

1

00:00:00,000 --> 00:00:10,600

On this episode of Mythbusters, Adam and Jamie risk drowning and dysentery.

2

00:00:10,600 --> 00:00:19,120

By testing the veracity of this multi-million hit viral video.

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00:00:19,120 --> 00:00:28,840

Can man, woman or a spawning superstar actually manage to briefly run on water?

4

00:00:28,840 --> 00:00:38,720

In time, Kari, Tori and Grant tried blasting a supposedly survivable action movie stunt.

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00:00:38,720 --> 00:00:44,160

When you're desperately diving for cover, just what is, and what isn't, bomb proof.

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00:00:44,160 --> 00:00:50,200

You'd probably be bleeding from your ears, but it is bomb proof.

7

00:00:50,200 --> 00:00:56,440

Who are the Mythbusters?

8

00:00:56,440 --> 00:00:57,440

Adam Savage.

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00:00:57,440 --> 00:00:59,440

That's 100% wacky right there.

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00:00:59,440 --> 00:01:02,040

And Jamie Heineman.

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00:01:02,040 --> 00:01:06,960

Between them more than 30 years of special effects experience.

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00:01:06,960 --> 00:01:09,840

Joining them, Tori Bellegi.

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00:01:09,840 --> 00:01:11,520

Let's charge this thing!

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00:01:11,520 --> 00:01:12,520

Grant Imahara.

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00:01:12,520 --> 00:01:13,960

It's lethal people.

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

And Kari Byron.

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00:01:14,960 --> 00:01:17,560

I'm starting to get the idea that this shouldn't be done inside.

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00:01:17,560 --> 00:01:19,720

They don't just tell the Myths.

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00:01:19,720 --> 00:01:20,720

Oh yeah.

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00:01:20,720 --> 00:01:27,400

They put them to the test.

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00:01:27,400 --> 00:01:32,160

First up, a myth that seems to defy the laws of physics.

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00:01:32,160 --> 00:01:35,840

Jamie there's a viral video we absolutely have to test.

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00:01:35,840 --> 00:01:36,840

Double rainbow?

24

00:01:36,840 --> 00:01:37,840

No.

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00:01:37,840 --> 00:01:42,000

This is some dudes by the side of a lake wearing shoes they say are water repellent and then

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00:01:42,000 --> 00:01:44,760

they proceed to run on the water.

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00:01:44,760 --> 00:01:48,760

They actually run across the surface of the water in these shoes.

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00:01:48,760 --> 00:01:50,200

I'm dubious.

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00:01:50,200 --> 00:01:52,160

And that's why we're interested in this.

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00:01:52,160 --> 00:01:55,600

Let's roll the videotape!

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00:01:55,600 --> 00:02:00,720

This is the clip that's got more than 7 million online viewers rethinking what they thought

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00:02:00,720 --> 00:02:03,880

they knew about, well, sinking.

33

00:02:03,880 --> 00:02:05,680

There's not a whole lot to it.

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00:02:05,680 --> 00:02:11,120

Strap on a pair of waterproof shoes, run on a curve to enhance the skimming effect and

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00:02:11,120 --> 00:02:14,640

keep the faith for a dozen adrenaline fueled strides.

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00:02:14,640 --> 00:02:17,120

I think you don't actually believe that you're going to walk on that water.

37

00:02:17,120 --> 00:02:19,000

It's not going to happen for you.

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00:02:19,000 --> 00:02:21,680

They call it liquid mountaineer.

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00:02:21,680 --> 00:02:27,240

It is this approach to temporarily walking on water, a myth or a miracle.

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00:02:27,240 --> 00:02:28,240

What do you think?

41

00:02:28,240 --> 00:02:29,240

Should we just go for it?

42

00:02:29,240 --> 00:02:30,240

I think so.

43

00:02:30,240 --> 00:02:34,360

Let's find ourselves a link and replicate exactly what we see them doing in that clip.

44

00:02:34,360 --> 00:02:35,360

Works for me.

45

00:02:35,360 --> 00:02:36,860

Okay.

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00:02:36,860 --> 00:02:42,520

Finding a lake that looks much like the one in the clip is the easy part.

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00:02:42,520 --> 00:02:46,600

Now it's time to run on the water.

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00:02:46,600 --> 00:02:52,120

James' optimism should be infectious, but over the years, James built up a natural

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00:02:52,120 --> 00:02:53,120

resistance.

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00:02:53,120 --> 00:02:56,080

According to the clip, this is all about the shoe.

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00:02:56,080 --> 00:02:59,320

They're hydrophobic, which means they repel water.

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00:02:59,320 --> 00:03:04,880

We've got the same type of shoe and they do seem to repel water.

53

00:03:04,880 --> 00:03:09,680

Whether that translates to me being able to run across a lake or something, let's just

54

00:03:09,680 --> 00:03:11,960

say I think I'm going for a swim.

55

00:03:11,960 --> 00:03:16,880

According to the viral video, Jamie needs to hit the water at speed and the turf should

56

00:03:16,880 --> 00:03:20,640

ensure traction right down to the lake's edge.

57

00:03:20,640 --> 00:03:24,680

You know, in the clip, they talked significantly about the curve that you enter the water in,

58

00:03:24,680 --> 00:03:27,400

like on the long arc and about believing.

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00:03:27,400 --> 00:03:30,320

You believe you can do it?

60

00:03:30,320 --> 00:03:31,320

I'm right there.

61

00:03:31,320 --> 00:03:32,320

You know me.

62

00:03:32,320 --> 00:03:33,320

All right.

63

00:03:33,320 --> 00:03:34,320

All right.

64

00:03:34,320 --> 00:03:37,920

Here we go.

65

00:03:37,920 --> 00:03:42,680

So much for focus, but maybe it does all come down to self-belief.

66

00:03:42,680 --> 00:03:54,120

Three, two, one, go.

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00:03:54,120 --> 00:03:56,840

Or maybe not.

68

00:03:56,840 --> 00:04:01,520

These shoes don't repel water well enough to keep me on top of the water.

69

00:04:01,520 --> 00:04:07,200

I just sort of ran into the water and that's all there is to it.

70

00:04:08,200 --> 00:04:09,200

All right, come on out.

71

00:04:09,200 --> 00:04:10,760

I want to give it a shot.

72

00:04:10,760 --> 00:04:12,800

So any words of advice?

73

00:04:12,800 --> 00:04:13,800

Keep your mouth closed.

74

00:04:13,800 --> 00:04:16,200

It's sort of like you should a duck poop in there.

75

00:04:16,200 --> 00:04:17,200

No, God.

76

00:04:17,200 --> 00:04:19,200

No problem.

77

00:04:19,200 --> 00:04:24,560

Adam's instincts tell him a longer run up might yield a better result.

78

00:04:24,560 --> 00:04:26,680

Okay, I'm ready.

79

00:04:26,680 --> 00:04:35,840

In three, two, one, go.

80

00:04:35,840 --> 00:04:38,120

You really can't fault the execution.

81

00:04:38,120 --> 00:04:42,960

In fact, Adam's effort looked just like the ones in the video except for the end bit.

82

00:04:42,960 --> 00:04:48,760

This water is disgusting.

83

00:04:48,760 --> 00:04:51,560

So did you feel like you were on top of the water?

84

00:04:51,560 --> 00:04:54,000

I mean, because you didn't really look like it.

85

00:04:54,000 --> 00:04:59,360

I felt like I was getting some good leg motion, like pat, pat, pat on the ground.

86

00:04:59,360 --> 00:05:03,640

And then my foot hits the water and it just kept going.

87

00:05:04,400 --> 00:05:07,240

Apparently the technique does take some getting used to.

88

00:05:07,240 --> 00:05:09,120

So I'm going to give it another go.

89

00:05:09,120 --> 00:05:11,120

Knock yourself out.

90

00:05:11,120 --> 00:05:18,040

They both decide to continue the testing, desperate to take at least one step on water.

91

00:05:18,040 --> 00:05:21,160

Just continue.

92

00:05:21,160 --> 00:05:24,920

Do not work.

93

00:05:24,920 --> 00:05:28,320

Every single attempt ends with a splash and a crash.

94

00:05:28,320 --> 00:05:31,160

Well, that was a spectacular failure.

95

00:05:31,680 --> 00:05:35,240

Yeah, these shoes are going to have to have a lot more going for them than water repellents

96

00:05:35,240 --> 00:05:36,240

for that to work.

97

00:05:36,240 --> 00:05:38,240

That's true enough.

98

00:05:41,240 --> 00:05:45,720

Now to a myth that takes self-preservation to its natural conclusion.

99

00:05:45,720 --> 00:05:51,200

All right, so as you guys know, and you guys definitely know, we have tested a ton of myths

100

00:05:51,200 --> 00:05:54,520

where we have taken everyday objects to see if they're bulletproof.

101

00:05:54,520 --> 00:05:56,520

Like laptops, sheriff badges.

102

00:05:56,520 --> 00:06:00,880

Yep, and we've also done an episode on what is supposedly stab proof.

103

00:06:01,600 --> 00:06:02,680

Exactly, but you know what?

104

00:06:02,680 --> 00:06:04,120

This one is going to trump them all.

105

00:06:04,120 --> 00:06:09,400

We are taking everyday objects to see if they're bomb proof.

106

00:06:09,400 --> 00:06:16,960

And those everyday objects, as suggested by you the fans, are a table, a car, a wall,

107

00:06:16,960 --> 00:06:18,360

and a dumpster.

108

00:06:18,360 --> 00:06:22,920

All four inspired by Hollywood.

109

00:06:22,920 --> 00:06:27,760

It's the kind of stuff you see all the time in action movies.

110

00:06:27,760 --> 00:06:33,640

Once before a bomb blast, the hero leaps to safety behind a parked car.

111

00:06:33,640 --> 00:06:38,040

The heroine is just close enough to reach that cinder block wall.

112

00:06:38,040 --> 00:06:44,480

Or the sidekick who's still got a snappy line or two left in him finds refuge in the refuse.

113

00:06:44,480 --> 00:06:50,600

But we want to know if any of these suburban shields could really save your bacon.

114

00:06:50,600 --> 00:06:54,760

Okay, for the Explosive De Jure, how about we use C4?

115

00:06:54,760 --> 00:06:57,000

That's used in a lot of Hollywood explosions.

116

00:06:57,000 --> 00:06:58,000

That's great.

117

00:06:58,000 --> 00:07:00,720

And first we should do a control blast to establish the injury zone.

118

00:07:00,720 --> 00:07:03,720

Then we're going to start bringing objects one by one to see if they're bomb proof.

119

00:07:03,720 --> 00:07:07,200

Alright, well the maximum amount of C4 we can use at the bomb range is three pounds.

120

00:07:07,200 --> 00:07:09,200

That is going to be a huge blast.

121

00:07:09,200 --> 00:07:11,200

This is going to be a cool experiment.

122

00:07:11,200 --> 00:07:13,200

You have no idea how right you are.

123

00:07:13,200 --> 00:07:19,200

For the whole team, this shapes up as a pretty sweet day at the office.

124

00:07:19,200 --> 00:07:21,200

What's bomb proof?

125

00:07:21,200 --> 00:07:23,880

I can't believe we haven't thought of this one before.

126

00:07:23,880 --> 00:07:28,920

The first thing to work out is the perfect test distance between the bomb and the shields.

127

00:07:28,920 --> 00:07:33,000

Too close and the whole experiment just blows to pieces.

128

00:07:33,000 --> 00:07:37,760

Too far away and the shock wave might not be lethal in the first place.

129

00:07:37,760 --> 00:07:39,760

So this will take some finessy.

130

00:07:39,760 --> 00:07:43,440

Come on Byron, hurry up, we don't have all day.

131

00:07:43,440 --> 00:07:48,440

Now, we're going to set up a number of radii from the epicenter of the blast.

132

00:07:48,440 --> 00:07:51,080

At each of these radii we're going to put two burstists.

133

00:07:51,080 --> 00:07:55,680

One that goes at 13, which is the threshold of injury, and one that goes at 75, which

134

00:07:55,680 --> 00:07:57,680

is the threshold of instant death.

135

00:07:57,680 --> 00:08:03,720

We've used burst discs before on the show to find out if various shock waves were survivable

136

00:08:03,720 --> 00:08:08,200

without actually resorting to a human sacrifice.

137

00:08:08,200 --> 00:08:13,360

So in this control blast, they're testing the outer limits of two differently calibrated

138

00:08:13,360 --> 00:08:14,480

discs.

139

00:08:14,480 --> 00:08:18,280

One said for a certain death, the other for injury.

140

00:08:18,280 --> 00:08:22,640

Up to some point, once the blast goes off, these are all going to burst.

141

00:08:22,640 --> 00:08:27,280

At the point where they don't burst, inside of that radius is injury.

142

00:08:27,280 --> 00:08:28,280

Outside of it is a safe zone.

143

00:08:28,280 --> 00:08:34,760

An identical on the other side, inside of the death radius means instant death.

144

00:08:34,760 --> 00:08:35,760

Three pound C4.

145

00:08:35,760 --> 00:08:39,800

Alright, you guys ready to see how much damage this shock wave can do?

146

00:08:39,800 --> 00:08:41,200

Absolutely.

147

00:08:41,200 --> 00:08:42,200

Charging.

148

00:08:42,200 --> 00:08:46,200

And three, two, one.

149

00:08:47,120 --> 00:08:51,000

Oh, that was a nice, that was a good one.

150

00:08:51,000 --> 00:08:53,000

Let's go check our discs.

151

00:08:53,000 --> 00:08:56,920

Three pounds of C4 is the most we can actually use at the bomb range.

152

00:08:56,920 --> 00:08:57,920

And I can see why.

153

00:08:57,920 --> 00:09:01,720

That is a nice, high-powered destructive explosion.

154

00:09:01,720 --> 00:09:07,840

We've got a beautiful, quick, orange, and then nice, clear, kind of sheer destructive

155

00:09:07,840 --> 00:09:10,000

blast.

156

00:09:10,000 --> 00:09:11,000

Destructive is right.

157

00:09:11,000 --> 00:09:14,520

All that's left of the C4 spike is a stump.

158

00:09:14,960 --> 00:09:17,440

Alright, so death side first, what do we got?

159

00:09:17,440 --> 00:09:19,680

We are bursting at 10 feet.

160

00:09:19,680 --> 00:09:22,400

So if you're anywhere 0 to 10 feet from the blast, you're dead.

161

00:09:22,400 --> 00:09:26,760

In the staggered arc, the 10-foot disc was the farthest one to burst.

162

00:09:26,760 --> 00:09:32,040

The discs at 11 feet and beyond stayed intact, so they've got their range.

163

00:09:32,040 --> 00:09:34,040

Alright, let's check injury.

164

00:09:34,040 --> 00:09:41,520

As the shock wave expands, the chance of death, as you'd expect, decreases with distance.

165

00:09:41,520 --> 00:09:44,160

Oh, look at all these ruptures.

166

00:09:44,200 --> 00:09:46,200

This is the 20-foot marker.

167

00:09:46,200 --> 00:09:47,200

All the way through.

168

00:09:47,200 --> 00:09:50,120

Alright, so that's the injury radius.

169

00:09:50,120 --> 00:09:53,040

0 to 20 feet, you're getting injured.

170

00:09:53,040 --> 00:10:00,400

Once again, they've got their range by noting that the next disc at 21 feet didn't burst.

171

00:10:00,400 --> 00:10:06,400

So these are the blast boundaries, just inside 10 feet for certain death and inside 20 for

172

00:10:06,400 --> 00:10:07,480

injury.

173

00:10:07,480 --> 00:10:12,800

But could everyday objects placed on the edge of the zones really save life and limb?

174

00:10:13,800 --> 00:10:17,800

There's just one way to test it, and that's by blowing stuff up.

175

00:10:21,160 --> 00:10:28,160

After the break, Adam and Jamie see if sheer speed can enhance your running on water experience.

176

00:10:28,160 --> 00:10:29,160

Go!

177

00:10:36,160 --> 00:10:41,560

Having totally failed to skip across a lake like a well-pitched stone, Adam and Jamie have

178

00:10:41,600 --> 00:10:43,600

reverted to Plan B.

179

00:10:46,600 --> 00:10:47,600

On your marks.

180

00:10:47,600 --> 00:10:48,600

It's set.

181

00:10:51,600 --> 00:10:53,600

And Plan B is a beauty.

182

00:10:54,600 --> 00:10:58,200

Now, if successfully running on the water is dependent on speed, we need someone really

183

00:10:58,200 --> 00:11:01,520

fast, and that's where Wallace Spearman behind me comes into the picture.

184

00:11:01,520 --> 00:11:06,440

He's 6'3", 170 pounds, and he's run the 200 meters in 19.65 seconds, making him the

185

00:11:06,480 --> 00:11:11,480

5th fastest person in the world at that distance and the perfect test subject for us.

186

00:11:11,480 --> 00:11:12,480

How you doing?

187

00:11:12,480 --> 00:11:13,480

Pretty good.

188

00:11:13,480 --> 00:11:16,360

If speed's the missing ingredient, that's what Wallace is brought.

189

00:11:16,360 --> 00:11:21,800

They figure that lightning speed might well be the key to success, and this man also runs

190

00:11:21,800 --> 00:11:24,920

the 100 meters in under 10 seconds.

191

00:11:24,920 --> 00:11:26,800

So Wallace, how far you think you're gonna get?

192

00:11:26,800 --> 00:11:28,480

I'm hoping 3 steps.

193

00:11:28,480 --> 00:11:29,480

This 3 steps?

194

00:11:29,480 --> 00:11:31,600

I'm fast, but I don't know if I'm that fast.

195

00:11:31,600 --> 00:11:32,600

We'll see.

196

00:11:32,600 --> 00:11:33,480

Okay.

197

00:11:33,480 --> 00:11:35,800

This test is mostly about speed.

198

00:11:35,800 --> 00:11:40,960

When Wallace is pretty fast on land, however, when Wallace moves from the land and into the

199

00:11:40,960 --> 00:11:45,320

water, he's not gonna have the same kind of traction, and that means he's gonna slow

200

00:11:45,320 --> 00:11:48,160

down really quickly.

201

00:11:48,160 --> 00:11:51,920

I'm more nervous for this than I was at the Olympics.

202

00:11:51,920 --> 00:11:56,640

And fair enough, even the Olympics can't compare to walking on water.

203

00:11:56,640 --> 00:11:59,600

So let's see if sheer speed is the answer.

204

00:11:59,600 --> 00:12:02,600

3, 2, 1, go!

205

00:12:06,800 --> 00:12:08,800

Apparently not.

206

00:12:08,800 --> 00:12:10,800

It's cold.

207

00:12:11,800 --> 00:12:15,800

He didn't seem to do any better than any over other tests.

208

00:12:15,800 --> 00:12:20,800

Now his first step on the water actually was quite a bit further out, but once it touched

209

00:12:20,800 --> 00:12:23,800

the water, it went down, same as the rest of us.

210

00:12:23,800 --> 00:12:28,800

But Spearman Jr. hasn't come all this way to pick up his towel and run home.

211

00:12:28,800 --> 00:12:29,800

Take off.

212

00:12:29,800 --> 00:12:33,800

In 3, 2, 1, go!

213

00:12:35,800 --> 00:12:44,800

I don't think he's working, guys.

214

00:12:44,800 --> 00:12:45,800

Try harder.

215

00:12:45,800 --> 00:12:47,800

You got your coach?

216

00:12:47,800 --> 00:12:53,800

Wallace has also seen the viral video, and just like Jamie and Adam, he's become obsessed

217

00:12:53,800 --> 00:12:57,800

with the thought that a minor miracle might be only a quick step away.

218

00:12:57,800 --> 00:12:59,800

He's not quitting.

219

00:12:59,800 --> 00:13:03,800

You know, one of the things that they talked about extensively in the video was how much

220

00:13:03,800 --> 00:13:06,800

you had to want it to run on the water.

221

00:13:06,800 --> 00:13:09,800

And Wallace did a fantastic job at that.

222

00:13:09,800 --> 00:13:10,800

He talked to us about it.

223

00:13:10,800 --> 00:13:12,800

He really wanted to make this work.

224

00:13:12,800 --> 00:13:13,800

He thought about a stride.

225

00:13:13,800 --> 00:13:17,800

He thought about the way his feet were hitting the water, and he gave it every chance he could.

226

00:13:17,800 --> 00:13:19,800

And it was still a total bust.

227

00:13:19,800 --> 00:13:20,800

What is?

228

00:13:20,800 --> 00:13:23,800

So it turns out, speed's not everything.

229

00:13:23,800 --> 00:13:28,800

Maybe if we got Wallace up to about 100 miles an hour, he'd skip across the lake like a rock.

230

00:13:29,800 --> 00:13:37,800

But given that humans can only run up to about 30 miles an hour, it's not happening.

231

00:13:37,800 --> 00:13:45,800

Alright, so we've done our control test, and it turns out if you are 10 feet away from

232

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

3 pounds of sea floor exploding, you're dead.

233

00:13:48,800 --> 00:13:51,800

If you're 20 feet away, you're going to be pretty messed up.

234

00:13:51,800 --> 00:13:55,800

Now that we've established those distances, we're going to see if hiding behind an object

235

00:13:55,800 --> 00:13:58,800

can protect you from the blast wave.

236

00:13:58,800 --> 00:14:03,800

And the first object might not be your first choice of shelter, assuming you had a choice.

237

00:14:03,800 --> 00:14:06,800

That's because it's a plain wooden table.

238

00:14:06,800 --> 00:14:12,800

I don't know, I don't think I'd want to be 10 feet away from 3 pounds of sea floor behind just a table.

239

00:14:12,800 --> 00:14:14,800

Oh, come on, that's 3 quarter inch pine.

240

00:14:14,800 --> 00:14:16,800

Yeah, it does seem kind of flimsy, huh?

241

00:14:16,800 --> 00:14:19,800

We'll find out how flimsy in just a few minutes.

242

00:14:19,800 --> 00:14:27,800

Grant plants the burst disk behind the pine, as Carrie and Tori deliver a twin for the 20-foot test.

243

00:14:27,800 --> 00:14:29,800

Alright, let's point it towards the blast.

244

00:14:29,800 --> 00:14:31,800

This is the injury zone.

245

00:14:31,800 --> 00:14:33,800

Alright, get in there.

246

00:14:33,800 --> 00:14:39,800

Given the likelihood of shrapnel, foam figures are added to catch any potentially fatal shards.

247

00:14:39,800 --> 00:14:43,800

But the way Grant sees it, that's not the main threat.

248

00:14:43,800 --> 00:14:47,800

So when we're looking at what is bomb proof, what we're actually looking at is a branch of physics

249

00:14:47,800 --> 00:14:53,800

called fluid dynamics, because we're looking at the movement of air, and air is technically a fluid.

250

00:14:53,800 --> 00:15:00,800

And when you set off a high explosive, such as C4, what it does is create a high velocity, high pressure wave of air.

251

00:15:00,800 --> 00:15:04,800

And that high pressure is potentially what is deadly to you.

252

00:15:04,800 --> 00:15:10,800

With one table just 10 feet from ground zero, and the other a scant 20.

253

00:15:10,800 --> 00:15:13,800

13 psi for the injury zone.

254

00:15:13,800 --> 00:15:16,800

It's a test that seems certain to end in splinters.

255

00:15:16,800 --> 00:15:21,800

Unprotected, we know that a blast of C4 would ruin your health.

256

00:15:21,800 --> 00:15:25,800

Now, to see if a simple pine table can save you.

257

00:15:25,800 --> 00:15:30,800

Okay, this is what is bomb proof wooden table.

258

00:15:30,800 --> 00:15:36,800

Alright, charging in three, two, one.

259

00:15:36,800 --> 00:15:38,800

Whoa!

260

00:15:38,800 --> 00:15:39,800

Wow!

261

00:15:39,800 --> 00:15:42,800

Well, that was definitely the death zone.

262

00:15:42,800 --> 00:15:46,800

Now, one table is down, but the other table is still standing.

263

00:15:46,800 --> 00:15:48,800

Let's go look at the damage.

264

00:15:49,800 --> 00:15:54,800

No prize for guessing which table is gone, and which one looks kind of intact.

265

00:15:54,800 --> 00:15:58,800

But the rubble inside the death zone has a surprise in store.

266

00:15:58,800 --> 00:15:59,800

There's no table left.

267

00:15:59,800 --> 00:16:01,800

The table is completely destroyed.

268

00:16:01,800 --> 00:16:02,800

Oh my God!

269

00:16:02,800 --> 00:16:03,800

No way!

270

00:16:03,800 --> 00:16:05,800

The burstness are intact.

271

00:16:05,800 --> 00:16:07,800

What the heck? How is that possible?

272

00:16:07,800 --> 00:16:10,800

The table must have deflected the pressure wave.

273

00:16:10,800 --> 00:16:16,800

That's exactly what it did, even if Tori finds the data hard to swallow.

274

00:16:17,800 --> 00:16:20,800

Well, there is no way you would have come away from this uninjured.

275

00:16:20,800 --> 00:16:25,800

No, but by our criteria, you would not have instantly died.

276

00:16:27,800 --> 00:16:29,800

Grant makes a good point.

277

00:16:29,800 --> 00:16:35,800

Incredibly, a simple wooden table made an otherwise fatal explosion survivable.

278

00:16:35,800 --> 00:16:38,800

Now, to check out the injury disc at the 20 foot mark.

279

00:16:38,800 --> 00:16:40,800

Okay, well the table is still standing.

280

00:16:40,800 --> 00:16:41,800

Let's see.

281

00:16:41,800 --> 00:16:42,800

Sort of.

282

00:16:43,800 --> 00:16:45,800

It's not burst.

283

00:16:45,800 --> 00:16:46,800

Definitely crinkled.

284

00:16:46,800 --> 00:16:49,800

You may have got away without any injury on this one.

285

00:16:49,800 --> 00:16:51,800

Okay, these results are so interesting.

286

00:16:51,800 --> 00:16:52,800

Let's go check out the high speed.

287

00:16:52,800 --> 00:16:54,800

I'm dying to see what it looks like.

288

00:16:54,800 --> 00:16:55,800

Me too.

289

00:16:55,800 --> 00:16:59,800

And it looks like that massive shock wave was at least interrupted by the table

290

00:16:59,800 --> 00:17:02,800

that Tori quite recently called flimsy.

291

00:17:03,800 --> 00:17:04,800

Whoa!

292

00:17:04,800 --> 00:17:05,800

Wow!

293

00:17:05,800 --> 00:17:06,800

Look at the wave.

294

00:17:06,800 --> 00:17:07,800

Yay.

295

00:17:07,800 --> 00:17:11,800

The disc didn't burst, but that table is in shreds.

296

00:17:11,800 --> 00:17:14,800

Both tables absorb the brunt of the blast.

297

00:17:14,800 --> 00:17:20,800

In the 10 foot death zone, extreme shrapnel from the shattered wood might have been fatal,

298

00:17:20,800 --> 00:17:22,800

but the shock wave wouldn't.

299

00:17:22,800 --> 00:17:26,800

At a 20 feet, you will remain snug and safe.

300

00:17:27,800 --> 00:17:32,800

Up next, replicating a reptile that has this whole water walk thing down pat.

301

00:17:33,800 --> 00:17:35,800

Yeah, it's a big tail, so what?

302

00:17:41,800 --> 00:17:42,800

Go!

303

00:17:42,800 --> 00:17:52,800

So far, Adam and Jamie and a world-class runner have failed to replicate this viral video,

304

00:17:52,800 --> 00:17:55,800

so it's time to think outside the box.

305

00:17:56,800 --> 00:18:00,800

Well, we couldn't make it work, and speed is definitely not a factor, so where do we go from here?

306

00:18:00,800 --> 00:18:04,800

Well, I think I may have found the grain of truth at the heart of this myth.

307

00:18:04,800 --> 00:18:05,800

Really?

308

00:18:05,800 --> 00:18:06,800

Really.

309

00:18:06,800 --> 00:18:11,800

Turns out there's a basilisk lizard, otherwise known as the Jesus Christ lizard,

310

00:18:11,800 --> 00:18:13,800

that actually can run on water.

311

00:18:13,800 --> 00:18:14,800

It can.

312

00:18:14,800 --> 00:18:15,800

It can.

313

00:18:15,800 --> 00:18:16,800

Really?

314

00:18:16,800 --> 00:18:17,800

Really.

315

00:18:17,800 --> 00:18:18,800

Yeah, really.

316

00:18:18,800 --> 00:18:23,800

This remarkable reptile can run as far as 20 yards across the water's surface,

317

00:18:23,800 --> 00:18:29,800

and that's just the kind of inspiration they need to replicate the results of the viral video.

318

00:18:29,800 --> 00:18:33,800

Alright, it looks like his feet are actually slapping the surface of the water,

319

00:18:33,800 --> 00:18:38,800

but they're continuing to push down and back as he's moving along.

320

00:18:38,800 --> 00:18:42,800

Well, also, it's not like he's running like this.

321

00:18:42,800 --> 00:18:44,800

He's like running with his legs out.

322

00:18:44,800 --> 00:18:47,800

Yeah, in an or-life fashion.

323

00:18:48,800 --> 00:18:50,800

I could watch this all day.

324

00:18:50,800 --> 00:18:52,800

But that's not going to happen.

325

00:18:52,800 --> 00:18:59,800

Based on what they just saw, Adam and Jamie will each build their own versions of lizard-human hybrid footwear.

326

00:18:59,800 --> 00:19:02,800

The aim is the same, to run on water.

327

00:19:02,800 --> 00:19:06,800

Where the waterproof shoes failed, these just might do the job.

328

00:19:06,800 --> 00:19:12,800

So, after looking at all the scientific papers that I've got about the physics of how this lizard stays above the water,

329

00:19:12,800 --> 00:19:18,800

it really seems to come down to the surface area of its foot and how hard it smacks the water.

330

00:19:18,800 --> 00:19:24,800

The design details of Adam's water-smacking lizard loafers are all in his head.

331

00:19:24,800 --> 00:19:28,800

The hinge in his feet shows that flexibility is a key factor.

332

00:19:28,800 --> 00:19:31,800

But otherwise, it's a case of watch and weight.

333

00:19:31,800 --> 00:19:35,800

Jamie, however, lays all his cards on the table.

334

00:19:35,800 --> 00:19:38,800

I figure, why mess around?

335

00:19:39,800 --> 00:19:44,800

It's clear from the get-go that we're witnessing the birth of the shovel shoe.

336

00:19:44,800 --> 00:19:46,800

Batten-bending.

337

00:19:46,800 --> 00:19:49,800

Now, a lizard foot is an incredibly hard thing to replicate.

338

00:19:49,800 --> 00:19:56,800

It's a whole bunch of finely muscled and jointed segments all working together that allow it to run on water.

339

00:19:56,800 --> 00:19:59,800

So, I've taken a kind of intuitive leap here.

340

00:19:59,800 --> 00:20:05,800

I'm hoping that cup shape of the inverted shovel blade will cut into the water and then scoop it backwards.

341

00:20:05,800 --> 00:20:11,800

Once it's finished with the first sweep, it should be easy enough to pull the whole thing forwards without dragging half the lake back with it.

342

00:20:11,800 --> 00:20:19,800

And just so you don't break your ankles, the attachments I'm using here are slightly modified boots and ankle braces from snowboards.

343

00:20:19,800 --> 00:20:23,800

Meantime, Adam proves he's the master of multitasking.

344

00:20:23,800 --> 00:20:26,800

If you're not sure what he's up to, here's a clue.

345

00:20:26,800 --> 00:20:29,800

So, his tail's coming out to about here.

346

00:20:29,800 --> 00:20:32,800

Seems like it's counterbalancing him.

347

00:20:32,800 --> 00:20:35,800

Yeah, also potentially, you know, ruddering.

348

00:20:35,800 --> 00:20:40,800

Yep, in the quest to build a better lizard, Adam's decided it's not all about the feet.

349

00:20:40,800 --> 00:20:43,800

The basilisk lizard has substantial counterbalance.

350

00:20:43,800 --> 00:20:48,800

So, an articulated tail is deemed essential equipment.

351

00:20:48,800 --> 00:20:50,800

Yeah, it's a big tail, so what?

352

00:20:50,800 --> 00:20:55,800

Adam's done and Jamie's shovel shoes are also ready for action.

353

00:20:57,800 --> 00:20:59,800

That might work.

354

00:20:59,800 --> 00:21:05,800

So, it's back to the very same lake that proved so unsupportive the first time around.

355

00:21:05,800 --> 00:21:07,800

But they have changed the stunt staff.

356

00:21:07,800 --> 00:21:10,800

Our water walking lizard today will be played by Jessica.

357

00:21:10,800 --> 00:21:14,800

She's 58 and a quarter inches tall, weighs 100 pounds and she's an acrobat.

358

00:21:14,800 --> 00:21:17,800

We think that her strength, her agility and her diminutive size

359

00:21:17,800 --> 00:21:21,800

make her the perfect candidate to help us make this work.

360

00:21:21,800 --> 00:21:22,800

You feeling ready?

361

00:21:22,800 --> 00:21:23,800

Ready!

362

00:21:23,800 --> 00:21:24,800

Let's do it.

363

00:21:24,800 --> 00:21:32,800

If either design stands a chance, it makes sense to strap them to the lightest, most agile frame they can find.

364

00:21:32,800 --> 00:21:34,800

First up is the control.

365

00:21:34,800 --> 00:21:40,800

Our point of comparison, Jessica is going to run into the water without any apparatus on her, just like we did.

366

00:21:40,800 --> 00:21:43,800

Jessica's faster than Adam and Jamie.

367

00:21:43,800 --> 00:21:47,800

She's much lighter and the odds are she should do a little better.

368

00:21:47,800 --> 00:21:48,800

Here we go.

369

00:21:48,800 --> 00:21:53,800

Running on water, control in three, two, one, go!

370

00:22:00,800 --> 00:22:01,800

She is fast.

371

00:22:01,800 --> 00:22:02,800

Yep.

372

00:22:02,800 --> 00:22:03,800

Come on out.

373

00:22:04,800 --> 00:22:05,800

Nice work.

374

00:22:05,800 --> 00:22:06,800

Let's get you dry.

375

00:22:07,800 --> 00:22:12,800

Checking the high speed, it's hard to see any marked improvement over Adam and Jamie.

376

00:22:12,800 --> 00:22:16,800

She ran, she hit water and she sank.

377

00:22:18,800 --> 00:22:24,800

Come on it, but maybe, just maybe, Adam's giant shoes will reverse the result.

378

00:22:24,800 --> 00:22:28,800

The biggest obstacle to buoyancy is that Jess is denser than water.

379

00:22:28,800 --> 00:22:31,800

But then again, so is a lizard.

380

00:22:31,800 --> 00:22:37,800

The basilisk spreads scaly fringes between its toes to increase its surface area on the water,

381

00:22:37,800 --> 00:22:39,800

which is what Adam's tried to do.

382

00:22:39,800 --> 00:22:43,800

Then it all comes down to speed and balance.

383

00:22:46,800 --> 00:22:52,800

Now if it's true that we are minutes away from setting lizard human hybrid history and walking a human on the water,

384

00:22:52,800 --> 00:22:54,800

it will be because of my two pronged attack.

385

00:22:54,800 --> 00:22:59,800

First prong is the feet, providing the widest possible surface area for Jessica to smack the water with,

386

00:22:59,800 --> 00:23:02,800

providing hopefully enough up pressure to keep her above the surface

387

00:23:02,800 --> 00:23:07,800

and giving her the same amount of flexibility as her normal feet or as close as we could achieve.

388

00:23:07,800 --> 00:23:09,800

The second prong is the tail.

389

00:23:09,800 --> 00:23:16,800

Acting as both a rudder and a stabilizer, a lizard wouldn't run across the water without it and neither will our acrobat.

390

00:23:16,800 --> 00:23:17,800

How's she gonna do?

391

00:23:17,800 --> 00:23:22,800

Well, she looks about as close to a Jesus lizard as you can get at this point.

392

00:23:22,800 --> 00:23:25,800

It worked for the lizard, maybe it'll work for her.

393

00:23:27,800 --> 00:23:28,800

Let's do it.

394

00:23:28,800 --> 00:23:32,800

If nothing else, our acrobat's about to prove she's no lounge lizard.

395

00:23:32,800 --> 00:23:36,800

In three, two, one, go.

396

00:23:36,800 --> 00:23:38,800

You can do it.

397

00:23:38,800 --> 00:23:40,800

Yes, yes, yes, yes.

398

00:23:40,800 --> 00:23:41,800

Oh!

399

00:23:46,800 --> 00:23:48,800

How you doing? You all right?

400

00:23:49,800 --> 00:23:52,800

Astonishingly, it did not work.

401

00:23:52,800 --> 00:23:54,800

It's like stuck in the mud.

402

00:23:54,800 --> 00:23:55,800

Oh really?

403

00:23:55,800 --> 00:24:00,800

Jess did her best, but it's fair to say the rig fell short of its early promising.

404

00:24:01,800 --> 00:24:03,800

Did you feel like the shoes held you above the water at all?

405

00:24:03,800 --> 00:24:04,800

Not at all.

406

00:24:04,800 --> 00:24:06,800

No, he just plunged right in.

407

00:24:06,800 --> 00:24:07,800

Yep.

408

00:24:07,800 --> 00:24:13,800

Now it's all up to genius Jamie to prove that a man or woman can walk on water.

409

00:24:14,800 --> 00:24:19,800

Coming up, the hopefully bomb proof shield that just might defeat its own purpose.

410

00:24:19,800 --> 00:24:21,800

It's right next to that bomb.

411

00:24:21,800 --> 00:24:23,800

It's gonna smash that car.

412

00:24:34,800 --> 00:24:37,800

It's safe from death and injury from the blast wave.

413

00:24:37,800 --> 00:24:41,800

However, at 10 feet, it will not save you from the shrapnel.

414

00:24:41,800 --> 00:24:45,800

But a wooden table is a world away from a mostly metal car.

415

00:24:45,800 --> 00:24:49,800

It's another classic Hollywood refuge suggested by fans.

416

00:24:49,800 --> 00:24:54,800

The Silver Sedan is set side onto the blast, out on the 20-foot ring.

417

00:24:54,800 --> 00:24:56,800

And stop!

418

00:24:57,800 --> 00:25:02,800

This is our 13 PSI burst disc, here at the edge of the injury zone.

419

00:25:02,800 --> 00:25:07,800

And it's right here behind the wheel where, you know, if you were hiding from an explosion, you'd crouch.

420

00:25:08,800 --> 00:25:12,800

Whether or not that's a smart move, we'll find out when the bomb goes off.

421

00:25:12,800 --> 00:25:14,800

The white car drew the short straw.

422

00:25:14,800 --> 00:25:16,800

So it's in the death zone.

423

00:25:16,800 --> 00:25:20,800

And the death disc now has an injury disc for company.

424

00:25:21,800 --> 00:25:24,800

What I've done now is added an injury disc in the death zone.

425

00:25:24,800 --> 00:25:30,800

Because what I want to find out is will the blast cause injury in the death zone now that the car is in place?

426

00:25:30,800 --> 00:25:35,800

Okay, so we've got two cars set up and three pounds of C4 between them.

427

00:25:35,800 --> 00:25:37,800

I think it's going to be a pretty good shield.

428

00:25:37,800 --> 00:25:40,800

Carrie agrees that the car should block the shock wave.

429

00:25:40,800 --> 00:25:42,800

Check out this man.

430

00:25:42,800 --> 00:25:45,800

But she's still convinced it'll all end in tears.

431

00:25:46,800 --> 00:25:49,800

If the burst disc ruptures, it's not from the wave.

432

00:25:49,800 --> 00:25:51,800

It's because the car's going to fall onto him.

433

00:25:51,800 --> 00:25:52,800

It's right next to that bomb.

434

00:25:52,800 --> 00:25:54,800

It tore a table in half.

435

00:25:54,800 --> 00:25:57,800

It's going to smash that car straight into those.

436

00:25:57,800 --> 00:25:59,800

She might be right.

437

00:25:59,800 --> 00:26:04,800

If you're crushed by the shelter you're cringing behind, that does kind of defeat the purpose.

438

00:26:04,800 --> 00:26:06,800

Okay.

439

00:26:06,800 --> 00:26:10,800

Here we go. In three, two, one.

440

00:26:13,800 --> 00:26:16,800

You know what? That looked like a pretty good bomb shield.

441

00:26:16,800 --> 00:26:18,800

Dude, you see how far it moved the car?

442

00:26:18,800 --> 00:26:19,800

Yeah.

443

00:26:19,800 --> 00:26:21,800

I'm not so sure. Let's check it out.

444

00:26:23,800 --> 00:26:26,800

It's clear that the car nearest the bomb took a beating.

445

00:26:26,800 --> 00:26:31,800

But just to build the suspense, they checked the injury zone discs first.

446

00:26:31,800 --> 00:26:34,800

Oh my gosh. Look at the damage it did to that car.

447

00:26:34,800 --> 00:26:37,800

Shadowed the window, knocked the hubcaps off.

448

00:26:37,800 --> 00:26:39,800

Wow. That is intense.

449

00:26:39,800 --> 00:26:42,800

But the disc tells its own story.

450

00:26:42,800 --> 00:26:44,800

They're not at first. We're good.

451

00:26:44,800 --> 00:26:47,800

Alright. Looks like we're bomb-proof against injury at 20 feet.

452

00:26:47,800 --> 00:26:49,800

Perfect. Let's check for death.

453

00:26:49,800 --> 00:26:50,800

Awesome.

454

00:26:50,800 --> 00:26:51,800

So now for the big one.

455

00:26:51,800 --> 00:26:55,800

Behind the death zone car was a death disc and an injury disc.

456

00:26:56,800 --> 00:26:58,800

Wow.

457

00:26:58,800 --> 00:27:00,800

That is crazy.

458

00:27:00,800 --> 00:27:01,800

There's no way you survived this.

459

00:27:01,800 --> 00:27:03,800

Expectations are not hot.

460

00:27:03,800 --> 00:27:06,800

Oh my god. You survived.

461

00:27:06,800 --> 00:27:08,800

You survived death?

462

00:27:08,800 --> 00:27:09,800

Yeah.

463

00:27:09,800 --> 00:27:10,800

You don't die?

464

00:27:10,800 --> 00:27:11,800

No.

465

00:27:11,800 --> 00:27:12,800

You live?

466

00:27:12,800 --> 00:27:13,800

You live.

467

00:27:13,800 --> 00:27:15,800

It takes a while to sink in.

468

00:27:15,800 --> 00:27:19,800

Even though the injury disc burst, the death disc did not.

469

00:27:19,800 --> 00:27:22,800

So by our criteria then, car is bomb-proof.

470

00:27:22,800 --> 00:27:25,800

Looks like there's some truth to these action films after all.

471

00:27:26,800 --> 00:27:31,800

The high speed shows the car buffeted 5 feet, which would knock you flat.

472

00:27:31,800 --> 00:27:35,800

Most of the glass shattered and the burst injury disc shows you

473

00:27:35,800 --> 00:27:37,800

wouldn't jump up shouting, you miss me.

474

00:27:37,800 --> 00:27:43,800

But given this methodology and this amount of C4, a car is a safe shelter.

475

00:27:43,800 --> 00:27:45,800

This is a really cool explosion.

476

00:27:45,800 --> 00:27:48,800

Honestly, I thought the car would get a lot more torn up.

477

00:27:48,800 --> 00:27:50,800

But it turns out it's a really good block.

478

00:27:50,800 --> 00:27:52,800

We did not burst the instant death disc.

479

00:27:52,800 --> 00:27:54,800

Now this is a really interesting result.

480

00:27:54,800 --> 00:27:57,800

We found that a car prevents you from dying in the death zone

481

00:27:57,800 --> 00:28:00,800

and prevents you from getting injured in the injury zone,

482

00:28:00,800 --> 00:28:02,800

which means that it's bomb-proof.

483

00:28:07,800 --> 00:28:12,800

Adam and Jamie are rapidly realizing that the concept of man running on water

484

00:28:12,800 --> 00:28:16,800

is every bit as improbable as it sounds.

485

00:28:16,800 --> 00:28:20,800

Running on top of the water is totally possible.

486

00:28:20,800 --> 00:28:25,800

If you're a bug, something tiny like a water strider is small enough

487

00:28:25,800 --> 00:28:29,800

and light enough to rely on the surface tension of the water to stay on top of it.

488

00:28:29,800 --> 00:28:34,800

As we get larger, though, things like Jesus Lizards have to run really hard

489

00:28:34,800 --> 00:28:35,800

to be able to do that.

490

00:28:35,800 --> 00:28:39,800

And as we get larger still, something like a waterfowl, like a duck,

491

00:28:39,800 --> 00:28:43,800

they can run on top of the water too, but they need help.

492

00:28:43,800 --> 00:28:44,800

They use their wings.

493

00:28:44,800 --> 00:28:49,800

Adam built two fancy lizard feet and a Godzilla tail.

494

00:28:49,800 --> 00:28:53,800

All he managed to do was to half-drown an acrobat.

495

00:28:53,800 --> 00:28:59,800

But Jamie has dreams of his own, and Jessica's job is to make them come true.

496

00:28:59,800 --> 00:29:01,800

So what do you call these? Shovel shoes?

497

00:29:01,800 --> 00:29:05,800

Shovel shoes, they are. Kind of has a nice ring to it, doesn't it?

498

00:29:05,800 --> 00:29:06,800

Yep.

499

00:29:06,800 --> 00:29:09,800

True to form, Jessica's soon up and flapping.

500

00:29:09,800 --> 00:29:11,800

How about trying to do a little run?

501

00:29:11,800 --> 00:29:14,800

It seems like she's found her inner lizard.

502

00:29:14,800 --> 00:29:18,800

There you go. It's just what the Jesus Lizard does, whatever.

503

00:29:18,800 --> 00:29:21,800

You know, just flail at it.

504

00:29:21,800 --> 00:29:23,800

Now let's go back down to the water.

505

00:29:23,800 --> 00:29:27,800

But any purchase of Jamie's shovel shoes comes with a free gift,

506

00:29:27,800 --> 00:29:32,800

a kind of outrigger walking frame that adds balance, much like a tail does,

507

00:29:32,800 --> 00:29:33,800

but up front.

508

00:29:33,800 --> 00:29:36,800

While a tail may provide a certain amount of stability,

509

00:29:36,800 --> 00:29:39,800

I figure that we can do the same thing in the front with the ski,

510

00:29:39,800 --> 00:29:44,800

but with the ski we'll also get a certain amount of supporting lift on the water.

511

00:29:44,800 --> 00:29:48,800

Jamie's also relying on a bigger surface area to help keep Jess afloat,

512

00:29:48,800 --> 00:29:54,800

but Adam's shoes were flat, and these concave feet could make a real difference.

513

00:29:54,800 --> 00:30:00,800

On the other hand, the ski's too cumbersome to carry, so she won't get much of a run-up.

514

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

Okay, shovel shoes in three, two, one, go.

515

00:30:05,800 --> 00:30:09,800

Okay, that was just embarrassing.

516

00:30:09,800 --> 00:30:13,800

So maybe the ski should go the way of the tail.

517

00:30:13,800 --> 00:30:16,800

Alright, shovel shoes without the sled.

518

00:30:16,800 --> 00:30:21,800

In three, two, one, go.

519

00:30:21,800 --> 00:30:25,800

She's a good sport.

520

00:30:25,800 --> 00:30:31,800

We could try this a hundred times, and I don't think we'd get running on water.

521

00:30:31,800 --> 00:30:36,800

No, I don't think we would.

522

00:30:36,800 --> 00:30:43,800

Straight ahead, the dumpsters add the brick wall that might or might not save your life.

523

00:30:43,800 --> 00:30:47,800

Hey, somebody threw away a perfectly good myth bus.

524

00:30:52,800 --> 00:30:53,800

So here's where we're at.

525

00:30:53,800 --> 00:30:58,800

We are testing a myth of what is bomb proof, and so far we've tested a wooden table and a car,

526

00:30:59,800 --> 00:31:05,800

and as it turns out, those things are bomb proof, both in the death zone and in the injury zone.

527

00:31:05,800 --> 00:31:08,800

Next up, we're going to test one of these, a dumpster.

528

00:31:08,800 --> 00:31:12,800

It's like in the action movies where a bomb's going off, hero sees the dumpster thinks,

529

00:31:12,800 --> 00:31:14,800

oh, I'll jump in there and be safe.

530

00:31:14,800 --> 00:31:20,800

Whatever happens, it looks like they've already confirmed the myth that getting in is a whole lot easier than getting out.

531

00:31:20,800 --> 00:31:24,800

What a shame, somebody threw away a perfectly good myth bus.

532

00:31:24,800 --> 00:31:26,800

A little help.

533

00:31:26,800 --> 00:31:35,800

As with the table and the car, they'll test two dumpsters, one at the 10 foot death zone and one at the 20 foot injury zone.

534

00:31:35,800 --> 00:31:36,800

Perfect!

535

00:31:36,800 --> 00:31:39,800

If this doesn't work out, we could be trashmen.

536

00:31:40,800 --> 00:31:42,800

Okay, this is the 13 PSI.

537

00:31:42,800 --> 00:31:44,800

Alright, this is the injury disc.

538

00:31:44,800 --> 00:31:49,800

Once again, they fit an injury and a death disc in the death zone dumpster.

539

00:31:49,800 --> 00:31:56,800

Now you'd think those four steel walls would be the best shelter yet against having a bomb churn your insides to custard.

540

00:31:56,800 --> 00:32:03,800

But here's the thing, it's a mostly enclosed box, except for the lid.

541

00:32:03,800 --> 00:32:09,800

If that energy wave actually diffracts around the top edge because it has these rigid walls inside,

542

00:32:09,800 --> 00:32:14,800

you could see some reflection and possibly get higher pressures inside of the box.

543

00:32:15,800 --> 00:32:19,800

And that same exact thought has already occurred to Carrie.

544

00:32:19,800 --> 00:32:26,800

If the wave happens to bounce off the backside of the dumpster, if it amplifies, we might burst one of the discs.

545

00:32:26,800 --> 00:32:28,800

Uh oh, Bob's going off, did it?

546

00:32:28,800 --> 00:32:31,800

But Tori's got no time for this kind of trash talk.

547

00:32:31,800 --> 00:32:34,800

You know what, I have a feeling these are going to act just like a bunker.

548

00:32:34,800 --> 00:32:36,800

I mean, you're surrounded by steel.

549

00:32:36,800 --> 00:32:40,800

The roof is open, but I think the shock wave is going to go right over you.

550

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

You might get some ear damage, but I think you're going to be pretty good.

551

00:32:44,800 --> 00:32:50,800

And the catalyst for catastrophe is still three whole pounds of plastic explosive.

552

00:32:50,800 --> 00:32:52,800

Let's do this.

553

00:32:52,800 --> 00:32:55,800

In three, two, one.

554

00:32:59,800 --> 00:33:02,800

Wow, that looked pretty good. Those dumpsters looking pretty good shape.

555

00:33:02,800 --> 00:33:03,800

Yeah, let's check it out.

556

00:33:03,800 --> 00:33:04,800

That one was right with boom.

557

00:33:06,800 --> 00:33:11,800

The 13 psi disc in the injury dumpster remains intact,

558

00:33:11,800 --> 00:33:14,800

so you'd be unscathed at 20 feet.

559

00:33:14,800 --> 00:33:18,800

And the death zone dumpster doesn't look too much the worse for wear.

560

00:33:18,800 --> 00:33:22,800

You know, for being so close to that blast, this dumpster looks in pretty good shape.

561

00:33:22,800 --> 00:33:25,800

Hey, the 75 psi disc is not ruptured.

562

00:33:25,800 --> 00:33:29,800

Yeah, but the injury disc is busted, so you're going to survive, but you're injured.

563

00:33:29,800 --> 00:33:34,800

But some of the shock wave must have penetrated, or the injury disc wouldn't have burst.

564

00:33:34,800 --> 00:33:36,800

Still, the dumpsters did well.

565

00:33:36,800 --> 00:33:41,800

Injury free at the injury zone and alive, but unwell at the death zone.

566

00:33:41,800 --> 00:33:45,800

So this is the dumpster that was 10 feet away from the C4 blast, and look at it.

567

00:33:45,800 --> 00:33:47,800

It's in pretty good shape.

568

00:33:47,800 --> 00:33:50,800

I mean, it's got some concaving happening, so it took a lot of the shock.

569

00:33:50,800 --> 00:33:55,800

But I mean, it acted like armor, and our death disc did not burst,

570

00:33:55,800 --> 00:33:58,800

which means if you were in here, you would have survived.

571

00:33:58,800 --> 00:34:01,800

You'd probably be bleeding from your ears, but it is bombproof.

572

00:34:01,800 --> 00:34:05,800

So far, the results have surprised everyone.

573

00:34:05,800 --> 00:34:12,800

Not least because every shelter tested inside said parameters actually would save your life.

574

00:34:12,800 --> 00:34:15,800

Next and last is a cinder block wall.

575

00:34:15,800 --> 00:34:21,800

And if you think you know how this one goes down, all I can say is you're probably wrong.

576

00:34:21,800 --> 00:34:24,800

I'm pretty sure that this wall is going to block the wave,

577

00:34:24,800 --> 00:34:27,800

and you're going to survive behind it, and you're going to get no injuries behind it.

578

00:34:27,800 --> 00:34:30,800

I mean, it's a brick-freaking wall.

579

00:34:30,800 --> 00:34:34,800

Point taken, and they've only built one brick-freaking wall.

580

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

As Tori explains.

581

00:34:36,800 --> 00:34:39,800

So we only have one wall to test this one, but we still have to have the death zone,

582

00:34:39,800 --> 00:34:42,800

which is 10 feet away, and the injury zone, which is 20 feet away.

583

00:34:42,800 --> 00:34:49,800

So, since we only have one wall, we're going to have to move our blast zone to 10 feet and 20 feet.

584

00:34:49,800 --> 00:34:52,800

Common Sense says start wide and work your way in.

585

00:34:52,800 --> 00:34:56,800

So Tori sets the first charge at the 20-foot mark.

586

00:34:56,800 --> 00:35:03,800

Grant fits the 13-psi injury disc, and Carrie supplies the Styrofoam stunt band.

587

00:35:03,800 --> 00:35:09,800

Now to see if a freestanding cinder block wall is as solid and as safe as it looks.

588

00:35:09,800 --> 00:35:13,800

In three, two, one, fire!

589

00:35:15,800 --> 00:35:17,800

I never get tired of that!

590

00:35:17,800 --> 00:35:19,800

That was a big blast!

591

00:35:19,800 --> 00:35:22,800

Alright, let's see if it was bomb proof.

592

00:35:24,800 --> 00:35:26,800

The wall's still intact.

593

00:35:26,800 --> 00:35:27,800

It is.

594

00:35:27,800 --> 00:35:29,800

And the disc?

595

00:35:29,800 --> 00:35:32,800

The disc is crinkled, but still intact.

596

00:35:32,800 --> 00:35:34,800

So it's bomb proof for injury.

597

00:35:34,800 --> 00:35:36,800

Alright, let's see if it'll save your life.

598

00:35:40,800 --> 00:35:49,800

They're down to the last three pounds of explosive, and having the distance from last time brings it all into a perilous perspective.

599

00:35:49,800 --> 00:35:51,800

Alright, 10 feet is right here.

600

00:35:51,800 --> 00:35:53,800

Oh my god, that's so close.

601

00:35:53,800 --> 00:35:55,800

Oh my gosh, we're going to destroy this wall.

602

00:35:55,800 --> 00:35:57,800

Alright, bang it in.

603

00:35:58,800 --> 00:36:03,800

The wall itself was examined and patched up, so it's just as strong as before.

604

00:36:03,800 --> 00:36:05,800

Very trusty right now.

605

00:36:05,800 --> 00:36:06,800

How long ago?

606

00:36:06,800 --> 00:36:09,800

Grant installs the last two burst discs.

607

00:36:09,800 --> 00:36:14,800

Alright, 75, and 13.

608

00:36:15,800 --> 00:36:17,800

And the bunker beckons.

609

00:36:17,800 --> 00:36:21,800

In three, two, one, fire!

610

00:36:22,800 --> 00:36:26,800

Oh my god, down with the wall.

611

00:36:26,800 --> 00:36:29,800

The wall is gone.

612

00:36:29,800 --> 00:36:33,800

I don't know if the disc got ruptured, but I think a brick would fall under it.

613

00:36:33,800 --> 00:36:35,800

I think we have shrapnel.

614

00:36:35,800 --> 00:36:37,800

I don't think that's bomb proof at all.

615

00:36:37,800 --> 00:36:39,800

Let's go check it out.

616

00:36:40,800 --> 00:36:45,800

It sure doesn't look like barely a single brick is still joined to another.

617

00:36:45,800 --> 00:36:49,800

But the bomb proof proof all rests with those sensitive discs.

618

00:36:49,800 --> 00:36:53,800

We're testing the lethality of the shockwave, pure and simple.

619

00:36:53,800 --> 00:36:55,800

Hey!

620

00:36:55,800 --> 00:36:56,800

They both survived!

621

00:36:56,800 --> 00:36:58,800

So both discs are still intact.

622

00:36:58,800 --> 00:37:03,800

Alright, so it looks like the wall protects you from the shockwave, both from injury and death.

623

00:37:03,800 --> 00:37:05,800

It's an amazing result.

624

00:37:05,800 --> 00:37:08,800

The blast was big enough to turn the wall to rubble,

625

00:37:08,800 --> 00:37:12,800

but the wall would still save you from death and even injury.

626

00:37:12,800 --> 00:37:17,800

Incredibly, all four shelters made an otherwise fatal blast survivable,

627

00:37:17,800 --> 00:37:20,800

which is a massively surprising result.

628

00:37:20,800 --> 00:37:25,800

And the foam figure showed that serious shrapnel was only a factor with the wooden table.

629

00:37:25,800 --> 00:37:27,800

I wonder what else is bomb proof.

630

00:37:27,800 --> 00:37:29,800

Look at that duct tape.

631

00:37:29,800 --> 00:37:30,800

Ooh, that's a good one.

632

00:37:30,800 --> 00:37:31,800

Phone books?

633

00:37:31,800 --> 00:37:32,800

Ooh, I like that one.

634

00:37:32,800 --> 00:37:34,800

Alright, well as incredible as it seems,

635

00:37:34,800 --> 00:37:38,800

I think we're going to have to call Myth confirmed on all four shelters.

636

00:37:38,800 --> 00:37:42,800

I mean, they were technically bomb proof in the parameters that we set up.

637

00:37:42,800 --> 00:37:47,800

Yeah, well we should make it clear that if the blasts were any larger or the explosion any closer,

638

00:37:47,800 --> 00:37:48,800

that'd be a different situation.

639

00:37:48,800 --> 00:37:50,800

Yeah, we were specifically testing the blast wave,

640

00:37:50,800 --> 00:37:53,800

and if you dive behind something solid, it's definitely going to dampen it.

641

00:37:53,800 --> 00:37:54,800

But shrapnel?

642

00:37:54,800 --> 00:37:56,800

Now, that's unpredictable.

643

00:38:13,800 --> 00:38:17,800

We've tried everything we can to successfully run on the water.

644

00:38:17,800 --> 00:38:19,800

We've tried it ourselves.

645

00:38:21,800 --> 00:38:24,800

We brought in an Olympic class runner,

646

00:38:26,800 --> 00:38:31,800

and we even made a human lizard hybrid by strapping two special sets of shoes to a gymnast.

647

00:38:31,800 --> 00:38:33,800

Yes, yes, oh!

648

00:38:33,800 --> 00:38:35,800

And nothing has worked.

649

00:38:35,800 --> 00:38:39,800

I think you'll agree that this thing is busted,

650

00:38:39,800 --> 00:38:41,800

but of course we can't leave it there.

651

00:38:41,800 --> 00:38:45,800

We want to see us run on water, which means we've got to cheat this sucker.

652

00:38:45,800 --> 00:38:48,800

And I think you know on Mythbusters, when we're about to cheat something,

653

00:38:48,800 --> 00:38:52,800

that means we're going to utilize a pile of wood and a pile of steel to let the cheating begin.

654

00:38:52,800 --> 00:38:54,800

What we have in mind is a bridge,

655

00:38:54,800 --> 00:38:58,800

but instead of going over the water, our bridge will go under the water,

656

00:38:58,800 --> 00:39:00,800

maybe a couple of inches or so.

657

00:39:00,800 --> 00:39:05,800

You won't be able to see it, but we'll be able to run on it, just like they did in the clip.

658

00:39:05,800 --> 00:39:10,800

But building a sub-aqua sidewalk is a whole lot trickier than it sounds.

659

00:39:10,800 --> 00:39:15,800

We're using square tube steel for the frame because it's relatively easy to cut and weld.

660

00:39:15,800 --> 00:39:18,800

Obviously also it's less buoyant than wood,

661

00:39:18,800 --> 00:39:22,800

and that means that we won't have to weight it down as much to keep it stable.

662

00:39:22,800 --> 00:39:25,800

But they do need a wood surface to run on.

663

00:39:25,800 --> 00:39:29,800

It's got enough give to enhance the illusion of running on water.

664

00:39:29,800 --> 00:39:30,800

Awesome.

665

00:39:30,800 --> 00:39:33,800

The next step is to camouflage it black.

666

00:39:34,800 --> 00:39:35,800

Look at that.

667

00:39:35,800 --> 00:39:41,800

White shirt, black paint, that's what being fearless is all about.

668

00:39:45,800 --> 00:39:46,800

What?

669

00:39:46,800 --> 00:39:50,800

The black paint should reflect the least amount of light,

670

00:39:50,800 --> 00:39:54,800

and it's all tied together with a long strip of flexible clear plastic.

671

00:39:55,800 --> 00:39:59,800

This is the device that will allow us to look like we're running on the water.

672

00:39:59,800 --> 00:40:00,800

It's an underwater bridge.

673

00:40:00,800 --> 00:40:03,800

It has two features that will make this extra realistic, I believe.

674

00:40:03,800 --> 00:40:09,800

One, a set of adjustment nuts all the way down that allow us to precisely calibrate its distance under the water.

675

00:40:09,800 --> 00:40:12,800

I believe it's about one and a half to two inches will be ideal.

676

00:40:12,800 --> 00:40:17,800

And two, this wooden top actually floats, which means when we run along it,

677

00:40:17,800 --> 00:40:23,800

it's actually going to give a little bit, hopefully lending an extra realistic aspect to our running.

678

00:40:23,800 --> 00:40:29,800

All that remains is to sink it precisely to two inches under, and that calls for teamwork.

679

00:40:29,800 --> 00:40:31,800

It's beautifully balanced.

680

00:40:31,800 --> 00:40:32,800

Oh, good.

681

00:40:32,800 --> 00:40:33,800

Let's walk on down.

682

00:40:33,800 --> 00:40:34,800

Okay.

683

00:40:35,800 --> 00:40:39,800

The basic concept of a sunken catwalk is pretty straightforward.

684

00:40:39,800 --> 00:40:41,800

Does that seem right?

685

00:40:41,800 --> 00:40:44,800

I think that seems right. It looks great. Let's lower it down.

686

00:40:44,800 --> 00:40:49,800

But the uneven contours of the lake bed force Adam to make some adjustments.

687

00:40:49,800 --> 00:40:55,800

After a delicate tap or two, both Adam and Jamie are convinced that they're good to go.

688

00:40:55,800 --> 00:41:00,800

I know, I know. You're thinking, I can totally see that bridge. How is this thing going to work?

689

00:41:00,800 --> 00:41:06,800

Remember, special effects is only about building a prop. It's also about how you film the prop.

690

00:41:06,800 --> 00:41:08,800

We're not going to film this from this angle.

691

00:41:08,800 --> 00:41:13,800

We're going to film it from this angle. See? No bridge.

692

00:41:13,800 --> 00:41:14,800

Do you see a bridge?

693

00:41:14,800 --> 00:41:15,800

No bridge.

694

00:41:15,800 --> 00:41:16,800

No bridge.

695

00:41:16,800 --> 00:41:20,800

Now let's see if our fake measures up to theirs.

696

00:41:21,800 --> 00:41:28,800

Running on water by cheating. In three, two, one, go.

697

00:41:28,800 --> 00:41:29,800

All right, let's go.

698

00:41:30,800 --> 00:41:31,800

Come on.

699

00:41:34,800 --> 00:41:36,800

Yeah, that one's great.

700

00:41:38,800 --> 00:41:39,800

Beautiful.

701

00:41:40,800 --> 00:41:43,800

And that, ladies and gentlemen, is how it's done.

702

00:41:44,800 --> 00:41:48,800

Ours was a frog and it looks like theirs was too.

703

00:41:48,800 --> 00:41:49,800

My turn.

704

00:41:49,800 --> 00:41:55,800

But Jamie knows better than anyone that reliable results should be repeatable.

705

00:41:55,800 --> 00:41:57,800

Three, two, one, go.

706

00:41:59,800 --> 00:42:02,800

Go, go, go. You got it. You got it. Yeah, yeah.

707

00:42:04,800 --> 00:42:05,800

Beautiful.

708

00:42:06,800 --> 00:42:08,800

And repeatedly repeatable.

709

00:42:08,800 --> 00:42:22,800

Not to mention reproduced, replicated and duplicated. Just to be on the safe side.

710

00:42:22,800 --> 00:42:24,800

That was very light-footed.

711

00:42:26,800 --> 00:42:27,800

That worked pretty well.

712

00:42:29,800 --> 00:42:36,800

In fact, it matched the viral video so well that the only way to call this myth is busted.

713

00:42:38,800 --> 00:42:43,800

All I think to take home from this is that when you need a little magic to make something work, movie magic will suffice.

714

00:42:43,800 --> 00:42:45,800

And don't believe everything you see.

715

00:42:45,800 --> 00:42:46,800

Exactly.

716

00:42:46,800 --> 00:42:47,800

After you.