

1

00:00:00,000 --> 00:00:05,400

Do not try any of the experiments you are about to see at home.

2

00:00:05,400 --> 00:00:07,600

You heard him. Don't do it.

3

00:00:11,600 --> 00:00:15,000

On this extra sticky episode of Mythbusters...

4

00:00:15,000 --> 00:00:18,000

This will be by far the strangest thing we have ever done.

5

00:00:18,000 --> 00:00:23,000

Adam and Jamie strip down to test a classic physics conundrum.

6

00:00:23,000 --> 00:00:25,000

Oh, holy crap, that is slippery!

7

00:00:25,000 --> 00:00:29,000

Can you swim just as fast in syrup as you can in water?

8

00:00:30,000 --> 00:00:32,000

Oh my God, look at you.

9

00:00:32,000 --> 00:00:36,000

While Tori, Grant and Carrie put the bite on two bullet myths.

10

00:00:36,000 --> 00:00:38,000

Your mom is in my head and she's saying don't do that.

11

00:00:40,000 --> 00:00:45,000

Could Davy Grockett really split a lead slug on an ax blade?

12

00:00:45,000 --> 00:00:47,000

That is crazy, look at that.

13

00:00:47,000 --> 00:00:53,000

And could McGiver blow open a steel door with a gun butt and the powder from six bullets?

14

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

Race yourself.

15

00:00:55,000 --> 00:00:56,000

Fire in the hole!

16

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

This will not be pretty.

17

00:01:01,000 --> 00:01:04,000

Who are the Mythbusters?

18

00:01:04,000 --> 00:01:05,000

Adam Savage

19

00:01:05,000 --> 00:01:07,000

Don't lick the mixing spoon.

20

00:01:07,000 --> 00:01:08,000

And Jamie Heineman

21

00:01:08,000 --> 00:01:10,000

When in doubt, C4.

22

00:01:10,000 --> 00:01:14,000

Between them more than 30 years of special effects experience.

23

00:01:14,000 --> 00:01:16,000

So the timing was perfect.

24

00:01:16,000 --> 00:01:18,000

Joining them, Carrie Byron.

25

00:01:18,000 --> 00:01:19,000

That was a rush.

26

00:01:19,000 --> 00:01:20,000

Grant Imahara

27

00:01:20,000 --> 00:01:21,000

Let's get it on!

28

00:01:21,000 --> 00:01:23,000

And Tori Belachie.

29

00:01:23,000 --> 00:01:24,000

Oh my God!

30

00:01:24,000 --> 00:01:26,000

They don't just tell the myth.

31

00:01:26,000 --> 00:01:29,000

They put them to the test.

32

00:01:47,000 --> 00:01:52,000

So I see swim goggles, I see a swim cap and I see syrup.

33

00:01:52,000 --> 00:01:55,000

I'm sensing a really big mess in our future, am I right?

34

00:01:55,000 --> 00:01:57,000

Oh, you are correct.

35

00:01:57,000 --> 00:02:00,000

This is a classic physics thought experiment.

36

00:02:00,000 --> 00:02:02,000

Simply stated, it is thus.

37

00:02:02,000 --> 00:02:07,000

That you can swim as fast in syrup as you can in regular old water.

38

00:02:07,000 --> 00:02:11,000

Well, the syrup is thicker, so I would think that it would slow down your movement through it.

39

00:02:11,000 --> 00:02:12,000

That might be true.

40

00:02:12,000 --> 00:02:18,000

But it also might be true that the thicker syrup gives you more to push against with your hands.

41

00:02:18,000 --> 00:02:23,000

So what this boils down to then is whether those two forces cancel each other out, right?

42

00:02:23,000 --> 00:02:25,000

That's what we got to get down and dirty and test.

43

00:02:25,000 --> 00:02:31,000

On the surface, you'd think that swimming in syrup could only end with drowning in syrup.

44

00:02:31,000 --> 00:02:33,000

But maybe not.

45

00:02:33,000 --> 00:02:40,000

The thick resistance that slows you down might also mean you've got more to push against, increasing your propulsion.

46

00:02:40,000 --> 00:02:43,000

Like Adam says, it's a classic physics dilemma.

47

00:02:43,000 --> 00:02:46,000

And we'll be testing it with real swimmers.

48

00:02:46,000 --> 00:02:47,000

Sweet.

49

00:02:47,000 --> 00:02:53,000

You know, I'm going to go out on a limb here and say we need to get a pool, a bunch of syrup, and start testing.

50

00:02:53,000 --> 00:02:55,000

You're right, but with two notable exceptions.

51

00:02:55,000 --> 00:02:57,000

One, we're not going to use real maple syrup.

52

00:02:57,000 --> 00:03:01,000

We're going to use guar gum, which should allow us to get exactly the viscosity we want.

53

00:03:01,000 --> 00:03:05,000

Two, we couldn't find a pool that would allow us to fill it with syrup.

54

00:03:05,000 --> 00:03:06,000

We're going to have to make our own.

55

00:03:06,000 --> 00:03:09,000

In fact, I propose we make two pools.

56

00:03:09,000 --> 00:03:14,000

One filled with water, one filled with heavy syrup, swimming each and compare our times.

57

00:03:14,000 --> 00:03:15,000

It's that simple.

58

00:03:15,000 --> 00:03:17,000

Well, let's dive right in.

59

00:03:17,000 --> 00:03:18,000

Okay.

60

00:03:24,000 --> 00:03:28,000

Well, this may look like just a clearing in the hills of Dublin, Pleasanton, California,

61

00:03:28,000 --> 00:03:36,000

but by the time we're done with it, by the end of the day, when we're through, digging a pair of 75 foot long pools with these puppies,

62

00:03:36,000 --> 00:03:43,000

this will be an experimental space on the leading edge of fluid dynamics swimming in goo.

63

00:03:43,000 --> 00:03:49,000

Before they tackle the swimming or the science, the boys need to show their blue collar credentials.

64

00:03:49,000 --> 00:03:51,000

And what do you know?

65

00:03:51,000 --> 00:03:53,000

It's poetry in motion.

66

00:04:04,000 --> 00:04:08,000

We are now about to line these in heavy plastic and fill them with water.

67

00:04:08,000 --> 00:04:12,000

And we're using four layers of heavy plastic, hopefully to keep any leaks from happening.

68

00:04:12,000 --> 00:04:15,000

We tried to eliminate as many sharp objects on the bottom.

69

00:04:15,000 --> 00:04:16,000

Perfect.

70

00:04:19,000 --> 00:04:21,000

Wow, it's freaking dark in here.

71

00:04:21,000 --> 00:04:23,000

Okay, everybody, just stay put.

72

00:04:23,000 --> 00:04:25,000

Make sure you hang onto your edges.

73

00:04:25,000 --> 00:04:26,000

We're ready for water.

74

00:04:29,000 --> 00:04:31,000

An Alameda County fire truck pumps the water.

75

00:04:35,000 --> 00:04:41,000

And the plastic lining, bolstered by some hefty plywood decking, seems to be holding.

76

00:04:41,000 --> 00:04:43,000

That's turned out to be a heck of a pool.

77

00:04:43,000 --> 00:04:45,000

Dude, this thing looks awesome.

78

00:04:45,000 --> 00:04:48,000

Dig a hole, got some plastic, you got a pool, huh?

79

00:04:50,000 --> 00:04:53,000

Ah, well, if the other trench is ready, let's make some goo and fill it.

80

00:04:53,000 --> 00:04:54,000

Okay.

81

00:04:54,000 --> 00:04:57,000

It's time to get sticky for science.

82

00:05:06,000 --> 00:05:07,000

What is it?

83

00:05:07,000 --> 00:05:10,000

All right, MacGyver is on a cargo ship.

84

00:05:10,000 --> 00:05:13,000

He's trying to rescue a boy who's locked behind a steel door.

85

00:05:13,000 --> 00:05:18,000

He empties out six bullets and ignites the gunpowder using an empty cartridge,

86

00:05:18,000 --> 00:05:20,000

then blows a lock open.

87

00:05:20,000 --> 00:05:22,000

Huh, I wouldn't have thought of that one.

88

00:05:24,000 --> 00:05:29,000

Mac's method is to pack the powder from six bullets inside a shred of cloth.

89

00:05:29,000 --> 00:05:32,000

He stuffs that in the lock, shoves in an empty cartridge,

90

00:05:32,000 --> 00:05:36,000

and smacks the firing cap with the butt of his gun.

91

00:05:37,000 --> 00:05:40,000

Hang on, I thought MacGyver had an extreme aversion to guns.

92

00:05:40,000 --> 00:05:46,000

True, he took a .38 from a guard he just KO'd, but let's not forget, there's a child's life at stake here.

93

00:05:46,000 --> 00:05:48,000

Sorry, forgot that.

94

00:05:48,000 --> 00:05:49,000

But still, it's a loaded gun.

95

00:05:49,000 --> 00:05:52,000

I mean, why wouldn't he just point it at the lock and shoot it out?

96

00:05:52,000 --> 00:05:56,000

Well, he thought it would ricochet straight back off a steel door.

97

00:05:56,000 --> 00:05:57,000

So what do you guys think?

98

00:05:57,000 --> 00:05:59,000

I say, let's give it a try.

99

00:05:59,000 --> 00:06:00,000

Let's do it.

100

00:06:01,000 --> 00:06:07,000

It's unusual for us to start testing a myth with an alternate method,

101

00:06:07,000 --> 00:06:10,000

but this really is the elephant in the room.

102

00:06:10,000 --> 00:06:14,000

If I had only a gun to unlock a door, I mean, personally, I would try shooting it

103

00:06:14,000 --> 00:06:17,000

before I would even remotely think of MacGyver's method.

104

00:06:17,000 --> 00:06:20,000

So I guess we'll see if he made the wise choice.

105

00:06:20,000 --> 00:06:27,000

Grant and Tori fixed the gun just a foot shy of a similar lock stuck inside a solid steel door.

106

00:06:27,000 --> 00:06:31,000

For safety's sake, they've set up the rig inside the bunker.

107

00:06:31,000 --> 00:06:35,000

All right, we're hot. We're cocked. We're loaded. Get out of here.

108

00:06:35,000 --> 00:06:38,000

Even in the drizzle, they're better off out than in.

109

00:06:38,000 --> 00:06:43,000

Here we go. In three, two, one.

110

00:06:43,000 --> 00:06:47,000

Ooh, that was a good one.

111

00:06:47,000 --> 00:06:51,000

Turns out it was much more than a good one.

112

00:06:51,000 --> 00:06:54,000

This lock was cracked with the very first bullet.

113

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

We punched a hole in the face of that lock.

114

00:06:57,000 --> 00:06:59,000

What? It opened?

115

00:06:59,000 --> 00:07:02,000

I don't accept that.

116

00:07:02,000 --> 00:07:04,000

We got it open in one shot.

117

00:07:04,000 --> 00:07:05,000

Wait, wait, wait, wait, wait.

118

00:07:05,000 --> 00:07:07,000

I am positive it was a lock.

119

00:07:07,000 --> 00:07:11,000

I don't know what to say. This never happens to us.

120

00:07:11,000 --> 00:07:18,000

I fully expected us to be here all day, you know, round after round, bouncing off the top or denting it.

121

00:07:19,000 --> 00:07:25,000

But Mack took a leaf from our book, using materials in ways that were never intended.

122

00:07:25,000 --> 00:07:30,000

Now, before we jump straight to the big bag, let's test his prep.

123

00:07:30,000 --> 00:07:34,000

First up, can you pull a bullet apart with your fingers?

124

00:07:34,000 --> 00:07:38,000

He is MacGyver. He has the strength of 20 men.

125

00:07:38,000 --> 00:07:40,000

Apparently not.

126

00:07:40,000 --> 00:07:45,000

Tori has the zen-like patience of a three-year-old unwrapping a birthday present.

127

00:07:46,000 --> 00:07:50,000

Okay, right now, your mom is in my head and she's saying, don't do that.

128

00:07:50,000 --> 00:07:52,000

So that's just Hollywood Hocom.

129

00:07:52,000 --> 00:07:54,000

No. Ah!

130

00:07:56,000 --> 00:08:00,000

What about setting off a firing cap with the broad butt of a 38?

131

00:08:02,000 --> 00:08:04,000

Okay, so we need to test this MacGyver scene.

132

00:08:04,000 --> 00:08:09,000

We need to find out if you can set off one of these caps by hitting it with a gun.

133

00:08:09,000 --> 00:08:11,000

Alright, this should be fun.

134

00:08:11,000 --> 00:08:14,000

Our guys are dedicated, but not insane.

135

00:08:14,000 --> 00:08:17,000

These cartridges have all been emptied of gunpowder.

136

00:08:17,000 --> 00:08:19,000

Ready, set, go!

137

00:08:21,000 --> 00:08:25,000

Now, I know it looks like we're having a lot of fun, but this is very dangerous.

138

00:08:25,000 --> 00:08:29,000

We're taking all the precautions to make sure everything is done safely.

139

00:08:29,000 --> 00:08:33,000

Nobody should ever try setting off a bullet outside of a gun.

140

00:08:33,000 --> 00:08:36,000

It's a bust for Mac's ignition system.

141

00:08:36,000 --> 00:08:43,000

Now, I don't know about yours, but I flattened the crap out of mine and it still didn't go off.

142

00:08:43,000 --> 00:08:44,000

Why is that?

143

00:08:44,000 --> 00:08:48,000

That's because this tiny firing cap flushed to the back of the cartridge

144

00:08:48,000 --> 00:08:53,000

is designed to be struck precisely by an equally tiny firing pin.

145

00:08:54,000 --> 00:08:59,000

So for our testing, Kari fits a similar pin in the base of the gun grip.

146

00:09:00,000 --> 00:09:05,000

Grant builds a simple rig to swing the gun to smash the cap to ignite the powder.

147

00:09:06,000 --> 00:09:10,000

Bang, bang, bang. That is going to be awesome.

148

00:09:10,000 --> 00:09:14,000

But just how much gunpowder do you get from six bullets?

149

00:09:14,000 --> 00:09:19,000

Okay, so that amount of gunpowder is only 30 grains.

150

00:09:19,000 --> 00:09:22,000

I mean, that's not a lot. Let me show you how much that is.

151

00:09:24,000 --> 00:09:28,000

That is all we have to work with to blow this lock up.

152

00:09:28,000 --> 00:09:29,000

I don't know if this is going to work.

153

00:09:30,000 --> 00:09:33,000

Still to come, this MacGyver myth hits the bomb range.

154

00:09:33,000 --> 00:09:35,000

You guys ready to have your minds blown?

155

00:09:35,000 --> 00:09:43,000

But next, it's Adam and Janie, Neck High in swimsuits and syrup.

156

00:09:43,000 --> 00:09:45,000

Oh, crap, that is slippery.

157

00:09:59,000 --> 00:10:04,000

It's time to fill our pool with syrup and the role of syrup today will be played by guar gum.

158

00:10:04,000 --> 00:10:11,000

It's a powdered food thickener and somehow we've got to make 750 pounds of it with 10,000 gallons of water.

159

00:10:11,000 --> 00:10:13,000

And that's where this truck comes in.

160

00:10:13,000 --> 00:10:18,000

Amazingly, it is uniquely custom-built for mixing guar gum with water.

161

00:10:19,000 --> 00:10:24,000

So if I'm correct, you place a 50-pound bag right here, slice up in the end and dumps in right there.

162

00:10:24,000 --> 00:10:25,000

Exactly right.

163

00:10:25,000 --> 00:10:28,000

Have you ever mixed up a guar gum mixture that's thick before?

164

00:10:28,000 --> 00:10:31,000

We've never mixed it this thick before. We're not even sure if it'll come.

165

00:10:32,000 --> 00:10:35,000

Well, it's better breaking their toys than ours.

166

00:10:35,000 --> 00:10:39,000

And let's remember that Adam and Janie will soon be swimming in this.

167

00:10:39,000 --> 00:10:41,000

I'll swim first if you don't mind.

168

00:10:41,000 --> 00:10:45,000

There's your starting fissile. There's your timer.

169

00:10:45,000 --> 00:10:49,000

And these things are so comfy I've been wearing mine all day.

170

00:10:51,000 --> 00:10:59,000

Janie averts his eyes and bites his tongue, knowing he'll be the next man stripping down to his racing undies.

171

00:10:59,000 --> 00:11:03,000

All right. Let's go.

172

00:11:03,000 --> 00:11:07,000

On your mark. Ready.

173

00:11:09,000 --> 00:11:12,000

This is the first of three freshwater sprints.

174

00:11:12,000 --> 00:11:16,000

They'll average out the times for a comparison to swimming in syrup.

175

00:11:17,000 --> 00:11:19,000

15.72.

176

00:11:19,000 --> 00:11:21,000

I bet I'll do faster the second time.

177

00:11:21,000 --> 00:11:24,000

It's just got to get used to swimming in such a narrow channel.

178

00:11:25,000 --> 00:11:30,000

It really doesn't matter how fast he swims so long as they get a good set of numbers.

179

00:11:32,000 --> 00:11:34,000

14.78.

180

00:11:36,000 --> 00:11:40,000

But Adam just can't resist showing off for the ladies.

181

00:11:40,000 --> 00:11:43,000

A little bit quicker each time. 14.62.

182

00:11:43,000 --> 00:11:45,000

You want to go?

183

00:11:45,000 --> 00:11:46,000

Did you pee in the pool?

184

00:11:46,000 --> 00:11:47,000

I did not.

185

00:11:47,000 --> 00:11:49,000

And that's good enough for Janie.

186

00:11:49,000 --> 00:11:53,000

He dons the cap and goggles and hands the gun to Adam.

187

00:11:53,000 --> 00:11:58,000

I get to say, I feel less like a swimming coach than a guy defending his house in the middle of the

night.

188

00:11:59,000 --> 00:12:01,000

You kids, get off my lawn!

189

00:12:03,000 --> 00:12:06,000

Janie proves to be more of a distance swimmer.

190

00:12:06,000 --> 00:12:09,000

But again, speed isn't the issue.

191

00:12:09,000 --> 00:12:14,000

What kind of a swimmer am I? Well, I'm not very fast. I get the job done, that's about it.

192

00:12:19,000 --> 00:12:20,000

24.

193

00:12:20,000 --> 00:12:24,000

And now they're ready to swim in something that's more like tree cold.

194

00:12:24,000 --> 00:12:28,000

This stuff is 1500 times thicker than water.

195

00:12:28,000 --> 00:12:29,000

I know what you're thinking.

196

00:12:29,000 --> 00:12:33,000

Of course you're going to swim slower in syrup than you are in regular water.

197

00:12:33,000 --> 00:12:39,000

But what if you get more purchase on your paddling hands and so on and something that's thicker?

198

00:12:39,000 --> 00:12:41,000

And here's another thought.

199

00:12:41,000 --> 00:12:45,000

Molecular bonds in syrup like this are constantly changing.

200

00:12:45,000 --> 00:12:51,000

It all depends on the temperature and the speed and the shape of a body moving through the liquid.

201

00:12:52,000 --> 00:13:00,000

What is happening in syrup is that we have things known as polymer chains or long strings of molecules

202

00:13:00,000 --> 00:13:05,000

that basically are like spaghetti noodles, like cooked spaghetti noodles, and they stick together.

203

00:13:05,000 --> 00:13:09,000

When they soak up water, we've got these bunches of these polymer chains.

204

00:13:09,000 --> 00:13:17,000

And depending on the speed that you move through them, depending on their thickness and what exactly they're made of,

205

00:13:17,000 --> 00:13:23,000

they can either just part and let you go through this mix like water, or they can bunch up,

206

00:13:23,000 --> 00:13:26,000

they can become something like the labreo tar pits.

207

00:13:26,000 --> 00:13:32,000

There's all sorts of different ways that these can end up affecting you as you're swimming in them.

208

00:13:33,000 --> 00:13:41,000

Janey's right. It's almost impossible to untangle the molecular physics of Newtonian fluids from Einsteinian viscosity.

209

00:13:41,000 --> 00:13:45,000

But Adam has a very prosaic prediction.

210

00:13:45,000 --> 00:13:49,000

Honestly, I don't see it happening. That stuff is just too darn thick.

211

00:13:49,000 --> 00:13:57,000

I think the difference we'll be seeing is much greater in the order of like 30, 40%, like 5, 6, 8 seconds difference.

212

00:13:57,000 --> 00:14:03,000

Adam's the first to see if swimming in syrup is faster than his freshwater freestyle.

213

00:14:09,000 --> 00:14:12,000

Oh, holy crap, that is slippery.

214

00:14:15,000 --> 00:14:21,000

It looks fast, but those resounding plops tell a different story.

215

00:14:22,000 --> 00:14:24,000

1862.

216

00:14:24,000 --> 00:14:26,000

That was respectively close.

217

00:14:26,000 --> 00:14:31,000

That's not that much different. That's only about three seconds or so slower.

218

00:14:31,000 --> 00:14:35,000

This stuff feels completely bizarre.

219

00:14:37,000 --> 00:14:39,000

Oh, it's like being born again.

220

00:14:42,000 --> 00:14:45,000

So let's get born again, again.

221

00:14:49,000 --> 00:14:51,000

18.94.

222

00:14:51,000 --> 00:14:53,000

And again.

223

00:14:57,000 --> 00:14:59,000

18.4.

224

00:15:01,000 --> 00:15:05,000

Well, your slowest times are faster than my fastest times in water.

225

00:15:05,000 --> 00:15:08,000

And there's more good news to come.

226

00:15:08,000 --> 00:15:14,000

Adam's average freshwater times weren't that much different to swimming in syrup.

227

00:15:14,000 --> 00:15:17,000

I'm really surprised how fast I was able to go.

228

00:15:17,000 --> 00:15:21,000

I would have thought the syrup would slow me down by like a factor of two.

229

00:15:21,000 --> 00:15:24,000

Not by a factor of .2.

230

00:15:24,000 --> 00:15:26,000

But we'd like two sets of figures.

231

00:15:26,000 --> 00:15:30,000

Time for Jamie to dip his doodle in that cold, cold sludge.

232

00:15:34,000 --> 00:15:36,000

Ready, set.

233

00:15:38,000 --> 00:15:42,000

I actually kind of like this stuff. It's kind of cozy in here.

234

00:15:42,000 --> 00:15:46,000

But swimming in it, not so much.

235

00:15:46,000 --> 00:15:48,000

No frigging way.

236

00:15:48,000 --> 00:15:50,000

Really?

237

00:15:50,000 --> 00:15:52,000

This is much heavier than me.

238

00:15:52,000 --> 00:15:56,000

I found that swimming in this stuff made me a lot more tired than swimming in water.

239

00:16:07,000 --> 00:16:09,000

That looked like a lot of work.

240

00:16:10,000 --> 00:16:15,000

So Jamie officially retires from competitive syrup swimming.

241

00:16:15,000 --> 00:16:18,000

We'll be using Adam's averages to make the comparisons.

242

00:16:19,000 --> 00:16:21,000

You alright?

243

00:16:21,000 --> 00:16:24,000

I'm fine. I'm just glad it didn't fall in there.

244

00:16:24,000 --> 00:16:25,000

Yeah.

245

00:16:25,000 --> 00:16:27,000

Three, two.

246

00:16:27,000 --> 00:16:30,000

After the break, Max Gunpowder's stunt gets blown to pieces.

247

00:16:30,000 --> 00:16:33,000

I hate it. Torey's right. I'm wrong.

248

00:16:33,000 --> 00:16:35,000

I hate that.

249

00:16:35,000 --> 00:16:57,000

Torey, Grant and Carrie are ready to test if TV legend Angus McGyver could possibly have blown the lock on a steel door using only loose gunpowder, an empty cartridge, and the butt of his gun.

250

00:16:57,000 --> 00:17:03,000

We're back at the Alameda Bomb Range, which is one of our favorite places to go because we can do all the things that we can't do in the shop.

251

00:17:03,000 --> 00:17:05,000

I think blow doors open with gunpowder.

252

00:17:05,000 --> 00:17:07,000

Get in there.

253

00:17:10,000 --> 00:17:12,000

Somebody go get McGyver.

254

00:17:12,000 --> 00:17:15,000

Alright, so that is 30 grains of smokeless powder.

255

00:17:15,000 --> 00:17:16,000

That's six bullets worth?

256

00:17:16,000 --> 00:17:18,000

Yeah, I know. Doesn't look like much.

257

00:17:18,000 --> 00:17:20,000

Do you think that's going to blow the lock open?

258

00:17:20,000 --> 00:17:21,000

Hey, it worked for McGyver.

259

00:17:21,000 --> 00:17:22,000

Yeah, I doubt it.

260

00:17:22,000 --> 00:17:25,000

I think the hardest part is going to be getting that into the lock.

261

00:17:25,000 --> 00:17:26,000

I know.

262

00:17:26,000 --> 00:17:28,000

Alright, let's do it.

263

00:17:28,000 --> 00:17:31,000

Carrie does manage to stuff the cloth in the lock.

264

00:17:31,000 --> 00:17:34,000

That's the first real thumbs up for this myth.

265

00:17:34,000 --> 00:17:36,000

Okay, that should be it.

266

00:17:36,000 --> 00:17:40,000

Then the boys attach Grant's custom rig to the door frame.

267

00:17:40,000 --> 00:17:43,000

So our lock is right behind here.

268

00:17:43,000 --> 00:17:46,000

It's got the bit of bandana with the powder in it.

269

00:17:46,000 --> 00:17:53,000

This is our cap and this is our mechanism to swing the gun.

270

00:17:53,000 --> 00:17:57,000

It's a little more complicated than just hitting it, but for safety's sake, we need something to do it.

271

00:17:57,000 --> 00:17:59,000

We need something to do it remotely.

272

00:17:59,000 --> 00:18:01,000

Do you want to put tension on the string, see if it holds up?

273

00:18:01,000 --> 00:18:04,000

Yeah, go ahead.

274

00:18:04,000 --> 00:18:06,000

Perfect.

275

00:18:06,000 --> 00:18:09,000

Okay, this is McGyver gun powder in lock test one.

276

00:18:09,000 --> 00:18:12,000

You guys ready to have your minds blown?

277

00:18:12,000 --> 00:18:14,000

Yeah, here we go.

278

00:18:14,000 --> 00:18:18,000

In three, two, one.

279

00:18:18,000 --> 00:18:22,000

No smoke, no fire, and no boom.

280

00:18:22,000 --> 00:18:27,000

I realized the earplugs are more for your countdown than the actual popping.

281

00:18:27,000 --> 00:18:32,000

The pin on the gun grip did strike the cap, but it didn't ignite the powder.

282

00:18:32,000 --> 00:18:35,000

Yeah, it went off, but the powder didn't, so what's the next step?

283

00:18:35,000 --> 00:18:39,000

I mean, the obvious thing is that the cap is not coming into contact with the powder because of the cloth.

284

00:18:39,000 --> 00:18:43,000

Maybe what we do is we put a hole in the cloth so that we have the cap in contact with the powder.

285

00:18:43,000 --> 00:18:45,000

Alright, well let's give that shot.

286

00:18:45,000 --> 00:18:50,000

Sok Tori sensibly spreads the gun powder all the way back to the ignition cap.

287

00:18:50,000 --> 00:18:54,000

Here we go. Three, two, one.

288

00:18:54,000 --> 00:18:57,000

Silence is deafening.

289

00:18:57,000 --> 00:19:01,000

Max Mini hostage wouldn't even know that someone was trying to rescue him.

290

00:19:01,000 --> 00:19:04,000

It didn't ignite the powder, and that was in contact with the cap.

291

00:19:04,000 --> 00:19:09,000

You know, I'm starting to think that no matter what, a cap going off isn't going to ignite the gun powder.

292

00:19:09,000 --> 00:19:15,000

But Grant's found a loophole that might just save this stunt and salvage Max's reputation.

293

00:19:15,000 --> 00:19:20,000

Now the type of gun powder that we're using is smokeless gun powder, which is found in modern ammunition.

294

00:19:20,000 --> 00:19:28,000

But at one time, the .38 caliber round had black powder, which has a bit more punch than the smokeless.

295

00:19:31,000 --> 00:19:35,000

My prediction is this is not going to work, but I'm optimistic.

296

00:19:35,000 --> 00:19:40,000

This might be their last chance to blow the lock like Mack did.

297

00:19:40,000 --> 00:19:43,000

Three, two, one.

298

00:19:44,000 --> 00:19:48,000

It ignited. That was cool.

299

00:19:48,000 --> 00:19:51,000

Alright, let's see if it opened that lock.

300

00:19:53,000 --> 00:19:54,000

No.

301

00:19:54,000 --> 00:19:59,000

The lock is intact, though it still looks real good on the high speed.

302

00:19:59,000 --> 00:20:01,000

It looks just like it did on the episode.

303

00:20:01,000 --> 00:20:02,000

Yeah.

304

00:20:02,000 --> 00:20:04,000

Except for that part where the door opens.

305

00:20:04,000 --> 00:20:09,000

So this door-busting myth, as seen on TV, is busted.

306

00:20:09,000 --> 00:20:12,000

But Grant still has faith in the general principle.

307

00:20:12,000 --> 00:20:18,000

Just the sake of argument, let's say that McGyver had a lot of black powder bullets.

308

00:20:18,000 --> 00:20:20,000

Yeah, let's fill the whole beat.

309

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

Fill the lock with black powder and then see.

310

00:20:23,000 --> 00:20:26,000

So they do, all the way up to the keyhole.

311

00:20:26,000 --> 00:20:29,000

And I've measured out 600 grains of black powder.

312

00:20:29,000 --> 00:20:32,000

That's 120 bullets worth of black powder.

313

00:20:32,000 --> 00:20:34,000

Now that's a lot more than McGyver had.

314

00:20:34,000 --> 00:20:36,000

Is that going to be enough to blow the lock open?

315

00:20:36,000 --> 00:20:37,000

We're about to find out.

316

00:20:38,000 --> 00:20:44,000

And their best chance for a big result is to forgo the cartridge cap for an electric igniter.

317

00:20:44,000 --> 00:20:49,000

How it works is you apply a battery to this end, current flows through the wire,

318

00:20:49,000 --> 00:20:56,000

heats up a little piece of wire here at the end that heats up chemical and instant ignition for our gunpowder.

319

00:20:56,000 --> 00:21:00,000

Now Carrie's prepared to make a prediction that's crystal clear.

320

00:21:00,000 --> 00:21:04,000

I think there's going to be a nice colorful boom, but I don't think that we're actually going to explode this lock

321

00:21:04,000 --> 00:21:08,000

because I think that the keyholes are going to let all of that pressure out.

322

00:21:08,000 --> 00:21:14,000

You can't fault the theory, but this ain't over until they've blown the gizzards out of it.

323

00:21:14,000 --> 00:21:16,000

Alrighty boys.

324

00:21:16,000 --> 00:21:17,000

Yes girl.

325

00:21:17,000 --> 00:21:23,000

This is lock, half full with black powder, electric igniter, just for the heck of it because we can.

326

00:21:23,000 --> 00:21:27,000

Well this could, you know, if it does explode it could open that door.

327

00:21:27,000 --> 00:21:29,000

I don't know about that, we'll see.

328

00:21:29,000 --> 00:21:32,000

Alright, in three, two, one.

329

00:21:35,000 --> 00:21:36,000

Yeah!

330

00:21:36,000 --> 00:21:37,000

Wow.

331

00:21:37,000 --> 00:21:39,000

We blew the door open.

332

00:21:39,000 --> 00:21:40,000

We blew the door open.

333

00:21:40,000 --> 00:21:42,000

Why am I always wrong?

334

00:21:42,000 --> 00:21:43,000

Yeah!

335

00:21:43,000 --> 00:21:47,000

I grossly underestimated the power of black powder in this lock.

336

00:21:47,000 --> 00:21:52,000

I thought there was no way in heck that door was opening and it's wide open and I hated it.

337

00:21:52,000 --> 00:21:54,000

And Tori's right and I'm wrong.

338

00:21:54,000 --> 00:21:55,000

I hate that.

339

00:21:55,000 --> 00:21:59,000

As much fun as I had today, I'm a little bit disappointed.

340

00:21:59,000 --> 00:22:01,000

Why? Because every prediction you have was wrong?

341

00:22:01,000 --> 00:22:06,000

Yeah, a little bit, but I mean guys, we busted MacGyver.

342

00:22:06,000 --> 00:22:09,000

Yes, but we proved that the general principle is sound.

343

00:22:09,000 --> 00:22:16,000

You just need a lot more gun powder and we even proved that you could set off gun powder using an empty cartridge by hitting it with the butt of a gun.

344

00:22:16,000 --> 00:22:17,000

I'm very impressed.

345

00:22:17,000 --> 00:22:25,000

But we did have a clear demonstration on how this was supposed to have worked from the TV show using only six bullets worth of powder and we didn't come anywhere close to that.

346

00:22:25,000 --> 00:22:28,000

Alright, so this one is busted.

347

00:22:28,000 --> 00:22:29,000

Busted.

348

00:22:29,000 --> 00:22:30,000

Busted.

349

00:22:30,000 --> 00:22:33,000

Well, you know what? It's not MacGyver's fault. It was the writer's fault.

350

00:22:33,000 --> 00:22:34,000

Good point.

351

00:22:34,000 --> 00:22:35,000

MacGyver's real.

352

00:22:35,000 --> 00:22:37,000

Yeah, so is the Toot Fairy.

353

00:22:37,000 --> 00:22:39,000

No, that's a myth.

354

00:22:39,000 --> 00:22:41,000

No, he's real too.

355

00:22:41,000 --> 00:22:42,000

No, Sasquatch is a myth.

356

00:22:46,000 --> 00:22:51,000

Coming up, Adam sets some surprising times in a new mix of syrup.

357

00:22:51,000 --> 00:22:53,000

Do you want to know how you did?

358

00:22:53,000 --> 00:22:54,000

Lay it on me, coach.

359

00:22:54,000 --> 00:22:58,000

Then we put a genuine frontier legend to the ultimate test.

360

00:22:58,000 --> 00:23:00,000

You know, maybe we channel him.

361

00:23:00,000 --> 00:23:02,000

Maybe, maybe help me hit my target.

362

00:23:07,000 --> 00:23:10,000

Please do not try what we do on this show at home.

363

00:23:10,000 --> 00:23:12,000

We're what you call experts.

364

00:23:12,000 --> 00:23:14,000

It's safer that way.

365

00:23:14,000 --> 00:23:31,000

We all love syrup on pancakes, but Adam and J.N.E. are dipping into some complex physics to see if they can swim in syrup just as fast as they can in water.

366

00:23:36,000 --> 00:23:41,000

Well, the results are in. We both swam significantly slower in syrup. It's not looking good for the myth.

367

00:23:41,000 --> 00:23:48,000

I know, but I'm not willing to let this one go. I'm starting to believe that we might have gotten this whole viscosity thing all wrong.

368

00:23:48,000 --> 00:23:51,000

How so? Nobody would deny that we were swimming in syrup.

369

00:23:51,000 --> 00:23:57,000

Right, but it was an average Joe's interpretation of syrup and it was 1500 times more viscous than water.

370

00:23:57,000 --> 00:24:01,000

And this myth has its origins as a physics thought experiment.

371

00:24:01,000 --> 00:24:10,000

To a physicist, something that's only twice the viscosity of water could be called a syrup and we might get very different results with material like that.

372

00:24:11,000 --> 00:24:16,000

Back in the trenches, it's time for a full scale refill with a brand new recipe.

373

00:24:16,000 --> 00:24:17,000

It should be perfect.

374

00:24:17,000 --> 00:24:18,000

That's a lot of rip.

375

00:24:18,000 --> 00:24:21,000

All right, let's bring on the water.

376

00:24:23,000 --> 00:24:31,000

We have in order to test this scaled back our syrup swimming pool all the way down to something that's only between two and five times as viscous as water.

377

00:24:31,000 --> 00:24:35,000

But rest assured to a physicist, this is a significant difference from regular water.

378

00:24:35,000 --> 00:24:39,000

Now the question is, will there be a significant difference in my swimming time?

379

00:24:39,000 --> 00:24:43,000

But first, we'll have to re-rate Adam in regular water.

380

00:24:43,000 --> 00:24:48,000

After all, it's a new day and he could be a few seconds slower or faster.

381

00:24:50,000 --> 00:24:55,000

Adam's first effort shows that getting a new set of figures was a prudent move.

382

00:24:55,000 --> 00:24:56,000

You're there.

383

00:24:56,000 --> 00:24:58,000

1343.

384

00:24:58,000 --> 00:24:59,000

Damn.

385

00:24:59,000 --> 00:25:02,000

I was worried that I was out of shape, but that's pretty darn good.

386

00:25:02,000 --> 00:25:03,000

Let's go for another one.

387

00:25:04,000 --> 00:25:05,000

No.

388

00:25:05,000 --> 00:25:10,000

The average time for all three swims is a full second faster than the day before.

389

00:25:12,000 --> 00:25:15,000

Why don't we take a quick break and then move into the syrup?

390

00:25:15,000 --> 00:25:19,000

Why don't we take a little bit of a reasonable break and then I'll swim in the syrup.

391

00:25:19,000 --> 00:25:20,000

Okay.

392

00:25:20,000 --> 00:25:27,000

While Adam takes a well-earned soap, let's reflect on the practical benefits of learning to swim through syrup.

393

00:25:28,000 --> 00:25:34,000

You know, somebody's going to be wondering what possible real-world application this is going to have.

394

00:25:34,000 --> 00:25:46,000

That person would be ignoring the fact of the great 1919 molasses flood in Boston in which a massive vat of molasses broke free.

395

00:25:46,000 --> 00:25:53,000

Molasses poured into the streets and killed 21 people who presumably had no idea how to swim in syrup.

396

00:25:53,000 --> 00:25:58,000

Well, it just goes to show you've got to collect those skills to be ready for anything, right?

397

00:25:58,000 --> 00:25:59,000

Yeah.

398

00:25:59,000 --> 00:26:01,000

Meantime, back at Club Mud.

399

00:26:01,000 --> 00:26:03,000

Ah, it's cold.

400

00:26:03,000 --> 00:26:04,000

Okay, here we go.

401

00:26:04,000 --> 00:26:05,000

Whoa.

402

00:26:05,000 --> 00:26:09,000

Okay, Adam and syrup twice as thick as water.

403

00:26:11,000 --> 00:26:13,000

Adam strikes out again.

404

00:26:14,000 --> 00:26:15,000

There.

405

00:26:15,000 --> 00:26:17,000

And sets a really fast time.

406

00:26:17,000 --> 00:26:20,000

14.02 seconds.

407

00:26:20,000 --> 00:26:21,000

Nice.

408

00:26:21,000 --> 00:26:22,000

You know what that is?

409

00:26:22,000 --> 00:26:25,000

That's significant data.

410

00:26:25,000 --> 00:26:26,000

Let's go again.

411

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

Okay.

412

00:26:29,000 --> 00:26:33,000

Adam's next two laps are both well under 15 seconds.

413

00:26:35,000 --> 00:26:37,000

14.62.

414

00:26:37,000 --> 00:26:42,000

Ah, it looks like I'm getting tired and slowing down a little bit.

415

00:26:42,000 --> 00:26:46,000

At the very least, this comparison looks like a close call.

416

00:26:46,000 --> 00:26:47,000

You want to know how you did?

417

00:26:47,000 --> 00:26:48,000

Lay it on me, coach.

418

00:26:48,000 --> 00:26:54,000

Okay, well, in the heavy syrup, you swam 27% slower than you did in water.

419

00:26:54,000 --> 00:27:00,000

But in the light syrup, you swam 2.8% slower than you did in water.

420

00:27:00,000 --> 00:27:01,000

Wow.

421

00:27:01,000 --> 00:27:02,000

That's a big difference.

422

00:27:02,000 --> 00:27:03,000

Yeah.

423

00:27:03,000 --> 00:27:07,000

I mean, I'll wager that the difference between any three of my times in either of the water

424

00:27:07,000 --> 00:27:10,000

or either of the syrup was greater than 2.8%.

425

00:27:10,000 --> 00:27:13,000

Yeah, that's less than half a second variation.

426

00:27:13,000 --> 00:27:14,000

It's well within the margin of error.

427

00:27:14,000 --> 00:27:16,000

That's a really cool result.

428

00:27:16,000 --> 00:27:22,000

In the heavy treacle analog, Adam's times were 28% slower than they were in water.

429

00:27:22,000 --> 00:27:23,000

So that's myth-clustered.

430

00:27:23,000 --> 00:27:28,000

Then again, his times in light syrup were much the same as swimming in water.

431

00:27:28,000 --> 00:27:30,000

So that's myth-confirmed.

432

00:27:30,000 --> 00:27:33,000

Obviously, there's a threshold between the two.

433

00:27:33,000 --> 00:27:37,000

And I'd like to find where that threshold exactly is.

434

00:27:37,000 --> 00:27:40,000

I.e., something that the layperson would cause syrup?

435

00:27:40,000 --> 00:27:43,000

Yet you can swim just as fast in it.

436

00:27:47,000 --> 00:27:48,000

I know you.

437

00:27:48,000 --> 00:27:49,000

You want more.

438

00:27:49,000 --> 00:27:53,000

There's a lot of really good stuff that we shoot that just doesn't make it into the show.

439

00:27:53,000 --> 00:27:56,000

Log on to discoveries.com.

440

00:27:56,000 --> 00:27:58,000

Check it out.

441

00:28:26,000 --> 00:28:31,000

The trusty musket Betsy fire a shot at the ax head and split the bullet clean in half.

442

00:28:31,000 --> 00:28:34,000

And that is what we're going to test to see if it's really possible.

443

00:28:37,000 --> 00:28:44,000

Back in the early 1800s, Davey Crockett gained fame as a U.S. Congressman and a fearless frontier type.

444

00:28:44,000 --> 00:28:52,000

Self-described as half-horror, half-alligator, Davey had a reputation for, well, embellishing the truth.

445

00:28:52,000 --> 00:28:57,000

He once boasted the perdiest sister and the ugliest dog in the country.

446

00:28:57,000 --> 00:29:01,000

So look, this guy was real and a huge part of American folklore.

447

00:29:01,000 --> 00:29:06,000

Yeah, I mean, back in the 50s, like, almost every kid had one of those Davey Crockett coon skin caps.

448

00:29:06,000 --> 00:29:10,000

But he did tell a lot of whoppers. He used to say that he could grin the bark off a tree.

449

00:29:10,000 --> 00:29:12,000

And that's just one tall tale.

450

00:29:12,000 --> 00:29:18,000

I mean, with all these crazy stories, it casts a lot of doubt on this myth that he could split a bullet by hitting an ax head.

451

00:29:18,000 --> 00:29:20,000

Unfortunately, I couldn't agree more.

452

00:29:20,000 --> 00:29:24,000

It's an all-time myth you just couldn't test with modern firearms.

453

00:29:24,000 --> 00:29:30,000

200 years ago, the guns were slower and the lead bullets were rounder and softer.

454

00:29:30,000 --> 00:29:34,000

But rest assured, the axes were sharp.

455

00:29:34,000 --> 00:29:38,000

All we have to do is shoot the ax head with the bullet and split it, too. How hard can that be?

456

00:29:38,000 --> 00:29:42,000

What are we going to do with the rest of our day? I don't know.

457

00:29:42,000 --> 00:29:48,000

I'm always looking forward to the historical myths, and this one is extra fun because I really, really am into Davey Crockett.

458

00:29:48,000 --> 00:29:54,000

I love all of the cap and ball musket shooting. It's going to be a good day.

459

00:29:54,000 --> 00:30:00,000

That's the spirit carry, unwavering optimism in the face of yet another myth that beggars believe.

460

00:30:04,000 --> 00:30:06,000

Hit the tail in the coon skin cap.

461

00:30:06,000 --> 00:30:12,000

Now hitting our target with these muskets is going to be tough. They're heavy. They're not as accurate as a modern-day rifle.

462

00:30:12,000 --> 00:30:17,000

So we thought maybe if we dress up like Davey Crockett, maybe they'll give us an advantage to hit our target.

463

00:30:17,000 --> 00:30:23,000

Maybe we channel him. Davey, help me hit my target. But I doubt it.

464

00:30:23,000 --> 00:30:30,000

Now, most folk wouldn't take advice from a man who shot his own hat. But I wouldn't say that out loud to Jim Mitchell.

465

00:30:30,000 --> 00:30:37,000

Jim's an expert on antique American firearms. Jim! Good to see you again. Good to see you.

466

00:30:38,000 --> 00:30:44,000

Jim's outfit terrifies me. I feel like his hat's going to bite him at any moment or just like crawl up on me.

467

00:30:44,000 --> 00:30:51,000

So you've got a couple of 58 calibers there with you. Are you comfortable with them? Shooting them? Loading them?

468

00:30:51,000 --> 00:30:53,000

Maybe you should give us a little refresher course.

469

00:30:53,000 --> 00:30:58,000

It sure couldn't hurt. These old-time rifles aren't exactly user-friendly.

470

00:30:58,000 --> 00:31:03,000

First thing, you load up the powder. Measure your powder out into the measure.

471

00:31:03,000 --> 00:31:09,000

It's quite a procedure loading up a musket. I mean, first you've got to pour the gun powder directly into the barrel.

472

00:31:09,000 --> 00:31:14,000

Then you've got like a lubricated little patch that you stuff a lead ball on. You have to stuff it all the way down.

473

00:31:14,000 --> 00:31:18,000

I mean, can you imagine loading that thing over and over and over if you had to be a quick shot?

474

00:31:20,000 --> 00:31:29,000

But shooting these guns is just as tricky. They all need practice. And here's Carrie's tip for making fruit salad in less than a tenth of a second.

475

00:31:29,000 --> 00:31:32,000

Hi!

476

00:31:32,000 --> 00:31:35,000

Grant shoots a soda bottle.

477

00:31:39,000 --> 00:31:41,000

And Tori terminates a tomato.

478

00:31:41,000 --> 00:31:43,000

Get it! Get that tomato!

479

00:31:44,000 --> 00:31:47,000

That's what you get for not being worth getting!

480

00:31:49,000 --> 00:31:54,000

Right now we're just hitting the target just to see if we can sight these guns in. And they seem pretty accurate.

481

00:31:54,000 --> 00:31:59,000

The tricky part now, though, is to be able to hit that ax blade dead center with the bullet so we get it to split.

482

00:31:59,000 --> 00:32:04,000

Because if it hits a little bit to the left or a little bit to the right, it might just deflect and stay one bullet.

483

00:32:04,000 --> 00:32:08,000

We need it to hit right in the middle so we see two pieces after the bullet hits the ax head.

484

00:32:08,000 --> 00:32:13,000

Next up, Carrie, Tori and Grant hone in on that ax blade.

485

00:32:13,000 --> 00:32:16,000

Look at it. One, two, a-choo!

486

00:32:25,000 --> 00:32:34,000

Tori, Grant and Carrie are testing the myth that Davy Crockett could hit two targets with one bullet by slitting it on an ax blade.

487

00:32:37,000 --> 00:32:40,000

So now it's our chance to do this myth for real.

488

00:32:40,000 --> 00:32:44,000

Now, legend has it that Davy Crockett could do this trick from 40 yards.

489

00:32:44,000 --> 00:32:47,000

So we're going to measure out 40 yards and give it a shot.

490

00:32:47,000 --> 00:32:50,000

But that's looking a long, long way off.

491

00:32:51,000 --> 00:32:54,000

And, uh, 40 yards.

492

00:32:55,000 --> 00:32:57,000

That's kind of far.

493

00:32:57,000 --> 00:33:00,000

I'm going to take a shot, and down I'm going to split it in the first one.

494

00:33:00,000 --> 00:33:02,000

But who knows, maybe I get lucky.

495

00:33:02,000 --> 00:33:04,000

Sometimes it's better to be lucky than good.

496

00:33:04,000 --> 00:33:09,000

Now we should get some idea of just how sharp the shooting has to be.

497

00:33:11,000 --> 00:33:14,000

Not bad at all. Let's try a take two.

498

00:33:14,000 --> 00:33:17,000

So little to the left.

499

00:33:21,000 --> 00:33:25,000

Tori's got one more shot before the others get their chance.

500

00:33:25,000 --> 00:33:29,000

Confirming the two target myth means splitting a bullet in half.

501

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

That's as tough as anything these guys have ever attempted.

502

00:33:36,000 --> 00:33:39,000

Look it. One, two, a-choo!

503

00:33:39,000 --> 00:33:40,000

Three.

504

00:33:40,000 --> 00:33:42,000

Whoa! I hit the blade.

505

00:33:42,000 --> 00:33:44,000

That's great. That is crazy. Look at that.

506

00:33:44,000 --> 00:33:48,000

It just hit here. I mean, I was maybe an eighth of an inch off from hitting it dead center.

507

00:33:48,000 --> 00:33:51,000

I think with a little practice you could hit that.

508

00:33:51,000 --> 00:33:53,000

Yeah, I mean, if you practice, you'd be able to hit this all day.

509

00:33:53,000 --> 00:33:55,000

But I mean, we're not looking at accuracy.

510

00:33:55,000 --> 00:33:57,000

We're looking at whether or not you could split the bullet.

511

00:33:57,000 --> 00:34:02,000

All right, well, let's split the difference, come in 20 yards, and then try it again.

512

00:34:02,000 --> 00:34:03,000

All right.

513

00:34:04,000 --> 00:34:09,000

They bring the mark in because this myth is more about if a bullet can split in two

514

00:34:09,000 --> 00:34:12,000

than where you took the shot from.

515

00:34:13,000 --> 00:34:15,000

Hey, nice shot.

516

00:34:17,000 --> 00:34:19,000

Carrie goes close.

517

00:34:20,000 --> 00:34:21,000

Whoa!

518

00:34:22,000 --> 00:34:25,000

Then closer as she grazes the handle.

519

00:34:25,000 --> 00:34:27,000

Look, you can see the burn mark.

520

00:34:27,000 --> 00:34:28,000

Nice shot.

521

00:34:28,000 --> 00:34:29,000

Thank you.

522

00:34:29,000 --> 00:34:30,000

Good one.

523

00:34:30,000 --> 00:34:31,000

Give me one more. One more.

524

00:34:31,000 --> 00:34:32,000

One more shot.

525

00:34:32,000 --> 00:34:35,000

Hard to say no to a girl with a gun.

526

00:34:36,000 --> 00:34:39,000

Close but no cigars, my dad would say.

527

00:34:40,000 --> 00:34:41,000

Look at that.

528

00:34:41,000 --> 00:34:43,000

Just grazed the ax.

529

00:34:43,000 --> 00:34:47,000

To be able to hit the blade by shooting offhand, it's going to take a long time and a lot of practice.

530

00:34:47,000 --> 00:34:51,000

Daylight's fading, so Grant gets to shoot off a sandbag.

531

00:34:51,000 --> 00:34:54,000

This could be the shot that confirms the Crockett myth.

532

00:34:54,000 --> 00:34:57,000

This ax don't stand a chance.

533

00:34:59,000 --> 00:35:00,000

You hit the blade.

534

00:35:00,000 --> 00:35:02,000

Look right here. Skimmed it.

535

00:35:02,000 --> 00:35:04,000

You're real close.

536

00:35:04,000 --> 00:35:07,000

So you just got to go over just like an eighth of an inch to the right.

537

00:35:07,000 --> 00:35:08,000

Like a hair.

538

00:35:10,000 --> 00:35:15,000

The shots are almost perfect, but for this test, almost just doesn't cut it.

539

00:35:15,000 --> 00:35:20,000

You know what, it's incredibly difficult, even off the rest, so I'm going to give it one more shot.

540

00:35:21,000 --> 00:35:24,000

And Grant can see Coyote Jim waiting in the wings.

541

00:35:28,000 --> 00:35:29,000

No splits.

542

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

If Davy Crockett could do this, he was quite a shot.

543

00:35:33,000 --> 00:35:38,000

Now, before we move on to the expert, how would you guys feel about me taking one shot from the bench?

544

00:35:38,000 --> 00:35:39,000

Sure, go ahead.

545

00:35:39,000 --> 00:35:40,000

Knock yourself out.

546

00:35:40,000 --> 00:35:41,000

I'm dying to do it.

547

00:35:41,000 --> 00:35:46,000

And we're dying to see if this split bullet myth is just another tall tale.

548

00:35:46,000 --> 00:35:51,000

Someone needs to step up and hit that blade with perfect precision.

549

00:35:57,000 --> 00:36:02,000

Tori's done it. One half of the bullet went left and the other went right.

550

00:36:02,000 --> 00:36:03,000

He did it!

551

00:36:03,000 --> 00:36:05,000

I can't believe it actually worked.

552

00:36:05,000 --> 00:36:06,000

Both sides.

553

00:36:06,000 --> 00:36:08,000

Look, right there, that's where it hit.

554

00:36:08,000 --> 00:36:09,000

Chink, chink.

555

00:36:09,000 --> 00:36:10,000

Yeah.

556

00:36:10,000 --> 00:36:11,000

It's confirmed.

557

00:36:11,000 --> 00:36:12,000

Holy confirmed. Who thought that?

558

00:36:12,000 --> 00:36:14,000

Davy Crockett didn't lie.

559

00:36:14,000 --> 00:36:18,000

So we showed you can split a bullet and take out two targets at once.

560

00:36:18,000 --> 00:36:23,000

Yeah, that was using an axe, ammunition, and weapons from Davy Crockett's time.

561

00:36:23,000 --> 00:36:26,000

And a little bit of mojo from Davy Crockett.

562

00:36:26,000 --> 00:36:27,000

The outfits.

563

00:36:27,000 --> 00:36:28,000

So this one's confirmed.

564

00:36:28,000 --> 00:36:29,000

It's confirmed.

565

00:36:29,000 --> 00:36:30,000

Confirmed.

566

00:36:33,000 --> 00:36:34,000

Still to come.

567

00:36:34,000 --> 00:36:41,000

Adam and Jamie go Goldilocks with a perfect syrup mix and a guy who's won gold in the pool.

568

00:36:41,000 --> 00:36:43,000

Is that funky or what?

569

00:36:43,000 --> 00:36:45,000

So weird. So weird.

570

00:36:50,000 --> 00:36:54,000

And now, another episode of Diesel Diaries.

571

00:36:54,000 --> 00:36:56,000

Dude, nice car.

572

00:36:56,000 --> 00:36:59,000

Yep, it's the new 2009 Jetta TDI.

573

00:36:59,000 --> 00:37:00,000

Turbo, nice.

574

00:37:00,000 --> 00:37:02,000

Wait, why'd you buy a diesel?

575

00:37:02,000 --> 00:37:03,000

Yeah, aren't they really loud?

576

00:37:03,000 --> 00:37:05,000

Look at loud, aren't they smelly?

577

00:37:05,000 --> 00:37:09,000

This new Jetta is going to crush all those ancient stereotypes about diesel engines.

578

00:37:09,000 --> 00:37:10,000

All right, so you say they're loud?

579

00:37:10,000 --> 00:37:12,000

Like a big old tractor.

580

00:37:12,000 --> 00:37:13,000

Yeah, they smell like tractors.

581

00:37:13,000 --> 00:37:18,000

All right, why don't you go get your decibel reader and we'll put this tractor to the test.

582

00:37:18,000 --> 00:37:20,000

All right, so I'm going to start up the car.

583

00:37:20,000 --> 00:37:22,000

You stick that over the engine.

584

00:37:24,000 --> 00:37:25,000

Hmm, ADDB.

585

00:37:25,000 --> 00:37:28,000

That's no louder than your average washing machine.

586

00:37:28,000 --> 00:37:31,000

And when the diesel warms up, the engine actually gets quieter.

587

00:37:31,000 --> 00:37:34,000

All right, you close your eyes and take a deep breath.

588

00:37:35,000 --> 00:37:36,000

Smell any tractors?

589

00:37:36,000 --> 00:37:40,000

Yeah, actually, we've been standing here for a while and the smell hasn't bothered me at all.

590

00:37:40,000 --> 00:37:43,000

Well, how do you feel about the 2009 Jetta TDI now?

591

00:37:43,000 --> 00:37:49,000

On the next episode of Diesel Diaries, Cary wants to know what exactly is coming out of that tailpipe.

592

00:37:49,000 --> 00:37:56,000

Jamie and Adam are testing if the extra thrust you'd get from swimming through syrup might just counteract the added resistance.

593

00:37:56,000 --> 00:38:02,000

So now they'll mix up one last batch with a texture that's more like good old maple syrup.

594

00:38:02,000 --> 00:38:05,000

Not too thick, not too thin, but just right.

595

00:38:05,000 --> 00:38:06,000

That's the doli locksmith.

596

00:38:06,000 --> 00:38:09,000

We're mixing up a lot of the old maple syrup.

597

00:38:09,000 --> 00:38:12,000

We're going to mix up a lot of the old maple syrup.

598

00:38:12,000 --> 00:38:15,000

We're going to mix up a lot of the old maple syrup.

599

00:38:15,000 --> 00:38:17,000

Not too thin, but just right.

600

00:38:17,000 --> 00:38:18,000

That's the doli locksmith.

601

00:38:18,000 --> 00:38:22,000

We're mixing up a batch right now and soon we'll be putting it to the test.

602

00:38:22,000 --> 00:38:29,000

It's a blend that should meet any definition of syrup, 500 times thicker than water.

603

00:38:31,000 --> 00:38:38,000

So these are Adam's last three swims and given how fast he swam in the light syrup, his times in this stuff should be really interesting.

604

00:38:39,000 --> 00:38:40,000

What's my time?

605

00:38:40,000 --> 00:38:42,000

14.34.

606

00:38:42,000 --> 00:38:43,000

Yeah!

607

00:38:44,000 --> 00:38:47,000

That goopy looking scum on top we call fish eyes.

608

00:38:47,000 --> 00:38:49,000

It's just clusters of quarry gum.

609

00:38:49,000 --> 00:38:52,000

Adam actually seems to enjoy swimming in it.

610

00:38:53,000 --> 00:38:54,000

13.81.

611

00:38:56,000 --> 00:38:57,000

Yeah!

612

00:38:57,000 --> 00:38:58,000

Good job.

613

00:38:58,000 --> 00:38:59,000

Thank you.

614

00:38:59,000 --> 00:39:01,000

You're done. You can get out now.

615

00:39:01,000 --> 00:39:02,000

I'm officially done.

616

00:39:02,000 --> 00:39:09,000

Adam's times were nice and steady, but it stands to reason that a better swimmer would be even more consistent.

617

00:39:09,000 --> 00:39:11,000

And that makes for better science.

618

00:39:14,000 --> 00:39:16,000

Enter this fine specimen.

619

00:39:16,000 --> 00:39:20,000

Nathan Adrian was a gold medal winner at the Beijing Olympics.

620

00:39:20,000 --> 00:39:21,000

Hello, sir.

621

00:39:21,000 --> 00:39:22,000

Hey, how's it going?

622

00:39:22,000 --> 00:39:23,000

Oh my God, look at you.

623

00:39:23,000 --> 00:39:27,000

That's perfect.

624

00:39:27,000 --> 00:39:29,000

You feel like running some tests for us?

625

00:39:29,000 --> 00:39:30,000

Absolutely, I'd love to.

626

00:39:31,000 --> 00:39:36,000

Let's start him off in a bent pool filled with straight water to set up baseline time.

627

00:39:37,000 --> 00:39:40,000

This surprise of Jamie's is proving extremely fruitful.

628

00:39:40,000 --> 00:39:45,000

Not only is Nathan fast, which I expected, he's super consistent.

629

00:39:45,000 --> 00:39:47,000

All of his times are within half a second of each other.

630

00:39:47,000 --> 00:39:53,000

My times had about a one second spread, so it just means that the data is that much more precise.

631

00:39:53,000 --> 00:39:54,000

9.81.

632

00:39:55,000 --> 00:39:56,000

Can we let him get out?

633

00:39:56,000 --> 00:39:58,000

Let's let him get out.

634

00:39:58,000 --> 00:40:04,000

Now it's time for this sports hero to swim in something gooey and slippery.

635

00:40:07,000 --> 00:40:09,000

On your mark, get set.

636

00:40:12,000 --> 00:40:16,000

Nathan, just pretend that you're one with the syrup.

637

00:40:20,000 --> 00:40:21,000

Almost dead on the money.

638

00:40:21,000 --> 00:40:22,000

10.87.

639

00:40:23,000 --> 00:40:24,000

Is that funky or what?

640

00:40:25,000 --> 00:40:26,000

So weird.

641

00:40:26,000 --> 00:40:30,000

You can bet this wasn't part of Nathan's post-Olympic dream.

642

00:40:30,000 --> 00:40:34,000

Just think about it like you got to swim faster to get out a bit quicker.

643

00:40:37,000 --> 00:40:42,000

A man with the right stuff forced to wallow in some very wrong stuff.

644

00:40:42,000 --> 00:40:43,000

Awesome.

645

00:40:43,000 --> 00:40:45,000

I can tell you're starting to get into it a little bit.

646

00:40:45,000 --> 00:40:47,000

It grows on you after a while, doesn't it?

647

00:40:50,000 --> 00:40:55,000

As far as resistance goes, when you're swimming at speed, it doesn't feel all that much different than water, truthfully.

648

00:40:55,000 --> 00:40:58,000

So Jamie tries to make sense of the stats.

649

00:40:58,000 --> 00:41:03,000

Nathan was a full 9% slower in medium syrup than water.

650

00:41:03,000 --> 00:41:11,000

More surprisingly, while his water times were super consistent, his syrup swims were much less consistent than Adam's.

651

00:41:11,000 --> 00:41:21,000

And with Adam swimming just 5.4% slower in syrup than water, which is almost within his margin of error, this myth could still go either way.

652

00:41:21,000 --> 00:41:29,000

Do you think that you were slower because the goo was offering more resistance or because it was messing with your technique?

653

00:41:29,000 --> 00:41:34,000

I'd have to say it was definitely messing with my technique and how comfortable I was in the water.

654

00:41:34,000 --> 00:41:40,000

It's such a huge disadvantage of being in such a foreign environment with the goop and everything.

655

00:41:40,000 --> 00:41:47,000

None of which seems to bother our boys, but given Nathan's erratic times, Adam's prepared to drop a bombshell.

656

00:41:47,000 --> 00:41:51,000

We're going to throw out Nathan's swim times in the syrup.

657

00:41:51,000 --> 00:41:54,000

See, we brought him in being an Olympic swimmer, one of the best in the world.

658

00:41:54,000 --> 00:42:08,000

We thought it was going to eliminate swimming time as a variable, but because what he does for hours every day is swim in a clear water pool following a line going as fast as he can, the syrup threw his technique out the window.

659

00:42:08,000 --> 00:42:13,000

Mine proved the point much better than his do. That's pretty cool.

660

00:42:15,000 --> 00:42:17,000

So how are we going to wrap this one up?

661

00:42:17,000 --> 00:42:25,000

The simple fact is that you swim just about as fast in the medium or goldilocks syrup and the light syrup as you did in water.

662

00:42:25,000 --> 00:42:31,000

Well, so I'd say that makes it solidly plausible. You can swim as fast in syrup as you can in water.

663

00:42:31,000 --> 00:42:35,000

Plausible, depending on the viscosity of the syrup.

664

00:42:39,000 --> 00:42:45,000

So that's a wrap for swimming in syrup, but there's still some unfinished business on the MacGyver set.

665

00:42:45,000 --> 00:42:54,000

Well, you know, we mythbusters have never been ones to leave well enough alone and we have a door here that we just don't want to take home.

666

00:42:54,000 --> 00:42:59,000

And with a little help from JD and some C4, they won't have to.

667

00:42:59,000 --> 00:43:04,000

Okay, the question is, do you want to do like a surgical kind of an entry around the lock or do you want to just blow the crap out of it?

668

00:43:04,000 --> 00:43:06,000

Hardly worth asking the question, really.

669

00:43:06,000 --> 00:43:08,000

Blow the crap out of it.

670

00:43:08,000 --> 00:43:09,000

Okay, let's blow the crap out of it then.

671

00:43:09,000 --> 00:43:11,000

Yeah, I guess we'll be in the bunker then.

672

00:43:11,000 --> 00:43:18,000

So our guys duck for cover. JD sets the charge and bellows out his four favorite words.

673

00:43:18,000 --> 00:43:23,000

Burn a hole! Burn a hole! Burn a hole!

674

00:43:23,000 --> 00:43:27,000

In three, two, one.

675

00:43:34,000 --> 00:43:40,000

To borrow a phrase from the poet of plastic explosives, Jamie Heidemann. Bye-bye, Dor.

676

00:43:41,000 --> 00:43:43,000

Screw black powder.

677

00:43:43,000 --> 00:43:47,000

That is incredible. That's like 70 feet away from the blast site.

678

00:43:51,000 --> 00:44:00,000

Now, personally, I think if MacGyver had carried around a lot more C4, he could have gotten through a lot more doors a lot easier.