22:22,390 --> 00:22:21,050

quite well actually takes him I took

538

00:22:24,280 --> 00:22:22,400

some notes on this because I thought

539

00:22:25,690 --> 00:22:24,290

look if I'm go I'm not really a whovian

540

00:22:27,550 --> 00:22:25,700

all that much I had to listen to the

541

00:22:28,780 --> 00:22:27,560

Doctor Who podcast which I would

542

00:22:30,130 --> 00:22:28,790

recommend it's simply called the Doctor

543

00:22:31,420 --> 00:22:30,140

Who podcast they were saying some

544

00:22:34,440 --> 00:22:31,430

interesting stuff but I think my

545

00:22:37,420 --> 00:22:34,450

favorite pisode would have to be

546

00:22:39,520 --> 00:22:37,430

carnival of monsters I had to look it up

547

00:22:40,840 --> 00:22:39,530

it was good we yes because because they

548

00:22:42,550 --> 00:22:40,850

were talking about voyage of the Damned

549

00:22:43,960 --> 00:22:42,560

and that's the one that carly was on and

550

00:22:45,160 --> 00:22:43,970

that made me think of the ship that they

551

00:22:47,020 --> 00:22:45,170

were on I thought hang on a minute

552

00:22:49,000 --> 00:22:47,030

voyage of the Damned which is a machine

553

00:22:50,620 --> 00:22:49,010

that had monsters and boats and things

554

00:22:51,670 --> 00:22:50,630

and jon pertwee gets trapped in there

555

00:22:53,350 --> 00:22:51,680

all the monsters and the boats and

556

00:22:54,970 --> 00:22:53,360

everything get mixed up and that's why

557

00:22:55,870 --> 00:22:54,980

you so remember that I but it just

558

00:22:57,760 --> 00:22:55,880

occurred to me one of my all-time

559

00:23:01,390 --> 00:22:57,770

favorites would have to be either the

560

00:23:03,250 --> 00:23:01,400

mascarpone dragger or the one where the

561

00:23:04,930 --> 00:23:03,260

doctor was more or less a Sherlock

562

00:23:06,940 --> 00:23:04,940

Holmes character was in the bait Tom

563

00:23:09,890 --> 00:23:06,950

Baker here and the name just eludes me

564

00:23:12,560 --> 00:23:09,900

for the moment the talons of wangcheng

565

00:23:13,850 --> 00:23:12,570

mr. right yes yes it was it was it was

566

00:23:15,350 --> 00:23:13,860

set in Jack the Ripper London that's

567

00:23:16,400 --> 00:23:15,360

right and he was virtually a Sherlock

568

00:23:19,490 --> 00:23:16,410

Holmes character that was a great

569

00:23:20,810 --> 00:23:19,500

episode a great adventure well and as

570

00:23:22,250 --> 00:23:20,820

you look here on the board you can see

571

00:23:23,870 --> 00:23:22,260

that of course there's that big gap

572

00:23:25,610 --> 00:23:23,880

where they just did a movie in the 90s

573

00:23:28,100 --> 00:23:25,620

yeah yeah we were all worried it

574

00:23:29,960 --> 00:23:28,110

wouldn't come back and then suddenly we

575

00:23:31,730 --> 00:23:29,970

heard rumors and before we knew it it

576

00:23:32,900 --> 00:23:31,740

came back it was great isn't it great

577

00:23:35,750 --> 00:23:32,910

that Matt Smith has been able to bring

578

00:23:38,210 --> 00:23:35,760

back the popularity of the Fez we look

579

00:23:39,860 --> 00:23:38,220

yep see that young lady down there is a

580

00:23:41,960 --> 00:23:39,870

girl wearing a fez hearing affairs and

581

00:23:43,610 --> 00:23:41,970

pretty much at any any kanya go now

582

00:23:46,130 --> 00:23:43,620

there's always someone with a red face I

583

00:23:47,810 --> 00:23:46,140

think it's marvelous I wonder what the

584

00:24:00,470 --> 00:23:47,820

new doctor will bring back ma let's have

585

00:24:02,660 --> 00:24:00,480

a bit further look down here welcome to

586

00:24:04,520 --> 00:24:02,670

a week in science from our iOS bringing

587

00:24:07,580 --> 00:24:04,530

you the science news you need to know

588

00:24:10,520 --> 00:24:07,590

this week in science saw brain activity

589

00:24:13,280 --> 00:24:10,530

after death language affecting vision

590

00:24:19,690 --> 00:24:13,290

and heart trouble there's an app for

591

00:24:25,940 --> 00:24:22,879

us researchers have used rats to

592

00:24:28,279 --> 00:24:25,950

investigate near-death experiences the

593

00:24:30,739 --> 00:24:28,289

rats displayed a big surge of brain

594

00:24:33,200 --> 00:24:30,749

activity immediately after cardiac

595

00:24:35,239 --> 00:24:33,210

arrest that's after their heart stopped

596

00:24:38,480 --> 00:24:35,249

beating and blood stopped flowing to the

597

00:24:41,299 --> 00:24:38,490

brain around twenty percent of human

598

00:24:43,430 --> 00:24:41,309

cardiac arrest survivors report having a

599

00:24:45,889 --> 00:24:43,440

near-death experience such as visions

600

00:24:48,350 --> 00:24:45,899

potentially stemming from residual brain

601
00:24:50,299 --> 00:24:48,360
activity close to death the researchers

602
00:24:52,180 --> 00:24:50,309
said their study provides the first

603
00:24:56,810 --> 00:24:52,190
scientific framework for these

604
00:24:59,450 --> 00:24:56,820
near-death experiences have you ever

605
00:25:02,810 --> 00:24:59,460
wondered why females are so preoccupied

606
00:25:05,419 --> 00:25:02,820
with elaborate male displays many male

607
00:25:07,489 --> 00:25:05,429
animals have bright colors big antlers

608
00:25:10,159 --> 00:25:07,499
long plumage and other features that

609
00:25:13,430 --> 00:25:10,169
attract females but we haven't really

610
00:25:15,499 --> 00:25:13,440
understood why it turns to mom a new

611
00:25:18,139 --> 00:25:15,509
theory this week suggests that females

612
00:25:20,600 --> 00:25:18,149
use the displays as an indicator of

613
00:25:22,489 --> 00:25:20,610

genetic compatibility particularly the

614

00:25:25,580 --> 00:25:22,499

genes involved in producing healthy

615

00:25:27,619 --> 00:25:25,590

offspring so the old adage appears to be

616

00:25:30,289 --> 00:25:27,629

true it's really what's on the inside

617

00:25:32,899 --> 00:25:30,299

that counts you're listening to a week

618

00:25:37,340 --> 00:25:32,909

in science from RI oz and now for

619

00:25:39,409 --> 00:25:37,350

science headlines in 30 seconds the

620

00:25:42,049 --> 00:25:39,419

discovery of the oldest near the toll

621

00:25:44,119 --> 00:25:42,059

bone tools in Europe suggests that they

622

00:25:46,310 --> 00:25:44,129

were less influenced by modern humans

623

00:25:48,499 --> 00:25:46,320

than we thought a new window can

624

00:25:51,259 --> 00:25:48,509

selectively block heat and visible light

625

00:25:54,019 --> 00:25:51,269

by applying specific voltages to glass a

626
00:25:56,090 --> 00:25:54,029
revolutionary iphone app and special

627
00:25:57,799 --> 00:25:56,100
case can quickly and cheaply detect

628
00:26:01,310 --> 00:25:57,809
heart rhythm problems potentially

629
00:26:03,710 --> 00:26:01,320
preventing strokes and hearing a word of

630
00:26:07,369 --> 00:26:03,720
an otherwise invisible object can help

631
00:26:09,350 --> 00:26:07,379
you to see it last week we asked you how

632
00:26:12,499 --> 00:26:09,360
did dolphins recognize their buddies

633
00:26:15,200 --> 00:26:12,509
after 20 years it's by their whistles

634
00:26:18,289 --> 00:26:15,210
the link to the paper is on our website

635
00:26:20,419 --> 00:26:18,299
that's it for this week in science for

636
00:26:22,909 --> 00:26:20,429
more information on these stories and

637
00:26:28,099 --> 00:26:22,919
other science news go to the rirs

638
00:26:30,230 --> 00:26:28,109

website RI au s org a you follow us on

639

00:26:32,810 --> 00:26:30,240

Twitter using the hashtag weekend

640

00:26:38,720 --> 00:26:32,820

sigh i'm paul willis and i'll catch you

641

00:26:40,549 --> 00:26:38,730

next week hey guys this is jay from the

642

00:26:43,160 --> 00:26:40,559

skeptics guide to the universe er well

643

00:26:44,570 --> 00:26:43,170

hold on whoa everybody knows I'm the

644

00:26:46,490 --> 00:26:44,580

only reason to listen to the Freak Show

645

00:26:52,340 --> 00:26:46,500

right I mean it was up to me the show

646

00:26:54,799 --> 00:26:52,350

would start with this yeah boy well

647

00:26:56,630 --> 00:26:54,809

Rebecca would hate that probably but I

648

00:26:57,950 --> 00:26:56,640

mean I'd rock that listen to our show

649

00:26:59,750 --> 00:26:57,960

and you can learn about cool stuff like

650

00:27:01,490 --> 00:26:59,760

a technological singularity which is

651
00:27:03,020 --> 00:27:01,500
someday when technology progresses so

652
00:27:04,370 --> 00:27:03,030
fast that it would make the Industrial

653
00:27:07,430 --> 00:27:04,380
Revolution look like a kid science

654
00:27:17,330 --> 00:27:07,440
project anyway come check us out at WWDC

655
00:27:18,740 --> 00:27:17,340
epic sky org get your son and here's the

656
00:27:20,120 --> 00:27:18,750
doctor who exhibit there's some costumes

657
00:27:21,650 --> 00:27:20,130
as well know this would be this would be

658
00:27:22,970 --> 00:27:21,660
David Tennant said we're looking at

659
00:27:24,980 --> 00:27:22,980
wouldn't it would certainly is with the

660
00:27:28,070 --> 00:27:24,990
the figures and the sort of the brown

661
00:27:31,430 --> 00:27:28,080
and brown shirt with blue stripes and

662
00:27:32,600 --> 00:27:31,440
the boulder not sure suit yes and what's

663
00:27:34,220 --> 00:27:32,610

the first thing that strikes you're

664

00:27:35,870 --> 00:27:34,230

looking at David Tennant's costume if

665

00:27:37,850 --> 00:27:35,880

indeed that is actually David Tennant's

666

00:27:39,110 --> 00:27:37,860

costume not one then just knocked up

667

00:27:42,890 --> 00:27:39,120

what's the thing that strikes you most

668

00:27:46,520 --> 00:27:42,900

about it the tie know how thin is you

669

00:27:48,919 --> 00:27:46,530

how thin is he yes i like the tie but

670

00:27:50,450 --> 00:27:48,929

you're right it's a very thin suit yes

671

00:27:52,850 --> 00:27:50,460

although actually when you get along

672

00:27:54,860 --> 00:27:52,860

when you see matt smith suit he's even

673

00:27:56,780 --> 00:27:54,870

thinner than david tennant's good grief

674

00:27:59,480 --> 00:27:56,790

you're probably right and he had the

675

00:28:01,160 --> 00:27:59,490

braces too which I like hmm which I like

676

00:28:03,110 --> 00:28:01,170

of course over there we've got the

677

00:28:05,470 --> 00:28:03,120

Companions wall as well with the larger

678

00:28:08,120 --> 00:28:05,480

companion photos there now of course

679

00:28:10,400 --> 00:28:08,130

really only the most popular for me was

680

00:28:11,990 --> 00:28:10,410

Leela it does knowing I think Leela had

681

00:28:14,330 --> 00:28:12,000

a large effect on a lot of Tom Baker

682

00:28:15,799 --> 00:28:14,340

fans it in many ways in many ways yes

683

00:28:17,360 --> 00:28:15,809

although under that we've got rose tyler

684

00:28:20,600 --> 00:28:17,370

of course which other but she brought

685

00:28:23,000 --> 00:28:20,610

the whole family with her she did she go

686

00:28:25,520 --> 00:28:23,010

to was a season pass to the TARDIS and

687

00:28:27,440 --> 00:28:25,530

berto whole family along I look I've

688

00:28:29,600 --> 00:28:27,450

actually got the three reasons why I

689

00:28:30,650 --> 00:28:29,610

actually don't like Doctor Who I do but

690

00:28:32,150 --> 00:28:30,660

there's be three reasons why you

691

00:28:34,790 --> 00:28:32,160

wouldn't like Doctor Who the episode

692

00:28:37,730 --> 00:28:34,800

let's kill hitler the episode the

693

00:28:39,110 --> 00:28:37,740

episode the doctor's wife now a lot of

694

00:28:41,030 --> 00:28:39,120

people love that

695

00:28:42,140 --> 00:28:41,040

I didn't mind that I nah I didn't like

696

00:28:44,510 --> 00:28:42,150

that I said come on enough of this

697

00:28:47,660 --> 00:28:44,520

emotional gunk and two two more words

698

00:28:49,970 --> 00:28:47,670

third reason River Song I'll come on

699

00:28:51,410 --> 00:28:49,980

River Song everyone likes River Song

700

00:28:55,040 --> 00:28:51,420

don't they know I'd like a completely

701
00:28:56,570 --> 00:28:55,050
taken out of the timeline listeners may

702
00:28:57,560 --> 00:28:56,580
have their own thoughts on that of

703
00:28:59,600 --> 00:28:57,570
course they do that's why I like to be

704
00:29:02,000 --> 00:28:59,610
controversial as we talk about the

705
00:29:03,830 --> 00:29:02,010
unpopular doctor now the unpopular

706
00:29:07,640 --> 00:29:03,840
doctor now I could be wrong about this

707
00:29:09,500 --> 00:29:07,650
is a rule the unpopular doctor I believe

708
00:29:11,000 --> 00:29:09,510
now a lot of people seem to think it

709
00:29:12,919 --> 00:29:11,010
might have been peter davidson because

710
00:29:14,810 --> 00:29:12,929
it was following Tom Baker who was quite

711
00:29:17,840 --> 00:29:14,820
popular but peter davidson did a pretty

712
00:29:19,370 --> 00:29:17,850
good job I think Colin Baker is known as

713
00:29:21,590 --> 00:29:19,380

the unpopular doctor you know I I

714

00:29:25,610 --> 00:29:21,600

enjoyed his doctor in fact he's the only

715

00:29:27,590 --> 00:29:25,620

one I've met the only doctor I've met as

716

00:29:29,450 --> 00:29:27,600

is Colin Baker some years ago here in

717

00:29:31,370 --> 00:29:29,460

Sydney he was absolutely charming and

718

00:29:32,600 --> 00:29:31,380

when I was when he was the doctor was my

719

00:29:34,820 --> 00:29:32,610

last two years of high school which were

720

00:29:36,200 --> 00:29:34,830

particularly horrendous for me and I

721

00:29:38,030 --> 00:29:36,210

would escape you know come home and

722

00:29:40,610 --> 00:29:38,040

watch Doctor Who to to escape the

723

00:29:42,860 --> 00:29:40,620

horrors of my high school experience so

724

00:29:44,720 --> 00:29:42,870

I got a soft spot for Colin Baker the

725

00:29:46,040 --> 00:29:44,730

reason that i mentioned him is unpopular

726

00:29:47,180 --> 00:29:46,050

line is because i think he tried to do

727

00:29:49,100 --> 00:29:47,190

something different with the character i

728

00:29:51,080 --> 00:29:49,110

think he might've even actually have

729

00:29:53,180 --> 00:29:51,090

tried to introduce a bit of the doctor

730

00:29:55,610 --> 00:29:53,190

being a conflicted personality for the

731

00:29:57,710 --> 00:29:55,620

almost the first time anyways nice and

732

00:30:00,230 --> 00:29:57,720

not always nice and and maybe what

733

00:30:01,790 --> 00:30:00,240

partial to a touch of beef mary is were

734

00:30:05,090 --> 00:30:01,800

just seeing a video of him now on trial

735

00:30:06,350 --> 00:30:05,100

in fact he had well I mean the doctors

736

00:30:08,060 --> 00:30:06,360

always got a touch of arrogance about

737

00:30:10,040 --> 00:30:08,070

him but there you can see he said he's

738

00:30:12,860 --> 00:30:10,050

he's big arrogant guy I don't know if I

739

00:30:14,930 --> 00:30:12,870

really i thought the costume was was fun

740

00:30:17,660 --> 00:30:14,940

and interesting but i don't know if a

741

00:30:19,600 --> 00:30:17,670

date so well it's something we also need

742

00:30:21,950 --> 00:30:19,610

to remind people about Doctor Who is

743

00:30:24,110 --> 00:30:21,960

when has there been a male lead

744

00:30:27,620 --> 00:30:24,120

character of any particular run of any

745

00:30:31,070 --> 00:30:27,630

series who's been so nonviolent James

746

00:30:33,380 --> 00:30:31,080

Bond no I take that back I mean look to

747

00:30:34,310 --> 00:30:33,390

find a non-violent character as much as

748

00:30:35,540 --> 00:30:34,320

Doctor Who you'd have to go to the

749

00:30:37,760 --> 00:30:35,550

Gilmore Girls or something like that

750

00:30:40,430 --> 00:30:37,770

he's been known to have a bit of a beef

751

00:30:43,250 --> 00:30:40,440

Oh dr. Lee's you know

752

00:30:44,780 --> 00:30:43,260

Ben Venusian Jitsu or something I

753

00:30:46,370 --> 00:30:44,790

remember but it's not his first resort

754

00:30:47,480 --> 00:30:46,380

he never carries a gun he's and I got

755

00:30:49,100 --> 00:30:47,490

that sonic screwdriver which

756

00:30:50,900 --> 00:30:49,110

occasionally worked depending on whether

757

00:30:53,120 --> 00:30:50,910

he's charged and I'm like yeah that's

758

00:30:55,160 --> 00:30:53,130

right now you're right you're right now

759

00:30:57,140 --> 00:30:55,170

he tries to solve his problems in other

760

00:31:00,740 --> 00:30:57,150

ways how do you think doctor who suits

761

00:31:02,470 --> 00:31:00,750

as a skeptic because he does apply the

762

00:31:06,380 --> 00:31:02,480

scientific method but yeah in

763

00:31:08,930 --> 00:31:06,390

consistently all very very but I I like

764

00:31:11,180 --> 00:31:08,940

the fact that that he's a hero and when

765

00:31:13,280 --> 00:31:11,190

I was a kid he was a hero for people

766

00:31:15,320 --> 00:31:13,290

like me who was an intelligent man

767

00:31:17,450 --> 00:31:15,330

solving problems with science and reason

768

00:31:19,850 --> 00:31:17,460

and you know okay a bit of action and

769

00:31:22,040 --> 00:31:19,860

adventure but then of course the show

770

00:31:24,320 --> 00:31:22,050

slips into things like the paranormal

771

00:31:25,850 --> 00:31:24,330

and and all this sort of stuff but you

772

00:31:27,920 --> 00:31:25,860

know what in that universe you allow it

773

00:31:30,110 --> 00:31:27,930

it's fantasy it's fiction but yeah

774

00:31:32,540 --> 00:31:30,120

basically speaking I think for science I

775

00:31:34,670 --> 00:31:32,550

think he's a great character he is

776

00:31:36,530 --> 00:31:34,680

someone who's always unconventional he's

777

00:31:39,680 --> 00:31:36,540

always strange he's always he's always

778

00:31:41,720 --> 00:31:39,690

by definition and outsider and unusual

779

00:31:43,760 --> 00:31:41,730

but he seems to always know do the right

780

00:31:46,130 --> 00:31:43,770

thing even if he doesn't appear do the

781

00:31:47,300 --> 00:31:46,140

right thing he usually does I think

782

00:31:49,970 --> 00:31:47,310

there's something in that in that like

783

00:31:52,940 --> 00:31:49,980

people that are at that are weird do the

784

00:31:54,860 --> 00:31:52,950

right thing it usually does the right

785

00:31:55,970 --> 00:31:54,870

thing but I mean the later doctors of

786

00:31:58,040 --> 00:31:55,980

course that they are the really

787

00:31:59,600 --> 00:31:58,050

conflicted once much more than the early

788

00:32:00,560 --> 00:31:59,610

ones which is interesting and why not

789

00:32:02,390 --> 00:32:00,570

you know they will the show has to

790

00:32:04,370 --> 00:32:02,400

evolve well by the time you've got ten

791

00:32:05,540 --> 00:32:04,380

personalities preceding you there's a

792

00:32:08,960 --> 00:32:05,550

chance that there could be you could be

793

00:32:10,490 --> 00:32:08,970

carrying a bit of baggage a man is the

794

00:32:18,770 --> 00:32:10,500

sum of these memories you know a Time

795

00:32:27,470 --> 00:32:22,470

from the pages of the Victorian skeptics

796

00:32:31,350 --> 00:32:27,480

website WWE Vick skeptics wordpress com

797

00:32:33,510 --> 00:32:31,360

another big psychic show rolls into town

798

00:32:36,930 --> 00:32:33,520

by Mel Vickers with assistance from

799

00:32:39,150 --> 00:32:36,940

Martin Hadley never has any psychic ever

800

00:32:41,340 --> 00:32:39,160

passed a rigorous scientific test of

801
00:32:43,560 --> 00:32:41,350
their claimed ability while most

802
00:32:45,090 --> 00:32:43,570
skeptics are well aware of this you'd

803
00:32:48,330 --> 00:32:45,100
think the media and society in general

804
00:32:50,910 --> 00:32:48,340
knew nothing of it imagine what kind of

805
00:32:53,520 --> 00:32:50,920
world it would be if from tomorrow

806
00:32:56,340 --> 00:32:53,530
psychics really did have the abilities

807
00:32:58,320 --> 00:32:56,350
they claim to possess the prizes from

808
00:33:01,250 --> 00:32:58,330
the next lottery would go to a series of

809
00:33:03,870 --> 00:33:01,260
psychics presumably in order of merit

810
00:33:06,060 --> 00:33:03,880
fairly soon non psychics would stop

811
00:33:08,220 --> 00:33:06,070
buying tickets and the lotteries would

812
00:33:10,800 --> 00:33:08,230
fold there wouldn't be much point in

813
00:33:14,370 --> 00:33:10,810

casinos bingo or the horse races either

814

00:33:16,140 --> 00:33:14,380

the world we inhabit isn't like that we

815

00:33:18,390 --> 00:33:16,150

have lotteries and casinos that make a

816

00:33:19,970 --> 00:33:18,400

fortune despite the presence of many

817

00:33:23,930 --> 00:33:19,980

psychics who traveled the world

818

00:33:26,130 --> 00:33:23,940

flaunting their talents in July 2013

819

00:33:28,710 --> 00:33:26,140

Australia played host to a visit from a

820

00:33:31,320 --> 00:33:28,720

prominent uk-based self-proclaimed

821

00:33:33,900 --> 00:33:31,330

psychic Sally Morgan Sally did a number

822

00:33:36,300 --> 00:33:33,910

of shows across Australia her shows the

823

00:33:39,120 --> 00:33:36,310

big events like those of John Edward and

824

00:33:41,130 --> 00:33:39,130

the late Doris Stokes the athenaeum

825

00:33:44,130 --> 00:33:41,140

theatre in Melbourne which posted sally

826

00:33:46,350 --> 00:33:44,140

morgan seats about a thousand people the

827

00:33:48,690 --> 00:33:46,360

emphasis is on her supposed messages

828

00:33:50,550 --> 00:33:48,700

from the departed these big psychic

829

00:33:53,550 --> 00:33:50,560

performances and not at all like the

830

00:33:55,980 --> 00:33:53,560

stereotypical local fare gypsy with her

831

00:33:58,350 --> 00:33:55,990

tent and crystal ball whom you might pay

832

00:34:00,840 --> 00:33:58,360

a few dollars for a giggle yes I know

833

00:34:02,760 --> 00:34:00,850

skeptics should always hold out hope

834

00:34:05,730 --> 00:34:02,770

that a real psychic may turn up one day

835

00:34:08,000 --> 00:34:05,740

but for how long for many years now the

836

00:34:10,169 --> 00:34:08,010

Australian skeptics have offered

837

00:34:13,110 --> 00:34:10,179

\$100,000 to anybody who can demonstrate

838

00:34:15,750 --> 00:34:13,120

a paranormal ability including psychic

839

00:34:18,899 --> 00:34:15,760

ability even greater sums of money are

840

00:34:21,149 --> 00:34:18,909

on offer elsewhere in the world testing

841

00:34:24,090 --> 00:34:21,159

psychics can be quite straightforward if

842

00:34:26,909 --> 00:34:24,100

a simple yet robust test protocol can be

843

00:34:28,060 --> 00:34:26,919

agreed upon for example many psychics

844

00:34:30,310 --> 00:34:28,070

claim to be able to do

845

00:34:32,170 --> 00:34:30,320

readings from photographs a person might

846

00:34:34,840 --> 00:34:32,180

send a photograph of a deceased relative

847

00:34:36,790 --> 00:34:34,850

to a psychic and the breathed and the

848

00:34:38,980 --> 00:34:36,800

psychic would then hook up by a phone

849

00:34:40,510 --> 00:34:38,990

for a reading the psychic would then

850

00:34:42,460 --> 00:34:40,520

typically claim to be using the

851

00:34:44,830 --> 00:34:42,470

photograph to help connect with the

852

00:34:47,170 --> 00:34:44,840

deceased and would also typically claim

853

00:34:50,020 --> 00:34:47,180

not to be getting information from the

854

00:34:52,930 --> 00:34:50,030

bereaved relative to test if this is

855

00:34:55,380 --> 00:34:52,940

true exclude the relative from the test

856

00:34:58,060 --> 00:34:55,390

and pose this question to the psychic

857

00:35:00,460 --> 00:34:58,070

here are the photographs of some dearly

858

00:35:03,070 --> 00:35:00,470

departed would you please get in contact

859

00:35:05,620 --> 00:35:03,080

with the spirit world and ask them their

860

00:35:07,600 --> 00:35:05,630

names our phones remain steadfastly

861

00:35:10,180 --> 00:35:07,610

silent despite the large sums of money

862

00:35:12,160 --> 00:35:10,190

on offer and to those shopping mall or

863

00:35:14,830 --> 00:35:12,170

we can market twenty dollar psychics who

864

00:35:17,260 --> 00:35:14,840

don't necessarily do it for the money we

865

00:35:18,700 --> 00:35:17,270

say can you think of a charity that

866

00:35:21,010 --> 00:35:18,710

could use a hundred thousand dollars

867

00:35:23,680 --> 00:35:21,020

courtesy of the Australian skeptics in

868

00:35:25,720 --> 00:35:23,690

October 2011 sally morgan was asked

869

00:35:28,690 --> 00:35:25,730

publicly to take part in a test of her

870

00:35:30,130 --> 00:35:28,700

psychic abilities in the UK the test

871

00:35:32,290 --> 00:35:30,140

protocol was put together by chris

872

00:35:35,170 --> 00:35:32,300

french a professor of psychology in the

873

00:35:37,210 --> 00:35:35,180

UK also on the test panel was science

874

00:35:39,940 --> 00:35:37,220

writer Simon Singh and members of the

875

00:35:42,880 --> 00:35:39,950

Merseyside skeptics society on offer was

876

00:35:45,100 --> 00:35:42,890

1 million u.s. dollars this was a

877

00:35:47,680 --> 00:35:45,110

serious offer who would want to pass up

878

00:35:49,870 --> 00:35:47,690

a million dollars Sally could have kept

879

00:35:53,140 --> 00:35:49,880

the money herself or given it to charity

880

00:35:56,260 --> 00:35:53,150

Sally Morgan's lawyers reportedly stated

881

00:35:58,930 --> 00:35:56,270

you will know that we all have far more

882

00:36:02,340 --> 00:35:58,940

important things to do than to take part

883

00:36:05,200 --> 00:36:02,350

in this or any other test at this point

884

00:36:07,540 --> 00:36:05,210

she will not attend a Liverpool or at

885

00:36:09,850 --> 00:36:07,550

any other time skeptics have

886

00:36:13,030 --> 00:36:09,860

investigated how to perform like a

887

00:36:15,370 --> 00:36:13,040

psychic their abilities can be imitated

888

00:36:17,770 --> 00:36:15,380

in many ways the method that produces

889

00:36:20,770 --> 00:36:17,780

the best and most spectacular hits is

890

00:36:22,720 --> 00:36:20,780

known as hot reading the performer uses

891

00:36:24,330 --> 00:36:22,730

information actually obtained from the

892

00:36:26,620 --> 00:36:24,340

subject before the readings start

893

00:36:28,630 --> 00:36:26,630

psychic performers have been caught

894

00:36:30,610 --> 00:36:28,640

obtaining information through

895

00:36:32,410 --> 00:36:30,620

questionnaires conversations with the

896

00:36:35,680 --> 00:36:32,420

audience members before the show and

897

00:36:37,930 --> 00:36:35,690

even from the internet cold reading is

898

00:36:40,420 --> 00:36:37,940

where the performer uses a variety of

899

00:36:41,480 --> 00:36:40,430

skills after the reading has started to

900

00:36:44,550 --> 00:36:41,490

discreetly

901
00:36:47,730 --> 00:36:44,560
straight from the subject or to get

902
00:36:50,550 --> 00:36:47,740
agreement from the subject to various

903
00:36:52,380 --> 00:36:50,560
careful suggestions done cleverly the

904
00:36:55,620 --> 00:36:52,390
performer appears to be getting

905
00:36:58,589 --> 00:36:55,630
information through psychic skills cold

906
00:37:00,839 --> 00:36:58,599
reading can work well not so well but

907
00:37:03,000 --> 00:37:00,849
compared to hot reading it has always

908
00:37:05,329 --> 00:37:03,010
had the advantage that the performer

909
00:37:08,520 --> 00:37:05,339
cannot be busted techniques include

910
00:37:11,790 --> 00:37:08,530
shrewd observation of the subject what

911
00:37:13,710 --> 00:37:11,800
demographic is the subject age how they

912
00:37:16,380 --> 00:37:13,720
dressed why would they be here at a

913
00:37:19,530 --> 00:37:16,390

psychic show you could go fishing for

914

00:37:22,500 --> 00:37:19,540

clues you ask questions that don't sound

915

00:37:25,079 --> 00:37:22,510

like obvious questions does this make

916

00:37:27,510 --> 00:37:25,089

sense to you therefore the subject will

917

00:37:29,700 --> 00:37:27,520

help you they believe in psychic

918

00:37:31,589 --> 00:37:29,710

abilities they'll unknowingly provide

919

00:37:34,290 --> 00:37:31,599

you with the answers there are also

920

00:37:37,200 --> 00:37:34,300

statements that cover all bases the

921

00:37:40,530 --> 00:37:37,210

rainbow rouge for example your father

922

00:37:43,710 --> 00:37:40,540

was at times cold but you knew his warm

923

00:37:46,170 --> 00:37:43,720

side he was in fact both cold and warm

924

00:37:48,390 --> 00:37:46,180

like most people you've covered all the

925

00:37:50,700 --> 00:37:48,400

bases and everything in between the

926

00:37:53,069 --> 00:37:50,710

subject will smile and degree what's

927

00:37:56,040 --> 00:37:53,079

also important is the perception of the

928

00:37:58,230 --> 00:37:56,050

audience people will naturally remember

929

00:38:01,410 --> 00:37:58,240

the hits and forget the misses for

930

00:38:03,540 --> 00:38:01,420

example Wow wasn't it amazing how the

931

00:38:06,300 --> 00:38:03,550

psychic knew your father was such a warm

932

00:38:09,240 --> 00:38:06,310

friendly person the comment about him

933

00:38:11,099 --> 00:38:09,250

also being cold is forgotten this is

934

00:38:13,890 --> 00:38:11,109

just a very quick look at the big

935

00:38:15,780 --> 00:38:13,900

subject of cold reading there is an

936

00:38:19,140 --> 00:38:15,790

excellent book available on the methods

937

00:38:21,540 --> 00:38:19,150

of cold reading by Ian Roland the full

938

00:38:25,109 --> 00:38:21,550

facts book of cold reading such people

939

00:38:27,770 --> 00:38:25,119

as Ian and local skeptic Lynn Kelly have

940

00:38:30,540 --> 00:38:27,780

shown how intelligence empathy and

941

00:38:34,140 --> 00:38:30,550

practice can allow any person to

942

00:38:36,809 --> 00:38:34,150

demonstrate apparent psychic powers Lynn

943

00:38:39,120 --> 00:38:36,819

has amazed believers with the accuracy

944

00:38:42,390 --> 00:38:39,130

of her readings I'll need to confess to

945

00:38:45,089 --> 00:38:42,400

them later on that she was a fake you

946

00:38:47,120 --> 00:38:45,099

can guess how good she is from the fact

947

00:38:50,270 --> 00:38:47,130

that customers have told her many times

948

00:38:53,250 --> 00:38:50,280

that she really does have psychic powers

949

00:38:55,749 --> 00:38:53,260

it's just that she does not realize it

950

00:38:58,269 --> 00:38:55,759

herself some rational thinkers

951
00:39:01,539 --> 00:38:58,279
except what psychics do with a kind of

952
00:39:03,999 --> 00:39:01,549
paternalistic justification oh well

953
00:39:06,669 --> 00:39:04,009
those that believe in that kind of thing

954
00:39:08,889 --> 00:39:06,679
sometimes need closure with departed

955
00:39:11,049 --> 00:39:08,899
loved ones so why not let them have it

956
00:39:13,899 --> 00:39:11,059
I'm not a fan of this apologetic

957
00:39:15,219 --> 00:39:13,909
thinking would it perhaps be better if

958
00:39:17,499 --> 00:39:15,229
the people sought help from a

959
00:39:19,659 --> 00:39:17,509
professional grief counselor a grief

960
00:39:22,359 --> 00:39:19,669
counselor should be capable of giving

961
00:39:24,339 --> 00:39:22,369
people the same kind of help if you

962
00:39:26,739 --> 00:39:24,349
argue that only psychics can offer

963
00:39:29,769 --> 00:39:26,749

benefit to grieving people then how does

964

00:39:31,809 --> 00:39:29,779

that compare with the harm that might be

965

00:39:35,139 --> 00:39:31,819

caused there are many documented cases

966

00:39:37,929 --> 00:39:35,149

where psychics have caused harm on the

967

00:39:40,389 --> 00:39:37,939

what's the harm website there are

968

00:39:43,120 --> 00:39:40,399

accounts of a lady who lost her life

969

00:39:45,939 --> 00:39:43,130

savings to a psychic / con artist and

970

00:39:48,069 --> 00:39:45,949

the child who died because a psychic /

971

00:39:50,859 --> 00:39:48,079

healer convinced her parents to change

972

00:39:52,870 --> 00:39:50,869

her medication the parents of a missing

973

00:39:55,689 --> 00:39:52,880

child were told that their child was

974

00:39:58,599 --> 00:39:55,699

dead for years later he was found alive

975

00:40:01,599 --> 00:39:58,609

the long list of loss of wealth health

976

00:40:04,389 --> 00:40:01,609

and in some cases life is worth a read

977

00:40:07,479 --> 00:40:04,399

by anyone who may think psychics do no

978

00:40:09,759 --> 00:40:07,489

harm to be fair these problems aren't

979

00:40:12,039 --> 00:40:09,769

always caused by the big name psychic

980

00:40:14,199 --> 00:40:12,049

performers typically promoters of the

981

00:40:17,289 --> 00:40:14,209

big touring psychic shows will try to

982

00:40:19,329 --> 00:40:17,299

market them to the media TV snippets of

983

00:40:21,969 --> 00:40:19,339

the psychics performances appear to

984

00:40:24,459 --> 00:40:21,979

focus on close relatives of people who

985

00:40:26,919 --> 00:40:24,469

have died take a look at Sally Morgan's

986

00:40:29,439 --> 00:40:26,929

promotional video on YouTube audience

987

00:40:31,359 --> 00:40:29,449

members who are called to stand up for a

988

00:40:33,879 --> 00:40:31,369

public reading look and sound quite

989

00:40:36,399 --> 00:40:33,889

distressed particularly when Sally

990

00:40:38,289 --> 00:40:36,409

voices the deceased what is really

991

00:40:41,529 --> 00:40:38,299

strange is how the most prominent

992

00:40:43,299 --> 00:40:41,539

psychics and high earning psychics have

993

00:40:45,999 --> 00:40:43,309

a disclaimer that they are only

994

00:40:48,370 --> 00:40:46,009

entertainers when self-proclaimed

995

00:40:51,609 --> 00:40:48,380

psychic John Edwards television show

996

00:40:54,279 --> 00:40:51,619

crossing over aired on Australian TV one

997

00:40:57,099 --> 00:40:54,289

might have noticed at the very end of

998

00:41:00,879 --> 00:40:57,109

the credits and just for three seconds a

999

00:41:02,739 --> 00:41:00,889

text disclaimer it states in part the

1000

00:41:05,109 --> 00:41:02,749

producer has relied heavily on

1001
00:41:06,819 --> 00:41:05,119
contributions of John Edward and other

1002
00:41:09,400 --> 00:41:06,829
third parties in the creation of this

1003
00:41:12,070 --> 00:41:09,410
program which has been produced for

1004
00:41:13,990 --> 00:41:12,080
entertainment purposes only sally morgan

1005
00:41:16,660 --> 00:41:14,000
used a similar disclaimer for her

1006
00:41:19,060 --> 00:41:16,670
australian shows sally morgan is an

1007
00:41:21,460 --> 00:41:19,070
experimental / investigational there are

1008
00:41:23,580 --> 00:41:21,470
no guaranteed or certain results and the

1009
00:41:26,560 --> 00:41:23,590
show is for the purposes of

1010
00:41:28,330 --> 00:41:26,570
entertainment so it's all just for

1011
00:41:30,070 --> 00:41:28,340
entertainment I have a hard time

1012
00:41:32,830 --> 00:41:30,080
reconciling that with the claims of

1013
00:41:36,160 --> 00:41:32,840

psychic abilities in Sally Morgan's

1014

00:41:39,070 --> 00:41:36,170

promotional video she says you know when

1015

00:41:42,190 --> 00:41:39,080

you think about it these messages where

1016

00:41:45,010 --> 00:41:42,200

are they coming from the ether as they

1017

00:41:47,340 --> 00:41:45,020

say one generally expects professional

1018

00:41:50,410 --> 00:41:47,350

people to be able to do what they claim

1019

00:41:52,450 --> 00:41:50,420

motor mechanics fix cars bankers borrow

1020

00:41:56,080 --> 00:41:52,460

and lend money cabinet makers make

1021

00:41:58,240 --> 00:41:56,090

cabinets and so on however psychics have

1022

00:42:00,340 --> 00:41:58,250

never been able to show under carefully

1023

00:42:03,010 --> 00:42:00,350

controlled conditions that they are

1024

00:42:04,770 --> 00:42:03,020

indeed psychic I'm yet to find a motor

1025

00:42:07,210 --> 00:42:04,780

mechanic who fixes cars for

1026

00:42:10,420 --> 00:42:07,220

entertainment purposes only perhaps

1027

00:42:12,760 --> 00:42:10,430

there are some that do shrug my motor

1028

00:42:15,340 --> 00:42:12,770

mechanic whistles sometimes but I

1029

00:42:17,800 --> 00:42:15,350

digress have I missed something here is

1030

00:42:19,870 --> 00:42:17,810

it ethical to use the relatives of

1031

00:42:23,020 --> 00:42:19,880

people who have died to market

1032

00:42:25,000 --> 00:42:23,030

entertainment Thank You Mel Vickers with

1033

00:42:27,280 --> 00:42:25,010

assistance from Martin Hadley for

1034

00:42:29,320 --> 00:42:27,290

writing that report again you can read

1035

00:42:41,040 --> 00:42:29,330

more from Victorian skeptics at Vic

1036

00:42:44,859 --> 00:42:42,910

have you heard the one about how the

1037

00:42:46,390 --> 00:42:44,869

Illuminati in conjunction with the US

1038

00:42:48,160 --> 00:42:46,400

government are hiding the existence of

1039

00:42:50,620 --> 00:42:48,170

aliens in order to ensure the supply of

1040

00:42:51,880 --> 00:42:50,630

helium is kept low or the CIA the

1041

00:42:53,650 --> 00:42:51,890

militant wing of the Freemasons are

1042

00:42:55,089 --> 00:42:53,660

working with the elders of zion to take

1043

00:42:57,579 --> 00:42:55,099

control of the population of the world

1044

00:42:59,380 --> 00:42:57,589

through fluoridated chemtrails canberra

1045

00:43:00,849 --> 00:42:59,390

skeptics incorporated on behalf of the

1046

00:43:02,559 --> 00:43:00,859

shadow government will be massing an

1047

00:43:05,109 --> 00:43:02,569

array of dark forces for the australian

1048

00:43:06,880 --> 00:43:05,119

skeptics national convention 2013 this

1049

00:43:08,470 --> 00:43:06,890

convention has conspired to coincide

1050

00:43:10,780 --> 00:43:08,480

with the 50th anniversary of the

1051
00:43:12,460 --> 00:43:10,790
assassination of John F Kennedy possibly

1052
00:43:14,500 --> 00:43:12,470
the most famous conspiracy theory of all

1053
00:43:16,359 --> 00:43:14,510
time if you've ever wanted to learn

1054
00:43:18,280 --> 00:43:16,369
about the truth behind the death of JFK

1055
00:43:20,170 --> 00:43:18,290
what makes for a good conspiracy theory

1056
00:43:22,180 --> 00:43:20,180
and why they are so prevalent Canberra

1057
00:43:23,920 --> 00:43:22,190
skeptics invites you to attend that is

1058
00:43:26,920 --> 00:43:23,930
of course should you choose to accept it

1059
00:43:29,530 --> 00:43:26,930
come to national skeptics convention org

1060
00:43:39,970 --> 00:43:29,540
and just remember they will be watching

1061
00:43:44,120 --> 00:43:42,260
we've come to the end of the Doctor Who

1062
00:43:46,970 --> 00:43:44,130
exhibition here at ABC ultimate we were

1063
00:43:48,740 --> 00:43:46,980

almost gone into ABC news 24 I'm I got

1064

00:43:50,150 --> 00:43:48,750

on there bit of lube you through the

1065

00:43:51,470 --> 00:43:50,160

broadcasting I think you should me not

1066

00:43:52,850 --> 00:43:51,480

yeah now we were trying to sit in the

1067

00:43:54,650 --> 00:43:52,860

background and pull faces and everything

1068

00:43:56,510 --> 00:43:54,660

but they actually change actually blue

1069

00:43:57,650 --> 00:43:56,520

screen the window out so that people

1070

00:43:58,970 --> 00:43:57,660

can't be seen in the background was a

1071

00:44:01,580 --> 00:43:58,980

bit i just wanted to go down there and

1072

00:44:03,500 --> 00:44:01,590

pull faces never never and that we

1073

00:44:05,150 --> 00:44:03,510

actually in front some of the masks of

1074

00:44:07,490 --> 00:44:05,160

some of the bad the evil people here at

1075

00:44:10,310 --> 00:44:07,500

dr who and this is a rather innocuous

1076

00:44:11,870 --> 00:44:10,320

looking piece of plastic and fiberglass

1077

00:44:13,460 --> 00:44:11,880

here but this actually scared the kapu p

1078

00:44:15,530 --> 00:44:13,470

adding it was a kid yeah when i was a

1079

00:44:17,900 --> 00:44:15,540

kid forget that the pig monster here or

1080

00:44:20,570 --> 00:44:17,910

the the the OOD I thought the Daleks

1081

00:44:22,880 --> 00:44:20,580

were scary but this one to me of all the

1082

00:44:24,230 --> 00:44:22,890

Doctor Who thing creatures whatever this

1083

00:44:26,690 --> 00:44:24,240

one gave me the creeps more than

1084

00:44:30,650 --> 00:44:26,700

anything else it's a Cyberman if anybody

1085

00:44:33,820 --> 00:44:30,660

watches the early tom baker stuff you'll

1086

00:44:36,320 --> 00:44:33,830

see cyber mats that they are like

1087

00:44:37,940 --> 00:44:36,330

mechanical rats in a way but they would

1088

00:44:40,010 --> 00:44:37,950

leap on people and kill them and that

1089

00:44:41,330 --> 00:44:40,020

was really scary thought because you

1090

00:44:42,800 --> 00:44:41,340

could be sitting there eating your

1091

00:44:44,780 --> 00:44:42,810

breakfast on this thing just rolls on

1092

00:44:47,990 --> 00:44:44,790

the carpet behind you jumps up and

1093

00:44:50,450 --> 00:44:48,000

before you know it it was scary look

1094

00:44:52,550 --> 00:44:50,460

dude are pretty scary bit like it's no

1095

00:44:54,740 --> 00:44:52,560

weeping angels I mean come on a monster

1096

00:44:58,430 --> 00:44:54,750

that comes up on you and all your just

1097

00:45:00,560 --> 00:44:58,440

look away or blink again know when you

1098

00:45:02,090 --> 00:45:00,570

were scary as the bean bag that eats you

1099

00:45:03,470 --> 00:45:02,100

you know as a child I couldn't sit down

1100

00:45:06,140 --> 00:45:03,480

sit on the bean bag for about three

1101
00:45:09,200 --> 00:45:06,150
years another really early memory I have

1102
00:45:10,610 --> 00:45:09,210
just an early memory of television is

1103
00:45:13,790 --> 00:45:10,620
the episode of doctor who is probably

1104
00:45:15,710 --> 00:45:13,800
the same one where somebody's talking on

1105
00:45:16,880 --> 00:45:15,720
the telephone and the master is at the

1106
00:45:19,070 --> 00:45:16,890
other end of the phone and he does

1107
00:45:20,960 --> 00:45:19,080
something with the device and the phone

1108
00:45:22,940 --> 00:45:20,970
cord attacks the person on the other end

1109
00:45:25,970 --> 00:45:22,950
and wraps at her and wraps around their

1110
00:45:27,140 --> 00:45:25,980
neck that was really scary would you

1111
00:45:28,790 --> 00:45:27,150
just think he went to all that trouble

1112
00:45:31,790 --> 00:45:28,800
and now he's being defeated by the

1113
00:45:33,650 --> 00:45:31,800

invention of mobile phones I'll get you

1114

00:45:35,060 --> 00:45:33,660

with that what do you know mate it's not

1115

00:45:37,520 --> 00:45:35,070

it's not working my not going to happen

1116

00:45:40,070 --> 00:45:37,530

what kind of mastery you that was scary

1117

00:45:41,660 --> 00:45:40,080

I admit I was I was scared by that no

1118

00:45:43,250 --> 00:45:41,670

scared by the Cyberman but in a

1119

00:45:44,810 --> 00:45:43,260

delightful way well it's been a

1120

00:45:47,239 --> 00:45:44,820

frightening episode here at the skeptics

1121

00:45:50,160 --> 00:45:47,249

earn it certainly has

1122

00:45:51,660 --> 00:45:50,170

what about coming up on next week next

1123

00:45:54,470 --> 00:45:51,670

week skeptic zone well you know what

1124

00:45:59,910 --> 00:45:54,480

it's like Doctor Who it's a mystery I

1125

00:46:02,400 --> 00:45:59,920

more of your interviews with malo cos

1126

00:46:04,979 --> 00:46:02,410

Eddie ah the man the man who worked for

1127

00:46:06,900 --> 00:46:04,989

NASA and what NASA used to be before was

1128

00:46:08,759 --> 00:46:06,910

NASA early days of NASA that's a really

1129

00:46:10,620 --> 00:46:08,769

fascinating series into interviews more

1130

00:46:12,900 --> 00:46:10,630

of that coming up next week apart from

1131

00:46:14,220 --> 00:46:12,910

that listeners you'll just have to wait

1132

00:46:15,479 --> 00:46:14,230

and see with a find out we're gonna have

1133

00:46:17,729 --> 00:46:15,489

a bit of a look around and if you could

1134

00:46:20,370 --> 00:46:17,739

take one bit of the exhibition home what

1135

00:46:22,109 --> 00:46:20,380

would it be for me it's Kylie Minogue's

1136

00:46:23,989 --> 00:46:22,119

outfit from voyage of the Damned but

1137

00:46:26,370 --> 00:46:23,999

that's for incredibly personal reasons

1138

00:46:28,620 --> 00:46:26,380

just walking up to that now we'll look

1139

00:46:32,160 --> 00:46:28,630

over to our right in a little glass box

1140

00:46:33,960 --> 00:46:32,170

we have Tom Baker's scarf I think that

1141

00:46:36,120 --> 00:46:33,970

would have to be it for me yeah because

1142

00:46:37,890 --> 00:46:36,130

I mean didn't all you know high school

1143

00:46:39,989 --> 00:46:37,900

kids get into long scarf suddenly when

1144

00:46:42,299 --> 00:46:39,999

Tom Tom Baker came out I had one it

1145

00:46:44,069 --> 00:46:42,309

curled a bit it wasn't quite the right

1146

00:46:45,779 --> 00:46:44,079

sort but I did have one well let's take

1147

00:46:52,410 --> 00:46:45,789

a journey in time and space and see next

1148

00:46:55,799 --> 00:46:52,420

time on there's a gap digs own you've

1149

00:47:00,390 --> 00:46:55,809

been listening to the skeptic zone visit

1150

00:47:02,880 --> 00:47:00,400

our website at www.skeptics.org on TV for

