

1

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

On this episode of MythBusters...

2

00:00:04,000 --> 00:00:05,500

Am I really that ugly?

3

00:00:05,500 --> 00:00:10,000

Adam and Jamie face a freaky face-off fable.

4

00:00:10,000 --> 00:00:13,500

Can a pullover mask...

5

00:00:13,500 --> 00:00:15,000

It's party time.

6

00:00:15,000 --> 00:00:19,500

be used to pull off a Mission Impossible-style identity theft.

7

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

That's weird.

8

00:00:24,000 --> 00:00:29,500

Meanwhile, Carrie Grant and Tori take aim at two ballistic myths.

9

00:00:29,500 --> 00:00:31,500

Are you feeling lucky?

10

00:00:31,500 --> 00:00:32,500

Punk?

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00:00:32,500 --> 00:00:36,500

First, can a trip shot shoot a gun around the ground?

12

00:00:36,500 --> 00:00:41,500

And second, would a Hollywood bullet really blast a merry-go-round...

13

00:00:41,500 --> 00:00:42,500

Make my day.

14

00:00:42,500 --> 00:00:44,500

into a spin?

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00:00:45,500 --> 00:00:47,500

Now, it's the scary-go-round.

16

00:00:50,500 --> 00:00:52,500

Who are the MythBusters?

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00:00:52,500 --> 00:00:54,500

Adam Savage.

18

00:00:54,500 --> 00:00:55,500

Big Boom! Big Boom!

19

00:00:55,500 --> 00:00:57,500

And Jamie Heidemann.

20

00:00:57,500 --> 00:00:58,500

Surrender your candy.

21

00:00:58,500 --> 00:01:02,500

Between them more than 30 years of special effects experience.

22

00:01:02,500 --> 00:01:04,500

Joining them...

23

00:01:04,500 --> 00:01:06,500

Grant Imajara.

24

00:01:06,500 --> 00:01:08,500

Decapitation hazard everybody.

25

00:01:08,500 --> 00:01:10,500

Carrie Byron.

26

00:01:10,500 --> 00:01:12,500

Trial time!

27

00:01:12,500 --> 00:01:13,500

And Tori Bellegi.

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00:01:13,500 --> 00:01:15,500

They're gonna fry my brain.

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00:01:15,500 --> 00:01:17,500

They don't just tell the myths.

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00:01:17,500 --> 00:01:19,500

They put them to the test.

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00:01:19,500 --> 00:01:30,500

This episode of MythBusters is presented by Chevrolet Silverado.

32

00:01:37,500 --> 00:01:39,500

I bet they're wondering who we are.

33

00:01:39,500 --> 00:01:40,500

Yeah.

34

00:01:40,500 --> 00:01:42,500

We're the story.

35

00:01:42,500 --> 00:01:43,500

Allow me to demonstrate.

36

00:01:44,500 --> 00:01:50,500

Remember in Mission Impossible, when the characters would wear these hand-sculpted, full pull-over head masks

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00:01:50,500 --> 00:01:55,500

in order to pretend to be a completely different character in order to breach security?

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00:01:55,500 --> 00:01:57,500

That's what we're gonna test.

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00:01:57,500 --> 00:01:58,500

Yeah.

40

00:02:00,500 --> 00:02:08,500

In the iconic 60s TV show Mission Impossible, a number of storylines depended upon handmade masks

41

00:02:08,500 --> 00:02:11,500

to perpetrate identity theft activities.

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00:02:11,500 --> 00:02:18,500

On screen, the pliable, realistically colored material is supposedly enough to fool security guards

43

00:02:18,500 --> 00:02:20,500

and even colleagues.

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00:02:20,500 --> 00:02:24,500

But Adam and Jamie want to know if it's possible in real life.

45

00:02:24,500 --> 00:02:26,500

You want to hear my methodology?

46

00:02:26,500 --> 00:02:27,500

Shoot.

47

00:02:27,500 --> 00:02:28,500

Alright.

48

00:02:28,500 --> 00:02:31,500

The masks we were just wearing are made by SPFX masks

49

00:02:31,500 --> 00:02:37,500

and they make the creme de la creme of silicone, super realistic, full pull-over head masks.

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00:02:37,500 --> 00:02:39,500

And they work old school.

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00:02:39,500 --> 00:02:46,500

They will make us a pair of masks working solely from photographs, exactly the technique used by the agents in Mission Impossible.

52

00:02:46,500 --> 00:02:48,500

Well, you know there's more to this than just the masks.

53

00:02:48,500 --> 00:02:52,500

We not only have to look like each other, we have to be able to act like each other.

54

00:02:52,500 --> 00:02:54,500

You're suggesting we get acting lessons?

55

00:02:54,500 --> 00:02:56,500

Isn't it about time?

56

00:02:56,500 --> 00:02:57,500

I think it is.

57

00:02:57,500 --> 00:02:58,500

That's perfect.

58

00:02:58,500 --> 00:02:59,500

Let's do it.

59

00:02:59,500 --> 00:03:07,500

So first up, let's meet the ugly mug maestro who'll be helping Adam and Jamie pull off this mythical face-off.

60

00:03:07,500 --> 00:03:09,500

Now line up and give me 20.

61

00:03:11,500 --> 00:03:16,500

Their hands-on techniques do match the old school methods of the Mission Impossible myth.

62

00:03:16,500 --> 00:03:20,500

But making an out-of-this-world monster mask is one thing.

63

00:03:20,500 --> 00:03:22,500

Behehehehehe.

64

00:03:22,500 --> 00:03:29,500

Recreating a human face accurate enough to fool a security guard is a different beast altogether.

65

00:03:29,500 --> 00:03:31,500

Oh, these are pointy.

66

00:03:31,500 --> 00:03:33,500

Those are very attractive features.

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00:03:33,500 --> 00:03:38,500

To make sure Adam and Jamie's masks don't end up with freaky pointy features.

68

00:03:38,500 --> 00:03:40,500

Turn to your left.

69

00:03:42,500 --> 00:03:45,500

Step one is gathering accurate data to work from.

70

00:03:46,500 --> 00:03:48,500

Hey Jamie, we're going to measure cheekbones.

71

00:03:48,500 --> 00:03:54,500

And with those numbers and pictures as reference, it's over to special effects artist Jim,

72

00:03:54,500 --> 00:04:00,500

who sculpts an anatomically accurate clay bust as the foundation for each mask.

73

00:04:01,500 --> 00:04:08,500

Next, they create fiberglass molds around those clay forms, which, when hardened, look like this.

74

00:04:08,500 --> 00:04:10,500

This is my mold.

75

00:04:10,500 --> 00:04:15,500

Pretty soon they're going to put this together and pour silicone in it, and you'll have a duplicate Jamie.

76

00:04:15,500 --> 00:04:21,500

Once the silicone is set and popped from the mold, the basic canvas for each mask is complete.

77

00:04:21,500 --> 00:04:26,500

Now it's time for the texture, detail, and color.

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00:04:26,500 --> 00:04:32,500

Everybody thinks of skin as just one crayon in the box, when in fact it's composed of a whole bunch of colors,

79

00:04:32,500 --> 00:04:34,500

and it's one of the most difficult paint jobs.

80

00:04:34,500 --> 00:04:38,500

This guy will take between six and ten hours to get right.

81

00:04:39,500 --> 00:04:40,500

It's weird.

82

00:04:41,500 --> 00:04:43,500

This is my half-finished mask.

83

00:04:43,500 --> 00:04:48,500

It doesn't look like me much at the moment, but put some hair on it in a beret, you're going to be surprised.

84

00:04:49,500 --> 00:04:54,500

And what's more surprising is how much effort goes into making our Hoosier Hursuit,

85

00:04:54,500 --> 00:04:58,500

because the folliculation is done hair by painstaking hair.

86

00:04:58,500 --> 00:05:05,500

The hair on my mask is actually real human hair, and it's punched into the silicone one follicle at a time.

87

00:05:05,500 --> 00:05:10,500

It's very time-consuming. Just the front, the beard, and eyebrows takes three days.

88

00:05:10,500 --> 00:05:12,500

The whole head, a week.

89

00:05:13,500 --> 00:05:15,500

Now you're going to shade me, right?

90

00:05:15,500 --> 00:05:16,500

Uh-huh.

91

00:05:16,500 --> 00:05:17,500

Okay, good.

92

00:05:17,500 --> 00:05:24,500

While Adam and Jamie's faces are being finished, Adam and Jamie head back to the shop to learn to be Jamie and Adam.

93

00:05:24,500 --> 00:05:28,500

And to do that, they're in the hands of a legend.

94

00:05:28,500 --> 00:05:35,500

Our acting coach is Terry McGovern. He's been acting for 40 years, and he's been teaching acting himself for 15 years.

95

00:05:35,500 --> 00:05:38,500

Film buffs might recognize him as the teacher in American graffiti.

96

00:05:38,500 --> 00:05:44,500

He was also the voice of the Sand Trooper in Star Wars who said, these aren't the droids we're

looking for.

97

00:05:45,500 --> 00:05:49,500

His job today is to teach us the art of impersonation.

98

00:05:57,500 --> 00:06:02,500

Okay, judging from the title Firearms Force and the fact that you guys are packing heat in the blueprint room,

99

00:06:02,500 --> 00:06:04,500

I'm guessing we have some shooting in our future.

100

00:06:04,500 --> 00:06:09,500

Yep. And a lot of it. We're testing two myths about bullets doing work.

101

00:06:09,500 --> 00:06:11,500

Like, killing bad guys?

102

00:06:11,500 --> 00:06:16,500

No. What we're talking about is bullets doing physical work, something moving when you shoot it.

103

00:06:16,500 --> 00:06:17,500

Like what?

104

00:06:17,500 --> 00:06:22,500

Well, the first one is a classic gun myth where two guys are in a duel, one drops his gun, reaches for it,

105

00:06:22,500 --> 00:06:25,500

and the other guy shoots it across the floor just out of reach.

106

00:06:25,500 --> 00:06:27,500

But can a bullet really impart that much force?

107

00:06:27,500 --> 00:06:30,500

Exactly. The second myth comes from the movie Shoot'em Up,

108

00:06:30,500 --> 00:06:33,500

where Clive Owen shoots a child's merry-go-round to get it to spin.

109

00:06:33,500 --> 00:06:36,500

I think we should start with that one. I've always wondered if that was true.

110

00:06:36,500 --> 00:06:43,500

In this Shoot'em Up scene, our hero stynies a sniper by firing a round into a merry-go-round.

111

00:06:44,500 --> 00:06:49,500

And supposedly the force of the bullet spins the target out of harm's way.

112

00:06:50,500 --> 00:06:55,500

But is the propulsion down to physics, or is it just cinema spin?

113

00:06:56,500 --> 00:07:00,500

So when we test these myths, I think it's going to be important for us to duplicate the circumstances

114

00:07:00,500 --> 00:07:04,500

exactly as they appear in the movie, which means distance a shooter and type a gun.

115

00:07:04,500 --> 00:07:05,500

Then we go for it.

116

00:07:05,500 --> 00:07:07,500

If that doesn't work, let's step up with firepower.

117

00:07:07,500 --> 00:07:11,500

Well then we should definitely ramp down the friction of the merry-go-round by using some lube.

118

00:07:11,500 --> 00:07:13,500

So to complete the scene, we need some props.

119

00:07:13,500 --> 00:07:17,500

A gun from the movie, a Glock, a merry-go-round, and a shooting range.

120

00:07:17,500 --> 00:07:18,500

Well let's go!

121

00:07:20,500 --> 00:07:23,500

For our firearms force myth, we've come out to the Richmond Rod and Gun Club,

122

00:07:23,500 --> 00:07:27,500

so we can find out if a handgun has enough force to spin a merry-go-round.

123

00:07:27,500 --> 00:07:31,500

And speaking of merry-go-rounds, they've brought their own.

124

00:07:32,500 --> 00:07:38,500

Okay, lubrication might help some of the friction so that we can get a little better spin on this.

125

00:07:38,500 --> 00:07:45,500

With the carousel lubed and level, and the safety railings in place, it's playtime.

126

00:07:45,500 --> 00:07:48,500

Alright, that's it. Let's see if it works.

127

00:07:50,500 --> 00:07:54,500

But before their roundabout becomes the most dangerous play equipment in history...

128

00:07:54,500 --> 00:07:58,500

Oh, it's just like childhood. It's super dangerous and I feel like I want to throw up.

129

00:07:59,500 --> 00:08:02,500

First, some science of spin.

130

00:08:02,500 --> 00:08:06,500

Now the challenge with this experiment is that the energy from the bullet's impact

131

00:08:06,500 --> 00:08:08,500

has to overcome the merry-go-round's inertia.

132

00:08:08,500 --> 00:08:11,500

Inertia being the resistance to movement.

133

00:08:11,500 --> 00:08:13,500

And that is based on the mass.

134

00:08:13,500 --> 00:08:17,500

This thing weighs over 500 pounds. That's a lot to overcome.

135

00:08:17,500 --> 00:08:24,500

So it's over to Grant using the force gauge to find out exactly how much resistance the bullet needs to overcome.

136

00:08:24,500 --> 00:08:26,500

Okay, 8.6 pounds.

137

00:08:27,500 --> 00:08:29,500

I don't know. We'll see.

138

00:08:29,500 --> 00:08:32,500

To monitor the merry-go-round, Grant adds a gauge.

139

00:08:32,500 --> 00:08:35,500

So if the gun gets any spin, they'll know.

140

00:08:35,500 --> 00:08:37,500

And speaking of firepower...

141

00:08:37,500 --> 00:08:40,500

To test this myth, we're going to start out with the gun from the movie, the 9mm.

142

00:08:40,500 --> 00:08:47,500

And if that doesn't work, we're going to tap into the entire Mythbusters arsenal with more and more powerful firearms.

143

00:08:47,500 --> 00:08:53,500

That's the plan. But first, it's down to the movie weapon of choice, the Glock.

144

00:08:54,500 --> 00:09:01,500

Now, it's got a muzzle energy of 383 foot-pounds and a muzzle velocity of 1,300 feet per second.

145

00:09:02,500 --> 00:09:06,500

Remember, the more mass, the more inertia an object has.

146

00:09:06,500 --> 00:09:11,500

So at 500 pounds, the merry-go-round has a lot of inertia.

147

00:09:11,500 --> 00:09:19,500

And although the bullet has 383 foot-pounds of muzzle energy, as it flies through the air, some of that energy dissipates.

148

00:09:19,500 --> 00:09:27,500

So, by the point of impact, will it have enough remaining kinetic energy to overcome the inertia and the friction of the bearings?

149

00:09:32,500 --> 00:09:34,500

Shouldn't it be spinning by now?

150

00:09:35,500 --> 00:09:37,500

Oh, and that was a good shot, too.

151

00:09:37,500 --> 00:09:38,500

Yeah!

152

00:09:40,500 --> 00:09:44,500

That was a direct hit in... I don't see the merry-go-round moving at all.

153

00:09:45,500 --> 00:09:59,500

So, with our first test with the 9mm hollow point in the Glock, we had enough energy to punch through the steel railing and move the merry-go-round about 1 1/8 of an inch, but it certainly wasn't the spinning around that you see in the movie.

154

00:10:05,500 --> 00:10:12,500

So this is the Smith & Wesson 44 Magnum. It has 1,100 foot-pounds of muzzle energy, more than twice that of the Glock.

155

00:10:12,500 --> 00:10:15,500

I got just one question. Are you feeling lucky?

156

00:10:16,500 --> 00:10:17,500

Punk?

157

00:10:23,500 --> 00:10:25,500

I don't even know if you need to take a second shot.

158

00:10:26,500 --> 00:10:31,500

So, even with the more powerful handgun, we were not able to get the merry-go-round to spin.

159

00:10:31,500 --> 00:10:38,500

We got it to move significantly more than the 9mm, about $\frac{3}{4}$ of an inch, but that is not spinning like you see in the movie.

160

00:10:38,500 --> 00:10:41,500

Now, we have one more handgun in our arsenal.

161

00:10:41,500 --> 00:10:50,500

The .45 caliber has 4 times the muzzle energy of the Glock, but will that extra kinetic energy overcome the merry-go-round's inertia?

162

00:10:55,500 --> 00:10:56,500

Good shot!

163

00:10:56,500 --> 00:10:57,500

I don't see it spinning.

164

00:11:00,500 --> 00:11:01,500

Not spinning yet.

165

00:11:01,500 --> 00:11:02,500

Nope.

166

00:11:03,500 --> 00:11:10,500

Yep, it seems that getting this carousel to spin is anything but the child's play of the movie.

167

00:11:11,500 --> 00:11:14,500

So just like the movie, we started out testing this myth with handguns.

168

00:11:14,500 --> 00:11:20,500

We tried 9mm, 45 caliber, and 44 Magnum.

169

00:11:21,500 --> 00:11:25,500

And so far, nothing has been able to move this merry-go-round very far.

170

00:11:25,500 --> 00:11:28,500

Certainly not like the spinning you see in the film.

171

00:11:28,500 --> 00:11:30,500

But you know what? We're not giving up here.

172

00:11:32,500 --> 00:11:33,500

We got plenty of other guns.

173

00:11:35,500 --> 00:11:36,500

Up next on MythBusters.

174

00:11:36,500 --> 00:11:38,500

You know.

175

00:11:38,500 --> 00:11:42,500

Adam and Jamie get into character and each other's faces.

176

00:11:42,500 --> 00:11:45,500

And then the transformation is complete.

177

00:11:50,500 --> 00:11:59,500

Adam and Jamie are facing off against the myth that wearing pullover face masks and altering your body language is enough to fool a security guard.

178

00:12:00,500 --> 00:12:05,500

And so far, they've had their mugs immortalized in silicone.

179

00:12:05,500 --> 00:12:08,500

But the masks won't be enough on their own.

180

00:12:08,500 --> 00:12:10,500

Very still.

181

00:12:10,500 --> 00:12:12,500

Q-Acting 101.

182

00:12:12,500 --> 00:12:13,500

Cerebral.

183

00:12:13,500 --> 00:12:16,500

First up, how to be Janie.

184

00:12:16,500 --> 00:12:17,500

Gestures?

185

00:12:18,500 --> 00:12:20,500

A lot of work with the mustache and the beard.

186

00:12:21,500 --> 00:12:22,500

Now the voice, okay?

187

00:12:22,500 --> 00:12:26,500

Very monotone, very low-pitched, very authoritative.

188

00:12:27,500 --> 00:12:28,500

I'm excited.

189

00:12:30,500 --> 00:12:33,500

This is really thrilling.

190

00:12:34,500 --> 00:12:37,500

I used to collect moles and spores.

191

00:12:39,500 --> 00:12:40,500

It's pretty good.

192

00:12:42,500 --> 00:12:43,500

Are we done?

193

00:12:44,500 --> 00:12:48,500

Now we all know Adam enjoys mimicking Jamie for comic effect.

194

00:12:48,500 --> 00:12:55,500

When I was riding the rails towards the end of the Great Depression, I learned several things from my hobo mentors.

195

00:12:55,500 --> 00:12:58,500

But when it comes to professionally putting the voice...

196

00:12:58,500 --> 00:12:59,500

Fine.

197

00:12:59,500 --> 00:13:03,500

Physical gestures and posture together into a believable performance.

198

00:13:03,500 --> 00:13:06,500

Well, he's positioned so that you can't knock him over.

199

00:13:06,500 --> 00:13:08,500

It's a much tougher assignment.

200

00:13:08,500 --> 00:13:12,500

But after a few hours of hard work with our professional Fespian...

201

00:13:12,500 --> 00:13:13,500

He uses vocal gestures.

202

00:13:13,500 --> 00:13:16,500

By that, I mean sometimes he instead of words, he will make sounds.

203

00:13:16,500 --> 00:13:18,500

Um... right.

204

00:13:18,500 --> 00:13:21,500

Jamie slowly but surely emerges.

205

00:13:21,500 --> 00:13:24,500

I'm just trying to get a word in edge-wise.

206

00:13:25,500 --> 00:13:26,500

Yeah, not bad.

207

00:13:26,500 --> 00:13:28,500

Adam's almost there.

208

00:13:28,500 --> 00:13:31,500

And while he keeps practicing, it's on to Jamie.

209

00:13:31,500 --> 00:13:33,500

First of all, Adam moves a lot.

210

00:13:33,500 --> 00:13:42,500

With all of Adam's garrulous and expressive character traits demonstrated, Jamie enters his own

personal room 101.

211

00:13:42,500 --> 00:13:45,500

You know what? I've had enough.

212

00:13:45,500 --> 00:13:46,500

No, I can't do this.

213

00:13:46,500 --> 00:13:52,500

His innate modesty and discomfort in the spotlight makes the whole process a real challenge.

214

00:13:52,500 --> 00:13:54,500

Um... let's see.

215

00:13:54,500 --> 00:14:00,500

But in a testament to his sense of humor and perseverance and Terry's teaching skills...

216

00:14:00,500 --> 00:14:03,500

To do that, you had to break the Jamie stance.

217

00:14:03,500 --> 00:14:04,500

They get through it.

218

00:14:04,500 --> 00:14:06,500

He thinks a lot with his hair.

219

00:14:06,500 --> 00:14:08,500

The recipe for being Adam is pretty simple, really.

220

00:14:08,500 --> 00:14:12,500

There's a lot of random movement from the waist up, including his arms.

221

00:14:12,500 --> 00:14:16,500

You know, I think you might be right.

222

00:14:16,500 --> 00:14:21,500

He's constantly adjusting his glasses, smoothing his hair and stroking his beard.

223

00:14:24,500 --> 00:14:30,500

And he laughs often and readily, and generally covers his mouth with his hands right after.

224

00:14:30,500 --> 00:14:31,500

Can I stop now?

225

00:14:31,500 --> 00:14:33,500

You may stop and put your ballet back on.

226

00:14:33,500 --> 00:14:35,500

My work here is done.

227

00:14:35,500 --> 00:14:36,500

Best of luck to you.

228

00:14:36,500 --> 00:14:44,500

After the curtain comes down and Terry bows out, the newly minted theses have their handmade masks hand-delivered.

229

00:14:44,500 --> 00:14:47,500

And get a bit of a shock.

230

00:14:47,500 --> 00:14:49,500

Am I really that ugly?

231

00:14:54,500 --> 00:15:02,500

Oh, man. That is frickin' creepy.

232

00:15:04,500 --> 00:15:06,500

Creepy, most definitely.

233

00:15:06,500 --> 00:15:08,500

But this isn't a Halloween special.

234

00:15:08,500 --> 00:15:12,500

The goal here is security breach realism.

235

00:15:19,500 --> 00:15:23,500

And to achieve that, they've got to put together the complete package.

236

00:15:23,500 --> 00:15:25,500

Are you ready?

237

00:15:26,500 --> 00:15:31,500

You know, becoming Jamie is more than just being a century and a half old and having a taste for fast cars and hard cider.

238

00:15:31,500 --> 00:15:32,500

Oh, no.

239

00:15:32,500 --> 00:15:36,500

There's many moving pieces to the puzzle that is James Franklin Heineman.

240

00:15:39,500 --> 00:15:41,500

It starts with the shoes.

241

00:15:42,500 --> 00:15:44,500

Then there's the grey pants.

242

00:15:45,500 --> 00:15:50,500

The trademark white shirt, for which, clearly I need some bigger shoulders.

243

00:15:51,500 --> 00:15:56,500

Add shoulder pads, the all-important mask, beret and glasses.

244

00:15:58,500 --> 00:16:01,500

And then the transformation is complete.

245

00:16:01,500 --> 00:16:06,500

And fake face to fake face, the comparison is impressive.

246

00:16:06,500 --> 00:16:09,500

I gotta say, the clothes make the man, don't they?

247

00:16:09,500 --> 00:16:12,500

They seriously, they seriously do.

248

00:16:12,500 --> 00:16:14,500

But is it good enough?

249

00:16:14,500 --> 00:16:17,500

After all, there are some obvious flaws in this face-off.

250

00:16:18,500 --> 00:16:23,500

The technique that was used to make this mask involves sculpting it over a generic inner mold.

251

00:16:23,500 --> 00:16:27,500

That means that every time a different person wears it, it's going to look slightly different.

252

00:16:27,500 --> 00:16:33,500

In my case, Adam's head here is a bit larger and fatter than it is in real life.

253

00:16:33,500 --> 00:16:35,500

So, the masks aren't perfect.

254

00:16:35,500 --> 00:16:40,500

The question here is, how far can we actually go towards fooling a mark?

255

00:16:40,500 --> 00:16:44,500

We can do things like, where the clothes of the original person,

256

00:16:44,500 --> 00:16:47,500

we can act like the original person.

257

00:16:50,500 --> 00:16:51,500

Really loose.

258

00:16:54,500 --> 00:16:57,500

We can even distract the mark.

259

00:16:57,500 --> 00:17:03,500

So, all of those things cumulatively may well have the effect of completing the illusion

260

00:17:03,500 --> 00:17:07,500

much better than any individual technique would by itself.

261

00:17:07,500 --> 00:17:10,500

That's perfect. You nailed it.

262

00:17:10,500 --> 00:17:12,500

Yeah, that's good.

263

00:17:38,500 --> 00:17:43,500

Shoot them up. The hero shoots first and asks questions later.

264

00:17:43,500 --> 00:17:49,500

But could a bullet really blast a merry-go-round into a spin?

265

00:17:49,500 --> 00:17:54,500

So far, the handguns failed to spin the wheel.

266

00:17:54,500 --> 00:17:58,500

So now for something a little bigger.

267

00:17:58,500 --> 00:18:01,500

What I have here is our good old standby 12-gauge shotgun.

268

00:18:01,500 --> 00:18:04,500

We're going to be firing a deer slug.

269

00:18:04,500 --> 00:18:07,500

Now, the deer slug has 2,500 foot-pounds of energy.

270

00:18:07,500 --> 00:18:10,500

That's more energy than any of our handguns so far.

271

00:18:10,500 --> 00:18:13,500

Plus, the deer slug has more mass than any of the bullets.

272

00:18:13,500 --> 00:18:19,500

Now, that added mass and that extra energy will hopefully get this merry-go-round to spin.

273

00:18:24,500 --> 00:18:30,500

Okay, so not only is it not spinning, but you blew a hole clean through it.

274

00:18:31,500 --> 00:18:36,500

Yeah, it's not working, but maybe a bit of bulletproofing will help.

275

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

So what's happening right now is our bullets are flying so fast

276

00:18:40,500 --> 00:18:43,500

they're just punching right through the merry-go-round and we're losing all that energy.

277

00:18:43,500 --> 00:18:47,500

So we added these plates. Hopefully that will capture that energy and make this thing spin.

278

00:18:50,500 --> 00:18:56,500

Alright, this is 12-gauge shotgun with deer slug reinforced merry-go-round.

279

00:18:57,500 --> 00:18:59,500

Hey, moved a little.

280

00:18:59,500 --> 00:19:02,500

The bulletproofing absorbs more of the bullets' energy.

281

00:19:02,500 --> 00:19:05,500

Keep it going, yeah!

282

00:19:05,500 --> 00:19:09,500

And with sans-tory shotgun barrage.

283

00:19:11,500 --> 00:19:18,500

But this is about a single impact and one deer slug only scored 1.5 inches of nudge,

284

00:19:18,500 --> 00:19:22,500

which means it's time to bring out the big, big guns.

285

00:19:22,500 --> 00:19:26,500

This is an AR-50. It fires 50-caliber rounds.

286

00:19:26,500 --> 00:19:32,500

They have 13,000 foot-pounds of energy. They travel at over 2,900 feet per second.

287

00:19:32,500 --> 00:19:36,500

They're 25 times more powerful than the gun in the movie.

288

00:19:36,500 --> 00:19:39,500

If this doesn't spin our merry-go-round, nothing will.

289

00:19:49,500 --> 00:19:53,500

Despite an impact that separated the half-inch steel plates,

290

00:19:53,500 --> 00:19:56,500

the merry-go-round still isn't spinning.

291

00:19:56,500 --> 00:19:59,500

We got it to move. It moved 8 inches and that was with one shot.

292

00:19:59,500 --> 00:20:03,500

Yeah, but we're using a 50-caliber with a reinforced merry-go-round

293

00:20:03,500 --> 00:20:06,500

and 8 inches is really not that impressive.

294

00:20:06,500 --> 00:20:08,500

Alright, so this one is busted.

295

00:20:08,500 --> 00:20:09,500

Totally busted.

296

00:20:09,500 --> 00:20:13,500

Busted. But there's still more twists and turns to come.

297

00:20:18,500 --> 00:20:21,500

That is some f***ing f***ing f***ing f***ing.

298

00:20:21,500 --> 00:20:26,500

Yep, this is one crazy, bleeping, double-taken myth.

299

00:20:26,500 --> 00:20:28,500

So where to next?

300

00:20:28,500 --> 00:20:31,500

Well, these guys are done and they look pretty darn good.

301

00:20:31,500 --> 00:20:32,500

So how do you want to start testing?

302

00:20:32,500 --> 00:20:34,500

Well, let's say we bring in some members of the general public,

303

00:20:34,500 --> 00:20:37,500

people who are familiar with our faces but don't know us,

304

00:20:37,500 --> 00:20:40,500

and see if these can fool them.

305

00:20:45,500 --> 00:20:48,500

To simulate a guard watching a building's entrance,

306

00:20:48,500 --> 00:20:52,500

our volunteers who know Jamie and Adam, but not personally,

307

00:20:52,500 --> 00:20:56,500

will be told their task is to focus a laser on a target.

308

00:20:56,500 --> 00:20:57,500

This is going to be cool.

309

00:20:57,500 --> 00:21:01,500

However, we'll really be testing their powers of observation.

310

00:21:01,500 --> 00:21:07,500

Will the fake mask-wearing myth buster in their peripheral vision pass mustard?

311

00:21:07,500 --> 00:21:10,500

Here's how it's going to go for our contestants.

312

00:21:10,500 --> 00:21:14,500

They'll start in this room here where shop general Don is going to hand them a laser.

313

00:21:15,500 --> 00:21:18,500

Then they'll proceed to this line, 90 feet from the target,

314

00:21:18,500 --> 00:21:21,500

and on command they will point their laser at the target,

315

00:21:21,500 --> 00:21:23,500

and then they'll stop pointing it at the target,

316

00:21:23,500 --> 00:21:25,500

and then they'll proceed to the 70-foot mark.

317

00:21:26,500 --> 00:21:29,500

At the 70-foot mark, they'll do the same thing again.

318

00:21:29,500 --> 00:21:31,500

Laser on, laser off.

319

00:21:32,500 --> 00:21:33,500

And so on.

320

00:21:35,500 --> 00:21:36,500

And so on.

321

00:21:37,500 --> 00:21:39,500

Now clearly, this is their last stop.

322

00:21:39,500 --> 00:21:41,500

They'll point the laser at the target one last time,

323

00:21:41,500 --> 00:21:45,500

and then they'll turn at the end of the test and see Jamie dressed as me.

324

00:21:45,500 --> 00:21:50,500

I'll be watching everything from behind this curtain. Go!

325

00:21:50,500 --> 00:21:53,500

So with Jamie in costume, in character...

326

00:21:53,500 --> 00:21:55,500

It's party time.

327

00:21:55,500 --> 00:21:59,500

And in position, the first excited fan is wheeled in,

328

00:21:59,500 --> 00:22:03,500

given their instructions and shown through to the test area.

329

00:22:04,500 --> 00:22:06,500

Here comes our first test subject.

330

00:22:08,500 --> 00:22:10,500

Okay, start.

331

00:22:10,500 --> 00:22:12,500

She sees Jamie.

332

00:22:14,500 --> 00:22:15,500

She looks confused.

333

00:22:16,500 --> 00:22:17,500

Next!

334

00:22:18,500 --> 00:22:21,500

She looks suspicious, but she's not saying anything.

335

00:22:21,500 --> 00:22:23,500

Aside from that brief look of confusion,

336

00:22:23,500 --> 00:22:25,500

our laser-wielding volunteer,

337

00:22:25,500 --> 00:22:29,500

with just the occasional glance across at fake Adam,

338

00:22:29,500 --> 00:22:32,500

completes the test without giving anything away.

339

00:22:32,500 --> 00:22:34,500

Stop. Thank you.

340

00:22:34,500 --> 00:22:38,500

But as the real Adam suspected, she was on to them from the get-go.

341

00:22:38,500 --> 00:22:41,500

Just wondering at what point in the walk-down

342

00:22:41,500 --> 00:22:43,500

that you felt like something was suspicious about him?

343

00:22:43,500 --> 00:22:45,500

Um, immediately.

344

00:22:45,500 --> 00:22:46,500

Really? Yes.

345

00:22:46,500 --> 00:22:50,500

Subject number two is equally quick on the uptake.

346

00:22:50,500 --> 00:22:53,500

Hello. Hi.

347

00:22:53,500 --> 00:22:55,500

He looks really suspicious right there.

348

00:22:56,500 --> 00:22:59,500

Even though the fan seemed focused on the fake test...

349

00:22:59,500 --> 00:23:00,500

Thank you.

350

00:23:00,500 --> 00:23:03,500

Thanks. Thanks very much.

351

00:23:03,500 --> 00:23:06,500

Jamie's not fooling them at all.

352

00:23:06,500 --> 00:23:09,500

And the third contestant not only confirms the conclusion,

353

00:23:09,500 --> 00:23:12,500

she pinpoints the why.

354

00:23:12,500 --> 00:23:15,500

When you first said go, because you said it kind of strange.

355

00:23:15,500 --> 00:23:17,500

My voice. Yeah.

356

00:23:17,500 --> 00:23:19,500

Yep, despite the voice coaching,

357

00:23:19,500 --> 00:23:21,500

Jamie still sounds like Jamie.

358

00:23:21,500 --> 00:23:22,500

Go.

359

00:23:22,500 --> 00:23:24,500

And as soon as he opens his silicone-covered mouth,

360

00:23:24,500 --> 00:23:26,500

he gives the game away.

361

00:23:26,500 --> 00:23:29,500

Question is, can Adam do any better?

362

00:23:29,500 --> 00:23:32,500

Can someone please clean up all this crap in the shop?

363

00:23:32,500 --> 00:23:35,500

Seeing as Adam frequently mimics Jamie,

364

00:23:35,500 --> 00:23:38,500

he's confident, but are his Heinemann vocal stylings

365

00:23:38,500 --> 00:23:40,500

as good as he thinks they are?

366

00:23:40,500 --> 00:23:42,500

Knock him down.

367

00:23:42,500 --> 00:23:43,500

Hello.

368

00:23:43,500 --> 00:23:46,500

The next three contestants are taken through the test.

369

00:23:46,500 --> 00:23:49,500

Go. He's focused on that target.

370

00:23:49,500 --> 00:23:53,500

But as before, they keep any suspicions they have to themselves...

371

00:23:53,500 --> 00:23:54,500

Next.

372

00:23:54,500 --> 00:23:58,500

...until confronted by the real Jamie and asked directly.

373

00:23:58,500 --> 00:23:59,500

What tipped you off?

374

00:23:59,500 --> 00:24:01,500

Uh, the voice difference.

375

00:24:01,500 --> 00:24:04,500

So it's confirmed the voice is the giveaway.

376

00:24:04,500 --> 00:24:07,500

But the team haven't yet plumbed the depths of this myth.

377

00:24:07,500 --> 00:24:11,500

They're picking the suspect variable and removing it.

378

00:24:11,500 --> 00:24:12,500

Awesome.

379

00:24:12,500 --> 00:24:13,500

Go.

380

00:24:20,500 --> 00:24:23,500

So far, Gary, Grant and Tori have busted Hollywood

381

00:24:23,500 --> 00:24:26,500

for playing fast and loose with physics.

382

00:24:26,500 --> 00:24:28,500

Totally busted.

383

00:24:29,500 --> 00:24:31,500

But before they get back on the merry-go-round

384

00:24:31,500 --> 00:24:33,500

to replicate the results,

385

00:24:33,500 --> 00:24:36,500

the team is gunning for a golden oldie.

386

00:24:36,500 --> 00:24:38,500

It's the good...

387

00:24:39,500 --> 00:24:41,500

the bad...

388

00:24:43,500 --> 00:24:45,500

the purdy.

389

00:24:45,500 --> 00:24:48,500

In the movies, a gunslinger manages to nonchalantly

390

00:24:48,500 --> 00:24:52,500

blast the gun out of the reach of his throne opponent.

391

00:24:52,500 --> 00:24:55,500

But could this trick shot really do the trick?

392

00:24:55,500 --> 00:24:58,500

So we are back at the range to test the myth

393

00:24:58,500 --> 00:25:00,500

that you could shoot a gun and move it.

394

00:25:00,500 --> 00:25:02,500

Now we're gonna test on three different surfaces.

395

00:25:02,500 --> 00:25:05,500

The first one is a dirt road, like you would find in a Western.

396

00:25:05,500 --> 00:25:07,500

The next one is a paved surface,

397

00:25:07,500 --> 00:25:09,500

like you would find in an urban setting,

398

00:25:09,500 --> 00:25:11,500

and finally a tile floor,

399

00:25:11,500 --> 00:25:13,500

something you might find in a public building.

400

00:25:13,500 --> 00:25:15,500

So what we're gonna do is we're gonna place the gun

401

00:25:15,500 --> 00:25:17,500

on each of the surfaces, fire at them,

402

00:25:17,500 --> 00:25:19,500

and see if we can get them to move.

403

00:25:19,500 --> 00:25:20,500

This is our target gun.

404

00:25:20,500 --> 00:25:22,500

It's just your base.

405

00:25:22,500 --> 00:25:24,500

9mm handgun.

406

00:25:24,500 --> 00:25:26,500

Now we're gonna start using the Glock,

407

00:25:26,500 --> 00:25:28,500

and we're gonna see if we shoot at the gun,

408

00:25:28,500 --> 00:25:30,500

how far we can skid it across the surface.

409

00:25:30,500 --> 00:25:32,500

It's handgun versus handgun.

410

00:25:32,500 --> 00:25:34,500

But before they get shooting,

411

00:25:34,500 --> 00:25:37,500

Grant wants to check the friction of our three floor coverings.

412

00:25:37,500 --> 00:25:40,500

I'm gonna take a quick measurement of the force required

413

00:25:40,500 --> 00:25:42,500

to drag them across the surfaces.

414

00:25:42,500 --> 00:25:45,500

So dirt is 1.54 pounds.

415

00:25:45,500 --> 00:25:49,500

Okay, asphalt is 1.46 pounds.

416

00:25:49,500 --> 00:25:51,500

Okay.

417

00:25:51,500 --> 00:25:53,500

Okay, tile's half a pound.

418

00:25:53,500 --> 00:25:57,500

Unsurprisingly, the tiled surface provides the least resistance.

419

00:25:57,500 --> 00:26:00,500

So that's where the team will start.

420

00:26:00,500 --> 00:26:02,500

This handgun's pretty heavy. I mean, it's a couple pounds.

421

00:26:02,500 --> 00:26:05,500

I don't think that there's any way a handgun has enough

422

00:26:05,500 --> 00:26:07,500

muzzle energy to actually get this thing moving

423

00:26:07,500 --> 00:26:09,500

across any surface.

424

00:26:09,500 --> 00:26:11,500

Yep, after the fake physics on film

425

00:26:11,500 --> 00:26:14,500

failed to spin the merry-go-round in real life,

426

00:26:14,500 --> 00:26:18,500

it's no surprise they're skeptical of making a gun skip.

427

00:26:18,500 --> 00:26:21,500

Go on, grab that gun. Get it.

428

00:26:21,500 --> 00:26:23,500

Shoot the gun away from the bad guy.

429

00:26:23,500 --> 00:26:27,500

This is handgun versus handgun, tile floor.

430

00:26:27,500 --> 00:26:29,500

Oh, my, no way!

431

00:26:29,500 --> 00:26:31,500

Ha-ha!

432

00:26:31,500 --> 00:26:34,500

Dude, that is just like in the movie.

433

00:26:34,500 --> 00:26:37,500

Wow! That works!

434

00:26:37,500 --> 00:26:41,500

Incredibly, completely confounding the team's predictions.

435

00:26:41,500 --> 00:26:43,500

And just like in the movies,

436

00:26:43,500 --> 00:26:47,500

Tori gets the gun to skid across 16 feet of tile.

437

00:26:47,500 --> 00:26:50,500

Well out of reach of Buster the Kid.

438

00:26:50,500 --> 00:26:52,500

Three shots!

439

00:26:52,500 --> 00:26:54,500

Dude, that works really well on the tile.

440

00:26:54,500 --> 00:26:56,500

That is crazy!

441

00:26:56,500 --> 00:26:59,500

With the 9mm making quick work of the tile,

442

00:26:59,500 --> 00:27:01,500

it's on to surface number two.

443

00:27:01,500 --> 00:27:03,500

But with a higher friction rating,

444

00:27:03,500 --> 00:27:06,500

perhaps the asphalt will put up more resistance.

445

00:27:06,500 --> 00:27:10,500

Wow!

446

00:27:10,500 --> 00:27:12,500

Nice.

447

00:27:12,500 --> 00:27:15,500

Three hits. You're almost out.

448

00:27:15,500 --> 00:27:18,500

That's it. Four hits.

449

00:27:18,500 --> 00:27:20,500

Totally works on asphalt.

450

00:27:20,500 --> 00:27:22,500

That was great. That was like four feet per bullet.

451

00:27:22,500 --> 00:27:24,500

Asphalt confirmed.

452

00:27:24,500 --> 00:27:28,500

Yep, so far the Mythbusters predictions have been shot to pieces.

453

00:27:28,500 --> 00:27:31,500

But there's one more dirty surface to try.

454

00:27:31,500 --> 00:27:34,500

Here we go.

455

00:27:34,500 --> 00:27:39,500

Ha-ha!

456

00:27:39,500 --> 00:27:41,500

Oh, my, it moved!

457

00:27:41,500 --> 00:27:43,500

Wow!

458

00:27:46,500 --> 00:27:48,500

Ha-ha-ha!

459

00:27:48,500 --> 00:27:50,500

That works so well in the dirt.

460

00:27:50,500 --> 00:27:51,500

So dirt's confirmed.

461

00:27:51,500 --> 00:27:53,500

Yeah, westerns don't lie.

462

00:27:53,500 --> 00:27:55,500

Well in this case they don't.

463

00:27:55,500 --> 00:27:58,500

Even on the most resistant surface, the dirt,

464

00:27:58,500 --> 00:28:02,500

it still only took six shots to shoot the gun clear out of reach.

465

00:28:02,500 --> 00:28:05,500

What we're talking about here is transfer of kinetic energy.

466

00:28:05,500 --> 00:28:09,500

Now the bullet has a certain kinetic energy based on its mass and its speed.

467

00:28:09,500 --> 00:28:12,500

It hits the gun and transfers some or all of that.

468

00:28:12,500 --> 00:28:16,500

Now based on the friction of the surface, that might require more or less.

469

00:28:16,500 --> 00:28:20,500

Bottom line is the bullet hits the gun and it moves.

470

00:28:20,500 --> 00:28:24,500

That way movies actually are real.

471

00:28:24,500 --> 00:28:26,500

I told you they don't lie.

472

00:28:26,500 --> 00:28:31,500

Yep, in this case the force of a firearm on film is in fact fact.

473

00:28:31,500 --> 00:28:33,500

Unlike the merry-go-round.

474

00:28:33,500 --> 00:28:36,500

But the team hasn't given up on making that myth move.

475

00:28:36,500 --> 00:28:39,500

Next up they're going to find out exactly what it would take

476

00:28:39,500 --> 00:28:43,500

to put the merry-go-round into a spin.

477

00:28:47,500 --> 00:28:54,500

In Mission Impossible Face Off, it seems you can't fool any of the people any of the time.

478

00:28:54,500 --> 00:28:56,500

You're kind of telling the voice a little bit.

479

00:28:56,500 --> 00:28:59,500

Well all of them said the voice is what ticked them off.

480

00:28:59,500 --> 00:29:00,500

Next.

481

00:29:00,500 --> 00:29:03,500

We're going to eliminate the voice from the next three tests.

482

00:29:03,500 --> 00:29:06,500

Because Jamie really talks just like this.

483

00:29:06,500 --> 00:29:07,500

Nobody knows that.

484

00:29:08,500 --> 00:29:09,500

Oh!

485

00:29:10,500 --> 00:29:15,500

So the next batch of test subjects will be subjected to the silent treatment.

486

00:29:16,500 --> 00:29:19,500

Okay, she's got a very mobile face.

487

00:29:19,500 --> 00:29:21,500

Let's see if she's got any tells.

488

00:29:22,500 --> 00:29:25,500

As before, fake Jamie will be standing near the target,

489

00:29:25,500 --> 00:29:28,500

pretending to note the results from the fake laser test.

490

00:29:28,500 --> 00:29:32,500

But the instructions will come from cameraman Ben.

491

00:29:32,500 --> 00:29:35,500

So far so good.

492

00:29:35,500 --> 00:29:39,500

Our smiley, pink top testee seems intent on the target.

493

00:29:40,500 --> 00:29:41,500

What's the next marker?

494

00:29:41,500 --> 00:29:44,500

She hasn't found out anything yet.

495

00:29:44,500 --> 00:29:45,500

She doesn't have a clue.

496

00:29:45,500 --> 00:29:50,500

But fake Jamie is in clear view and she can't help but see him.

497

00:29:50,500 --> 00:29:55,500

So as the guard to this building will our volunteer note, our masked intruder,

498

00:29:55,500 --> 00:29:57,500

is not who he's pretending to be.

499

00:30:00,500 --> 00:30:01,500

Hello.

500

00:30:01,500 --> 00:30:02,500

Hi.

501

00:30:02,500 --> 00:30:03,500

That is awesome.

502

00:30:03,500 --> 00:30:05,500

You are a dead ringer.

503

00:30:05,500 --> 00:30:07,500

That's amazing.

504

00:30:07,500 --> 00:30:12,500

At what point did you finally feel like something was wrong with the disguise?

505

00:30:12,500 --> 00:30:14,500

The first moment I looked at your face.

506

00:30:14,500 --> 00:30:15,500

Which was?

507

00:30:15,500 --> 00:30:16,500

Straight on.

508

00:30:16,500 --> 00:30:17,500

Yes.

509

00:30:17,500 --> 00:30:18,500

When I was right here.

510

00:30:18,500 --> 00:30:19,500

Yeah.

511

00:30:19,500 --> 00:30:20,500

Up until then, I thought you were Jamie.

512

00:30:20,500 --> 00:30:21,500

Excellent.

513

00:30:22,500 --> 00:30:23,500

Well, thank you very much.

514

00:30:23,500 --> 00:30:24,500

Thank you, Jamie.

515

00:30:24,500 --> 00:30:25,500

Thank you.

516

00:30:25,500 --> 00:30:26,500

And thank you, not Jamie.

517

00:30:26,500 --> 00:30:27,500

You're very welcome.

518

00:30:28,500 --> 00:30:30,500

That's a result in favor of the myth.

519

00:30:30,500 --> 00:30:34,500

Despite being in plain view for the whole 90 feet, it wasn't until

520

00:30:34,500 --> 00:30:40,500

fake Jamie directly confronted her that she realized it wasn't really him.

521

00:30:40,500 --> 00:30:43,500

This experiment is working exactly as planned.

522

00:30:43,500 --> 00:30:48,500

All of our test subjects are totally focused on holding that laser beam on the target.

523

00:30:48,500 --> 00:30:52,500

Now they can't help but see us because we're right next to it.

524

00:30:52,500 --> 00:30:54,500

But they're not looking directly at us.

525

00:30:54,500 --> 00:30:58,500

And so they're going all the way up until they're right in front of us.

526

00:30:58,500 --> 00:31:03,500

And they don't know what's up until they turn around and look directly at us.

527

00:31:03,500 --> 00:31:07,500

Throughout the test, you thought this person was me.

528

00:31:07,500 --> 00:31:08,500

Yes.

529

00:31:08,500 --> 00:31:10,500

I think that went well.

530

00:31:10,500 --> 00:31:11,500

I think so.

531

00:31:11,500 --> 00:31:14,500

With three from three, the results are cut and dry.

532

00:31:14,500 --> 00:31:19,500

And all that remains is to check if Adam's mask is similarly successful.

533

00:31:19,500 --> 00:31:22,500

When did you notice that something was wrong?

534

00:31:22,500 --> 00:31:27,500

When I turned to shake his hand after the final tests, it didn't look quite right.

535

00:31:27,500 --> 00:31:28,500

I don't know what.

536

00:31:28,500 --> 00:31:31,500

This is great without the voice for people to cue off of.

537

00:31:31,500 --> 00:31:35,500

They're going all the way from 90 feet to 5 feet believing that the myth buster that

538

00:31:35,500 --> 00:31:37,500

they're in the room with is me.

539

00:31:37,500 --> 00:31:43,500

Right up until the point in which they turn and see his big old head.

540

00:31:43,500 --> 00:31:48,500

So in this scenario, similar to a security guard monitoring the entrance to a building,

541

00:31:48,500 --> 00:31:52,500

if you keep your mouth shut, the myth is looking great.

542

00:31:52,500 --> 00:31:54,500

That went so much better than I thought it would.

543

00:31:54,500 --> 00:31:56,500

I want to do a little dance.

544

00:31:58,500 --> 00:32:02,500

But now Adam and Jamie have a much tougher test in mind.

545

00:32:02,500 --> 00:32:06,500

If we leave the voice out of the equation, the masks are actually proving to be quite

546

00:32:06,500 --> 00:32:11,500

effective up until the point that the mark is point blank in front of the imposter.

547

00:32:11,500 --> 00:32:15,500

But that is with fans, people that know us but don't really know us.

548

00:32:15,500 --> 00:32:21,500

Now the question is what happens if we bring somebody in that deals with us every day?

549

00:32:23,500 --> 00:32:24,500

That's weird.

550

00:32:28,500 --> 00:32:30,500

Coming right up.

551

00:32:30,500 --> 00:32:32,500

It's the scary go round.

552

00:32:32,500 --> 00:32:36,500

Carry Granjantori lock and load to replicate the results.

553

00:32:41,500 --> 00:32:44,500

So watching that gun fly backwards was amazing.

554

00:32:44,500 --> 00:32:48,500

Yeah, that result was so surprising that I think maybe we should go back and retest the

555

00:32:48,500 --> 00:32:49,500

merry go round.

556

00:32:49,500 --> 00:32:50,500

What do you mean?

557

00:32:50,500 --> 00:32:51,500

Well what if we re-engineer it?

558

00:32:51,500 --> 00:32:56,500

We have it so that it absorbs the bullets energy and it spins a lot easier than it did.

559

00:32:56,500 --> 00:32:59,500

If we can overcome the inertia we might be able to get it to spin and keep it spinning

560

00:32:59,500 --> 00:33:01,500

especially if we use something that repeat fires.

561

00:33:01,500 --> 00:33:02,500

Hey this is Muthbusters.

562

00:33:02,500 --> 00:33:05,500

If it's worth doing, it's worth overdoing.

563

00:33:07,500 --> 00:33:11,500

And first on the list for a little overdoing is the merry go round.

564

00:33:11,500 --> 00:33:12,500

Okay lower it down.

565

00:33:12,500 --> 00:33:18,500

Starting at the bottom, Tori over-engineers the bearing system to give it the smoothest spin.

566

00:33:19,500 --> 00:33:22,500

Now one problem we were having with getting this merry go round to spin was there was too much

567

00:33:22,500 --> 00:33:25,500

friction in the bearing system that came with the merry go round.

568

00:33:25,500 --> 00:33:28,500

So I've switched that out for a couple of flange bearings.

569

00:33:28,500 --> 00:33:33,500

Hopefully these will cut down that friction and allow this to spin once we start shooting it.

570

00:33:34,500 --> 00:33:37,500

Meanwhile, Grant and Carry add some armor plating.

571

00:33:37,500 --> 00:33:43,500

Not only will these provide targets, they should ensure the optimum absorption of kinetic energy.

572

00:33:45,500 --> 00:33:49,500

And with school out on the renovating, it's back to the playground.

573

00:33:49,500 --> 00:33:52,500

The most dangerous playground ever.

574

00:33:52,500 --> 00:33:58,500

And with a new improved merry go round in place, they can check just how improved it is.

575

00:33:58,500 --> 00:34:02,500

So it took 8.6 pounds of force last time. What do we have now?

576

00:34:02,500 --> 00:34:03,500

Dremel please.

577

00:34:03,500 --> 00:34:04,500

Okay here we go.

578

00:34:06,500 --> 00:34:07,500

Point four.

579

00:34:07,500 --> 00:34:09,500

We've taken off 8 pounds of force.

580

00:34:09,500 --> 00:34:11,500

This thing might actually spin.

581

00:34:11,500 --> 00:34:16,500

And to give this recreation their best shot, they're pulling out three big guns.

582

00:34:16,500 --> 00:34:21,500

Carry will be providing the entree, the main course cooked up by Torian Grant.

583

00:34:21,500 --> 00:34:25,500

So this is the firepower we're going to be using to try and spin our super merry go round.

584

00:34:25,500 --> 00:34:28,500

These are two semi-automatic shotguns.

585

00:34:28,500 --> 00:34:33,500

We'll be firing deer slugs, which have an energy of over 5,000 foot-pounds.

586

00:34:33,500 --> 00:34:38,500

But to kick things off, we thought we'd start out with something just a little bit more powerful.

587

00:34:38,500 --> 00:34:41,500

Now check this out, we have a Barrett 416.

588

00:34:41,500 --> 00:34:46,500

Now with 9,000 foot-pounds of muzzle energy, we should be able to get past that initial inertia

589

00:34:46,500 --> 00:34:49,500

and actually replicate the results of this myth.

590

00:34:49,500 --> 00:34:53,500

Yep, and if it wasn't already the most perilous playground ever,

591

00:34:53,500 --> 00:34:58,500

Carry has some last minute set dressing that'll really light up proceedings.

592

00:34:59,500 --> 00:35:01,500

It's not like this merry go round isn't dangerous enough.

593

00:35:01,500 --> 00:35:04,500

We're at a shooting range firing rounds at it,

594

00:35:04,500 --> 00:35:09,500

but Carry's decided to put barbed wire and a rope soaked in gasoline that she's going to light before we start shooting.

595

00:35:09,500 --> 00:35:12,500

When we get it, Carry, you don't want us to ride your merry go round.

596

00:35:14,500 --> 00:35:17,500

Now it's the scary go round.

597

00:35:17,500 --> 00:35:23,500

Scary, for sure, but will their excess lead to success?

598

00:35:23,500 --> 00:35:27,500

Will the amped up armory replicate the results seen in the movie?

599

00:35:28,500 --> 00:35:32,500

It's over to Carry to get the ball rolling or spinning.

600

00:35:33,500 --> 00:35:43,500

And unsurprisingly, 9,000 foot-pounds of energy does finally overcome the inertia of the merry go round.

601

00:35:45,500 --> 00:35:48,500

Then Grant and Tori provide backup.

602

00:35:51,500 --> 00:35:56,500

With a steady stream of ammo to keep the vicious circle spinning.

603

00:36:03,500 --> 00:36:05,500

That is so terrifying!

604

00:36:06,500 --> 00:36:08,500

Alright, who's going for a ride?

605

00:36:08,500 --> 00:36:09,500

We replicated the results.

606

00:36:09,500 --> 00:36:10,500

That's awesome.

607

00:36:10,500 --> 00:36:13,500

Awesome, but still busting.

608

00:36:13,500 --> 00:36:19,500

Only by going completely and utterly myth busters did they get the money shot.

609

00:36:21,500 --> 00:36:26,500

We took everything we learned during the early stages of this myth and applied it to the scary go rounds.

610

00:36:26,500 --> 00:36:31,500

We reduced the friction of spinning, we added plates to capture all of that energy,

611

00:36:31,500 --> 00:36:33,500

and you know what? It works.

612

00:36:33,500 --> 00:36:36,500

Now about that debt-cored swing set.

613

00:36:36,500 --> 00:36:39,500

Yeah, how about the landmine sandbox?

614

00:36:39,500 --> 00:36:41,500

C4, seesaw?

615

00:36:41,500 --> 00:36:42,500

Love it.

616

00:37:02,500 --> 00:37:10,500

I think it's time to move from people who are familiar with us to people who really know us.

617

00:37:10,500 --> 00:37:13,500

I think it's time to bring in Carry and Grant.

618

00:37:13,500 --> 00:37:14,500

You know, I've got an idea.

619

00:37:14,500 --> 00:37:17,500

What if we invite them over for what we're calling an observation test,

620

00:37:17,500 --> 00:37:20,500

and we expose them to you dressed as me,

621

00:37:20,500 --> 00:37:24,500

but every time we do that, we introduce a subtle wardrobe change,

622

00:37:24,500 --> 00:37:27,500

and maybe that'll distract them enough to pull this off.

623

00:37:27,500 --> 00:37:29,500

I think that's great.

624

00:37:29,500 --> 00:37:31,500

Here's how this test is going to work.

625

00:37:31,500 --> 00:37:36,500

Grant and Carry will be told they're here to participate in a spot-the-difference test from five distances.

626

00:37:36,500 --> 00:37:42,500

90 feet, 70 feet, 50 feet, 30 feet, and 5 feet.

627

00:37:42,500 --> 00:37:44,500

From each of these distances, a curtain will rise,

628

00:37:44,500 --> 00:37:48,500

exposing me dressed as Jamie on a turntable spinning.

629

00:37:48,500 --> 00:37:51,500

Except each time the curtain goes up, I'll have something different about my wardrobe.

630

00:37:51,500 --> 00:37:52,500

Curtain down.

631

00:37:53,500 --> 00:37:54,500

I think we're ready.

632

00:37:55,500 --> 00:37:58,500

Cue a confident, perhaps overconfident, Carry.

633

00:37:59,500 --> 00:38:01,500

I feel like I should be able to pick differences.

634

00:38:01,500 --> 00:38:03,500

I mean, I think I know Jamie pretty well.

635

00:38:03,500 --> 00:38:05,500

Okay, raise the curtain.

636

00:38:05,500 --> 00:38:09,500

At 90 feet, with no actual changes to Jamie's wardrobe...

637

00:38:10,500 --> 00:38:12,500

Wow, 90 feet is far.

638

00:38:13,500 --> 00:38:19,500

Carry doesn't notice anything untoward, but at 70 feet, she takes the bait.

639

00:38:20,500 --> 00:38:23,500

Well, obviously the orange belt is different.

640

00:38:23,500 --> 00:38:25,500

That's kind of crazy town.

641

00:38:25,500 --> 00:38:29,500

I don't think I've ever seen Jamie in a different color before.

642

00:38:29,500 --> 00:38:35,500

But before Carry moves to the 50 feet marker, a thought occurs and she pauses.

643

00:38:35,500 --> 00:38:38,500

Is that really Jamie or is that a wax statue of Jamie?

644

00:38:38,500 --> 00:38:42,500

Okay, so Carry's aware something is not quite right.

645

00:38:42,500 --> 00:38:44,500

Oh yeah, different shoes.

646

00:38:44,500 --> 00:38:45,500

Wow!

647

00:38:45,500 --> 00:38:47,500

But other than the obvious wardrobe changes...

648

00:38:47,500 --> 00:38:49,500

There's a blue hankie in his pocket.

649

00:38:49,500 --> 00:38:53,500

It's not until she's at five feet that she's willing to elaborate.

650

00:38:55,500 --> 00:38:57,500

That doesn't look like Jamie.

651

00:38:57,500 --> 00:39:00,500

There's some sort of prosthetics or something going on.

652

00:39:00,500 --> 00:39:04,500

And even then, it takes a moment before she's ready to commit.

653

00:39:04,500 --> 00:39:06,500

There's not one thing changing.

654

00:39:06,500 --> 00:39:09,500

There is a complete difference that I didn't see at 90.

655

00:39:09,500 --> 00:39:12,500

And I thought I saw at 70, but I doubted myself.

656

00:39:12,500 --> 00:39:14,500

But at five...

657

00:39:14,500 --> 00:39:17,500

Unless he ate some shellfish and he's allergic, there's something going on.

658

00:39:22,500 --> 00:39:24,500

I knew there was some trickery.

659

00:39:26,500 --> 00:39:28,500

How early did you catch on?

660

00:39:28,500 --> 00:39:29,500

70.

661

00:39:29,500 --> 00:39:30,500

Really?

662

00:39:30,500 --> 00:39:31,500

I was like, is that a wax statue of Jamie?

663

00:39:31,500 --> 00:39:33,500

It just doesn't look right.

664

00:39:33,500 --> 00:39:37,500

At 70 feet, I felt like there was something a little weird about the Jamie I was looking at.

665

00:39:37,500 --> 00:39:41,500

But I thought maybe he was swollen from a bee sting or something.

666

00:39:41,500 --> 00:39:44,500

So I didn't say anything as to not embarrass him.

667

00:39:44,500 --> 00:39:46,500

Thank you, Carry.

668

00:39:46,500 --> 00:39:49,500

Okay, I'm totally horrified by this mask.

669

00:39:49,500 --> 00:39:51,500

I mean, it's just...

670

00:39:51,500 --> 00:39:54,500

I'm not holding Jamie's skin, freaks me out, but...

671

00:39:54,500 --> 00:39:57,500

Wow, this was the weirdest test.

672

00:39:57,500 --> 00:39:59,500

Weird, but very interesting.

673

00:39:59,500 --> 00:40:02,500

Despite the distraction of the wardrobe changes,

674

00:40:02,500 --> 00:40:05,500

Carry noticed something was off from quite a distance.

675

00:40:05,500 --> 00:40:07,500

But she's known Jamie for eight years.

676

00:40:07,500 --> 00:40:11,500

And it wasn't until she was five feet away that she was sure.

677

00:40:11,500 --> 00:40:16,500

The question now is, will Grant give us a more definitive result?

678

00:40:17,500 --> 00:40:20,500

I've known Jamie for approximately 12 years.

679

00:40:20,500 --> 00:40:24,500

And I am intimately familiar with how he looks.

680

00:40:24,500 --> 00:40:29,500

And the reason is that he always wears exactly the same thing.

681

00:40:29,500 --> 00:40:32,500

Man, from this distance, that looks like everyday Jamie.

682

00:40:32,500 --> 00:40:35,500

For the entire time that I've known Jamie,

683

00:40:35,500 --> 00:40:38,500

he has always had the mustache and the beret.

684

00:40:38,500 --> 00:40:44,500

And the rest of his wardrobe hasn't changed in probably eight years.

685

00:40:44,500 --> 00:40:46,500

Alright, well that's easy.

686

00:40:46,500 --> 00:40:49,500

He's got a fluorescent orange belt on.

687

00:40:49,500 --> 00:40:54,500

As the test progresses, despite Grant's close relationship with Jamie...

688

00:40:54,500 --> 00:40:56,500

Those would be the wrong shoes.

689

00:40:56,500 --> 00:41:00,500

He appears to be completely oblivious he's looking at Adam.

690

00:41:00,500 --> 00:41:03,500

How close will he get before he realizes it?

691

00:41:03,500 --> 00:41:06,500

Okay, five feet. Jamie, are you ready?

692

00:41:06,500 --> 00:41:07,500

I'm ready.

693

00:41:07,500 --> 00:41:09,500

Alright, raise the curtain.

694

00:41:11,500 --> 00:41:13,500

That's strange.

695

00:41:13,500 --> 00:41:16,500

It looks like a wax figure of Jamie.

696

00:41:16,500 --> 00:41:20,500

I know it sounds weird. I don't think that's a real Jamie up there.

697

00:41:20,500 --> 00:41:25,500

Yep, incredibly, until you get up close, the mask really does work.

698

00:41:30,500 --> 00:41:32,500

You!

699

00:41:34,500 --> 00:41:35,500

Doctor.

700

00:41:38,500 --> 00:41:40,500

Hold this for a second.

701

00:41:40,500 --> 00:41:42,500

Oh my goodness.

702

00:41:43,500 --> 00:41:46,500

Wow!

703

00:41:46,500 --> 00:41:49,500

I feel so embarrassed.

704

00:41:49,500 --> 00:41:52,500

I've known Jamie for over ten years.

705

00:41:52,500 --> 00:41:59,500

And it took me up until the five foot mark to realize that this is not Jamie.

706

00:41:59,500 --> 00:42:01,500

Now that was actually you.

707

00:42:01,500 --> 00:42:03,500

The whole time.

708

00:42:03,500 --> 00:42:05,500

That was me the whole time.

709

00:42:12,500 --> 00:42:15,500

Disdraction business is all about the circumstances.

710

00:42:15,500 --> 00:42:20,500

If you get the right combination of distractions and distance and that kind of thing,

711

00:42:20,500 --> 00:42:22,500

you can get away with murder.

712

00:42:24,500 --> 00:42:26,500

So how do we want to call this?

713

00:42:26,500 --> 00:42:31,500

Is it possible to impersonate somebody with a full pullover head mask?

714

00:42:31,500 --> 00:42:34,500

Well, I'm obviously at this range, you're not you.

715

00:42:34,500 --> 00:42:38,500

But given enough distance and distraction, I think we're going to have to call this one plausible.

716

00:42:38,500 --> 00:42:40,500

And creepy.

717

00:42:41,500 --> 00:42:43,500

Ugh!

718

00:42:44,500 --> 00:42:47,500

We've got to file this one under Mission Possible.

719

00:42:50,500 --> 00:42:52,500

Nice.