

1

00:00:00,000 --> 00:00:03,800

Give us a break.

2

00:00:03,800 --> 00:00:09,600

Don't try anything you're about to see us do at home.

3

00:00:09,600 --> 00:00:12,800

On this episode of MythBusters, let's go.

4

00:00:12,800 --> 00:00:17,200

Adam and Jamie light up a festive myth that's TRE-MEN-NOS.

5

00:00:17,200 --> 00:00:21,200

All I know is this is going to make some little child really happy.

6

00:00:21,200 --> 00:00:24,760

Can lights on a tree cause it to burst into flame?

7

00:00:24,760 --> 00:00:26,760

It looks so cheery now.

8

00:00:26,760 --> 00:00:31,160

When Carrie Grant and Tori make light work of a heavy concept?

9

00:00:31,160 --> 00:00:34,960

When does the time, space, fabric start to weave around this?

10

00:00:34,960 --> 00:00:40,360

When they investigate the possibility that you can flick a switch and turn off gravity.

11

00:00:40,360 --> 00:00:42,360

It works!

12

00:00:42,360 --> 00:00:45,560

And if that wasn't enough, Carrie takes one for the team.

13

00:00:45,560 --> 00:00:47,560

I didn't know what I was getting myself into here.

14

00:00:47,360 --> 00:00:51,360

To find out if vodka can cure the sting of a jellyfish.

15

00:00:51,360 --> 00:00:53,360

Okay, now we can start treatment.

16

00:00:54,360 --> 00:00:58,360

Who are the MythBusters? Adam Savage.

17

00:00:58,360 --> 00:01:00,360

I'm making a rocket out of meat.

18

00:01:00,360 --> 00:01:02,360

And Jamie Heineman.

19

00:01:02,360 --> 00:01:04,360

I'm so excited!

20

00:01:04,360 --> 00:01:08,360

Between them more than 30 years of special effects experience.

21

00:01:08,360 --> 00:01:10,360

That's what I'm talking about!

22

00:01:10,360 --> 00:01:12,360

Joining them, Carrie Byron.

23

00:01:12,360 --> 00:01:14,360

I'm a piñata!

24

00:01:14,360 --> 00:01:15,360

Grant Imahara.

25

00:01:15,360 --> 00:01:17,360

Don't say anything.

26

00:01:17,360 --> 00:01:18,360

And Tori Bellegi.

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00:01:18,360 --> 00:01:20,360

Oh yeah, not Tori.

28

00:01:20,360 --> 00:01:22,360

They don't just tell the Myths.

29

00:01:24,360 --> 00:01:26,360

They put them to the test.

30

00:01:38,360 --> 00:01:39,360

What do you got?

31

00:01:39,360 --> 00:01:42,360

Well, this one has been flooding my inbox.

32

00:01:42,360 --> 00:01:44,360

It is a very popular seasonal myth.

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00:01:44,360 --> 00:01:47,360

But I can't wait until Christmas to test it.

34

00:01:47,360 --> 00:01:49,360

Okay, well what is it?

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00:01:49,360 --> 00:01:52,360

During Christmas season you will have your tree festooned with lights.

36

00:01:52,360 --> 00:01:55,360

The myth is if you leave that tree on overnight,

37

00:01:55,360 --> 00:01:58,360

the lights can cause the tree to heat up, burst into flames,

38

00:01:58,360 --> 00:02:00,360

burn your house to the ground.

39

00:02:00,360 --> 00:02:03,360

Well, Christmas tree fires do happen every year.

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00:02:03,360 --> 00:02:06,360

Right, but is it because of the heat from the lights,

41

00:02:06,360 --> 00:02:08,360

or from some other reason?

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00:02:08,360 --> 00:02:11,360

So we need to dial in on exactly what's going on there.

43

00:02:11,360 --> 00:02:12,360

Precisely.

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00:02:14,360 --> 00:02:16,360

It's the epitome of the festive season.

45

00:02:16,360 --> 00:02:18,360

A tree dressed with colored lights.

46

00:02:18,360 --> 00:02:21,360

But is it dressed to kill?

47

00:02:21,360 --> 00:02:24,360

Tree fires are no laughing matter.

48

00:02:24,360 --> 00:02:26,360

But is this nightmare before Christmas

49

00:02:26,360 --> 00:02:29,360

really caused by simply leaving the tree lights on?

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00:02:29,360 --> 00:02:33,360

Well, the mythbusters are getting fired up to find an answer.

51

00:02:33,360 --> 00:02:35,360

What's the plan on this one?

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00:02:35,360 --> 00:02:38,360

Well, we get a regular tree and a normal amount of lights,

53

00:02:38,360 --> 00:02:41,360

put it on it, and fire it up, see what happens.

54

00:02:41,360 --> 00:02:44,360

You know, it occurs to me that we should test several different types of lights,

55

00:02:44,360 --> 00:02:47,360

because if there's one that gets hotter than the others,

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00:02:47,360 --> 00:02:49,360

that should be our test platform.

57

00:02:49,360 --> 00:02:52,360

Okay, and then if none of the normal quantities of lights

58

00:02:52,360 --> 00:02:55,360

of whatever type set that tree on fire,

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00:02:55,360 --> 00:02:58,360

then we need to really ramp it up and put a bunch of them on there.

60

00:02:58,360 --> 00:03:02,360

Right, but if your ridiculous number of lights fails to ignite that tree,

61

00:03:02,360 --> 00:03:05,360

we're going to have to resort to something other than the heat of the lights.

62

00:03:05,360 --> 00:03:06,360

You mean like a short.

63

00:03:06,360 --> 00:03:07,360

Exactly.

64

00:03:08,360 --> 00:03:12,360

But before all that, the first step in turning the spotlight on this myth

65

00:03:12,360 --> 00:03:16,360

is to get some lights, and the boys know just the place.

66

00:03:17,360 --> 00:03:20,360

We've come to a place called Fantastico in downtown San Francisco,

67

00:03:20,360 --> 00:03:23,360

and when you want really weird esoteric strange things,

68

00:03:23,360 --> 00:03:25,360

and you want a lot of them, and you want them cheap,

69

00:03:25,360 --> 00:03:29,360

this is where I have been coming for well over a decade.

70

00:03:29,360 --> 00:03:33,360

Let's see if store manager Mike can shed some light on the story.

71

00:03:33,360 --> 00:03:36,360

Now the question for us is, are the cases of the trees being set on fire

72

00:03:36,360 --> 00:03:38,360

a function of the lights themselves,

73

00:03:38,360 --> 00:03:41,360

or of the operator putting up too many of them at once?

74

00:03:41,360 --> 00:03:44,360

These lights nowadays have a safety fuse and a plug.

75

00:03:44,360 --> 00:03:46,360

In the old days, you know, on the box, it would say,

76

00:03:46,360 --> 00:03:49,360

don't put more than three sets, and a guy'd have, you know,

77

00:03:49,360 --> 00:03:53,360

20 sets strung out, so it would overload your circuit and cause the house to burn.

78

00:03:53,360 --> 00:03:56,360

But now these actually have a safety fuse in the socket.

79

00:03:56,360 --> 00:03:58,360

These are the screw-in ones.

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00:03:58,360 --> 00:04:02,360

It's like my grandma used to have, and these are the little tiny, blinky ones.

81

00:04:02,360 --> 00:04:08,360

Adam and Jamie buy dozens of boxes of the two most commonly used indoor tree lights,

82

00:04:08,360 --> 00:04:10,360

C7s and C9s.

83

00:04:10,360 --> 00:04:15,360

From this Aladdin's cave, it's back to Jamie's to get this myth up and running.

84

00:04:15,360 --> 00:04:19,360

These two types both have a three amp fuse in them.

85

00:04:19,360 --> 00:04:23,360

This one has a five amp fuse, and even just kind of holding my hands over here,

86

00:04:23,360 --> 00:04:25,360

I can feel a lot more heat coming off of this one.

87

00:04:25,360 --> 00:04:28,360

So that one right there is the one to keep an eye on.

88

00:04:28,360 --> 00:04:32,360

To test just how sizzling each variety can get,

89

00:04:32,360 --> 00:04:36,360

before loading up a tree, Adam first makes hot boxes.

90

00:04:36,360 --> 00:04:38,360

Look at that.

91

00:04:38,360 --> 00:04:43,360

So I'm going to take one of each of our sample strands and put them in these metal containers

92

00:04:43,360 --> 00:04:47,360

to foil over the top, leave them overnight, come back and measure them in the morning

93

00:04:47,360 --> 00:04:50,360

and see what the actual temperature I get to.

94

00:04:50,360 --> 00:04:53,360

Is that temperature hot enough to set fire to anything?

95

00:04:53,360 --> 00:04:58,360

With the boxes warming up, the guys plant a pine forest for their next test.

96

00:04:58,360 --> 00:05:02,360

The question is, will the heat from the bulbs ignite a forest fire?

97

00:05:02,360 --> 00:05:09,360

Second test is going to be to wrap the maximum amount that the manufacturer will allow around some trees.

98

00:05:09,360 --> 00:05:14,360

And the maximum allowable amount is dictated by the fuses that are built right into these lights.

99

00:05:14,360 --> 00:05:18,360

They have a few, so if you hook up four strands of light just fine,

100

00:05:18,360 --> 00:05:22,360

I think between four and five strands, those fuses will start to fail.

101

00:05:22,360 --> 00:05:27,360

So we're going to get to that point, wrap them around some trees and leave those overnight.

102

00:05:27,360 --> 00:05:31,360

Alright, Christmas spirit in three, two, one, go!

103

00:05:31,360 --> 00:05:36,360

I feel like in such a good mood for some reason.

104

00:05:36,360 --> 00:05:39,360

Doesn't it just warm your heart?

105

00:05:39,360 --> 00:05:44,360

To recreate a typical in-home situation, the lights are going to be left on all night,

106

00:05:44,360 --> 00:05:46,360

and it's Jess's job to watch over them.

107

00:05:46,360 --> 00:05:50,360

Some of these might actually blow after a short period of time,

108

00:05:50,360 --> 00:05:56,360

and in that case you would remove just one strand and let the remaining strands glow all night.

109

00:05:56,360 --> 00:06:00,360

And we'll be back tomorrow morning to find out what happened.

110

00:06:00,360 --> 00:06:05,360

Here's hoping that for Jess's night, all is calm and all is bright.

111

00:06:05,360 --> 00:06:06,360

See you tomorrow morning.

112

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

Alright, thanks guys.

113

00:06:08,360 --> 00:06:10,360

Sure. Thank you.

114

00:06:10,360 --> 00:06:13,360

See you tomorrow. I'll be here.

115

00:06:17,360 --> 00:06:24,360

In the past, the mythbusters have tested and busted crazy concepts such as pyramid power.

116

00:06:24,360 --> 00:06:26,360

I'm reading your thoughts right now.

117

00:06:26,360 --> 00:06:27,360

Free energy.

118

00:06:27,360 --> 00:06:30,360

You might as well just go get a battery.

119

00:06:30,360 --> 00:06:31,360

And mind control.

120

00:06:31,360 --> 00:06:35,360

Now I'm ready to make him take his bra out.

121

00:06:35,360 --> 00:06:41,360

But Carrie Grant and Tori are determined to get this frontier technology off the ground.

122

00:06:46,360 --> 00:06:48,360

Okay guys, got the next big myth.

123

00:06:48,360 --> 00:06:52,360

Have you ever thought it would be cool to control gravity?

124

00:06:52,360 --> 00:06:53,360

Yes.

125

00:06:53,360 --> 00:06:54,360

Woo! Great!

126

00:06:54,360 --> 00:06:55,360

I can't wait.

127

00:06:55,360 --> 00:06:56,360

Another one of these.

128

00:06:56,360 --> 00:06:57,360

Yeah.

129

00:06:57,360 --> 00:07:01,360

Okay look, there's a lot of credible research going on all around the world.

130

00:07:01,360 --> 00:07:04,360

There's a Russian scientist doing a lot of cool stuff with superconductors.

131

00:07:04,360 --> 00:07:08,360

NASA, the European Space Agency are all interesting.

132

00:07:08,360 --> 00:07:11,360

Yeah, that just pretty much proves that there's nuts,

133

00:07:11,360 --> 00:07:13,360

jobs and fruit cakes all the way to the top.

134

00:07:15,360 --> 00:07:19,360

Anti-gravity is the mythical holy grail of science.

135

00:07:19,360 --> 00:07:21,360

But can it actually be done?

136

00:07:21,360 --> 00:07:24,360

Can you flick a switch and turn off gravity?

137

00:07:24,360 --> 00:07:28,360

Is anti-gravity science or science fiction?

138

00:07:28,360 --> 00:07:33,360

It's these questions our Intrepid Trio will try to answer.

139

00:07:33,360 --> 00:07:35,360

And guess where they're going to start?

140

00:07:35,360 --> 00:07:37,360

As with all these fringe technologies,

141

00:07:37,360 --> 00:07:40,360

we have the magic of the internet to help us find information.

142

00:07:40,360 --> 00:07:44,360

The patent office has issued numerous anti-gravity patents.

143

00:07:44,360 --> 00:07:46,360

They don't have to test if they work,

144

00:07:46,360 --> 00:07:49,360

but they do have to issue the patent.

145

00:07:49,360 --> 00:07:54,360

Okay, you know, some of these have nothing to do with any sort of terrestrial technology.

146

00:07:54,360 --> 00:07:58,360

And most of these have nothing to do with any sort of reality.

147

00:07:58,360 --> 00:08:01,360

Alright, well then why don't we just get a cross-section and then,

148

00:08:01,360 --> 00:08:03,360

I guess start testing these.

149

00:08:04,360 --> 00:08:07,360

Before the testing begins, let's talk about gravity,

150

00:08:07,360 --> 00:08:10,360

a force that Tari is familiar with.

151

00:08:11,360 --> 00:08:14,360

But in case you're not, let's get back to basics.

152

00:08:14,360 --> 00:08:16,360

And a clever fella called Newton.

153

00:08:17,360 --> 00:08:18,360

I'm okay?

154

00:08:18,360 --> 00:08:24,360

In 1687, Sir Isaac explained that gravity is the tendency of objects with mass

155

00:08:24,360 --> 00:08:27,360

to accelerate toward each other.

156

00:08:27,360 --> 00:08:30,360

And because that really big thing beneath our feet,

157

00:08:30,360 --> 00:08:33,360

planet Earth, has some serious pulling power,

158

00:08:33,360 --> 00:08:36,360

what goes up must come down.

159

00:08:36,360 --> 00:08:41,360

But the concept of anti-gravity doesn't just mean avoiding the downs.

160

00:08:41,360 --> 00:08:46,360

So an airplane or a helicopter or anything with wings

161

00:08:46,360 --> 00:08:50,360

is not an example of gravity modification.

162

00:08:50,360 --> 00:08:54,360

Yes, they generate lift, which is an opposition to gravity,

163

00:08:54,360 --> 00:08:58,360

but they are not modifying the gravitational field.

164

00:08:58,360 --> 00:09:03,360

So the team is going to be testing devices that claim to alter gravity.

165

00:09:03,360 --> 00:09:05,360

Sounds simple. Where do we start?

166

00:09:06,360 --> 00:09:11,360

The anti-gravity device that I'm working on is basically,

167

00:09:11,360 --> 00:09:14,360

it's just sort of a floating spinning top.

168

00:09:14,360 --> 00:09:18,360

Okay, but how does a spinning top make gravity disappear?

169

00:09:18,360 --> 00:09:20,360

I don't know, but I think it takes batteries.

170

00:09:20,360 --> 00:09:22,360

Well, according to the instructions,

171

00:09:22,360 --> 00:09:26,360

the trick is to get the top spinning above the base plate,

172

00:09:26,360 --> 00:09:29,360

which should hold it in an anti-gravity field.

173

00:09:31,360 --> 00:09:33,360

This is how it says to start out.

174

00:09:35,360 --> 00:09:38,360

It also says for ages eight and up.

175

00:09:38,360 --> 00:09:42,360

A quick read of the manual and a change of venue later,

176

00:09:42,360 --> 00:09:45,360

and it looks like Carrie has turned off gravity.

177

00:09:58,360 --> 00:10:00,360

The future is here.

178

00:10:02,360 --> 00:10:05,360

Later, will the festive fur get fired?

179

00:10:05,360 --> 00:10:07,360

I bet this is what Christmas is like in heaven.

180

00:10:08,360 --> 00:10:11,360

And the team get a shock when their lifter lifts.

181

00:10:12,360 --> 00:10:13,360

Ah!

182

00:10:18,360 --> 00:10:21,360

Twass the night of the fairy lights test,

183

00:10:21,360 --> 00:10:26,360

and all through M5, not a creature was stirring, not even a...

184

00:10:29,360 --> 00:10:31,360

To test a seasonal story,

185

00:10:31,360 --> 00:10:34,360

Jamie and Adam strung three strings of lights on some trees

186

00:10:34,360 --> 00:10:38,360

and left them on all night to see if the heat generated

187

00:10:38,360 --> 00:10:40,360

would cause the trees to ignite.

188

00:10:40,360 --> 00:10:43,360

Mythtern Jazz was left to stand guard.

189

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

Good morning!

190

00:10:45,360 --> 00:10:46,360

Morning, guys.

191

00:10:46,360 --> 00:10:47,360

How'd you do?

192

00:10:47,360 --> 00:10:51,360

Um, it was pretty uneventful. No fires.

193

00:10:51,360 --> 00:10:55,360

There were no flames, but it wasn't exactly a silent night.

194

00:10:55,360 --> 00:10:58,360

Nothing more than this shop is pretty scary at night.

195

00:10:58,360 --> 00:11:00,360

There's a lot of weird noises that go on.

196

00:11:00,360 --> 00:11:02,360

Have you ever spent the night in your own shop?

197

00:11:02,360 --> 00:11:03,360

No.

198

00:11:05,360 --> 00:11:08,360

Adam checks the temperature of the lights in the hot boxes.

199

00:11:08,360 --> 00:11:11,360

The three-amp C7s show no signs of damage,

200

00:11:11,360 --> 00:11:17,360

but at 350 degrees, the five-amp C9s have started to melt.

201

00:11:17,360 --> 00:11:20,360

Why is a Christmas tree light sickle?

202

00:11:20,360 --> 00:11:23,360

The C9s got hot enough to start melting the plastic and rubber

203

00:11:23,360 --> 00:11:26,360

encasing the bulbs and the wires,

204

00:11:26,360 --> 00:11:30,360

and that is totally significant to our testing here

205

00:11:30,360 --> 00:11:32,360

because that could lead to a wire short.

206

00:11:32,360 --> 00:11:35,360

A wire short very easily means fire.

207

00:11:35,360 --> 00:11:39,360

So, normal amount of lights on a normal tree, we get nothing.

208

00:11:39,360 --> 00:11:40,360

Let's ramp it up.

209

00:11:40,360 --> 00:11:45,360

I agree. I think this time we should go for 500 of the C9 bulbs.

210

00:11:45,360 --> 00:11:48,360

And while we're at it, why don't we get a thermal imaging camera

211

00:11:48,360 --> 00:11:50,360

and see what the heat distribution looks like?

212

00:11:50,360 --> 00:11:53,360

I totally agree. That is an excellent idea.

213

00:11:54,360 --> 00:11:57,360

Unlike last time, for this upping the anti-test,

214

00:11:57,360 --> 00:12:01,360

Jamie and Adam are not following the instructions on the back of the box.

215

00:12:01,360 --> 00:12:07,360

I want to bypass the safety measures implemented on the C9 lights

216

00:12:07,360 --> 00:12:12,360

and put as many of them as a person could put on a normal household circuit.

217

00:12:13,360 --> 00:12:19,360

Getting into the festive spirit, they load up the tree with 500 lights.

218

00:12:19,360 --> 00:12:23,360

All right. Yeah, actually, I think we could stop there.

219

00:12:27,360 --> 00:12:29,360

That's the lights.

220

00:12:29,360 --> 00:12:33,360

Here's the thermal camera and the action is about to heat up.

221

00:12:33,360 --> 00:12:36,360

This is going to make this so much fun.

222

00:12:38,360 --> 00:12:42,360

Adam, the heat seeking cameraman, is ready.

223

00:12:42,360 --> 00:12:44,360

So you might want to put on your shades for this one.

224

00:12:44,360 --> 00:12:47,360

All right. In three, two, one.

225

00:12:47,360 --> 00:12:49,360

Hey, everything went on.

226

00:12:51,360 --> 00:12:53,360

I can definitely feel the heat coming off of here.

227

00:12:54,360 --> 00:12:55,360

Now we wait.

228

00:12:56,360 --> 00:12:57,360

It's just going to be a while.

229

00:12:57,360 --> 00:13:02,360

What we're going to be looking for here is either the tree auto-igniting

230

00:13:02,360 --> 00:13:07,360

because of the general level of heat being created or some sort of a short.

231

00:13:08,360 --> 00:13:11,360

It's been three hours and we're still pretty much leveled off, aren't we?

232

00:13:11,360 --> 00:13:15,360

Yeah, I'm getting up close to 225 thereabouts.

233

00:13:15,360 --> 00:13:16,360

It's gotten a little higher.

234

00:13:16,360 --> 00:13:20,360

I am noticing it's getting extremely dry right in the middle around the lights.

235

00:13:20,360 --> 00:13:24,360

These needles are just like they fall off the branches over here.

236

00:13:24,360 --> 00:13:26,360

This is like an oven.

237

00:13:27,360 --> 00:13:32,360

Five more hours on, the tree is baked in the middle but not flambé.

238

00:13:32,360 --> 00:13:33,360

I don't know, Adam.

239

00:13:33,360 --> 00:13:36,360

I think we need another five or six thousand lights.

240

00:13:38,360 --> 00:13:42,360

We took 500 lights and let them sit on this tree for eight solid hours.

241

00:13:42,360 --> 00:13:48,360

And although it got hot, you'll notice the tree is not a charred husk of a tree.

242

00:13:48,360 --> 00:13:49,360

We did not get fire.

243

00:13:53,360 --> 00:13:54,360

Gravity.

244

00:13:54,360 --> 00:13:57,360

It's one of the four fundamental forces of nature.

245

00:13:58,360 --> 00:14:00,360

So is it possible to just turn it off?

246

00:14:02,360 --> 00:14:07,360

Grant, Tori and Carrie are surfing the net and testing a number of devices to find out.

247

00:14:09,360 --> 00:14:13,360

Carrie has a spinning top that appears to be defying gravity.

248

00:14:13,360 --> 00:14:17,360

But really, it's just being held up with a magnetic field.

249

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

The stability is created by the spinning.

250

00:14:21,360 --> 00:14:25,360

So if it's not spinning fast enough, it wiles out and runs away.

251

00:14:25,360 --> 00:14:28,360

Fun but hardly anti-gravity.

252

00:14:28,360 --> 00:14:30,360

Maybe Grant has something better.

253

00:14:30,360 --> 00:14:35,360

Well, the first thing that we've found is the anti-gravity lifter kit.

254

00:14:35,360 --> 00:14:42,360

And this is basically a triangular device that makes use of an electromagnetic field

255

00:14:42,360 --> 00:14:46,360

without any moving parts to produce some sort of lift.

256

00:14:46,360 --> 00:14:51,360

As fanciful as this may sound, there's actually some support behind the idea.

257

00:14:51,360 --> 00:14:53,360

There's interest from NASA.

258

00:14:53,360 --> 00:14:55,360

There's a lot of documentation on the internet.

259

00:14:55,360 --> 00:15:02,360

But we have yet to find out whether this is actually gravity modification by our definition.

260

00:15:02,360 --> 00:15:09,360

The theory, known as the by-field-brown effect, is that by forcing 30,000 volts through this wire,

261

00:15:09,360 --> 00:15:13,360

a new gravitational field is established.

262

00:15:13,360 --> 00:15:17,360

And the lifter is freed from conventional gravity.

263

00:15:17,360 --> 00:15:23,360

But despite being a bright spark, Grant and his new device are grounded.

264

00:15:29,360 --> 00:15:32,360

Does it say anything about buzzing?

265

00:15:32,360 --> 00:15:36,360

Could this build be a bust for a big-brained Grant?

266

00:15:36,360 --> 00:15:40,360

Several hours later, Tori and Carrie check in for a progress report.

267

00:15:41,360 --> 00:15:44,360

Anti-gravity machine is a little anticlimactic.

268

00:15:44,360 --> 00:15:46,360

Hey, just do way.

269

00:15:46,360 --> 00:15:50,360

When this thing's hovering off the table, you're going to be eating those words.

270

00:15:50,360 --> 00:15:53,360

But progress is in short supply.

271

00:15:53,360 --> 00:15:56,360

I don't know what this is supposed to do, but so far it looks pretty cool.

272

00:15:59,360 --> 00:16:03,360

Grant, in an admission of defeat, calls the manufacturer for some advice.

273

00:16:03,360 --> 00:16:08,360

It's jumping across P1 to where R7-C connects.

274

00:16:08,360 --> 00:16:13,360

And just a few modifications later, the team is finally ready for lift-off.

275

00:16:13,360 --> 00:16:16,360

AHHHHHHHHHHHHH!

276

00:16:16,360 --> 00:16:17,360

Okay.

277

00:16:17,360 --> 00:16:21,360

I'm falling!

278

00:16:21,360 --> 00:16:24,360

It's starting to fall towards me.

279

00:16:24,360 --> 00:16:27,360

Man, would you shut it off when it flies towards us?

280

00:16:27,360 --> 00:16:32,360

It's a myth-busters first, an internet-bought device that actually works.

281

00:16:32,360 --> 00:16:35,360

You could say the team is shocked.

282

00:16:35,360 --> 00:16:37,360

I'm so impressed.

283

00:16:37,360 --> 00:16:39,360

Even Jamie is impressed.

284

00:16:39,360 --> 00:16:41,360

Well, it's neat that it actually worked.

285

00:16:41,360 --> 00:16:44,360

Most of these things that we run across are just total nonsense.

286

00:16:44,360 --> 00:16:46,360

But that's real.

287

00:16:46,360 --> 00:16:50,360

It's definitely getting up off the table, and there's no fans, there's no rockets,

288

00:16:50,360 --> 00:16:55,360

there's no magnets, there's nothing but electricity going into it.

289

00:16:55,360 --> 00:16:58,360

So, Pat's on the back all right.

290

00:16:58,360 --> 00:17:03,360

But has the myth of anti-gravity been confirmed, or is there something else going on?

291

00:17:03,360 --> 00:17:07,360

Our team of super-sloots get testing to find out.

292

00:17:07,360 --> 00:17:08,360

Whoa!

293

00:17:08,360 --> 00:17:10,360

Oh, it just totally just...

294

00:17:10,360 --> 00:17:11,360

Wacking it out!

295

00:17:11,360 --> 00:17:12,360

Gleeter.

296

00:17:12,360 --> 00:17:16,360

Okay, so we know there's a large electrical field around this, which, you know,

297

00:17:16,360 --> 00:17:19,360

just by nature of the device, we kind of figured.

298

00:17:19,360 --> 00:17:22,360

But that doesn't mean that that's necessarily anti-gravity.

299

00:17:22,360 --> 00:17:29,360

So, next we should do thrust, and that'll tell us whether it's actually some mechanical form of

lifting.

300

00:17:29,360 --> 00:17:35,360

And it's bad news for anti-gravity believers, because there is some air movement.

301

00:17:35,360 --> 00:17:40,360

We are getting 1.6 miles per hour of wind, so there is thrust.

302

00:17:40,360 --> 00:17:45,360

Yep, that is a thrust effect, not a gravity modification effect.

303

00:17:45,360 --> 00:17:51,360

So, it's like a fixed-wing aircraft, you know, pushing air out of the way to overcome gravity.

304

00:17:51,360 --> 00:17:58,360

So, 30,000 volts is forced down the wire, and that ionizes the air around it.

305

00:17:58,360 --> 00:18:04,360

These ions are attracted to the foil below, and the flow of air thrusts the lifter off the ground.

306

00:18:04,360 --> 00:18:08,360

And if Grant is right, it won't work in a vacuum.

307

00:18:08,360 --> 00:18:15,360

My suspicion about what's going on here is that the large DC voltage is ionizing the air around the lifter.

308

00:18:15,360 --> 00:18:20,360

It's creating a flow of ions, which is bringing air along with it, creating thrust.

309

00:18:20,360 --> 00:18:25,360

Now, what you can do to prove this, or disprove it, is to remove all of the air.

310

00:18:25,360 --> 00:18:29,360

If that's the case, then there should be no thrust.

311

00:18:29,360 --> 00:18:35,360

And sure enough, when they perform the test in a vacuum, the lifter is grounded.

312

00:18:35,360 --> 00:18:37,360

And it's not flying.

313

00:18:37,360 --> 00:18:39,360

It's not flying!

314

00:18:39,360 --> 00:18:43,360

It worked beforehand, put it in the vacuum, no flight.

315

00:18:43,360 --> 00:18:49,360

No flight, no air, no thrust, no anti-gravity.

316

00:18:49,360 --> 00:18:51,360

Can't say any better than that.

317

00:18:51,360 --> 00:18:54,360

Coming up, Adam blows a festive fuse.

318

00:18:54,360 --> 00:18:56,360

Oh!

319

00:18:56,360 --> 00:19:02,360

And then Carrie, Grant and Tori bring in the big boys with the big toys.

320

00:19:02,360 --> 00:19:08,360

When does the vortex open up, and like the time, space, fabric starts to weave around it?

321

00:19:11,360 --> 00:19:16,360

Can leaving tree lights on overnight cause a Christmas catastrophe?

322

00:19:16,360 --> 00:19:19,360

Well, not if the mythbusters are anything to go by.

323

00:19:19,360 --> 00:19:22,360

They put 500 lights on a regular tree.

324

00:19:22,360 --> 00:19:25,360

But there was no fire in the hole.

325

00:19:25,360 --> 00:19:27,360

Yeah, I'm starting to think that we're going about this all wrong.

326

00:19:27,360 --> 00:19:31,360

That what we really should be looking for is an electrical spark.

327

00:19:31,360 --> 00:19:34,360

Well, all the lights are fuses protected, though. They're not going to generate a spark.

328

00:19:34,360 --> 00:19:39,360

That's true about the lights, but you could still plug too many lights into a standard house outlet

329

00:19:39,360 --> 00:19:42,360

by using those three outlet adapters.

330

00:19:42,360 --> 00:19:46,360

If you tree enough of those on each other, you could overload the house circuit.

331

00:19:46,360 --> 00:19:52,360

I think I could do a bench test that will demonstrate whether or not we can get a spark from that

kind of arrangement.

332

00:19:52,360 --> 00:19:53,360

Okay.

333

00:19:54,360 --> 00:19:57,360

Okay, let's get cooking with Adam.

334

00:19:57,360 --> 00:20:02,360

Now the critical ingredients in creating a spark fire from Christmas lights are my old favorites,

335

00:20:02,360 --> 00:20:07,360

the old grandma eight-foot extension cord, a team gauge, a nice clamp-on ammeter

336

00:20:07,360 --> 00:20:11,360

for monitoring the amount of power being consumed by the Christmas lights.

337

00:20:11,360 --> 00:20:13,360

And...

338

00:20:16,360 --> 00:20:19,360

Aw, more Christmas lights than you could possibly imagine.

339

00:20:19,360 --> 00:20:21,360

Okay, maybe slightly less.

340

00:20:21,360 --> 00:20:28,360

The preparation is so easy. Just take some plain cubed sockets and put them one on top of the other.

341

00:20:28,360 --> 00:20:33,360

Does this look familiar? If it does, I'm not coming over to your house for Christmas.

342

00:20:33,360 --> 00:20:36,360

Plug them into an old-style extension cord.

343

00:20:36,360 --> 00:20:43,360

Modern extension cords are a little thicker, but this is very likely to be found in just about any house.

344

00:20:43,360 --> 00:20:45,360

And a generous amount of tree lights.

345

00:20:45,360 --> 00:20:51,360

With ten strands, I am now exceeding the underwriters' laboratories recommendations by 50%.

346

00:20:51,360 --> 00:20:54,360

And bake for about 15 minutes.

347

00:20:54,360 --> 00:20:57,360

280 degrees.

348

00:20:57,360 --> 00:21:00,360

Crazy. Come on, I want some failure.

349

00:21:00,360 --> 00:21:04,360

It's probably best that you don't try this at home.

350

00:21:04,360 --> 00:21:07,360

I'm running double the rated power through it.

351

00:21:07,360 --> 00:21:09,360

Well, that right there is kind of scary.

352

00:21:09,360 --> 00:21:14,360

Isn't it? I mean, if you put too much into an extension cord, just plugged into your house...

353

00:21:14,360 --> 00:21:16,360

Whoa!

354

00:21:16,360 --> 00:21:18,360

That's what I was talking about.

355

00:21:18,360 --> 00:21:20,360

That's what's gonna happen.

356

00:21:25,360 --> 00:21:31,360

The insulation on the wiring melted, and that made two of the wires touch together,

357

00:21:31,360 --> 00:21:36,360

and that caused arcing across those wires and a large spark.

358

00:21:36,360 --> 00:21:41,360

Unfortunately, in your home, this is a recipe for disaster.

359

00:21:41,360 --> 00:21:49,360

We're demonstrating a totally viable method for too many lights causing a failure and that failure causing a spark.

360

00:21:49,360 --> 00:21:53,360

People get really, really enthusiastic about their Christmas decorations,

361

00:21:53,360 --> 00:21:57,360

and I'll wager that a few of you have done this.

362

00:21:57,360 --> 00:21:59,360

Now do you see the danger?

363

00:22:02,360 --> 00:22:08,360

Like commuting by jetpack and miracle time-saving kitchens,

364

00:22:08,360 --> 00:22:14,360

the control of gravity is a mythical technology that has been promised but not delivered.

365

00:22:14,360 --> 00:22:16,360

Or has it?

366

00:22:16,360 --> 00:22:18,360

Ah!

367

00:22:18,360 --> 00:22:20,360

I'm fucking...

368

00:22:20,360 --> 00:22:23,360

I'm fucking...

369

00:22:23,360 --> 00:22:26,360

I'm starting to flogging towards me.

370

00:22:26,360 --> 00:22:30,360

Okay, guys, the lifter, super cool, but no gravity modification.

371

00:22:30,360 --> 00:22:32,360

I think it's some sort of thrust.

372

00:22:32,360 --> 00:22:35,360

You know, this whole gravity thing is really tricky.

373

00:22:35,360 --> 00:22:37,360

Maybe we should bring in some experts.

374

00:22:37,360 --> 00:22:41,360

Yeah, there's gotta be some sort of instrumentation that measures gravity accurately.

375

00:22:41,360 --> 00:22:44,360

I bet if we looked hard enough, we could find something.

376

00:22:44,360 --> 00:22:48,360

Well, let's get both, because we never know how to use the instruments.

377

00:22:48,360 --> 00:22:51,360

Actually, they get three men in a machine.

378

00:22:51,360 --> 00:22:58,360

Micro-G LaCoste physicists Tim and Derek bring a box full of ultra-sensitive gravity meter.

379

00:22:58,360 --> 00:23:02,360

And there's Dr. Bob Jacobson, who's a professor of physics.

380

00:23:02,360 --> 00:23:04,360

So pay attention at the back there.

381

00:23:04,360 --> 00:23:06,360

Okay, let's get down to basics.

382

00:23:06,360 --> 00:23:11,360

What's the difference between anti-gravity and gravity modification?

383

00:23:11,360 --> 00:23:15,360

747s fly by countering gravity with another force.

384

00:23:15,360 --> 00:23:20,360

You can fight gravity by having some other force that acts against it.

385

00:23:20,360 --> 00:23:25,360

Anti-gravity is canceling it, it's making it go away so that it doesn't act on a particular object.

386

00:23:25,360 --> 00:23:30,360

Instead of lifting something, you make its weight disappear so that it just floats.

387

00:23:30,360 --> 00:23:31,360

So that's the theory.

388

00:23:31,360 --> 00:23:36,360

And for confirmation that the anti-gravity devices don't actually cancel gravity,

389

00:23:36,360 --> 00:23:39,360

it's time to fire up the gravity meter.

390

00:23:39,360 --> 00:23:45,360

When does the vortex open up and like the time, space, fabric start to weave around this?

391

00:23:45,360 --> 00:23:47,360

23 minutes.

392

00:23:47,360 --> 00:23:51,360

Okay, Grant has successfully released his inner geek.

393

00:23:51,360 --> 00:23:54,360

So why don't we find out how the gravity meter works?

394

00:23:54,360 --> 00:23:56,360

So this is a vacuum.

395

00:23:56,360 --> 00:23:57,360

So there's no air, no nothing in there.

396

00:23:57,360 --> 00:23:59,360

Well, that's what we're actually trying to get right now.

397

00:23:59,360 --> 00:24:00,360

This is helping establish that.

398

00:24:00,360 --> 00:24:01,360

Okay.

399

00:24:01,360 --> 00:24:05,360

So there's a little mirror in here, a little motor that lifts that mirror to the top,

400

00:24:05,360 --> 00:24:07,360

and then releases it, it free-falls.

401

00:24:07,360 --> 00:24:11,360

There's the vacuum, there's nothing to slow it down, so it falls purely under gravity.

402

00:24:11,360 --> 00:24:17,360

This black box here has a laser coming into it, just like a cops radar gun.

403

00:24:17,360 --> 00:24:23,360

It balances the laser off this falling mirror and tracks it extremely precisely.

404

00:24:23,360 --> 00:24:28,360

And then there's a bunch of electronics that will hook up that read out the tracking information to that laptop

405

00:24:28,360 --> 00:24:32,360

and it'll tell us what the acceleration of gravity is.

406

00:24:32,360 --> 00:24:34,360

Which sounds ideal for the myth.

407

00:24:34,360 --> 00:24:39,360

If there is any change in gravity, this awesome piece of equipment will detect it,

408

00:24:39,360 --> 00:24:42,360

right down to one part per billion.

409

00:24:42,360 --> 00:24:48,360

To perfect the vacuum that's so crucial to its accuracy, it has to warm up overnight.

410

00:24:48,360 --> 00:24:53,360

And when they come back in the morning, the guys get an idea of just how impressive it really is.

411

00:24:53,360 --> 00:25:00,360

Apparently there was an earthquake this morning, and I think that correlates to some of the noise we saw this morning.

412

00:25:00,360 --> 00:25:05,360

The meter not only mapped the effect of local earthquake activity on gravity,

413

00:25:05,360 --> 00:25:09,360

it detected tidal fluctuations caused by the passage of the moon.

414

00:25:09,360 --> 00:25:14,360

So it should be able to detect an actual anti-gravity field.

415

00:25:14,360 --> 00:25:17,360

Okay, there is no effect on the gravity meter.

416

00:25:17,360 --> 00:25:25,360

Hey, Bob! You've witnessed the top levitate, but we've recorded absolutely no modification of gravity.

417

00:25:25,360 --> 00:25:29,360

That's because the gravity detector is not sensitive to magnetism,

418

00:25:29,360 --> 00:25:31,360

and it's magnetism that's holding up your top.

419

00:25:31,360 --> 00:25:33,360

That's one device down.

420

00:25:33,360 --> 00:25:36,360

Up next for Judgment Day is the lifter.

421

00:25:36,360 --> 00:25:40,360

Coming up, the guys grapple with their final anti-gravity device.

422

00:25:40,360 --> 00:25:42,360

It works!

423

00:25:42,360 --> 00:25:44,360

Look at that!

424

00:25:44,360 --> 00:25:46,360

It's just like, it's just sitting there.

425

00:25:48,360 --> 00:25:56,360

Carrie Grant and Tori and a trio of top physicists have busted the spinning top as an anti-gravity device.

426

00:25:56,360 --> 00:25:59,360

Okay, there is no effect on the gravity meter.

427

00:25:59,360 --> 00:26:03,360

Now it's time to get the final word on the lifter.

428

00:26:07,360 --> 00:26:10,360

Okay, now you can smell the ozone, and you can feel...

429

00:26:10,360 --> 00:26:11,360

Be careful though, because it's...

430

00:26:11,360 --> 00:26:15,360

Yeah, don't get too close, but you can feel the wind coming off.

431

00:26:16,360 --> 00:26:18,360

So, it's definitely thrust.

432

00:26:18,360 --> 00:26:25,360

That's the theory, but with the lifter levitating right below the meter, the gravity graph is unmoved.

433

00:26:26,360 --> 00:26:30,360

The number this morning was 979-982-924.

434

00:26:30,360 --> 00:26:31,360

Yes.

435

00:26:31,360 --> 00:26:35,360

979-982-912.

436

00:26:35,360 --> 00:26:41,360

So it's 12 parts per billion, and that's within the noise of us all walking around.

437

00:26:41,360 --> 00:26:44,360

That's a pretty normal noise level.

438

00:26:44,360 --> 00:26:47,360

So basically, the lifter is grounded.

439

00:26:47,360 --> 00:26:49,360

That gravitometer was amazing.

440

00:26:49,360 --> 00:26:53,360

It was pretty mind-blowing how accurate that device was.

441

00:26:53,360 --> 00:26:56,360

It busted the lifter, but where do we go from here?

442

00:26:56,360 --> 00:27:01,360

I do have one more device that I found, but you can't really test it with traditional science.

443

00:27:01,360 --> 00:27:04,360

It's the Hamel Generator, and apparently this guy was abducted by aliens.

444

00:27:04,360 --> 00:27:10,360

They showed him around their ship, and from seeing that, he came up with the designs for this generator.

445

00:27:10,360 --> 00:27:15,360

Well, if anybody's already solved anti-gravity, it's definitely the aliens.

446

00:27:15,360 --> 00:27:20,360

Okay, well the Mythbusters have tested crazy claims before.

447

00:27:20,360 --> 00:27:22,360

Merry Christmas to us all.

448

00:27:22,360 --> 00:27:26,360

And they've come across stranger ingredient lists in their time.

449

00:27:26,360 --> 00:27:27,360

Three jade balls.

450

00:27:27,360 --> 00:27:29,360

A roll of aluminum and a thousand magnets.

451

00:27:29,360 --> 00:27:30,360

Yep.

452

00:27:30,360 --> 00:27:33,360

But why are they taking this one seriously?

453

00:27:33,360 --> 00:27:36,360

The reason why we're taking this seriously is because he has very specific designs.

454

00:27:36,360 --> 00:27:40,360

Designs are good. So how does this alien technology work?

455

00:27:40,360 --> 00:27:46,360

Supposedly, the perfectly balanced cones wobble within the constraints of a magnetic field.

456

00:27:46,360 --> 00:27:52,360

And it's this dynamic equilibrium that generates an electro-gravitational field,

457

00:27:52,360 --> 00:27:56,360

and that causes the alien ship to lose its connection with gravity.

458

00:27:56,360 --> 00:28:00,360

I would really wish the aliens were here to show me how to build this thing.

459

00:28:00,360 --> 00:28:04,360

With aliens in short supply, Grant and Carrie will have to do.

460

00:28:04,360 --> 00:28:09,360

And Grant gets the all-important bearings rigged at practically light speed.

461

00:28:09,360 --> 00:28:13,360

This is the bearing, and it's supposed to wobble.

462

00:28:13,360 --> 00:28:16,360

And it's a little something like this.

463

00:28:18,360 --> 00:28:20,360

It's not bad actually.

464

00:28:20,360 --> 00:28:24,360

And while Carrie lines the rim of three bike wheels with the magnets,

465

00:28:24,360 --> 00:28:28,360

Tori has made three cones from the roll of aluminum.

466

00:28:29,360 --> 00:28:30,360

Dish!

467

00:28:34,360 --> 00:28:38,360

Once Tori and Grant finish fighting with foil, they finish the assembly.

468

00:28:42,360 --> 00:28:43,360

It works!

469

00:28:44,360 --> 00:28:45,360

Look at that!

470

00:28:45,360 --> 00:28:48,360

It's just like, it's just sitting there.

471

00:28:48,360 --> 00:28:52,360

The cone is just perfectly centered inside the ring.

472

00:28:52,360 --> 00:28:54,360

It's just hovering there.

473

00:28:54,360 --> 00:28:55,360

It's just, yeah.

474

00:28:55,360 --> 00:28:56,360

It's looking good.

475

00:28:56,360 --> 00:28:59,360

The magnets and cones are perfectly balanced.

476

00:28:59,360 --> 00:29:03,360

But it's when the third cone goes in that things will get interesting.

477

00:29:03,360 --> 00:29:09,360

The generator should take off and start floating in an anti-gravity field.

478

00:29:09,360 --> 00:29:11,360

See it now it's going.

479

00:29:11,360 --> 00:29:12,360

See that?

480

00:29:12,360 --> 00:29:13,360

See it oscillating?

481

00:29:13,360 --> 00:29:15,360

Oscillating, yes.

482

00:29:15,360 --> 00:29:17,360

Levitating, no.

483

00:29:17,360 --> 00:29:21,360

But just to be sure, the guys prepare for the ultimate test.

484

00:29:21,360 --> 00:29:23,360

It's been started.

485

00:29:23,360 --> 00:29:25,360

It's started as a generator.

486

00:29:25,360 --> 00:29:26,360

Get out of the business.

487

00:29:26,360 --> 00:29:27,360

Let's get out.

488

00:29:27,360 --> 00:29:32,360

Remember, the super sensitive gravity meter can detect even the tiniest fluctuation in local gravity.

489

00:29:32,360 --> 00:29:38,360

Our world-class physicists stand by anticipating a major scientific breakthrough.

490

00:29:38,360 --> 00:29:43,360

But really, no one is surprised when the Hamilton generator flat lies.

491

00:29:43,360 --> 00:29:48,360

Are you sure you're not tampering with these results because you don't want there to be anti-gravity out there?

492

00:29:48,360 --> 00:29:52,360

Because it is all a conspiracy and you are part of the man?

493

00:29:52,360 --> 00:29:54,360

No comment.

494

00:29:54,360 --> 00:29:57,360

You see that hole in the ceiling where it took off?

495

00:29:57,360 --> 00:29:58,360

No.

496

00:29:58,360 --> 00:29:59,360

You neither.

497

00:29:59,360 --> 00:30:04,360

You would have been better building something designed by Mark Hamill.

498

00:30:04,360 --> 00:30:12,360

Well, the Hamilton, the Hamilton aside, how did all our other devices do?

499

00:30:12,360 --> 00:30:15,360

Okay, the lifter, very cool piece of technology.

500

00:30:15,360 --> 00:30:19,360

It works great, but in the end, it's not anti-gravity.

501

00:30:19,360 --> 00:30:20,360

It's all thrust.

502

00:30:20,360 --> 00:30:22,360

So anti-gravity is busted?

503

00:30:22,360 --> 00:30:24,360

Yeah, it's busted.

504

00:30:24,360 --> 00:30:28,360

I don't know if we can bust anti-gravity and we can bust our devices.

505

00:30:28,360 --> 00:30:29,360

All right, revised.

506

00:30:29,360 --> 00:30:32,360

Anti-gravity busted for now.

507

00:30:51,360 --> 00:30:55,360

Now for something completely different.

508

00:30:55,360 --> 00:30:57,360

Vodka.

509

00:30:57,360 --> 00:31:06,360

Most people choose to drink it, but our team of alcohol aficionados have busted it as a bee killer and poison oak cure.

510

00:31:06,360 --> 00:31:13,360

They've also used it to kill off bad breath and cheesy feet.

511

00:31:13,360 --> 00:31:16,360

But that's not enough for Cary and Tori.

512

00:31:16,360 --> 00:31:19,360

This time, something fishy is going on.

513

00:31:19,360 --> 00:31:21,360

We're here at Monterey Bay Aquarium.

514

00:31:21,360 --> 00:31:25,360

We're going to pick up a jellyfish and find out if you can use vodka to treat a jellyfish sting.

515

00:31:25,360 --> 00:31:31,360

It's an old fish-wise tale, and if it's jelly sure after, you can't do better than this aquarium,

516

00:31:31,360 --> 00:31:34,360

which has one of the finest collections in the country.

517

00:31:34,360 --> 00:31:39,360

So it's off into the aquarium's belly to find a jelly.

518

00:31:39,360 --> 00:31:40,360

What type of jellyfish is this?

519

00:31:40,360 --> 00:31:43,360

These are Pacific sea nettles, *Chrysaora fuscescens*.

520

00:31:43,360 --> 00:31:47,360

One of the big local jellies you'll find out in the Pacific Northeast Ocean.

521

00:31:47,360 --> 00:31:52,360

This won't kill you or injure you, but you know, it'll be uncomfortable for a week.

522

00:31:52,360 --> 00:31:57,360

How reassuring, but you know what they say, no pain, no gain.

523

00:31:57,360 --> 00:31:58,360

See one that looks good?

524

00:31:58,360 --> 00:32:02,360

Oh, there's a good one.

525

00:32:02,360 --> 00:32:09,360

Jelly catcher away, one little tentacle, no problem at all.

526

00:32:09,360 --> 00:32:11,360

Wow.

527

00:32:11,360 --> 00:32:13,360

Bag of jelly.

528

00:32:13,360 --> 00:32:15,360

I can't believe I get to take this guy home.

529

00:32:15,360 --> 00:32:16,360

That's fun.

530

00:32:16,360 --> 00:32:21,360

Back at M5, despite the vodka at the ready, Kari's had second thoughts,

531

00:32:21,360 --> 00:32:24,360

not to mention thirds and fourths.

532

00:32:24,360 --> 00:32:25,360

I think I'm a little anxious.

533

00:32:25,360 --> 00:32:27,360

I'm a little bit nervous.

534

00:32:27,360 --> 00:32:33,360

I thought I was going to be perfectly fine, but now that it's come down to it, I find my heart going...

535

00:32:35,360 --> 00:32:38,360

I really want to do this.

536

00:32:38,360 --> 00:32:40,360

It's not like I want to do it.

537

00:32:40,360 --> 00:32:42,360

I'm doing this for the show.

538

00:32:42,360 --> 00:32:49,360

You're going to grab him by the head, Jenny, and underwater run him across my arm

539

00:32:49,360 --> 00:32:54,360

so the little tentacles will slide across, stinging me with thousands of little stingers,

540

00:32:54,360 --> 00:32:57,360

releasing neurotoxins into my body.

541

00:32:57,360 --> 00:32:59,360

That should be fun.

542

00:32:59,360 --> 00:33:03,360

While the jelly limbers up, Dr. Tori explains the procedure.

543

00:33:03,360 --> 00:33:06,360

All right, Kari, so once you get stung, the process is going to be this.

544

00:33:06,360 --> 00:33:08,360

We're going to do the traditional treatment.

545

00:33:08,360 --> 00:33:09,360

That's warm water.

546

00:33:09,360 --> 00:33:11,360

I'm going to be scrubbing your arm with the brush.

547

00:33:11,360 --> 00:33:15,360

We're going to put traditional anti-histamine gel on it.

548

00:33:15,360 --> 00:33:20,360

With the other arm, we're going to take the vodka and pour that on it and scrub with the brush.

549

00:33:20,360 --> 00:33:22,360

We'll see which one works better.

550

00:33:22,360 --> 00:33:25,360

You ready? You psyched up? Give me some hits.

551

00:33:27,360 --> 00:33:29,360

Cue the winds.

552

00:33:30,360 --> 00:33:32,360

Did we get enough on this one?

553

00:33:32,360 --> 00:33:33,360

Yeah, I feel some right there, too.

554

00:33:33,360 --> 00:33:34,360

All right, let's go.

555

00:33:34,360 --> 00:33:39,360

Okay, so it's definitely started to sting more and more, and it's tingling in different places.

556

00:33:39,360 --> 00:33:46,360

And what's basically happening from what I understand is that each of the little spikes is letting off slowly neurotoxins.

557

00:33:46,360 --> 00:33:49,360

Okay, now we can start treatment.

558

00:33:49,360 --> 00:33:54,360

Kari could swear that when she took this job, nobody mentioned neurotoxins.

559

00:33:54,360 --> 00:33:56,360

So we're going to do the traditional treatment first.

560

00:33:56,360 --> 00:33:57,360

Okay.

561

00:33:57,360 --> 00:33:59,360

Warm water. Ready? Here we go.

562

00:33:59,360 --> 00:34:01,360

Okay, in the brush.

563

00:34:01,360 --> 00:34:05,360

Scrub this. Now we've got to scrub the stingers out, but I haven't released yet.

564

00:34:05,360 --> 00:34:07,360

A little lower on the arm right there.

565

00:34:07,360 --> 00:34:08,360

Okay.

566

00:34:08,360 --> 00:34:12,360

Now, pain's a subjective thing, but how does that feel, Kari?

567

00:34:12,360 --> 00:34:14,360

It's not like petting puppies or anything.

568

00:34:15,360 --> 00:34:20,360

Team player Tori works fast, finishing the traditional treatment lickety-split.

569

00:34:20,360 --> 00:34:23,360

Vodka treatment. You ready?

570

00:34:23,360 --> 00:34:25,360

And before you can say...

571

00:34:25,360 --> 00:34:27,360

How you doing?

572

00:34:27,360 --> 00:34:29,360

It's all right.

573

00:34:29,360 --> 00:34:31,360

He's also applied the alcoholic antidote.

574

00:34:31,360 --> 00:34:33,360

All right, so that's it for the vodka treatment, right?

575

00:34:33,360 --> 00:34:35,360

That's it for the vodka treatment.

576

00:34:35,360 --> 00:34:38,360

At all things considered, Kari's in good spirits.

577

00:34:38,360 --> 00:34:41,360

Maybe she's been drinking the vodka.

578

00:34:41,360 --> 00:34:44,360

I was expecting some sort of sci-fi kind of pain.

579

00:34:44,360 --> 00:34:46,360

I really was.

580

00:34:46,360 --> 00:34:51,360

So I was preparing for like, jagged spikes, and I was gritting my teeth really, really hard.

581

00:34:51,360 --> 00:34:53,360

It wasn't as bad as I thought.

582

00:34:53,360 --> 00:34:55,360

Well, you are a brave individual, I have to say that.

583

00:34:55,360 --> 00:35:00,360

The jellyfish may not have had a ferocious kick, but did the vodka help at all?

584

00:35:00,360 --> 00:35:05,360

So between the vodka and the traditional treatment for jellyfish sting, which one do you think works better?

585

00:35:05,360 --> 00:35:07,360

Both treatments were extremely effective.

586

00:35:07,360 --> 00:35:09,360

I really didn't develop a rash.

587

00:35:09,360 --> 00:35:12,360

After about an hour and a half, I wouldn't have even known the jelly was dying me at all.

588

00:35:12,360 --> 00:35:15,360

So vodka as a treatment for jelly sting?

589

00:35:15,360 --> 00:35:16,360

Confirmed?

590

00:35:16,360 --> 00:35:20,360

I'm completely surprised, but I definitely have to say that the myth was confirmed.

591

00:35:20,360 --> 00:35:25,360

I think the vodka deactivated the nematocyst in my arm and left me without an itchy sting.

592

00:35:25,360 --> 00:35:26,360

Sweet.

593

00:35:26,360 --> 00:35:29,360

Now it's time to take a little Titus out to the bay and set him free.

594

00:35:29,360 --> 00:35:31,360

You don't want to eat him?

595

00:35:56,360 --> 00:35:57,360

Had a result.

596

00:35:57,360 --> 00:36:01,360

If you put too much into an extension cord, just plugged into your house.

597

00:36:01,360 --> 00:36:02,360

Oh!

598

00:36:02,360 --> 00:36:04,360

Ho, ho, ho, ho, ho!

599

00:36:04,360 --> 00:36:06,360

Alright, we got a spark.

600

00:36:06,360 --> 00:36:08,360

Now it's time to get a fire.

601

00:36:08,360 --> 00:36:11,360

Okay, well a dry tree is going to be easier to burn.

602

00:36:11,360 --> 00:36:16,360

I agree, so we should dry the heck out of this tree we're going to use and wrap the heck out of it.

603

00:36:16,360 --> 00:36:20,360

I want five times as many Christmas lights on it as we did in the shop.

604

00:36:20,360 --> 00:36:25,360

Okay, and just in case that doesn't do it, we should also put in a remote ignition rig as well.

605

00:36:25,360 --> 00:36:28,360

And just to replicate the spark I got in the bench test, perfect.

606

00:36:28,360 --> 00:36:30,360

One way that we're going to burn this thing.

607

00:36:31,360 --> 00:36:35,360

Sound the sirens? Did someone say fire?

608

00:36:35,360 --> 00:36:42,360

To try to ignite a tree once and for all, Jamie and Adam have come to the City of Pleasanton Fire Center.

609

00:36:42,360 --> 00:36:44,360

This is it.

610

00:36:46,360 --> 00:36:47,360

Hi Captain.

611

00:36:47,360 --> 00:36:48,360

Hi General.

612

00:36:48,360 --> 00:36:53,360

And Captain Dickey has no doubt that Christmas tree fires are frightening.

613

00:36:53,360 --> 00:36:55,360

Well, what do you think about what we're doing here?

614

00:36:55,360 --> 00:36:58,360

Have you dealt with this kind of situation before in a house fire?

615

00:36:58,360 --> 00:37:00,360

Yes, we go to Christmas tree fires every year.

616

00:37:00,360 --> 00:37:06,360

We had a house burn up in December 26th of 1997 where a child turned the lights onto the Christmas tree

617

00:37:06,360 --> 00:37:11,360

and the tree immediately ignited and burned up the house and caused a lot of damage.

618

00:37:11,360 --> 00:37:13,360

Alright, well you ready to go?

619

00:37:13,360 --> 00:37:14,360

I'm ready.

620

00:37:14,360 --> 00:37:16,360

In this last test, the guys are going for broke.

621

00:37:16,360 --> 00:37:20,360

They've rigged the tree with hundreds of lights plugged into dozens of sockets.

622

00:37:20,360 --> 00:37:24,360

And further up the fire factor, the pine is totally parched.

623

00:37:24,360 --> 00:37:27,360

What we have here is a kiln dried tree.

624

00:37:27,360 --> 00:37:32,360

This was dried at a place that dries flowers, so it's dry as a bone.

625

00:37:32,360 --> 00:37:34,360

We've gone way over the top with these lights.

626

00:37:34,360 --> 00:37:41,360

We've got 2500 lights, it's a couple hundred amps worth of electrical power and heat going into

this tree.

627

00:37:41,360 --> 00:37:46,360

72 strands of lights, 1800 bulbs.

628

00:37:47,360 --> 00:37:50,360

I bet this is what Christmas is like in heaven.

629

00:37:50,360 --> 00:37:51,360

I'm going to turn them off.

630

00:37:51,360 --> 00:37:53,360

I can't even gaze upon it.

631

00:37:53,360 --> 00:37:55,360

So bright is the light it gives off.

632

00:37:55,360 --> 00:37:59,360

It's as bright as the sun, but there's something missing.

633

00:37:59,360 --> 00:38:01,360

That's right, tacky ornaments.

634

00:38:01,360 --> 00:38:03,360

A decorative garland.

635

00:38:03,360 --> 00:38:06,360

As if we needed this thing to be any more flammable.

636

00:38:06,360 --> 00:38:09,360

And some brightly colored baubles.

637

00:38:10,360 --> 00:38:12,360

Are these not glass?

638

00:38:12,360 --> 00:38:13,360

Oh, they are.

639

00:38:13,360 --> 00:38:20,360

With 2500 lights, this is the ultimate test in the hot ball makes fire theory.

640

00:38:20,360 --> 00:38:25,360

But in case that still doesn't work, Jamie's also added a sparker for good measure.

641

00:38:25,360 --> 00:38:35,360

The neon transformer takes 110, just normal line voltage and kicks it up to, I think in this case, it's around 5,000, 6,000 volts, something like that.

642

00:38:35,360 --> 00:38:39,360

This is a straightforward, always works way of getting a fire.

643

00:38:39,360 --> 00:38:41,360

Doesn't the tree look lovely, children?

644

00:38:41,360 --> 00:38:43,360

Now to set it on fire.

645

00:38:43,360 --> 00:38:46,360

Do not try this test at home.

646

00:38:46,360 --> 00:38:51,360

Without the fire department on hand, more than the turkey will be overcooked.

647

00:38:51,360 --> 00:38:53,360

Okay, Linda, give us power.

648

00:38:53,360 --> 00:38:55,360

Coming at you, press the green button.

649

00:38:55,360 --> 00:38:56,360

Over.

650

00:38:58,360 --> 00:38:59,360

And there it is.

651

00:38:59,360 --> 00:39:01,360

It looks so cheery now.

652

00:39:02,360 --> 00:39:08,360

With all 2500 lights on, the guys monitor the tree from a safe distance.

653

00:39:08,360 --> 00:39:12,360

Those light bulbs require more power than most people have in their house.

654

00:39:12,360 --> 00:39:15,360

Not just on a single circuit, in their whole house.

655

00:39:15,360 --> 00:39:22,360

The temperature rises rapidly and soon the tree gets hot enough to make Jamie's whiskers bristle with anticipation.

656

00:39:22,360 --> 00:39:25,360

Chris, what's the temperature, the maximum?

657

00:39:25,360 --> 00:39:27,360

The top now is at 240.

658

00:39:27,360 --> 00:39:29,360

240 on the scale, that's the highest?

659

00:39:29,360 --> 00:39:34,360

240 degrees and it's been 21 minutes.

660

00:39:34,360 --> 00:39:37,360

Soon there's a hopeful sign.

661

00:39:37,360 --> 00:39:40,360

Yeah, it's smoking and you can see it through the windows here.

662

00:39:40,360 --> 00:39:43,360

Dude, we're gonna get ignition.

663

00:39:43,360 --> 00:39:47,360

But 40 minutes later, the bulbs still haven't gone ballistic.

664

00:39:47,360 --> 00:39:52,360

And if 2500 bulbs can't heat a tree to ignition, then no amount will.

665

00:39:52,360 --> 00:39:55,360

Well, lots of smoke, no fire.

666

00:39:55,360 --> 00:39:57,360

I think we're gonna set the spark off.

667

00:39:57,360 --> 00:39:58,360

Sounds good.

668

00:39:58,360 --> 00:39:59,360

You guys ready?

669

00:39:59,360 --> 00:40:01,360

We'll mask up and be prepared to go in.

670

00:40:01,360 --> 00:40:02,360

Okay.

671

00:40:02,360 --> 00:40:07,360

We're going to light this thing up with old sparky so stand by for our signal to cut the power over.

672

00:40:07,360 --> 00:40:10,360

Copy that, I'm getting by.

673

00:40:10,360 --> 00:40:12,360

It's the final test in this story.

674

00:40:12,360 --> 00:40:15,360

Can a spark cause the fur to fire?

675

00:40:15,360 --> 00:40:17,360

Okay, let's try it.

676

00:40:17,360 --> 00:40:23,360

Ignition in three, two, one.

677

00:40:23,360 --> 00:40:25,360

Bingo, we have ignition.

678

00:40:25,360 --> 00:40:26,360

There you go.

679

00:40:26,360 --> 00:40:28,360

That's it.

680

00:40:28,360 --> 00:40:31,360

That's beautiful.

681

00:40:31,360 --> 00:40:33,360

So fast.

682

00:40:33,360 --> 00:40:37,360

The fire department springs into action.

683

00:40:44,360 --> 00:40:47,360

Firemen have the best boys ever.

684

00:40:47,360 --> 00:40:51,360

Our Christmas trees branches aren't so lovely anymore.

685

00:40:51,360 --> 00:40:54,360

Well, I thought it was an ugly Christmas tree before.

686

00:40:54,360 --> 00:40:57,360

There's your problem.

687

00:40:57,360 --> 00:41:02,360

The short circuit did the job and the boys are shocked at how fast the fire spread.

688

00:41:02,360 --> 00:41:07,360

That wasn't an explosion, but it was so fast that it'd be out of control.

689

00:41:07,360 --> 00:41:11,360

If it went up, you wouldn't be able to do anything unless you were standing right there with the fire extinguisher.

690

00:41:11,360 --> 00:41:12,360

Exactly.

691

00:41:12,360 --> 00:41:20,360

At the moment we saw the fire, you're already pretty much too late to get it under control with anything but a bunch of firemen.

692

00:41:20,360 --> 00:41:23,360

I was amazed how fast it got out of control.

693

00:41:23,360 --> 00:41:24,360

Right.

694

00:41:24,360 --> 00:41:27,360

It grows quickly and there's no other fuel in that room, so it would burn itself out.

695

00:41:27,360 --> 00:41:32,360

But imagine if you had drapes and furniture inside, it would continue to grow rapidly.

696

00:41:32,360 --> 00:41:39,360

And with that kind of fire, even if you had a, like, a standard household fire extinguisher, you probably wouldn't be able to deal with it, right?

697

00:41:39,360 --> 00:41:43,360

No, a fire like this would grow out of control before you can even go out and get your fire extinguisher.

698

00:41:43,360 --> 00:41:46,360

The best thing to do is leave the house immediately.

699

00:41:46,360 --> 00:41:48,360

All it would take is one little spark.

700

00:41:48,360 --> 00:41:53,360

You know, whether it's an older set of lights, whether somebody's messed with the fuse.

701

00:41:54,360 --> 00:41:58,360

You can get a short and if you do, you can set a tree on fire.

702

00:41:58,360 --> 00:41:59,360

This is no myth.

703

00:41:59,360 --> 00:42:18,360

In fact, this is more like a public service announcement because the figures we have says that on December 24th, 25th, and 26th in the U.S., there's over 10,000 fires that cause 40 deaths and over \$80 million in damage every single year from Christmas trees burning down from various reasons.

704

00:42:19,360 --> 00:42:21,360

I think this one is totally busted.

705

00:42:21,360 --> 00:42:28,360

And we put 2,500 bulbs on that tree and it was not enough to create the heat necessary to auto ignite.

706

00:42:28,360 --> 00:42:30,360

I agree. It's myth busted.

707

00:42:30,360 --> 00:42:40,360

But, you know, that doesn't mean that people should let their guards down because we did prove that it is possible to overload something like an extension cord with so many lights that you create a short and you could start a tree fire.

708

00:42:40,360 --> 00:42:44,360

Yeah, you know, this myth really, I am amazed.

709

00:42:44,360 --> 00:42:46,360

Woke up my holiday spirit.

710

00:42:46,360 --> 00:42:49,360

I think that we should do a Christmas special.

711

00:42:49,360 --> 00:42:50,360

It's one for the future.

712

00:42:50,360 --> 00:42:52,360

It is.