

1

00:00:00,000 --> 00:00:04,520

Give us a break.

2

00:00:04,520 --> 00:00:10,640

Don't try what you're about to see at home.

3

00:00:10,640 --> 00:00:15,520

On this episode of MythBusters, Jamie and Adam get that sinking feeling.

4

00:00:15,520 --> 00:00:16,520

Oh man.

5

00:00:16,520 --> 00:00:19,200

Oh that sound is so long.

6

00:00:19,200 --> 00:00:22,840

To test the myth that if your vehicle plunges into the drink.

7

00:00:22,840 --> 00:00:24,760

Oh my god it's coming up in the air.

8

00:00:24,760 --> 00:00:26,560

Wow, can you feel the pressure?

9

00:00:26,560 --> 00:00:30,400

Are you done or is there a way to escape?

10

00:00:30,400 --> 00:00:33,000

That is intense.

11

00:00:33,000 --> 00:00:36,640

And meanwhile, in the biggest build of its kind in history.

12

00:00:36,640 --> 00:00:39,440

This is going to be the biggest piece of paper ever.

13

00:00:39,440 --> 00:00:42,480

Grant, Tori and Carrie attempt to squash the myth.

14

00:00:42,480 --> 00:00:44,560

Put it on the pancake.

15

00:00:44,560 --> 00:00:49,760

That it's an impossible task to fold a piece of paper more than seven times.

16

00:00:49,760 --> 00:00:55,400

So he sounded so much easier on paper.

17

00:00:56,400 --> 00:01:00,200

Who are the MythBusters?

18

00:01:00,200 --> 00:01:01,200

Adam Savage.

19

00:01:01,200 --> 00:01:02,200

Ow ow ow.

20

00:01:02,200 --> 00:01:04,720

And Jamie Heidemann.

21

00:01:04,720 --> 00:01:06,640

It's almost too exciting.

22

00:01:06,640 --> 00:01:11,800

Between them more than 30 years of special effects experience.

23

00:01:11,800 --> 00:01:13,640

Queue, dramatic music.

24

00:01:13,640 --> 00:01:15,640

Joining them, Carrie Byron.

25

00:01:15,640 --> 00:01:17,320

That's going to be so cool.

26

00:01:17,320 --> 00:01:18,320

Grant Imahara.

27

00:01:18,320 --> 00:01:20,680

Listen to that baby purr.

28

00:01:20,680 --> 00:01:21,680

And Tori Bellachy.

29

00:01:21,680 --> 00:01:24,320

Charamedics are nowhere to be found.

30

00:01:24,320 --> 00:01:26,880

They don't just tell the myths.

31

00:01:26,880 --> 00:01:30,680

They put them to the test.

32

00:01:44,680 --> 00:01:46,440

Underwater car escape.

33

00:01:46,440 --> 00:01:49,720

Something tells me this involves a car in the water.

34

00:01:49,720 --> 00:01:51,680

Shockingly, that is true.

35

00:01:51,680 --> 00:01:55,200

This is what I've been wanting to do almost since we started doing this show.

36

00:01:55,200 --> 00:01:59,000

The myth is that you're in a car, it goes over the side of a branch or something into

37

00:01:59,000 --> 00:02:00,920

the water and starts to sink.

38

00:02:00,920 --> 00:02:05,080

The myth is you will not be able to open that door until the cabin of the car fills up with

39

00:02:05,080 --> 00:02:08,240

water and then you can open the door and escape.

40

00:02:08,240 --> 00:02:10,600

Sounds like you might be cutting that kind of close though.

41

00:02:10,600 --> 00:02:12,960

That's exactly what we're going to find out.

42

00:02:12,960 --> 00:02:18,760

It's the stuff of nightmares and spectacular movie stunts.

43

00:02:18,760 --> 00:02:22,720

But this sinking scenario is a real life life threat.

44

00:02:22,720 --> 00:02:27,160

So if you're in a vehicle that takes a dive into the drink, is it possible to escape

45

00:02:27,160 --> 00:02:31,120

or would a watery grave be your fate?

46

00:02:31,120 --> 00:02:34,360

I think it's pretty obvious what the plan for this one should be.

47

00:02:34,360 --> 00:02:39,320

Yep, we've got to get a real car, we've got to put it in the water and get inside it and

48

00:02:39,320 --> 00:02:40,320

go down with it.

49

00:02:40,320 --> 00:02:41,800

I've always wanted to be the dude in the car.

50

00:02:41,800 --> 00:02:43,080

You've got to let me be the dude in the car.

51

00:02:43,080 --> 00:02:44,480

You can be the dude in the car.

52

00:02:44,480 --> 00:02:45,480

Yes!

53

00:02:45,480 --> 00:02:47,640

Dude, better you than me.

54

00:02:47,640 --> 00:02:52,440

But before he gets his feet wet, Adam first sets up a small scale pressure test.

55

00:02:52,440 --> 00:02:55,640

He fills a three foot deep cylindrical tank with water.

56

00:02:55,640 --> 00:03:01,520

It's an interestingly improvised rubbery contrivance that makes perfect sense to him.

57

00:03:01,520 --> 00:03:07,200

On the right here is a box which represents my car and like a car it will let water in

58

00:03:07,200 --> 00:03:11,280

but slowly it will leak out of a lot of the corners and edges.

59

00:03:11,280 --> 00:03:16,720

And when you see that happening, hopefully this unit will demonstrate that the pressure

60

00:03:16,720 --> 00:03:21,440

is higher here on this drum that's in the open water than it is on this drum that's

61

00:03:21,440 --> 00:03:22,440

in the car.

62

00:03:22,440 --> 00:03:27,480

Adam places a small piece of perspex loosely on the underside of the box that will represent

63

00:03:27,480 --> 00:03:29,600

the door of his car.

64

00:03:29,600 --> 00:03:30,600

Ready?

65

00:03:30,600 --> 00:03:31,600

Yep.

66

00:03:31,600 --> 00:03:35,560

Each foot the drum is lowered is equivalent to half a PSI of pressure.

67

00:03:35,560 --> 00:03:41,440

In the real world that's a crushing one to two thousand pounds of force on a door.

68

00:03:41,440 --> 00:03:44,920

That's the pressure inside the car, that's the pressure of the water outside the car.

69

00:03:44,920 --> 00:03:49,360

When you're inside this car you're trying to open this door you can't because the pressure

70

00:03:49,360 --> 00:03:51,880

outside is higher than the pressure inside.

71

00:03:51,880 --> 00:03:53,040

Pressure differential.

72

00:03:53,040 --> 00:03:55,760

It's happening.

73

00:03:55,760 --> 00:04:00,280

Pressure differential occurs because water exerts greater pressure than air.

74

00:04:00,280 --> 00:04:04,600

When a vehicle sinks the water presses on the doors holding them shut.

75

00:04:04,600 --> 00:04:09,400

When the cabin fills with water the inside pressure becomes the same as the outside and

76

00:04:09,400 --> 00:04:12,960

it's only then its grip is released.

77

00:04:12,960 --> 00:04:17,280

After building up and up the two lines finally meet.

78

00:04:17,280 --> 00:04:19,040

Watch the store, watch the store.

79

00:04:19,040 --> 00:04:20,040

And release.

80

00:04:20,040 --> 00:04:21,040

Ha ha ha!

81

00:04:21,040 --> 00:04:25,640

There it goes.

82

00:04:25,640 --> 00:04:31,240

To test this theory in a real life situation the plan is to suspend a car from a crane.

83

00:04:31,240 --> 00:04:35,960

Adam will be the trap driver in front while Jamie will be in back wearing a rebreather.

84

00:04:35,960 --> 00:04:41,120

Then the car will be lowered into the watery depths with safety divers monitoring the entire

85

00:04:41,120 --> 00:04:42,120

operation.

86

00:04:42,120 --> 00:04:49,360

Fresh from the classifieds Jamie has found a classic American sedan with power windows.

87

00:04:49,360 --> 00:04:50,880

It runs great.

88

00:04:50,880 --> 00:04:52,760

Never to start again.

89

00:04:52,760 --> 00:04:55,120

Now to pull it apart.

90

00:04:55,120 --> 00:04:59,800

First thing we need to do is remove the engine from the car because any oil, any fluids that

91

00:04:59,800 --> 00:05:02,200

would foul the water is going to be a problem.

92

00:05:02,200 --> 00:05:05,200

What's the matter?

93

00:05:05,200 --> 00:05:10,360

Haven't you ever seen somebody work on a car with an ax?

94

00:05:10,360 --> 00:05:14,800

His opponent has been wounded and is starting to weaken.

95

00:05:14,800 --> 00:05:17,840

It's coming.

96

00:05:17,840 --> 00:05:23,720

After a protracted battle the engine finally succones.

97

00:05:23,720 --> 00:05:27,920

Jamie is victorious but the thrill of the kill has gone to his head.

98

00:05:27,920 --> 00:05:34,200

I had to remove the engine from the car to clean the car up so I did.

99

00:05:34,200 --> 00:05:39,240

Well, there's your problem.

100

00:05:40,240 --> 00:05:46,360

Now that the engine is out he needs to add its equivalent weight back in.

101

00:05:46,360 --> 00:05:49,040

This thing right here is our engine surrogate.

102

00:05:49,040 --> 00:05:53,920

We need to simulate the amount of weight that it represented because the car might settle

103

00:05:53,920 --> 00:05:56,440

into the water differently if we don't.

104

00:05:56,440 --> 00:06:00,880

700 pounds of weight is lowered into the cavity.

105

00:06:00,880 --> 00:06:06,560

This is Jamie's new hydrogen fuel cell engine.

106

00:06:06,560 --> 00:06:11,280

With the weighting checked off it's time to make like Keith Moon and drive the car

107

00:06:11,280 --> 00:06:12,840

into the pool.

108

00:06:12,840 --> 00:06:18,160

To conduct their test, Campolindo High School in Marega is kindly letting us use their aquatic

109

00:06:18,160 --> 00:06:19,160

center.

110

00:06:19,160 --> 00:06:20,800

Go Cougars!

111

00:06:20,800 --> 00:06:25,280

This is a high school diving pool and this is where we're going to sink our car.

112

00:06:25,280 --> 00:06:29,880

It's about 13 feet deep right here which should be plenty for us to do our test.

113

00:06:29,880 --> 00:06:31,280

It's nice and warm.

114

00:06:31,280 --> 00:06:33,520

It'll be great.

115

00:06:33,640 --> 00:06:39,680

Aside from his burning enthusiasm, Adam has a burning question for safety diver Sean.

116

00:06:39,680 --> 00:06:41,720

Alright Sean, so I'm going to be in this car.

117

00:06:41,720 --> 00:06:44,000

It's going to start filling up with water.

118

00:06:44,000 --> 00:06:48,000

I'm going to hold my breath but when I run out what's the backup?

119

00:06:48,000 --> 00:06:51,520

Well the backup is sitting in your passenger seat right there.

120

00:06:51,520 --> 00:06:52,520

This back up.

121

00:06:52,520 --> 00:06:56,080

We're going to keep a feet of air waiting for you with a five foot long hose.

122

00:06:56,080 --> 00:06:58,720

Remember to purge it and breathe normally.

123

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

That's already hooked up.

124

00:07:00,720 --> 00:07:02,520

It's ready to go.

125

00:07:02,520 --> 00:07:07,280

And Jamie will be sitting here in his re-breather with this standing bind case I need it.

126

00:07:07,280 --> 00:07:08,280

Correct.

127

00:07:08,280 --> 00:07:10,080

Jamie isn't in the back just to look pretty.

128

00:07:10,080 --> 00:07:16,200

He's a certified dive master with 30 years of experience and 3,000 dives under his weight

129

00:07:16,200 --> 00:07:17,200

belt.

130

00:07:17,200 --> 00:07:20,040

I'm just going to be sitting there relaxing waiting for Adam to freak out and then I'll

131

00:07:20,040 --> 00:07:21,920

be right there with his regulator.

132

00:07:21,920 --> 00:07:27,320

So as not to skew the test by adding extra air, Jamie will be using a re-breather instead

133

00:07:27,320 --> 00:07:29,920

of regular scuba tanks.

134

00:07:29,920 --> 00:07:34,280

His recycle exhaled breath and therefore don't create bubbles.

135

00:07:34,280 --> 00:07:39,080

It's a self-contained unit that's very 007.

136

00:07:39,080 --> 00:07:41,720

Adam's starting to lose his cool.

137

00:07:41,720 --> 00:07:46,520

I'm actually a little freaked out because I'm going to be like holding myself up off

138

00:07:46,520 --> 00:07:47,520

the dashboard.

139

00:07:47,520 --> 00:07:51,200

I'll be my face planted into the windshield in this thing.

140

00:07:51,200 --> 00:07:55,400

I didn't take that into account and it's going to make this a lot more difficult to stay

141

00:07:55,400 --> 00:07:57,280

focused and calm.

142

00:07:57,280 --> 00:07:58,880

Let's go do it.

143

00:07:58,880 --> 00:08:06,840

The safety divers swim into position and Jamie has some final sage words of advice.

144

00:08:06,840 --> 00:08:10,720

Adam, I only have one thing to say to you.

145

00:08:10,720 --> 00:08:14,600

Don't pee in the pool because I'm in the car there with you.

146

00:08:14,600 --> 00:08:18,280

Time for Adam to get inside for the ride of his life.

147

00:08:18,280 --> 00:08:20,720

You ready?

148

00:08:20,720 --> 00:08:25,760

All set.

149

00:08:25,760 --> 00:08:32,440

So wearing no scuba gear, 13 feet underwater, does Adam think he'll sink or swim?

150

00:08:32,440 --> 00:08:36,760

I think it's entirely likely I may need oxygen before this test is complete.

151

00:08:36,760 --> 00:08:39,160

Okay, getting into gear.

152

00:08:39,160 --> 00:08:41,160

Is that a problem?

153

00:08:41,160 --> 00:08:44,680

Next, Adam is flooded with strong emotions.

154

00:08:44,680 --> 00:08:45,680

Oh, sh**.

155

00:08:45,680 --> 00:08:46,680

Oh, man.

156

00:08:46,680 --> 00:08:50,680

Oh, sh**.

157

00:08:50,680 --> 00:08:53,800

And coming up, the team makes a super-sized spreadsheet.

158

00:08:53,840 --> 00:08:58,160

This is going to be the biggest piece of paper ever.

159

00:08:58,160 --> 00:09:02,840

Jamie and Adam are testing the myth that if your car swerves off the road and into a body

160

00:09:02,840 --> 00:09:08,400

of water to get out alive, you have to wait until it's completely submerged and full of

161

00:09:08,400 --> 00:09:10,600

water before you can open the door.

162

00:09:10,600 --> 00:09:16,240

So did you know last year, AAA estimated 11,000 vehicles went off the road and into

163

00:09:16,240 --> 00:09:20,000

the water and as a result of those accidents, 300 people died?

164

00:09:20,000 --> 00:09:21,000

I only count.

165

00:09:21,000 --> 00:09:22,000

That's a lot of people.

166

00:09:22,000 --> 00:09:23,920

I thought it was more like a freak accident.

167

00:09:23,920 --> 00:09:26,080

Now, apparently it's a lot more common than that.

168

00:09:26,080 --> 00:09:34,160

Well, maybe we can help raise awareness a bit as to what these people are facing.

169

00:09:34,160 --> 00:09:39,680

And what better way to raise awareness than to raise themselves in a car, into the sky,

170

00:09:39,680 --> 00:09:41,680

and plunge into a pool?

171

00:09:41,680 --> 00:09:45,200

What the f**k are we doing?

172

00:09:45,200 --> 00:09:51,280

Remember, when Adam goes 13 feet under, he won't be wearing breathing apparatus.

173

00:09:51,280 --> 00:09:58,240

The paramedics are on their toes and Adam has his escape strategy all worked out.

174

00:09:58,240 --> 00:10:04,200

I'm going to try to start opening this door the moment I see the water get above my glass.

175

00:10:04,200 --> 00:10:08,520

Now if the myth is true, I won't be able to open that door until the water level inside

176

00:10:08,520 --> 00:10:11,320

the car gets to the same point.

177

00:10:11,320 --> 00:10:12,520

Deep breaths, Adam.

178

00:10:12,520 --> 00:10:13,680

Deep breaths.

179

00:10:13,680 --> 00:10:16,760

It's way too late to put on the brakes.

180

00:10:16,760 --> 00:10:19,160

I couldn't stop now from one or two.

181

00:10:19,160 --> 00:10:22,880

As the water rushes in, Adam is getting that sinking feeling.

182

00:10:22,880 --> 00:10:24,880

Oh, s**t.

183

00:10:24,880 --> 00:10:26,880

Oh, man.

184

00:10:26,880 --> 00:10:29,080

Oh, s**t.

185

00:10:29,080 --> 00:10:32,760

The crane chains go slack and the car is sinking on its own.

186

00:10:32,760 --> 00:10:39,960

The 700-pound fake engine is taking it down nose first, exactly as it would in a real situation.

187

00:10:39,960 --> 00:10:44,280

The water's up to my butt now.

188

00:10:44,280 --> 00:10:45,280

All right.

189

00:10:45,280 --> 00:10:47,640

Okay, it's coming past my waist.

190

00:10:47,640 --> 00:10:49,400

Now I can start to see under the water.

191

00:10:49,400 --> 00:10:50,400

Oh, my God.

192

00:10:50,400 --> 00:10:51,400

It's coming up under the windshield.

193

00:10:51,400 --> 00:10:52,400

Wow, I can feel the pressure.

194

00:10:52,400 --> 00:10:53,400

All right.

195

00:10:53,400 --> 00:10:59,760

I only have a couple more breaths here.

196

00:10:59,760 --> 00:11:04,240

Adam's never this quiet, so what's going on down there?

197

00:11:04,240 --> 00:11:09,960

The water is leaking in from every open crevice in the car and Adam is now fully under.

198

00:11:09,960 --> 00:11:15,960

He holds his breath, tugs on the door, pushes his whole weight against it, but nothing

199

00:11:15,960 --> 00:11:16,960

happens.

200

00:11:16,960 --> 00:11:27,320

Finally, he can't hold his breath any longer and signals for Jamie to pass in the regulator.

201

00:11:27,320 --> 00:11:32,880

When the pressure ultimately equalizes, he opens the door and swims to the surface, but

202

00:11:32,880 --> 00:11:34,880

it was too late.

203

00:11:34,880 --> 00:11:48,680

That is intense.

204

00:11:48,680 --> 00:11:52,360

No matter how you slice it.

205

00:11:52,360 --> 00:11:53,360

I died.

206

00:11:53,360 --> 00:11:54,960

Let's just put it that way.

207

00:11:54,960 --> 00:11:57,560

Well, that's put a dampener on things.

208

00:11:57,560 --> 00:12:02,240

From the time the water hit Adam's knees to when he surfaced, took just one minute and

209

00:12:02,240 --> 00:12:05,920

51 seconds, but that's a long time when you're drowning.

210

00:12:05,920 --> 00:12:09,800

The fact is, even though you do go vertical, you don't feel like it because the water is

211

00:12:09,800 --> 00:12:11,520

filling the cabin at that point.

212

00:12:11,520 --> 00:12:14,200

So you can kind of float it.

213

00:12:14,200 --> 00:12:19,360

I held my breath, I don't know, for what felt like 30 seconds trying to push open that door,

214

00:12:19,360 --> 00:12:24,920

using my legs, bracing up inside the cabin.

215

00:12:24,920 --> 00:12:28,240

Well, you died.

216

00:12:28,240 --> 00:12:31,240

Yeah, I died.

217

00:12:31,240 --> 00:12:34,880

Jamie's passive observer view was a little eerie.

218

00:12:34,880 --> 00:12:38,040

I just sitting there watching the guy drown.

219

00:12:38,040 --> 00:12:41,040

He's like just going nuts on that door.

220

00:12:41,040 --> 00:12:47,120

He's really using up his oxygen and it didn't take him that long to run out.

221

00:12:47,120 --> 00:12:49,560

You don't want to be in a car when it goes down like that.

222

00:12:49,560 --> 00:12:51,480

It's scary.

223

00:12:51,480 --> 00:12:56,400

The bottom line is Adam ran out of air before he could open the door.

224

00:12:56,400 --> 00:12:57,640

That myth is confirmed.

225

00:12:57,640 --> 00:13:04,200

I could not open that door until the cab seemed to be full of water for a while.

226

00:13:04,200 --> 00:13:08,040

Yeah, you were given it all you could and you just weren't able to do anything with

227

00:13:08,040 --> 00:13:11,400

that door until we started to level out.

228

00:13:11,400 --> 00:13:13,440

That's the point that you opened the door.

229

00:13:13,440 --> 00:13:15,720

And that was quite a while.

230

00:13:15,720 --> 00:13:19,960

Differential pressure could be such a downer.

231

00:13:19,960 --> 00:13:22,960

I got to tell you, I've been wanting to do this since we've been doing this show and

232

00:13:22,960 --> 00:13:25,240

that was still pretty terrifying.

233

00:13:25,320 --> 00:13:30,560

Yeah, sitting there in the back seat watching you drown was kind of unsettling somehow.

234

00:13:30,560 --> 00:13:34,960

If you'd like to watch the entire sequence of me sinking in the car uncut, you can log

235

00:13:34,960 --> 00:13:37,880

on to Discovery.com slash MythBusters.

236

00:13:37,880 --> 00:13:41,120

And see it in real time.

237

00:13:41,120 --> 00:13:45,240

But now let's cut to a new myth.

238

00:13:45,240 --> 00:13:50,840

Alright, this myth has been around forever.

239

00:13:50,840 --> 00:13:52,640

Okay, what is it?

240

00:13:52,640 --> 00:13:56,200

You can't fold a piece of paper in half more than seven times.

241

00:13:56,200 --> 00:13:57,200

I don't believe it.

242

00:13:57,200 --> 00:13:58,200

Let's do it.

243

00:13:58,200 --> 00:13:59,200

That's why I brought a piece of paper.

244

00:13:59,200 --> 00:14:00,200

Alright, let's see.

245

00:14:00,200 --> 00:14:01,200

Show us.

246

00:14:01,200 --> 00:14:04,440

Alright, that's one.

247

00:14:04,440 --> 00:14:08,520

This myth is a MythBusters fan site's special request.

248

00:14:08,520 --> 00:14:13,960

It's a theory that most people first hear in elementary school and Carrie is finding out

249

00:14:13,960 --> 00:14:15,760

it isn't child's play.

250

00:14:15,760 --> 00:14:19,280

Don't break the table.

251

00:14:19,280 --> 00:14:20,280

There's seven.

252

00:14:20,280 --> 00:14:22,120

Come on, Carrie, one more.

253

00:14:22,120 --> 00:14:23,120

One more, you can do it.

254

00:14:23,120 --> 00:14:24,120

Come on, pump it.

255

00:14:24,120 --> 00:14:25,120

I'm not giving up yet.

256

00:14:25,120 --> 00:14:26,120

Yeah.

257

00:14:26,120 --> 00:14:31,960

Eight doesn't, I don't think eight worked.

258

00:14:31,960 --> 00:14:33,960

I think that's seven.

259

00:14:33,960 --> 00:14:38,040

You know what, there's got to be a way to fold this piece of paper more than seven times.

260

00:14:38,040 --> 00:14:42,880

Okay, well let's break this down and figure out what it takes to fold it eight times

261

00:14:42,880 --> 00:14:43,880

more.

262

00:14:43,880 --> 00:14:47,120

I have a feeling you're going to get math involved again.

263

00:14:47,120 --> 00:14:48,120

Correct, Carrie.

264

00:14:48,120 --> 00:14:50,720

It's called exponential growth.

265

00:14:50,720 --> 00:14:56,160

Every time you fold a piece of paper in half, it gets twice as small and twice as thick.

266

00:14:56,160 --> 00:15:02,560

A piece of paper folded just seven times quickly multiplies to 128 layers.

267

00:15:02,560 --> 00:15:06,280

Eight folds doubles again to 256 layers.

268

00:15:06,280 --> 00:15:09,640

And the theory is this is too thick to bend.

269

00:15:09,640 --> 00:15:15,240

Okay, so the challenge is each of us has two hours to take these pieces of paper and see

270

00:15:15,240 --> 00:15:16,680

how many times we can fold them.

271

00:15:16,680 --> 00:15:19,880

The person that folds them the most wins.

272

00:15:19,880 --> 00:15:25,120

Using standard letter eight and a half by 11 office paper, our first contender, Tori

273

00:15:25,120 --> 00:15:26,840

Balechi, steps up.

274

00:15:26,840 --> 00:15:29,040

First you must massage the paper.

275

00:15:29,040 --> 00:15:35,320

If you get it relaxed so that it'll fold easier.

276

00:15:35,320 --> 00:15:39,000

It's one.

277

00:15:39,000 --> 00:15:45,280

Tori's basic method of folding and rotating is smooth all the way until he gets to number

278

00:15:45,280 --> 00:15:46,280

seven.

279

00:15:46,800 --> 00:15:50,400

This is tricky here.

280

00:15:50,400 --> 00:15:54,560

Is he about to wrench this myth open already?

281

00:15:54,560 --> 00:15:59,480

The pressure is on to bring it home to eight.

282

00:15:59,480 --> 00:16:02,000

Eight.

283

00:16:02,000 --> 00:16:03,000

Got it.

284

00:16:03,000 --> 00:16:08,160

I think you managed to wad it in half eight times, but look, that's not half.

285

00:16:08,160 --> 00:16:09,160

There's one.

286

00:16:09,160 --> 00:16:10,760

That's not a fault.

287

00:16:10,760 --> 00:16:12,520

Oh, and you cut the paper.

288

00:16:12,520 --> 00:16:14,520

You cut the paper.

289

00:16:14,520 --> 00:16:17,600

Tori's tactic is to focus on the fold.

290

00:16:17,600 --> 00:16:25,000

My way of tackling this seven-paper fold problem is to hopefully use a little bit of compression,

291

00:16:25,000 --> 00:16:30,240

a little bit of steam, and a little bit of sanding to make that last fold, which seems

292

00:16:30,240 --> 00:16:33,240

to be the problem a little bit easier.

293

00:16:33,240 --> 00:16:37,880

A home-spun touch might be just what this myth needs.

294

00:16:37,880 --> 00:16:41,640

After ironing a perfect crease, she rubs it with fine sandpaper.

295

00:16:42,640 --> 00:16:44,640

It's just going to be a tiny bit thinner.

296

00:16:44,640 --> 00:16:49,120

I'm just thinking maybe just that microscopic little edge it could give me.

297

00:16:49,120 --> 00:16:52,480

Her idea may just iron out the kinks in this competition.

298

00:16:52,480 --> 00:16:53,480

Have you done with this?

299

00:16:53,480 --> 00:16:58,280

I was wondering if you could come over and iron my newspaper.

300

00:16:58,280 --> 00:17:02,840

But she too runs out of steam at seven.

301

00:17:02,840 --> 00:17:03,840

Seven times.

302

00:17:03,840 --> 00:17:04,840

That's it.

303

00:17:04,840 --> 00:17:08,120

This ends up being a spit-wad.

304

00:17:08,120 --> 00:17:12,080

Meanwhile, Grant has really been pondering this paper puzzle.

305

00:17:12,080 --> 00:17:16,600

Okay, so I think that this is actually a dimensional problem.

306

00:17:16,600 --> 00:17:22,480

And here, this is a piece of 20-pound 8.5 by 11, like, office paper.

307

00:17:22,480 --> 00:17:26,840

And it is 3,000ths of an inch.

308

00:17:26,840 --> 00:17:31,920

So if I make that thinner, theoretically, I should be able to get more folds in the

309

00:17:31,920 --> 00:17:33,400

same amount of space.

310

00:17:33,400 --> 00:17:35,840

And that's why I have this.

311

00:17:35,840 --> 00:17:39,120

This is tracing paper, technically still paper.

312

00:17:39,120 --> 00:17:42,320

Isn't it a little early in the game to start cheating?

313

00:17:42,320 --> 00:17:43,920

Still paper.

314

00:17:43,920 --> 00:17:46,640

A cheat, quite the contrary.

315

00:17:46,640 --> 00:17:48,880

Grant sees himself as a purist.

316

00:17:48,880 --> 00:17:56,560

No hammer, no plan, no sanding.

317

00:17:56,560 --> 00:18:03,400

Plus he has a cunning plan, to fold lengthwise repeatedly, then widthwise repeatedly.

318

00:18:03,400 --> 00:18:07,440

Now for the folding in half.

319

00:18:07,440 --> 00:18:12,160

If you fold a piece of paper in alternating directions, it doesn't constrain itself with

320

00:18:12,160 --> 00:18:13,160

each fold.

321

00:18:13,160 --> 00:18:16,800

So, it's easier to keep folding.

322

00:18:16,800 --> 00:18:18,960

There's number eight.

323

00:18:18,960 --> 00:18:20,160

Eight.

324

00:18:20,160 --> 00:18:24,680

But someone still doesn't want to concede defeat.

325

00:18:24,680 --> 00:18:25,680

Twenty-two.

326

00:18:25,680 --> 00:18:26,680

Twenty-three.

327

00:18:26,680 --> 00:18:36,120

Next, the team finally finish building their broadsheet.

328

00:18:36,120 --> 00:18:40,280

Oh, look at this ocean of paper.

329

00:18:40,280 --> 00:18:43,560

And Adam learns why you should never go sailing in a car.

330

00:18:43,560 --> 00:18:49,240

What is getting to the top of the window here?

331

00:18:49,240 --> 00:18:53,640

Grant, Tori and Carrie are trying to burn a hole in the seven paper fold myth.

332

00:18:53,640 --> 00:18:56,200

You got something you want to say, Grant?

333

00:18:56,880 --> 00:18:58,600

As a matter of fact, I do.

334

00:18:58,600 --> 00:19:04,840

I think it's clear that I won the competition with eight folds, and not only did I win,

335

00:19:04,840 --> 00:19:06,040

I busted the myth.

336

00:19:06,040 --> 00:19:07,360

You know what though?

337

00:19:07,360 --> 00:19:10,400

You got eight folds, but you changed the method of the folding.

338

00:19:10,400 --> 00:19:14,840

The obvious way would be to fold it in half, turn it 90 degrees and fold it again.

339

00:19:14,840 --> 00:19:17,880

Every time we tried to do that, we couldn't get more than seven folds.

340

00:19:17,880 --> 00:19:19,680

I mean, there might be some truth to this myth.

341

00:19:19,680 --> 00:19:24,440

Well, if we use a really big piece of paper, I think there's a possibility that we could

342

00:19:24,440 --> 00:19:25,960

get more than seven folds.

343

00:19:25,960 --> 00:19:30,960

OK, then let's get the biggest piece of seamless paper we can find and try it again.

344

00:19:30,960 --> 00:19:33,000

All right then.

345

00:19:33,000 --> 00:19:38,720

They roll out the biggest seamless piece of paper they could find, 12 and a half by 15

346

00:19:38,720 --> 00:19:39,720

feet.

347

00:19:39,720 --> 00:19:44,920

In theory, increasing the paper's dimensions should make it easier to reach the elusive

348

00:19:44,920 --> 00:19:45,920

eight-fold goal.

349

00:19:45,920 --> 00:19:47,920

You want to have big biceps?

350

00:19:47,920 --> 00:19:48,920

Do this.

351

00:19:48,920 --> 00:19:49,920

Do this exercise.

352

00:19:49,920 --> 00:20:00,040

For the first couple of folds, the paper is a pushover, but it's shrinking with surprising

353

00:20:00,040 --> 00:20:03,240

speed.

354

00:20:03,240 --> 00:20:05,080

Gets real small real fast.

355

00:20:05,080 --> 00:20:06,080

Sure does.

356

00:20:06,080 --> 00:20:07,080

So this is seven.

357

00:20:07,080 --> 00:20:09,080

We're supposed to get one more fold.

358

00:20:09,080 --> 00:20:11,080

I think maybe.

359

00:20:11,080 --> 00:20:15,080

Good luck.

360

00:20:15,080 --> 00:20:23,080

But no matter what sick methods of intimidation they try, the paper doesn't break.

361

00:20:23,080 --> 00:20:25,360

The team is all torn up.

362

00:20:25,360 --> 00:20:32,440

Even using a piece of paper the size of a room 288 times larger than the letter size paper,

363

00:20:32,440 --> 00:20:35,400

they couldn't crack the seven-fold ceiling.

364

00:20:35,400 --> 00:20:37,280

So now what?

365

00:20:37,280 --> 00:20:40,240

This is six times thicker than the tracing paper.

366

00:20:40,240 --> 00:20:43,600

If we can learn anything from this little exercise, it would be we need to go thinner

367

00:20:43,600 --> 00:20:45,240

and we need to go bigger.

368

00:20:45,240 --> 00:20:46,240

Bigger?

369

00:20:46,240 --> 00:20:47,680

You got it, Carrie.

370

00:20:47,680 --> 00:20:53,080

No one knows space like NASA, and they have plenty of it at an empty airship hangar they've

371

00:20:53,080 --> 00:20:56,480

given us clearance to use at Moffitt Field.

372

00:20:56,480 --> 00:21:03,160

At more than 200 feet high, 1,000 feet long, and 300 feet wide, our crew will really be

373

00:21:03,160 --> 00:21:06,960

able to explore the outer reaches of this myth.

374

00:21:06,960 --> 00:21:13,560

The plan is to get 17 individual rolls and lay them out side by side, covering 170 by

375

00:21:13,560 --> 00:21:14,560

220 feet.

376

00:21:14,560 --> 00:21:18,400

The team will join them together with double-sided tape.

377

00:21:18,400 --> 00:21:23,560

Then they'll use whatever methods necessary to try and fold it into a submission.

378

00:21:23,560 --> 00:21:26,080

Basically, you're going to have to fill this whole area.

379

00:21:26,080 --> 00:21:33,280

Yeah, well, we have 170 feet this way and 220 this way before we get to any equipment.

380

00:21:33,280 --> 00:21:34,640

So will that work out for us?

381

00:21:34,640 --> 00:21:37,120

Yeah, it's perfect to scale up an 8.5 by 11 sheet.

382

00:21:37,120 --> 00:21:39,680

So this is going to be a long day.

383

00:21:39,680 --> 00:21:41,600

We have a lot of work.

384

00:21:41,600 --> 00:21:43,280

Then let's roll.

385

00:21:43,280 --> 00:21:46,720

They position the first roll, give it a push, and they're off.

386

00:21:46,720 --> 00:21:50,760

This is going to be the biggest piece of paper ever.

387

00:21:50,760 --> 00:21:53,720

One down.

388

00:21:53,720 --> 00:21:57,440

16 more to go.

389

00:21:57,440 --> 00:22:02,880

Their first 220 feet of scroll has been successfully unrolled.

390

00:22:02,880 --> 00:22:08,640

To secure roll number two, they need double-sided tape.

391

00:22:08,640 --> 00:22:14,160

Each inch by inch, they press the sticky stuff along the edge of the paper.

392

00:22:14,160 --> 00:22:18,560

Time to truck in roll number two.

393

00:22:18,560 --> 00:22:20,040

Roll down, tape down.

394

00:22:20,040 --> 00:22:22,360

I think we get the concept.

395

00:22:22,360 --> 00:22:26,640

Later, will the team's paper-fold attempt be all torn up?

396

00:22:26,640 --> 00:22:30,320

Uh-oh, we got a situation.

397

00:22:30,320 --> 00:22:34,240

Coming up, we test every survival technique for escaping from a car that you've driven

398

00:22:34,240 --> 00:22:36,240

off a bridge.

399

00:22:37,240 --> 00:22:43,360

Back at the pool, Jamie and Adam are testing ways to escape a car that's plunged into the

400

00:22:43,360 --> 00:22:44,360

drain.

401

00:22:44,360 --> 00:22:48,840

They've already discovered that if you wait for the cabin to fill with water so the differential

402

00:22:48,840 --> 00:22:54,280

pressure equalizes and releases its grip on the doors, it could be too late.

403

00:22:54,280 --> 00:22:58,200

Now, they're going to try out a modified survival technique.

404

00:22:58,200 --> 00:23:01,440

Oh, here we are, day two.

405

00:23:01,440 --> 00:23:06,560

The first maneuver on their cheating death checklist is to try and open the door before

406

00:23:06,560 --> 00:23:08,640

the car starts to sink.

407

00:23:08,640 --> 00:23:13,200

I figure for this particular technique to work, you need to do it right the minute you

408

00:23:13,200 --> 00:23:14,200

hit the water.

409

00:23:14,200 --> 00:23:17,440

If you hesitate, it's all over and you've got to ride it out.

410

00:23:17,440 --> 00:23:19,440

Here we go.

411

00:23:19,440 --> 00:23:27,280

Adam's plan of action is, I'm just going to wait until the water gets into my ankles

412

00:23:27,280 --> 00:23:29,160

and then I'm going to try and open the door.

413

00:23:29,880 --> 00:23:30,880

Here we go.

414

00:23:30,880 --> 00:23:31,880

Oh man.

415

00:23:31,880 --> 00:23:34,680

Oh, that sound is so long.

416

00:23:34,680 --> 00:23:35,680

The water rushes in.

417

00:23:35,680 --> 00:23:42,880

Okay, I'm starting to see it on the floor and it's coming up to my ankles.

418

00:23:42,880 --> 00:23:44,680

Now I'm going to try and open the door.

419

00:23:44,680 --> 00:23:46,680

And Adam rushes out.

420

00:23:51,680 --> 00:23:55,760

The surface exit via the door, totally viable.

421

00:23:55,760 --> 00:24:00,120

I waited until the water was up to the top of my shoes and I was still able to push this

422

00:24:00,120 --> 00:24:01,600

door open.

423

00:24:01,600 --> 00:24:03,960

The water rises slowly upwards.

424

00:24:03,960 --> 00:24:07,120

Next, he's going to wait until it gets to his waist.

425

00:24:07,120 --> 00:24:10,320

Okay, past my shoes, halfway up my shins.

426

00:24:10,320 --> 00:24:13,720

All right, now I'm looking at, my God, it set my knees.

427

00:24:13,720 --> 00:24:15,200

I'm not going to be able to open the door.

428

00:24:15,200 --> 00:24:16,200

All right, wait.

429

00:24:16,200 --> 00:24:18,200

This one's no push over.

430

00:24:18,200 --> 00:24:21,960

As the water level climbs, so does the amount of pressure.

431

00:24:21,960 --> 00:24:26,160

Adam has to brace himself against the opposite door to force it open.

432

00:24:33,560 --> 00:24:35,000

I was able to do it.

433

00:24:35,000 --> 00:24:36,760

But only just.

434

00:24:36,760 --> 00:24:39,040

This time he's going even higher.

435

00:24:39,040 --> 00:24:42,040

I'm going to wait until I see water hit the top of this window.

436

00:24:42,040 --> 00:24:46,640

Then I'm going to use all my strength against the opposite door to try and push it open.

437

00:24:48,640 --> 00:24:51,440

Dude, I'm going to have dreams about this tonight.

438

00:24:51,440 --> 00:24:54,440

All right, water's getting to the top of the window here.

439

00:24:54,440 --> 00:24:56,440

All right, here we go.

440

00:24:56,440 --> 00:24:59,440

It's almost at the top, almost there.

441

00:24:59,440 --> 00:25:01,440

Three, two, one, go.

442

00:25:01,440 --> 00:25:06,160

The differential pressure on the other side of the door has become too strong and holds

443

00:25:06,160 --> 00:25:08,160

it shut.

444

00:25:08,160 --> 00:25:13,160

Adam gamely pushes back, but he's like a krill fighting a whale.

445

00:25:13,160 --> 00:25:17,160

It's not long before it's RIP for our little crustacean.

446

00:25:22,160 --> 00:25:25,160

I think we found the cutoff point.

447

00:25:25,160 --> 00:25:30,160

Actually, the car near the door after it hits the water is a viable option.

448

00:25:30,160 --> 00:25:35,160

If you have a very small window, by the time you can see water halfway up the window, it's

449

00:25:35,160 --> 00:25:37,160

pretty much too late.

450

00:25:39,160 --> 00:25:45,320

The art of paper folding, known as origami, is believed to have originated as long ago

451

00:25:45,320 --> 00:25:48,360

as the first century AD in China.

452

00:25:48,360 --> 00:25:53,360

Masters of the craft believe it is a pursuit in which you can unlock the secrets of creation.

453

00:25:53,360 --> 00:25:56,360

It looks like a big giant diaper.

454

00:25:56,360 --> 00:26:02,360

That might be a stretch for our novices here today, but finally they reach the last joint.

455

00:26:02,360 --> 00:26:06,360

Ooh, look at this ocean of paper.

456

00:26:10,360 --> 00:26:14,360

I think this is going to be probably the biggest attempt to fold a piece of paper more than

457

00:26:14,360 --> 00:26:15,360

seven times.

458

00:26:15,360 --> 00:26:20,360

Actually, in 2002, there's this high school student named Brittany Gallivan, and for an

459

00:26:20,360 --> 00:26:24,360

extra credit project, she did the seven-paper fold and got more than seven folds.

460

00:26:24,360 --> 00:26:25,360

What?

461

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

How?

462

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

She used toilet paper and folded it lengthwise, but the toilet paper was 4,000 feet long.

463

00:26:31,360 --> 00:26:33,360

How many folds did she get?

464

00:26:33,360 --> 00:26:34,360

She got 12 folds.

465

00:26:34,360 --> 00:26:38,360

She had to use a shopping mall, and it took over seven hours to fold.

466

00:26:38,360 --> 00:26:40,360

Wow, that's impressive.

467

00:26:40,360 --> 00:26:44,360

She may have beaten the seven-paper fold, but she did it lengthwise.

468

00:26:44,360 --> 00:26:49,360

I still think the spirit of the myth is folding it in half, turning it 90, and folding it again.

469

00:26:49,360 --> 00:26:54,360

That's true, and within the parameters of the spirit of the myth, that record is still up for grabs.

470

00:26:54,360 --> 00:26:55,360

I say we do it.

471

00:26:55,360 --> 00:26:57,360

We just got to be careful we don't get any paper cuts.

472

00:26:57,360 --> 00:27:02,360

With the paper-built finish, they can finally begin folding.

473

00:27:02,360 --> 00:27:07,360

It socks only as the whole Mythbusters crew grabs an edge.

474

00:27:07,360 --> 00:27:12,360

My new worry is that this paper is going to rip when we start trying to fold it.

475

00:27:12,360 --> 00:27:17,360

I mean, it's really thin, and the size of these pieces of paper is so heavy.

476

00:27:17,360 --> 00:27:21,360

I just see ripping for days.

477

00:27:21,360 --> 00:27:25,360

One rip and their best laid plans will be shredded.

478

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

Uh-oh, uh-oh, we got a situation.

479

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

Coming up on Mythbusters, can we fold this piece of paper more than seven times?

480

00:27:33,360 --> 00:27:38,360

And soon, Adam takes the art of heavy breathing to a whole new level.

481

00:27:42,360 --> 00:27:49,360

If you drive your car into the drink, you can't get out alive unless you open a door at precisely

the right moment.

482

00:27:49,360 --> 00:27:52,360

So is there another window of opportunity?

483

00:27:52,360 --> 00:27:58,360

So we know it's pretty much impossible to open the door once the car is submerged in underwater.

484

00:27:58,360 --> 00:28:02,360

The question everyone asks after that is, well, why didn't you open the window?

485

00:28:02,360 --> 00:28:05,360

That's what I'm going to do, a shop test to find out.

486

00:28:05,360 --> 00:28:09,360

I have one electrically powered window, and I have one manual powered window.

487

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

I'm going to put them under the same kind of strain that they'd experience underwater and try to open them.

488

00:28:13,360 --> 00:28:21,360

The 350 pounds Adam is adding is equivalent to the pressure the window would be under at a depth of just two feet.

489

00:28:21,360 --> 00:28:30,360

I do not know of a more visual way to make clear how much pressure you're dealing with when you put things underwater.

490

00:28:30,360 --> 00:28:33,360

Then he tries to crank it open.

491

00:28:33,360 --> 00:28:38,360

I should point out I'm in a really good position for leverage to open this window.

492

00:28:38,360 --> 00:28:41,360

But there's not even a sliver of a crack.

493

00:28:41,360 --> 00:28:47,360

There it goes. It just failed. Yeah, the gear just slipped.

494

00:28:47,360 --> 00:28:57,360

Under that kind of pressure, there's so much force pushing the glass against the frame of the car that the manual lever is going to break.

495

00:28:57,360 --> 00:29:03,360

Maybe electric windows have more power, but the common perception is they don't even work underwater.

496

00:29:03,360 --> 00:29:11,360

This is the electric door, and the first thing I want to do is dump the electric door in this container with the battery and see how long the electric hold out for.

497

00:29:11,360 --> 00:29:13,360

Okay, here we go.

498

00:29:13,360 --> 00:29:16,360

The battery's on the bottom.

499

00:29:16,360 --> 00:29:18,360

They let it steep.

500

00:29:21,360 --> 00:29:26,360

After 45 minutes, surprisingly, it's still going strong.

501

00:29:26,360 --> 00:29:31,360

So it's not out of the question that power windows could still work underwater.

502

00:29:31,360 --> 00:29:35,360

But what about the effect of differential pressure?

503

00:29:35,360 --> 00:29:38,360

Ready? Uh-huh.

504

00:29:38,360 --> 00:29:45,360

The burden of 350 pounds pressing down on the glass is a real pain.

505

00:29:45,360 --> 00:29:50,360

Automatic windows, you are just as screwed as you are with manual windows.

506

00:29:50,360 --> 00:29:55,360

350 pounds of pressure, that's only two feet underwater.

507

00:29:55,360 --> 00:29:58,360

It's like the bare minimum you'd be encountering.

508

00:29:58,360 --> 00:30:04,360

As long as there's still air in the cabin of the car, you would not be able to open this window.

509

00:30:04,360 --> 00:30:08,360

But Adam isn't prepared to expire a third time.

510

00:30:08,360 --> 00:30:14,360

Now that we know you can't open that window because of the pressure, the question remains as to how to open that window.

511

00:30:14,360 --> 00:30:16,360

And I'd say you break it.

512

00:30:16,360 --> 00:30:18,360

The question is how.

513

00:30:18,360 --> 00:30:26,360

Their plan is to try to break the glass using various items you'd likely have within your reach inside a submerged vehicle.

514

00:30:26,360 --> 00:30:28,360

For starters, keys.

515

00:30:28,360 --> 00:30:32,360

Alright, you ready? Go for it.

516

00:30:32,360 --> 00:30:39,360

Adam smacks the glass, but it doesn't crack.

517

00:30:39,360 --> 00:30:44,360

I'm actually able to get a good solid hit on that. Nothing. I'd say keys are busted.

518

00:30:44,360 --> 00:30:47,360

Next on call, a cell phone.

519

00:30:47,360 --> 00:30:53,360

You're just bounding for your life.

520

00:30:53,360 --> 00:30:56,360

You're screwed.

521

00:30:56,360 --> 00:30:59,360

Then Adam suits up for another attempt.

522

00:30:59,360 --> 00:31:08,360

So Adam, this is like you've just stolen a car and you got a little carried away and escaping the cops and now you're underwater so you're in trouble.

523

00:31:08,360 --> 00:31:10,360

Is that my motivation?

524

00:31:10,360 --> 00:31:16,360

So busting an escape hole might be possible with steel-toed boots.

525

00:31:16,360 --> 00:31:18,360

Oh, that's so cold.

526

00:31:18,360 --> 00:31:22,360

Okay, I'm going to get to kicking this window out right away.

527

00:31:23,360 --> 00:31:28,360

But the window doesn't crumble.

528

00:31:28,360 --> 00:31:33,360

If he had just carried out his community service sentence, he would have lived.

529

00:31:33,360 --> 00:31:35,360

Nothing.

530

00:31:35,360 --> 00:31:36,360

Nothing?

531

00:31:36,360 --> 00:31:37,360

Nope.

532

00:31:37,360 --> 00:31:43,360

None of the items that would be laying around randomly in your car worked for us to break a window.

533

00:31:43,360 --> 00:31:48,360

So we get to try the commercially available ones.

534

00:31:48,360 --> 00:31:52,360

This is a hammer thing with a point on it and this is a spring-loaded punch.

535

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

They try the underwater emergency hammer first.

536

00:31:57,360 --> 00:31:59,360

Oh!

537

00:31:59,360 --> 00:32:00,360

What a difference.

538

00:32:00,360 --> 00:32:01,360

Wow!

539

00:32:01,360 --> 00:32:02,360

One hit.

540

00:32:02,360 --> 00:32:05,360

That was instantaneous.

541

00:32:05,360 --> 00:32:07,360

Probably done well.

542

00:32:07,360 --> 00:32:08,360

That works.

543

00:32:08,360 --> 00:32:12,360

Amazing, a product that does exactly what it says on the box.

544

00:32:12,360 --> 00:32:19,360

Next up is a store-bought center punch device, a tool that's normally used to dent a surface prior

to drilling.

545

00:32:19,360 --> 00:32:23,360

Put it up against the glass and push and it does that.

546

00:32:23,360 --> 00:32:24,360

Yeah.

547

00:32:24,360 --> 00:32:26,360

And luckily I have one more car door.

548

00:32:26,360 --> 00:32:32,360

A new door is submerged and they're ready for the count.

549

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

Three, two, one.

550

00:32:35,360 --> 00:32:39,360

Wow, my hand just went right through.

551

00:32:39,360 --> 00:32:45,360

The reason the store-bought products work is because car windows are made of tempered glass.

552

00:32:45,360 --> 00:32:50,360

This means they've been heat-treated so that their surfaces are under compression,

553

00:32:50,360 --> 00:32:53,360

fracture it and this tension showers.

554

00:32:53,360 --> 00:32:55,360

That's lovely.

555

00:32:55,360 --> 00:33:00,360

The products meant to do get you out of that car did exactly that perfectly on the first try each.

556

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

It doesn't take much but it has to be the right thing.

557

00:33:03,360 --> 00:33:04,360

Yeah, exactly.

558

00:33:04,360 --> 00:33:09,360

At last, a release.

559

00:33:09,360 --> 00:33:18,360

Back over at NASA, our team is finding out that folding a football field-sized piece of paper isn't exactly a breeze.

560

00:33:18,360 --> 00:33:26,360

For instance, the fact that it turns into a giant windsock with the littlest bit of a breeze, there's air trapped underneath it.

561

00:33:26,360 --> 00:33:34,360

But they managed to rain in the billowing parachute without any tears for an official fold one.

562

00:33:34,360 --> 00:33:37,360

Let it fall, pull the slack.

563

00:33:37,360 --> 00:33:42,360

Oh, that was beautiful.

564

00:33:42,360 --> 00:33:45,360

They reposition for the next crease.

565

00:33:45,360 --> 00:33:48,360

We're going to fold that direction.

566

00:33:48,360 --> 00:33:52,360

It's like trying to fold the world's biggest bed sheet.

567

00:33:52,360 --> 00:33:58,360

It's starting to, it's crumpling in weird ways. It's not folding smoothly.

568

00:33:58,360 --> 00:34:04,360

But the team manages to smooth out the wrinkles and make folds two, three.

569

00:34:04,360 --> 00:34:06,360

Hey, notice we're all getting a little closer.

570

00:34:06,360 --> 00:34:09,360

Four, five.

571

00:34:09,360 --> 00:34:12,360

Everybody to this side for six.

572

00:34:12,360 --> 00:34:17,360

And six, neat and tidy tuckings.

573

00:34:17,360 --> 00:34:20,360

It's actually like an airbag.

574

00:34:20,360 --> 00:34:24,360

However, with each pass, the additional layers make it harder to heave over.

575

00:34:24,360 --> 00:34:29,360

And at fold seven, everyone and everything is starting to puff.

576

00:34:29,360 --> 00:34:30,360

A lot of air.

577

00:34:30,360 --> 00:34:32,360

Yeah, and it's not going down.

578

00:34:32,360 --> 00:34:33,360

There it is.

579

00:34:33,360 --> 00:34:34,360

Yeah, push your foot.

580

00:34:34,360 --> 00:34:36,360

Seven is squashed out.

581

00:34:36,360 --> 00:34:39,360

Now the team is about to go for eight.

582

00:34:39,360 --> 00:34:43,360

If they achieve this, they will bust the seven paper fold myth.

583

00:34:43,360 --> 00:34:45,360

See everybody's very quiet.

584

00:34:45,360 --> 00:34:47,360

Because we're all anticipating busting this myth.

585

00:34:47,360 --> 00:34:50,360

We've folded it seven times. We're about to go for number eight.

586

00:34:50,360 --> 00:34:52,360

Eight.

587

00:34:52,360 --> 00:34:55,360

Looking good.

588

00:34:55,360 --> 00:34:57,360

I think we're going to do it.

589

00:34:57,360 --> 00:35:01,360

The paper tries to dig in its heels, but is losing its grip.

590

00:35:01,360 --> 00:35:03,360

Come on.

591

00:35:03,360 --> 00:35:06,360

And we did it.

592

00:35:06,360 --> 00:35:08,360

Eight.

593

00:35:08,360 --> 00:35:09,360

Eight.

594

00:35:09,360 --> 00:35:10,360

Eight.

595

00:35:10,360 --> 00:35:14,360

It sure feels satisfying to beat a paper myth to a pulp.

596

00:35:14,360 --> 00:35:20,360

If you draw a line all the way down, you'll be able to intersect every layer.

597

00:35:20,360 --> 00:35:22,360

And that is a true eight folds.

598

00:35:22,360 --> 00:35:24,360

And that busts this myth.

599

00:35:24,360 --> 00:35:29,360

There's no stopping our out of control paper pushers now.

600

00:35:29,360 --> 00:35:32,360

If it's worth doing, it's worth overdoing.

601

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

Carrie trucks in a giant rolling pin to flatten this piece of puff pastry some more.

602

00:35:38,360 --> 00:35:41,360

Flat as a pancake.

603

00:35:41,360 --> 00:35:46,360

As smooth as rolled dough, it folds back easy as pie.

604

00:35:46,360 --> 00:35:47,360

Nine.

605

00:35:47,360 --> 00:35:48,360

Nine.

606

00:35:48,360 --> 00:35:53,360

To achieve double digits, the paper is too heavy for the team to lift themselves.

607

00:35:53,360 --> 00:35:55,360

So they stick a fork in it.

608

00:35:55,360 --> 00:35:57,360

Drive in. Drive in.

609

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

That is a definite ten.

610

00:36:03,360 --> 00:36:06,360

Topping ten is going to be tough.

611

00:36:07,360 --> 00:36:13,360

Thanks to their buddy, exponential growth, the paper is now 1,024 layers thick.

612

00:36:13,360 --> 00:36:17,360

It takes every ounce of strength they have to bend it.

613

00:36:17,360 --> 00:36:18,360

You got it?

614

00:36:18,360 --> 00:36:20,360

That feels like an honest eleven to me.

615

00:36:20,360 --> 00:36:22,360

Nice!

616

00:36:22,360 --> 00:36:24,360

Yeah!

617

00:36:24,360 --> 00:36:26,360

Eleven.

618

00:36:26,360 --> 00:36:32,360

Not only did they bust seven folds, they turned it up all the way to eleven.

619

00:36:32,360 --> 00:36:34,360

You definitely put this one to bed.

620

00:36:34,360 --> 00:36:35,360

Absolutely.

621

00:36:35,360 --> 00:36:40,360

As far as our definition for the myth goes as the fold, we've got it long, we've got it flat.

622

00:36:40,360 --> 00:36:44,360

If we do any bit more, it's just going to be a semi-circle.

623

00:36:44,360 --> 00:36:47,360

We got eleven folds out of a football-sized piece of paper.

624

00:36:47,360 --> 00:36:52,360

We busted a myth, and we're going to go home before the sun completely goes down.

625

00:36:52,360 --> 00:36:54,360

Eleven folds!

626

00:36:54,360 --> 00:36:55,360

I didn't think it was possible.

627

00:36:55,360 --> 00:36:57,360

Should we go to the NASA gift shop?

628

00:36:57,360 --> 00:36:58,360

Yeah!

629

00:36:58,360 --> 00:37:07,360

Next, as Adam learned how to channel Aquaman.

630

00:37:07,360 --> 00:37:09,360

That was beautiful!

631

00:37:09,360 --> 00:37:12,360

It was so...it was very cool.

632

00:37:14,360 --> 00:37:19,360

If you drive into a body of water, you don't get more than one chance to escape.

633

00:37:19,360 --> 00:37:21,360

So is there a best-hope scenario?

634

00:37:21,360 --> 00:37:24,360

Jamie and Adam are trying to find out.

635

00:37:24,360 --> 00:37:27,360

They've done their homework at M5.

636

00:37:28,360 --> 00:37:35,360

But it's way more exciting diving back into a real-life situation.

637

00:37:35,360 --> 00:37:39,360

The next survival technique we're going to try is breaking the window.

638

00:37:39,360 --> 00:37:45,360

Unfortunately, we can't break the window because it's cool and people would get glass in their feet or something.

639

00:37:45,360 --> 00:37:54,360

So what we've done is rig the window with a lubricant and with high voltage so that we can really positively pull it down.

640

00:37:54,360 --> 00:37:59,360

The high voltage triggers should be enough to counter the differential pressure.

641

00:37:59,360 --> 00:38:02,360

Alright, there we go.

642

00:38:02,360 --> 00:38:04,360

That sound again!

643

00:38:04,360 --> 00:38:07,360

Here we go, rushing in past my feet.

644

00:38:07,360 --> 00:38:09,360

Wow, we are dropping really fast.

645

00:38:09,360 --> 00:38:12,360

Alright, I'm sinking really fast now.

646

00:38:12,360 --> 00:38:18,360

I'm about to hit the switch in three, two, one.

647

00:38:18,360 --> 00:38:24,360

Adam hits the switch and water enters the cabin like a flood.

648

00:38:24,360 --> 00:38:29,360

But he rides out the torrent and escapes.

649

00:38:29,360 --> 00:38:34,360

I lived the water rushed in just as I thought it would and it was quite intense.

650

00:38:34,360 --> 00:38:36,360

But I held my breath.

651

00:38:36,360 --> 00:38:42,360

I only had to hold it for a few seconds because pretty much very quickly the cab filled up,

652

00:38:42,360 --> 00:38:46,360

I was able to just go out the window and come to the surface.

653

00:38:46,360 --> 00:38:49,360

By smashing the window, Adam survived.

654

00:38:49,360 --> 00:38:52,360

So in case of emergency, break glass.

655

00:38:52,360 --> 00:38:59,360

As the silent observer of Adam's numerous dunkings, Jamie has had time to meditate and he's had a vision.

656

00:38:59,360 --> 00:39:01,360

He calls his revelation...

657

00:39:01,360 --> 00:39:03,360

Simply patience.

658

00:39:03,360 --> 00:39:10,360

The idea being that if you sit there, you relax, you conserve your energy and therefore your air,

659

00:39:10,360 --> 00:39:15,360

you'll be able to apply your energy when you need it, right at the last minute when the car is equalized

660

00:39:15,360 --> 00:39:18,360

and there's not going to be any problem getting out of it.

661

00:39:18,360 --> 00:39:22,360

Instead of sitting there fighting the whole way and then you drown.

662

00:39:22,360 --> 00:39:28,360

Let the car fill up, let it settle on the bottom, then casually open the door and swim to the surface.

663

00:39:28,360 --> 00:39:32,360

It's the maximum conservation of energy technique.

664

00:39:32,360 --> 00:39:34,360

It's fairy Jamie.

665

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

I've gone through this before.

666

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

He totally relaxes.

667

00:39:42,360 --> 00:39:46,360

Adam centers himself inside the cabin.

668

00:39:49,360 --> 00:39:55,360

As the water level rises, he goes with the flow and serenely lets the car fill with water.

669

00:39:56,360 --> 00:40:03,360

He's under just as long as he was in the first test, but now he's not using up oxygen trying to yank open the door.

670

00:40:03,360 --> 00:40:07,360

The emergency air tank remains untouched.

671

00:40:07,360 --> 00:40:11,360

Now that's calm under differential pressure.

672

00:40:15,360 --> 00:40:19,360

When the cabin equalizes, he gently pushes open the door.

673

00:40:25,360 --> 00:40:28,360

The car is ready to go.

674

00:40:33,360 --> 00:40:35,360

I survived!

675

00:40:35,360 --> 00:40:39,360

Woo! The mid-busters technique worked!

676

00:40:39,360 --> 00:40:43,360

Woo! How many minutes was I down?

677

00:40:43,360 --> 00:40:45,360

One minute thirty seven.

678

00:40:45,360 --> 00:40:49,360

One minute thirty seven. I could have been down for another fifteen or twenty seconds.

679

00:40:49,360 --> 00:40:53,360

That was beautiful. It was so... it was very cool.

680

00:40:53,360 --> 00:40:58,360

The longest period of time to actually for the car to level out.

681

00:40:58,360 --> 00:41:03,360

Once it did though, I still felt like I had plenty of breath.

682

00:41:03,360 --> 00:41:08,360

I just cracked the door, gave thumbs up to the camera, and sawn it up to the surface.

683

00:41:08,360 --> 00:41:12,360

Jamie has a final watery rumination.

684

00:41:12,360 --> 00:41:16,360

Of course, in the real world, this technique is a little more problematic.

685

00:41:16,360 --> 00:41:21,360

Everything's happening so fast, you don't know what the depth of the water that you're in is.

686

00:41:21,360 --> 00:41:26,360

The best is to open that window before you get water up to it, and then your goal.

687

00:41:26,360 --> 00:41:32,360

In the words of a Zen master, in the beginner's mind there are many possibilities.

688

00:41:32,360 --> 00:41:35,360

But in the expert's mind, there are few.

689

00:41:35,360 --> 00:41:40,360

Looks like the guys have narrowed down this myth just so.

690

00:41:40,360 --> 00:41:43,360

Well, how are we going to wrap this one up?

691

00:41:43,360 --> 00:41:49,360

Well, the original myth we started with, that you can't open the car door until the cabin's full of water,

692

00:41:49,360 --> 00:41:51,360

is absolutely confirmed.

693

00:41:51,360 --> 00:41:56,360

And we've actually looked at four really viable survival techniques.

694

00:41:56,360 --> 00:42:01,360

Of course, the best one is, just don't drive into the water in the first place.

695

00:42:01,360 --> 00:42:02,360

I'll try and remember that.

696

00:42:02,360 --> 00:42:04,360

My personal favorite is your Zen technique.

697

00:42:04,360 --> 00:42:05,360

It worked.

698

00:42:05,360 --> 00:42:06,360

It worked like a charm.

699

00:42:06,360 --> 00:42:07,360

That was awesome.

700

00:42:07,360 --> 00:42:09,360

I was just sitting there watching you go,

701

00:42:09,360 --> 00:42:14,360

you're looking at your watch, you're kind of chilling out.

702

00:42:14,360 --> 00:42:16,360

Actually, I find it really relaxing to shot.

703

00:42:16,360 --> 00:42:19,360

I'm going to finish up by doing a little more meditating in the car at the bottom.

704

00:42:19,360 --> 00:42:20,360

Okay.

705

00:42:20,360 --> 00:42:33,360

I really like these kinds of myths, man.

706

00:42:33,360 --> 00:42:37,360

Putting ourselves in dangerous situations and coming up with the best way to get out,

707

00:42:37,360 --> 00:42:38,360

that's too much fun.

708

00:42:38,360 --> 00:42:40,360

I want to do some more.

709

00:42:40,360 --> 00:42:45,360

Well, you may get your chance because we're going to do a whole episode based on fan suggestions.

710

00:42:45,360 --> 00:42:47,360

I bet there's some like that in there.

711

00:42:47,360 --> 00:42:48,360

You hear that?

712

00:42:48,360 --> 00:42:53,360

So if you've got an idea for us, log on to Discovery.com slash MythBusters

713

00:42:53,360 --> 00:42:56,360

and tell us what you'd like to see us do on the air.

714

00:42:56,360 --> 00:43:00,360

Yeah, if it's stupid and risky, we're all over it.