

1

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

Please, don't try anything that you're about to see us do at home. Ever!

2

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

You can't keep me in here, copper! I'm gonna get out!

3

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

And while they slug it out, Tori Grant and Carrie knock them back.

4

00:00:38,000 --> 00:00:41,000

That's terrible, they're drunk.

5

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

As they get the measure of some more vodka myths.

6

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

Can I get a little privacy? Cheese!

7

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

Who are the Mythbusters?

8

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

Adam Savage

9

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

Jamie Heineman

10

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

Aren't Tracer rounds illegal?

11

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

Tori Balachy

12

00:00:58,000 --> 00:01:00,000

Science is fun.

13

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

Carrie Byron

14

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

Guess what I did today?

15

00:01:02,000 --> 00:01:04,000

And Grant Imajara

16

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

You guys ready for this?

17

00:01:05,000 --> 00:01:09,000

Between them over 50 years of special effects experience.

18

00:01:09,000 --> 00:01:11,000

That's what I'm talking about!

19

00:01:11,000 --> 00:01:13,000

They don't just tell the myth.

20

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

They put them to the test.

21

00:01:28,000 --> 00:01:30,000

This one straight from the fan site.

22

00:01:30,000 --> 00:01:34,000

And I am indebted to the fan site. This is an awesome myth.

23

00:01:34,000 --> 00:01:38,000

The story goes that at the federal supermax prison in Marion, Illinois,

24

00:01:38,000 --> 00:01:43,000

an inmate fashioned a crude crossbow using only newspaper,

25

00:01:43,000 --> 00:01:46,000

parts of his food tray for the tip,

26

00:01:46,000 --> 00:01:49,000

and the elastic from his underpants as a bow string.

27

00:01:49,000 --> 00:01:54,000

And he's able to use this crossbow to shoot and kill a fellow inmate from across a hall.

28

00:01:54,000 --> 00:01:58,000

I like this myth too. I've always had a fascination with crossbows.

29

00:01:58,000 --> 00:02:00,000

I've had this one since I was a teenager.

30

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

That's why there are no cats left in the neighborhood.

31

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

I can just see why thank you, Father.

32

00:02:06,000 --> 00:02:12,000

At any rate, the first thing we need to do is find a list of the kinds of things

33

00:02:12,000 --> 00:02:14,000

that inmates actually have access to.

34

00:02:14,000 --> 00:02:17,000

Because there are limitations, I'm sure.

35

00:02:17,000 --> 00:02:18,000

Absolutely.

36

00:02:18,000 --> 00:02:21,000

Before they get rocking with this jailhouse myth,

37

00:02:21,000 --> 00:02:23,000

they want to see if it's even feasible.

38

00:02:23,000 --> 00:02:27,000

So Adam volunteers to spend a day behind the wire

39

00:02:27,000 --> 00:02:31,000

at Notaria's supermax facility, San Quentin.

40

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

Good morning.

41

00:02:34,000 --> 00:02:35,000

You're Vernel?

42

00:02:35,000 --> 00:02:36,000

I'm Vernel. You are?

43

00:02:36,000 --> 00:02:37,000

Adam Savage.

44

00:02:37,000 --> 00:02:38,000

I see your ID, sir.

45

00:02:38,000 --> 00:02:39,000

Oh, yes.

46

00:02:40,000 --> 00:02:41,000

Here you go.

47

00:02:42,000 --> 00:02:44,000

Okay. Well, thank you. Welcome to San Quentin.

48

00:02:44,000 --> 00:02:45,000

Thank you very much.

49

00:02:45,000 --> 00:02:46,000

Shall we go take a look at what you got?

50

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

Let's take a walk on inside.

51

00:02:47,000 --> 00:02:48,000

All right.

52

00:02:48,000 --> 00:02:52,000

With all the security, weapons are rare behind bars, right?

53

00:02:53,000 --> 00:02:54,000

Wrong.

54

00:02:54,000 --> 00:02:58,000

A trip to the prison museum shows just how wrong.

55

00:02:58,000 --> 00:03:01,000

I know it's a personality flaw in my part,

56

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

but I really enjoy this part of the area.

57

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

This is the area where we keep the various types of creative contraband

58

00:03:08,000 --> 00:03:10,000

that inmates have created inside the prison.

59

00:03:10,000 --> 00:03:13,000

My God, I'm just looking at it without any explanation.

60

00:03:13,000 --> 00:03:17,000

I'm astonished by the level of ingenuity.

61

00:03:17,000 --> 00:03:21,000

For starters, how about a gun made entirely from plumbing parts?

62

00:03:21,000 --> 00:03:24,000

Fires a 32 caliber round.

63

00:03:24,000 --> 00:03:27,000

It's a semi-automatic bolt action.

64

00:03:27,000 --> 00:03:31,000

And that device you see on the front, that's actually a flash guard.

65

00:03:31,000 --> 00:03:32,000

Oh my God.

66

00:03:32,000 --> 00:03:34,000

Adam's impressed.

67

00:03:34,000 --> 00:03:38,000

Inmates will use anything and everything to fashion a weapon,

68

00:03:38,000 --> 00:03:41,000

including, you've guessed it, newspaper.

69

00:03:42,000 --> 00:03:45,000

Now, that looks like a paper spear, like newspaper.

70

00:03:45,000 --> 00:03:46,000

Am I right?

71

00:03:46,000 --> 00:03:49,000

Well, exactly. It is newspaper, and what they did is they created it,

72

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

made it into a shaft.

73

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

On the end, that's actually...

74

00:03:53,000 --> 00:03:54,000

Yeah.

75

00:03:54,000 --> 00:03:56,000

That's a Styrofoam cup.

76

00:03:56,000 --> 00:03:57,000

No.

77

00:03:57,000 --> 00:04:00,000

Tempered Styrofoam arrowheads,

78

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

candy wrapper blow darts, restroom revolvers.

79

00:04:03,000 --> 00:04:07,000

Perhaps a paper crossbow is not beyond the bounds of reason.

80

00:04:07,000 --> 00:04:09,000

Thanks so much for showing me around.

81

00:04:09,000 --> 00:04:11,000

Do you have the key to let me out here?

82

00:04:11,000 --> 00:04:13,000

I do have the key, yes, I have.

83

00:04:13,000 --> 00:04:15,000

Can you get the key?

84

00:04:16,000 --> 00:04:18,000

I could have.

85

00:04:18,000 --> 00:04:21,000

Can you get the key right now?

86

00:04:23,000 --> 00:04:28,000

Freedom tastes sweet, and Adam's taste buds are tingling for this murderous myth.

87

00:04:28,000 --> 00:04:34,000

Meanwhile, his partner in crime is on the hunt for some killer briefs.

88

00:04:34,000 --> 00:04:37,000

So Tim, I'm looking for some prison style underwear.

89

00:04:37,000 --> 00:04:40,000

Now, do you know what that would typically be?

90

00:04:40,000 --> 00:04:44,000

I would think it would be the most basic of basics.

91

00:04:44,000 --> 00:04:46,000

No drums, no whistles.

92

00:04:46,000 --> 00:04:50,000

So I would think that would be what you're looking for for prison.

93

00:04:50,000 --> 00:04:52,000

I mean, I have some other styles,

94

00:04:52,000 --> 00:04:55,000

but I don't think the government is going to give it to prisoners.

95

00:04:55,000 --> 00:04:59,000

While Tim searches out his most austere undies,

96

00:04:59,000 --> 00:05:03,000

Jamie rummages among some styles that prisoners can only dream about.

97

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

You got your camo underwear.

98

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

Oh, and that's lovely as well.

99

00:05:08,000 --> 00:05:10,000

That certainly makes a statement.

100

00:05:10,000 --> 00:05:12,000

I'm not sure what exactly, but...

101

00:05:12,000 --> 00:05:17,000

You think we could call this standard prison issue?

102

00:05:17,000 --> 00:05:22,000

Well, you might get locked up for wearing them, but prisoners go plain.

103

00:05:22,000 --> 00:05:26,000

Yeah, I don't know how we're going to separate the elastic out of these strips,

104

00:05:26,000 --> 00:05:29,000

but I guess if you're in prison, you got lots of time.

105

00:05:29,000 --> 00:05:34,000

I would say, and necessity also being the mother of invention.

106

00:05:34,000 --> 00:05:36,000

Well, I think we're all set, Tim.

107

00:05:36,000 --> 00:05:38,000

There he goes, sir.

108

00:05:38,000 --> 00:05:40,000

Jamie makes tracks back to M5,

109

00:05:40,000 --> 00:05:45,000

where he finds that another lethal crossbow component has been delivered.

110

00:05:45,000 --> 00:05:47,000

Wow!

111

00:05:47,000 --> 00:05:50,000

Prison issue, dinner trays.

112

00:05:50,000 --> 00:05:53,000

Now, we can only use these for making the tips.

113

00:05:53,000 --> 00:05:57,000

The myth is called paper crossbow.

114

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

You can't build the bulk of it out of this thing.

115

00:05:59,000 --> 00:06:01,000

I don't know, it's kind of springy.

116

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

So they've got the materials for both bowstring and arrowhead.

117

00:06:06,000 --> 00:06:08,000

Now for the sticky bit.

118

00:06:08,000 --> 00:06:12,000

You know, there's one aspect to this myth that we have yet to deal with,

119

00:06:12,000 --> 00:06:15,000

and there's no information on it. It's glue.

120

00:06:15,000 --> 00:06:20,000

Yeah, if they had super glue, they could make something equivalent to fiberglass, even.

121

00:06:20,000 --> 00:06:25,000

Well, I think in order to maintain the spirit of the home-built crossbow,

122

00:06:25,000 --> 00:06:28,000

we really should look at some kind of home-brew glue,

123

00:06:28,000 --> 00:06:31,000

something we made with readily available materials.

124

00:06:31,000 --> 00:06:33,000

Sure, there's got to be something out there.

125

00:06:33,000 --> 00:06:36,000

If the glue doesn't hold, the paper crossbow will fall apart,

126

00:06:36,000 --> 00:06:38,000

and with it, the myth.

127

00:06:38,000 --> 00:06:42,000

So the guys decide to try out four different homemade varieties.

128

00:06:42,000 --> 00:06:47,000

There's casine glue, made from milk, vinegar, and baking soda.

129

00:06:47,000 --> 00:06:50,000

I haven't really ended up with a glue.

130

00:06:50,000 --> 00:06:52,000

It's more of a paste.

131

00:06:52,000 --> 00:06:55,000

Then there's glues made from plain flour.

132

00:06:55,000 --> 00:06:57,000

Oh, not too much, not too much.

133

00:06:57,000 --> 00:07:02,000

White flour, and the hot favorite, gelatin and glycerin.

134

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

I like this the best. I mean, personally, I think that's the most promising.

135

00:07:06,000 --> 00:07:11,000

To test their stickability, Adam whips up some simple rigs.

136

00:07:11,000 --> 00:07:15,000

I want to test the relative strengths of each of them.

137

00:07:15,000 --> 00:07:19,000

So I've made up a test rig, which is comprised of two pieces of wood,

138

00:07:19,000 --> 00:07:21,000

a handle, and a sheet of newspaper in between.

139

00:07:21,000 --> 00:07:25,000

He glues each of the four rigs together with a different glue.

140

00:07:25,000 --> 00:07:29,000

Then leaves them to set in a drying cabinet.

141

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

I think my glue tests have dried,

142

00:07:34,000 --> 00:07:37,000

and now it's time to do some strength testing on them.

143

00:07:37,000 --> 00:07:40,000

First up on the fish scale, flour and water.

144

00:07:42,000 --> 00:07:47,000

That was 25 pounds of force. That's actually kind of impressive.

145

00:07:47,000 --> 00:07:50,000

Test number two, flour, water, and sugar.

146

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

Two, three.

147

00:07:52,000 --> 00:07:55,000

Also 25 pounds.

148

00:07:55,000 --> 00:07:57,000

This is the casine glue.

149

00:07:58,000 --> 00:08:01,000

Yeah. 21 pounds.

150

00:08:01,000 --> 00:08:03,000

I mean, it was more like a paste than anything else.

151

00:08:03,000 --> 00:08:05,000

It just really didn't do it.

152

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

Last but not least, my personal favorite, the gelatin glue.

153

00:08:12,000 --> 00:08:13,000

36 pounds.

154

00:08:13,000 --> 00:08:15,000

We have a winner.

155

00:08:15,000 --> 00:08:18,000

I couldn't quite hang off of that, but that's pretty darn good.

156

00:08:18,000 --> 00:08:22,000

It is a bookbinding glue, and it definitely looks the nicest.

157

00:08:22,000 --> 00:08:26,000

Finally, there's the control test. Wood glue.

158

00:08:26,000 --> 00:08:29,000

It's been a while since Adam heard himself on the show,

159

00:08:29,000 --> 00:08:32,000

but this setup has potential.

160

00:08:38,000 --> 00:08:41,000

Yep, business as usual.

161

00:08:41,000 --> 00:08:46,000

60 pounds of force across the knuckles is going to sting a little.

162

00:08:47,000 --> 00:08:48,000

That hurt.

163

00:08:48,000 --> 00:08:50,000

Check this out, Jimmy.

164

00:08:50,000 --> 00:08:54,000

After the break, Adam and Jamie check out a paper cut, prison style.

165

00:08:56,000 --> 00:08:57,000

That's nasty.

166

00:08:57,000 --> 00:09:01,000

And another round of vodka myths fires up with a splutter.

167

00:09:11,000 --> 00:09:15,000

Vodka is an ancient Russian beverage long popular

168

00:09:15,000 --> 00:09:18,000

for keeping up the spirits in a hostile climate.

169

00:09:19,000 --> 00:09:23,000

But many a tall tale has been spun around the legendary drink.

170

00:09:24,000 --> 00:09:27,000

And over several weeks, the mythbusters are testing some out.

171

00:09:27,000 --> 00:09:29,000

Oh yeah, that's good.

172

00:09:29,000 --> 00:09:30,000

Okay.

173

00:09:30,000 --> 00:09:35,000

In previous episodes, they proved that vodka can remove even the worst foot odor.

174

00:09:38,000 --> 00:09:41,000

And that it's a match for the foulest breath.

175

00:09:42,000 --> 00:09:43,000

That burns.

176

00:09:44,000 --> 00:09:46,000

Yeah, cinnamony, actually.

177

00:09:46,000 --> 00:09:49,000

Now they're testing some more vodka myths.

178

00:09:50,000 --> 00:09:53,000

First up, vodka smoke remover.

179

00:09:56,000 --> 00:10:01,000

Anybody who has dated a smoker or knows a smoker knows their clothes really smell bad.

180

00:10:01,000 --> 00:10:04,000

So this might be a really nice cure for them.

181

00:10:07,000 --> 00:10:11,000

Down the years, washing powders have promised more than just clean clothes.

182

00:10:11,000 --> 00:10:14,000

They've promised a kind of heaven on earth.

183

00:10:14,000 --> 00:10:15,000

That's the promise.

184

00:10:15,000 --> 00:10:17,000

What a wonderful sight when you're washing.

185

00:10:17,000 --> 00:10:21,000

But can vodka work miracles with smoke infested laundry?

186

00:10:21,000 --> 00:10:26,000

Carrie's going to try and get more from her wash with a splash of the heart stuff.

187

00:10:27,000 --> 00:10:31,000

To kick things off, Carrie creates an automated smoking machine.

188

00:10:34,000 --> 00:10:38,000

I'm going to use a little siphon and make a little airtight tube.

189

00:10:38,000 --> 00:10:40,000

Drill some holes, put some cigarettes in it.

190

00:10:41,000 --> 00:10:44,000

This is an airtight box that Tori built for another myth.

191

00:10:44,000 --> 00:10:47,000

We were doing a little experiment with explosive decompression.

192

00:10:47,000 --> 00:10:51,000

It's just big enough to hang two sweatshirts inside,

193

00:10:51,000 --> 00:10:55,000

get them saturated with smoke so that we have something to test.

194

00:10:55,000 --> 00:10:56,000

Sounds like a plan.

195

00:10:56,000 --> 00:11:00,000

In go the shirts, followed by Carrie and the lighter.

196

00:11:07,000 --> 00:11:09,000

I should have worn a respirator for that.

197

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

Before her lungs can recover, there's an outbreak of passive smoking.

198

00:11:14,000 --> 00:11:15,000

Last thing I want.

199

00:11:15,000 --> 00:11:16,000

Oh no!

200

00:11:16,000 --> 00:11:19,000

Hey, I'm going to leak over here too.

201

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

What happened to Tori's airtight box?

202

00:11:23,000 --> 00:11:28,000

By the time she's done taping, her smoke box looks like Yield Brenner's bedroom.

203

00:11:28,000 --> 00:11:29,000

Oh, they're almost down to the filter.

204

00:11:29,000 --> 00:11:33,000

I can still see some little red glowing lights right there.

205

00:11:33,000 --> 00:11:35,000

I can barely see anything.

206

00:11:36,000 --> 00:11:43,000

I smell like bingo nights, some French-born cinema kind of old lady bar.

207

00:11:43,000 --> 00:11:49,000

And according to the myth, Vodka's just the job to remove that stubborn smell.

208

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

Two days later, and the shirts are ripe for the picking.

209

00:11:54,000 --> 00:11:56,000

They both smell like ashtrays.

210

00:11:56,000 --> 00:11:59,000

I'm going to take them to the laundromat quickly.

211

00:11:59,000 --> 00:12:02,000

God, that is horrible.

212

00:12:06,000 --> 00:12:08,000

Okay, there we go.

213

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

That would be one part vodka, two, three parts water.

214

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

Just one jacket will be sprayed with a vodka spritzer.

215

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

The other will be the control.

216

00:12:17,000 --> 00:12:18,000

Whoa!

217

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

That's horrible.

218

00:12:20,000 --> 00:12:21,000

Well, it's just smoky.

219

00:12:21,000 --> 00:12:24,000

It's like you would, you know, spend the night in a bar.

220

00:12:24,000 --> 00:12:25,000

Yeah, that reeks.

221

00:12:25,000 --> 00:12:27,000

Spent the night on the floor of a bar.

222

00:12:27,000 --> 00:12:30,000

A quick product test at its wash time.

223

00:12:30,000 --> 00:12:33,000

Okay, the vodka's going to be on the end.

224

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

And this one, the smoky, will be to the left.

225

00:12:40,000 --> 00:12:42,000

And now it's a waiting game.

226

00:12:46,000 --> 00:12:51,000

So here's a few tips on how to pass the time while the soap suds do their thing.

227

00:12:51,000 --> 00:12:53,000

Now we're just working.

228

00:12:53,000 --> 00:12:54,000

We're going to be here.

229

00:12:54,000 --> 00:12:56,000

Can I get a little privacy?

230

00:12:56,000 --> 00:12:57,000

Geez.

231

00:12:57,000 --> 00:13:01,000

And here's some more highlights of the drying cycle.

232

00:13:02,000 --> 00:13:06,000

German surrealist painter starting with Z or Q.

233

00:13:06,000 --> 00:13:09,000

Because you're the one who said...

234

00:13:14,000 --> 00:13:16,000

Is it done yet?

235

00:13:16,000 --> 00:13:17,000

Guys, look, it's done.

236

00:13:17,000 --> 00:13:19,000

It's done with the capital E.

237

00:13:19,000 --> 00:13:20,000

Yay!

238

00:13:20,000 --> 00:13:22,000

Okay, you know what I'd like to do for this one?

239

00:13:22,000 --> 00:13:24,000

I'd like to do a blind smell test.

240

00:13:24,000 --> 00:13:25,000

So I'll have you turn around.

241

00:13:25,000 --> 00:13:26,000

Okay.

242

00:13:26,000 --> 00:13:28,000

And then Tori and I will switch your room.

243

00:13:28,000 --> 00:13:29,000

That's a good idea.

244

00:13:29,000 --> 00:13:30,000

All right.

245

00:13:30,000 --> 00:13:35,000

Grant is well-established as the Mythbusters olfactory expert.

246

00:13:35,000 --> 00:13:38,000

This one has a slightly oaky smell.

247

00:13:39,000 --> 00:13:40,000

Yeah.

248

00:13:40,000 --> 00:13:43,000

Shirt sniff number two and what's the verdict?

249

00:13:43,000 --> 00:13:45,000

So this is the better smelling one, right?

250

00:13:45,000 --> 00:13:46,000

Yep.

251

00:13:46,000 --> 00:13:50,000

And it's the one that we sprayed on.

252

00:13:50,000 --> 00:13:51,000

Hey!

253

00:13:51,000 --> 00:13:52,000

Don't, don't, don't.

254

00:13:52,000 --> 00:13:55,000

Not that much better smelling, I want to say.

255

00:13:55,000 --> 00:13:56,000

But a little better.

256

00:13:56,000 --> 00:13:57,000

A little better.

257

00:13:58,000 --> 00:14:04,000

The Mythbusters are investigating the myth that an inmate at a Supermax prison was shot

258

00:14:04,000 --> 00:14:09,000

and killed by a paper crossbow when some intriguing footage arrives.

259

00:14:11,000 --> 00:14:12,000

Check this out, Jimmy.

260

00:14:12,000 --> 00:14:19,000

A official within the California prison system sent me this video of an inmate in the prison

261

00:14:19,000 --> 00:14:22,000

constructing and firing a crossbow-like weapon.

262

00:14:22,000 --> 00:14:23,000

Check this out.

263

00:14:24,000 --> 00:14:30,000

The video was shot at Palakon Bay Prison in Northern California, where modern cells are

264

00:14:30,000 --> 00:14:33,000

designed for maximum safety.

265

00:14:33,000 --> 00:14:37,000

Even so, some inmates find ways to hurt staff or each other.

266

00:14:37,000 --> 00:14:43,000

Here, an inmate shows how he constructed a sophisticated crossbow-type weapon from materials

267

00:14:43,000 --> 00:14:46,000

the state is required to give him.

268

00:14:46,000 --> 00:14:47,000

Elastic from underwear.

269

00:14:47,000 --> 00:14:51,000

A barrel and darts from writing paper rolled tightly.

270

00:14:51,000 --> 00:14:54,000

A plastic spoon sharpened as a legal point.

271

00:14:54,000 --> 00:15:00,000

The weapon is engineered to fit through the door, making staff or other inmates a target.

272

00:15:03,000 --> 00:15:04,000

That's nasty.

273

00:15:05,000 --> 00:15:09,000

I think that the very first step is just to try and replicate that thing.

274

00:15:09,000 --> 00:15:13,000

It's a tantalizing glimpse of a paper weapon in action.

275

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

But is it a crossbow?

276

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

There's only one way to find out.

277

00:15:19,000 --> 00:15:23,000

To stay true to the myth, Adam uses the homemade bookbinding glue.

278

00:15:23,000 --> 00:15:31,000

And the bowstring comes courtesy of their state-issue underwear, which is disappointingly low on power.

279

00:15:33,000 --> 00:15:36,000

Yeah, it doesn't look anything like what it does in the video.

280

00:15:36,000 --> 00:15:38,000

I think it's because the fabric is really dampening it.

281

00:15:38,000 --> 00:15:39,000

Yeah.

282

00:15:39,000 --> 00:15:44,000

Jamie thinks that separating the rubber from the fabric will give more power.

283

00:15:44,000 --> 00:15:49,000

I just have a hard time believing an inmate could pull all the rubber out of this sort of thing.

284

00:15:49,000 --> 00:15:51,000

I don't have any problem with that at all.

285

00:15:51,000 --> 00:15:53,000

I mean, it's just a matter of time.

286

00:15:53,000 --> 00:15:57,000

And patience, of which Adam has precious little.

287

00:15:59,000 --> 00:16:06,000

So while Jamie does the painstaking stuff, he bolts to make an arrow from plastic cutlery.

288

00:16:06,000 --> 00:16:11,000

Where I'm using the sand to just picture someone rubbing it on the window sill for a few hours.

289

00:16:15,000 --> 00:16:19,000

Round two with the liberated underwear elastic.

290

00:16:19,000 --> 00:16:20,000

Yay!

291

00:16:20,000 --> 00:16:22,000

Jamie, that was pretty good, man.

292

00:16:22,000 --> 00:16:24,000

That looks exactly like what the video showed.

293

00:16:24,000 --> 00:16:27,000

Maybe, but it doesn't fulfill the myth.

294

00:16:27,000 --> 00:16:29,000

This is a pretty serious little weapon.

295

00:16:29,000 --> 00:16:33,000

However, it's not what I would call a crossbow.

296

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

This is more of a spear gun.

297

00:16:35,000 --> 00:16:41,000

So what we have to do now to follow the letter of the myth is actually build something that is a crossbow.

298

00:16:42,000 --> 00:16:44,000

In other words, one of these.

299

00:16:44,000 --> 00:16:48,000

Plenty powerful enough to kill one of these.

300

00:16:48,000 --> 00:16:53,000

Coming up, Adam and Jamie hit the range to test drive a real crossbow.

301

00:16:54,000 --> 00:16:55,000

Nicely done.

302

00:16:55,000 --> 00:16:57,000

Take us two yards, Neeter.

303

00:16:57,000 --> 00:17:02,000

And it's B for blasted in the myth of the vodka bee killer.

304

00:17:02,000 --> 00:17:04,000

That's terrible, they're drunk.

305

00:17:12,000 --> 00:17:19,000

In the myth of the paper crossbow, Adam and Jamie are at archery only in Newark.

306

00:17:19,000 --> 00:17:25,000

They want to know more about what exactly they're going to be building a paper version of.

307

00:17:25,000 --> 00:17:30,000

The main difference between a crossbow and a regular bow is that on a regular bow,

308

00:17:30,000 --> 00:17:36,000

the archer or the shooter is actually going to pull it all the way back to full draw and hang on to the weight physically.

309

00:17:36,000 --> 00:17:44,000

So in a crossbow, you physically cock the mechanism back and you can actually walk around with the weapon cocked and locked and ready to shoot.

310

00:17:44,000 --> 00:17:46,000

Almost like a firearm.

311

00:17:48,000 --> 00:17:49,000

Pretty good.

312

00:17:49,000 --> 00:17:58,000

Have you heard the myth of a prison convict making a paper crossbow out of newspaper and shooting and killing another inmate with it?

313

00:17:58,000 --> 00:18:00,000

I have not, no.

314

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

Do you think something like that would be possible?

315

00:18:02,000 --> 00:18:05,000

I believe it is possible, but pretty unlikely.

316

00:18:07,000 --> 00:18:09,000

So they know what they're aiming for.

317

00:18:09,000 --> 00:18:16,000

They want some hard data about crossbow performance in terms of accuracy, velocity and penetration.

318

00:18:19,000 --> 00:18:24,000

If you know the weight and velocity of a missile, you can work out its kinetic energy.

319

00:18:25,000 --> 00:18:29,000

One of the measurements for assessing a weapon's killing capacity.

320

00:18:29,000 --> 00:18:32,000

And it's 28 grams.

321

00:18:32,000 --> 00:18:34,000

Now for the velocity.

322

00:18:34,000 --> 00:18:42,000

Jamie fires off some bolts through a chronograph, which clocks their speed in feet per second.

323

00:18:44,000 --> 00:18:46,000

That was 259 on that first shot.

324

00:18:46,000 --> 00:18:47,000

259?

325

00:18:47,000 --> 00:18:49,000

159.

326

00:18:49,000 --> 00:18:53,000

So Jamie, your average on those three shots was 251 feet per second.

327

00:18:53,000 --> 00:19:01,000

That gives a kinetic energy of 61 foot-pounds enough to bring down a black bear, let alone an inmate.

328

00:19:02,000 --> 00:19:04,000

Rest to 51?

329

00:19:04,000 --> 00:19:12,000

To find the most lethal arrowhead, they'll fire a variety at a block of ballistics wax from a distance of 15 feet.

330

00:19:12,000 --> 00:19:17,000

About the width of the prison corridor in the paper crossbow myth.

331

00:19:17,000 --> 00:19:20,000

For starters, they'll use a standard arrowhead.

332

00:19:23,000 --> 00:19:25,000

Alright, let's bring a tape measure over.

333

00:19:25,000 --> 00:19:26,000

Who?

334

00:19:26,000 --> 00:19:28,000

Ah, so.

335

00:19:28,000 --> 00:19:31,000

With a target tip, it penetrated six inches.

336

00:19:31,000 --> 00:19:34,000

Six inches of penetration.

337

00:19:34,000 --> 00:19:35,000

Not bad.

338

00:19:36,000 --> 00:19:40,000

Next, they try a four-bladed razor tip used for hunting.

339

00:19:42,000 --> 00:19:45,000

This one went six and a half inches.

340

00:19:45,000 --> 00:19:48,000

Next, a cut on contact broadhead.

341

00:19:48,000 --> 00:19:49,000

Alright.

342

00:19:49,000 --> 00:19:52,000

It's a traditional hunting tip, as old as the Stone Age.

343

00:19:54,000 --> 00:19:56,000

Oh, that went a lot farther, man.

344

00:19:56,000 --> 00:19:57,000

So about eight inches.

345

00:19:57,000 --> 00:19:59,000

About eight inches.

346

00:19:59,000 --> 00:20:02,000

That's good, because that's the easiest one for us to make.

347

00:20:02,000 --> 00:20:05,000

With a plastic food tray.

348

00:20:05,000 --> 00:20:07,000

So, watch the verdict.

349

00:20:07,000 --> 00:20:14,000

Just thinking this one through from a mechanical standpoint, I'd be totally pleased with two inches of penetration.

350

00:20:14,000 --> 00:20:16,000

Generally, I prefer a little bit more.

351

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

There's no way a paper crossbow will achieve this much penetration.

352

00:20:21,000 --> 00:20:25,000

So, to be lethal, it may have to be deadly accurate.

353

00:20:25,000 --> 00:20:29,000

The final test, just how sharp can a crossbow shoot?

354

00:20:29,000 --> 00:20:33,000

So, Jamie, the key is here is just tight grouping.

355

00:20:33,000 --> 00:20:34,000

Okay.

356

00:20:34,000 --> 00:20:39,000

From 15 feet, the distance specified in the myth, this should be a walk in the park.

357

00:20:41,000 --> 00:20:43,000

Yeah, look at that!

358

00:20:46,000 --> 00:20:47,000

Nicely done.

359

00:20:47,000 --> 00:20:48,000

Wow.

360

00:20:48,000 --> 00:20:50,000

Ain't gonna get much closer than that.

361

00:20:50,000 --> 00:20:52,000

No, I don't think you are.

362

00:20:52,000 --> 00:20:54,000

Three bolts, one hole, not bad.

363

00:20:55,000 --> 00:20:57,000

So, what do we know?

364

00:20:57,000 --> 00:21:01,000

We know a crossbow can produce 61 foot-pounds of kinetic energy.

365

00:21:01,000 --> 00:21:07,000

Enough to bury a hunting tip eight inches into the eye of a deer from 15 feet.

366

00:21:07,000 --> 00:21:09,000

A real crossbow is lethal.

367

00:21:09,000 --> 00:21:14,000

So, the question is, how lethal can we make one out of paper?

368

00:21:14,000 --> 00:21:20,000

The pen may be mightier than the sword, but could paper really be a match for a crossbow?

369

00:21:26,000 --> 00:21:31,000

Time for another vodka myth.

370

00:21:31,000 --> 00:21:36,000

What if you've got an infestation of bees and no commercial bee killer?

371

00:21:36,000 --> 00:21:40,000

According to one myth, vodka could be your solution.

372

00:21:40,000 --> 00:21:45,000

One of the other vodka myths that we've heard of is that vodka could be used as a bee killer.

373

00:21:45,000 --> 00:21:54,000

So, what I'm gonna do, I'm gonna build a bee box, basically a clear plex box that will keep the little critters in so they don't come out and start stinging us.

374

00:21:54,000 --> 00:22:00,000

We'll fill this up with vodka and then spray it in there and see if it does in fact kill the bees.

375

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

For Tori, knocking up a bee box is as simple as A-B-C.

376

00:22:07,000 --> 00:22:11,000

Breathing holes will ensure that the bees don't suffocate.

377

00:22:11,000 --> 00:22:14,000

No point in trying to kill bees that are already dead.

378

00:22:14,000 --> 00:22:15,000

There you go.

379

00:22:15,000 --> 00:22:20,000

You got a box, throw the bees in, close the lid, close the latch.

380

00:22:20,000 --> 00:22:25,000

I'm probably gonna tape it up just in case and then we'll start killing bees.

381

00:22:25,000 --> 00:22:30,000

Splendid. Now for a spot of bee wrangling.

382

00:22:30,000 --> 00:22:36,000

Alright worst case scenario, like a whole bunch of bees get into the suit and they start stinging

the heck out of us. What do you do?

383

00:22:36,000 --> 00:22:39,000

What you might want to remember is bees always fly up.

384

00:22:39,000 --> 00:22:45,000

So like when a month there is my overalls, you open up the top part and let them fly up and out, up and out.

385

00:22:45,000 --> 00:22:51,000

You know, run, first run, unzip, you know, pull off everything and they'll try to fly up.

386

00:22:51,000 --> 00:22:52,000

So now you know.

387

00:22:52,000 --> 00:22:54,000

We are ready. Take us to your leader.

388

00:22:54,000 --> 00:22:56,000

Take us to your leader.

389

00:22:56,000 --> 00:23:02,000

Laughing in the face of terror, our amateur apiarists are led to a busy hive.

390

00:23:02,000 --> 00:23:04,000

Whoa!

391

00:23:04,000 --> 00:23:11,000

And you can see how this is all filled with honey, nectar that hasn't quite formed into honey at the moment.

392

00:23:11,000 --> 00:23:13,000

Dead bees walking.

393

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

Now we're just gonna put a few of them in the box.

394

00:23:17,000 --> 00:23:22,000

When is a bee a guinea pig? When it's unlucky enough to end up in Tori's bee box.

395

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

Is that good?

396

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

Yes, thank you little babies. Very kind of you.

397

00:23:27,000 --> 00:23:29,000

We're done with this?

398

00:23:29,000 --> 00:23:31,000

They're kind of poking my head.

399

00:23:31,000 --> 00:23:32,000

Brace your nose dude.

400

00:23:32,000 --> 00:23:38,000

Before things get to the running and unzipping stage, they make a quick exit.

401

00:23:38,000 --> 00:23:45,000

Back at the shop, the bee governor has failed to grant a last minute reprieve, so Tori gets down to work.

402

00:23:45,000 --> 00:23:50,000

I have one spray bottle filled with water, one spray bottle filled with vodka, and so now I'm gonna test the myth.

403

00:23:50,000 --> 00:23:58,000

What I'm gonna do is I'm gonna spray five times into the bee box with the vodka, spray five times into this bee box with the water, and see how the bees respond to each.

404

00:23:58,000 --> 00:24:00,000

Okay, here we go. Vodka first.

405

00:24:03,000 --> 00:24:07,000

The bees are starting to roll around.

406

00:24:07,000 --> 00:24:09,000

That's terrible, they're drunk.

407

00:24:09,000 --> 00:24:12,000

It's the bee bender from hell.

408

00:24:12,000 --> 00:24:19,000

It looks like they're climbing the walls to get out of the liquid, so you know, if it's gonna kill them, it could be that they're just drowning in it, and that would work with any liquid.

409

00:24:19,000 --> 00:24:26,000

While they wallow in vodka, Tori sprays Box 2 with an equivalent volume of plain water.

410

00:24:26,000 --> 00:24:33,000

Then he leaves the bees to sink or swim for a quarter hour, which in bee time seems like an eternity.

411

00:24:33,000 --> 00:24:39,000

Coming up on MythMusters, Adam and Jamie get rolling in the PaperCrosco build-off.

412

00:24:39,000 --> 00:24:41,000

The Red Baron.

413

00:24:41,000 --> 00:24:47,000

And are the bees dead as dodo's or drunk as skunks in Vodka Bee Killer?

414

00:24:47,000 --> 00:24:49,000

Hey, I got two more survivors.

415

00:24:53,000 --> 00:24:55,000

Give us a break.

416

00:24:55,000 --> 00:24:58,000

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

417

00:25:04,000 --> 00:25:10,000

In the myth of the PaperCrospe, Adam and Jamie have researched contraband prison weapons,

418

00:25:10,000 --> 00:25:17,000

constructed a replica of a paper speargun, and performance tested a real crossbow.

419

00:25:17,000 --> 00:25:21,000

Now they're ready for a MythBusters build-off.

420

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

I know you don't like the competition thing, but we're going to do a build-off here.

421

00:25:26,000 --> 00:25:31,000

And we're going to each build our own crossbow using only newspaper,

422

00:25:31,000 --> 00:25:36,000

underwear elastic, plastic food tray, and homemade glue.

423

00:25:36,000 --> 00:25:43,000

And then we're going to test them and see who's made the most potentially lethal and accurate PaperCrospos.

424

00:25:43,000 --> 00:25:45,000

Well, you know the first thing I'm going to do.

425

00:25:45,000 --> 00:25:46,000

Cheat?

426

00:25:46,000 --> 00:25:47,000

Yeah.

427

00:25:47,000 --> 00:25:49,000

Here's the news.

428

00:25:49,000 --> 00:25:54,000

With just two days to make their deadly weapons, they've got a tool shop amnesty.

429

00:25:54,000 --> 00:25:59,000

We can use any tools we want. We're not scraping this against the jail bars or anything.

430

00:25:59,000 --> 00:26:04,000

We're assuming there's enough time to shape and cut pretty much anything.

431

00:26:04,000 --> 00:26:08,000

The homemade glue is brewed and it's on your marks.

432

00:26:08,000 --> 00:26:11,000

Are you ready? I promise not to look around the barrier.

433

00:26:11,000 --> 00:26:17,000

You're welcome to look at it. It'll be fine. I know I'll be looking.

434

00:26:17,000 --> 00:26:18,000

Here we go.

435

00:26:19,000 --> 00:26:24,000

Adam and Jamie rarely use paper as a building material in special effects.

436

00:26:24,000 --> 00:26:27,000

So it's a case of trial and error.

437

00:26:27,000 --> 00:26:33,000

I have no idea from one minute to the next what the structure is going to do or be.

438

00:26:33,000 --> 00:26:34,000

No idea.

439

00:26:36,000 --> 00:26:42,000

In its early stages, this build is basically origami, which is like watching paint dry.

440

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

So let's cover the first few hours with a music montage.

441

00:26:48,000 --> 00:26:53,000

And remember, don't try this one at home. Leave it to the Mythbusters.

442

00:26:56,000 --> 00:26:59,000

Okay, that should do it. Let's check on progress.

443

00:26:59,000 --> 00:27:05,000

I'm going with a really classic approach. It's very much the shape of a crossbow.

444

00:27:05,000 --> 00:27:09,000

I'm hoping that works. It could all just crush the moment I start.

445

00:27:09,000 --> 00:27:13,000

Jamie's design is slightly more complex.

446

00:27:13,000 --> 00:27:20,000

What I've decided to do is make a couple of things that are basically the same shape,

447

00:27:20,000 --> 00:27:24,000

and they pivot on a central axis point.

448

00:27:24,000 --> 00:27:28,000

Their main problem is that newspaper has zero tensile strength.

449

00:27:28,000 --> 00:27:33,000

Adam compensates by adding tightly rolled support struts,

450

00:27:33,000 --> 00:27:39,000

while Jamie's gone for cone shapes, reinforced with crumpled paper.

451

00:27:39,000 --> 00:27:43,000

It's sort of like a honeycomb aluminum made out of paper.

452

00:27:43,000 --> 00:27:49,000

By the end of the day, Adam's simple design has grown arms, legs, and wings.

453

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

I call this the red Baron.

454

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

Eddie thinks it's pretty fly.

455

00:27:58,000 --> 00:28:04,000

If it all goes as I think it might, it's going to have a fair amount of power to it.

456

00:28:04,000 --> 00:28:08,000

But you never know what Jamie's going to come up with.

457

00:28:08,000 --> 00:28:13,000

Jamie's lagging behind, but he's aiming high with his ambitious design.

458

00:28:13,000 --> 00:28:18,000

It may start like this, and then I'll cock it back like so.

459

00:28:18,000 --> 00:28:21,000

We shall see whether it actually works.

460

00:28:21,000 --> 00:28:26,000

They leave their crossbow contraptions to dry overnight and hit the showers.

461

00:28:26,000 --> 00:28:30,000

And rubber kits working with newspaper can be dirty.

462

00:28:30,000 --> 00:28:35,000

After the break, gentlemen, choose your weapons.

463

00:28:35,000 --> 00:28:39,000

Adam and Jamie go head to head in the paper crossbow shootout.

464

00:28:39,000 --> 00:28:41,000

I shot Grant in the face.

465

00:28:47,000 --> 00:28:51,000

Tari's testing the sting in another tall tale.

466

00:28:51,000 --> 00:28:53,000

Vodka B-Killer.

467

00:28:53,000 --> 00:28:57,000

He sprayed one sample with vodka and another with water,

468

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

and he's back for a health check.

469

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

We're about 15 minutes into this experiment.

470

00:29:04,000 --> 00:29:08,000

It looks like the water bees are doing a lot worse than the vodka bees,

471

00:29:08,000 --> 00:29:10,000

and I don't know why that is.

472

00:29:10,000 --> 00:29:13,000

Perhaps they're hard drinking worker bees.

473

00:29:13,000 --> 00:29:17,000

I think what I'll do is just let each of the box dry out,

474

00:29:17,000 --> 00:29:20,000

and then come back and then do a death count.

475

00:29:20,000 --> 00:29:22,000

What a fun myth this is.

476

00:29:22,000 --> 00:29:27,000

Even if the vodka doesn't kill them, tomorrow you're going to wish it had.

477

00:29:28,000 --> 00:29:31,000

So how to go with the vodka and the water with the bees?

478

00:29:31,000 --> 00:29:33,000

The two things that I noticed when I started the experiment

479

00:29:33,000 --> 00:29:37,000

was one, when I sprayed the vodka and the bees jumped out of the vodka

480

00:29:37,000 --> 00:29:40,000

onto the sides of the wall, so they got out there as soon as they could.

481

00:29:40,000 --> 00:29:42,000

When I sprayed the water, they didn't move.

482

00:29:42,000 --> 00:29:43,000

They just kind of stayed there.

483

00:29:43,000 --> 00:29:45,000

So look at that guy.

484

00:29:45,000 --> 00:29:47,000

I think he's still alive.

485

00:29:47,000 --> 00:29:51,000

Watch, do some, you know, B-C-P-R. B-P-R.

486

00:29:51,000 --> 00:29:55,000

All right, we'll pull these guys out, see if we can revive some of them,

487

00:29:55,000 --> 00:29:57,000

and then we'll count the bodies.

488

00:29:57,000 --> 00:30:00,000

Sounds like some kind of B-grade horror movie.

489

00:30:01,000 --> 00:30:04,000

With the water bees in need of immediate attention,

490

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

they get the hair dryer treatment.

491

00:30:06,000 --> 00:30:08,000

Did it come out with a little beehive hairdo?

492

00:30:08,000 --> 00:30:10,000

Oh, beehive.

493

00:30:11,000 --> 00:30:16,000

At first, all seems lost, but Grant and Tari keep believing,

494

00:30:16,000 --> 00:30:20,000

and slowly a little miracle starts to unfold.

495

00:30:20,000 --> 00:30:22,000

Hey, I got two more survivors.

496

00:30:22,000 --> 00:30:25,000

Apparently bees have a waxy coating on the thorax,

497

00:30:25,000 --> 00:30:28,000

so though drenched, they weren't drowned.

498

00:30:28,000 --> 00:30:31,000

That's pretty amazing. All but two came back to life.

499

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

Your B-C-P-R was truly a thing to behold.

500

00:30:34,000 --> 00:30:35,000

Like a bee whisperer.

501

00:30:35,000 --> 00:30:37,000

Why, thank you.

502

00:30:37,000 --> 00:30:42,000

And while the water bees were tallying off, the vodka bees were sobering up.

503

00:30:42,000 --> 00:30:45,000

Hey, check out these guys. These guys are kicking ass.

504

00:30:45,000 --> 00:30:46,000

No, that's amazing.

505

00:30:46,000 --> 00:30:48,000

I thought the ones that we sprayed with water were all dead.

506

00:30:48,000 --> 00:30:50,000

We got all but two revived.

507

00:30:50,000 --> 00:30:53,000

Yeah, and the vodka ones, we didn't even need to revive them.

508

00:30:53,000 --> 00:30:55,000

We didn't lose a single bee.

509

00:30:55,000 --> 00:30:57,000

So vodka is a bee killer?

510

00:30:57,000 --> 00:30:59,000

Totally busted.

511

00:30:59,000 --> 00:31:00,000

Busted?

512

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

With a capital B.

513

00:31:09,000 --> 00:31:12,000

It's day two in the Paper Crossbow build-off,

514

00:31:12,000 --> 00:31:17,000

and the mythbusters are up right and early to see how their creations have fared overnight.

515

00:31:19,000 --> 00:31:21,000

Ready, Timmy?

516

00:31:21,000 --> 00:31:24,000

Put simply, no he's not.

517

00:31:24,000 --> 00:31:27,000

This thing's turning out to be a little bit unstable.

518

00:31:27,000 --> 00:31:29,000

I'm not really sure what to do about it.

519

00:31:33,000 --> 00:31:36,000

So basically I don't have anything to say about it.

520

00:31:36,000 --> 00:31:38,000

I'm trying to fuss with it.

521

00:31:38,000 --> 00:31:41,000

While Jamie's in a flap, Adam's flying.

522

00:31:41,000 --> 00:31:45,000

With time to spare, he uses the remains of his dinner tray

523

00:31:45,000 --> 00:31:48,000

to add a bona fide firing mechanism.

524

00:31:54,000 --> 00:31:57,000

A genuine crossbow in under two days,

525

00:31:57,000 --> 00:32:01,000

made only from newspaper, underwear, and a prison food tray.

526

00:32:01,000 --> 00:32:03,000

No wonder he's pleased.

527

00:32:03,000 --> 00:32:05,000

I can't wait to shoot this thing.

528

00:32:07,000 --> 00:32:10,000

Meanwhile, Jamie's been forced into a retreat,

529

00:32:10,000 --> 00:32:13,000

and he's locked down all moving parts.

530

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

With time running out, he adds support struts

531

00:32:16,000 --> 00:32:19,000

to strengthen his now rigid four cone structure.

532

00:32:20,000 --> 00:32:27,000

I'm just having one left go at it to see whether I can't optimize the performance of it

533

00:32:27,000 --> 00:32:30,000

and reduce the likelihood of some kind of general collapse.

534

00:32:30,000 --> 00:32:36,000

I'm pretty sure at a certain point, this whole thing's just going to be a lot of paper.

535

00:32:41,000 --> 00:32:44,000

Adam's already at work on the set.

536

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

It is the perfect prison color.

537

00:32:47,000 --> 00:32:52,000

I call this lockdown green one prison door.

538

00:32:52,000 --> 00:32:56,000

You can't keep me in here, copper. I'm going to get out.

539

00:32:59,000 --> 00:33:04,000

With only minutes remaining, Jamie fashions a plastic bolt and attaches the bow string.

540

00:33:07,000 --> 00:33:10,000

Well, time to walk away.

541

00:33:11,000 --> 00:33:18,000

According to the myth, the paper crossbow killer unleashed his deadly missile from behind his cell door.

542

00:33:18,000 --> 00:33:25,000

15 feet away, it struck and killed its target, played by inmate Himahara.

543

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

All right, well, where are we supposed to, are we going to try and shoot him in the head?

544

00:33:29,000 --> 00:33:34,000

Yeah, I mean, I think if you're going to try and hurt somebody, you know, shooting him in the face.

545

00:33:35,000 --> 00:33:38,000

No sooner said than done.

546

00:33:38,000 --> 00:33:42,000

For a control, Adam fires off a headshot from a regular crossbow.

547

00:33:42,000 --> 00:33:46,000

Three, two, one.

548

00:33:46,000 --> 00:33:48,000

Nice shot.

549

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

I shot grant in the face.

550

00:33:55,000 --> 00:33:58,000

The chronograph measures 251 feet per second.

551

00:33:58,000 --> 00:34:04,000

At a 61 foot pounds of force, that's a carbon copy of the archery shop results.

552

00:34:05,000 --> 00:34:08,000

I got it right in his left nostril.

553

00:34:10,000 --> 00:34:14,000

Dude, that is so going right in his nose.

554

00:34:14,000 --> 00:34:17,000

You got to come here and check this out.

555

00:34:21,000 --> 00:34:23,000

What are you doing there, Grant?

556

00:34:23,000 --> 00:34:25,000

That's hard stuff.

557

00:34:26,000 --> 00:34:29,000

Oh, that only going in that far.

558

00:34:29,000 --> 00:34:32,000

This, ours are just going to bounce off that sucker.

559

00:34:32,000 --> 00:34:37,000

Well, three and a quarter inches of penetration.

560

00:34:37,000 --> 00:34:39,000

So a fatal shot?

561

00:34:39,000 --> 00:34:44,000

With a commercial crossbow, inmate Himahara would definitely be cold dead.

562

00:34:46,000 --> 00:34:48,000

That's the benchmark.

563

00:34:48,000 --> 00:34:51,000

So how will the Mythbusters paper versions measure up?

564

00:34:51,000 --> 00:34:54,000

Time to lift the veil on their closely guarded contenders.

565

00:34:56,000 --> 00:34:59,000

I have not yet seen Jamie's design.

566

00:34:59,000 --> 00:35:04,000

I'm always fascinated by our different approaches to problems like these.

567

00:35:04,000 --> 00:35:08,000

Actually, I've been watching what Adam's been doing the entire time,

568

00:35:08,000 --> 00:35:11,000

in spite of the rules against doing that.

569

00:35:11,000 --> 00:35:16,000

You know, without having rules to break, there'd be no particular interest in the competition for me.

570

00:35:16,000 --> 00:35:19,000

I think it's time to see what each others built.

571

00:35:22,000 --> 00:35:29,000

Dude, if the full draw of the bow makes it collapse, is candy going to pour out?

572

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

I'm sorry, I've already tried it. I've shot it a few times.

573

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

Oh, really?

574

00:35:36,000 --> 00:35:37,000

No, kidding.

575

00:35:39,000 --> 00:35:41,000

Wow, that's pretty good.

576

00:35:42,000 --> 00:35:46,000

Could Jamie be staring down the barrel of a rare defeat?

577

00:35:46,000 --> 00:35:50,000

Adam's, you could, like, use as a club and it'd probably be just fine.

578

00:35:50,000 --> 00:35:51,000

You could still shoot it.

579

00:35:51,000 --> 00:35:55,000

This thing, I could just go like that and break in half with my hands.

580

00:35:55,000 --> 00:35:58,000

So, I have my doubts about this.

581

00:35:58,000 --> 00:36:00,000

Jamie, are you ready to shoot?

582

00:36:01,000 --> 00:36:03,000

I'm going to shoot.

583

00:36:04,000 --> 00:36:07,000

Don't sound so thrilled about it, you'll freak people out.

584

00:36:07,000 --> 00:36:11,000

Strictly speaking, a prison assassin would have just one shot.

585

00:36:11,000 --> 00:36:15,000

Jamie takes dead aim through his cell door's dinner hatch.

586

00:36:17,000 --> 00:36:18,000

Are you ready on high speed?

587

00:36:18,000 --> 00:36:19,000

Ready.

588

00:36:19,000 --> 00:36:20,000

Ready.

589

00:36:20,000 --> 00:36:22,000

Alright, seems to be holding up.

590

00:36:22,000 --> 00:36:24,000

Okay, well you're ready, Kenny.

591

00:36:27,000 --> 00:36:28,000

60.

592

00:36:28,000 --> 00:36:29,000

60.

593

00:36:29,000 --> 00:36:30,000

I ain't half bad, really.

594

00:36:30,000 --> 00:36:31,000

No.

595

00:36:32,000 --> 00:36:34,000

A real crossbow was what, 250?

596

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

Yeah, 60 feet per second.

597

00:36:37,000 --> 00:36:39,000

The barrel's flying nice and straight, watch it hit the target.

598

00:36:39,000 --> 00:36:40,000

Whoa.

599

00:36:40,000 --> 00:36:41,000

Yeah.

600

00:36:41,000 --> 00:36:46,000

The bolt bounced off inmate Imahara's head before hitting the target behind.

601

00:36:46,000 --> 00:36:49,000

It's an unexpectedly impressive result.

602

00:36:49,000 --> 00:36:52,000

A bolt from the blue, you might say.

603

00:36:52,000 --> 00:36:55,000

I was actually pretty pleased with the first shot on this thing.

604

00:36:55,000 --> 00:37:00,000

I think it did considerably better than the one that we saw that the prisoners had made.

605

00:37:01,000 --> 00:37:03,000

So far, so good.

606

00:37:03,000 --> 00:37:07,000

I think we can get a little bit more speed out of it and I think it's actually kind of deadly

607

00:37:07,000 --> 00:37:10,000

if you hit somebody in exactly the right spot.

608

00:37:10,000 --> 00:37:12,000

Coming up, the shootout showdown.

609

00:37:12,000 --> 00:37:18,000

Is Adam's paper crossbow a paper tiger or does it have real bite?

610

00:37:18,000 --> 00:37:19,000

Woo!

611

00:37:29,000 --> 00:37:32,000

Jamie's paper crossbow has confounded the critics.

612

00:37:32,000 --> 00:37:38,000

His very first shot struck inmate Imahara at 60 feet per second.

613

00:37:39,000 --> 00:37:43,000

People were giving me a hard time saying, you know, ah, is candy going to fall out of that thing?

614

00:37:43,000 --> 00:37:45,000

It looks like a piñata.

615

00:37:45,000 --> 00:37:48,000

But it has actually held up.

616

00:37:49,000 --> 00:37:53,000

With a little bit more practice, maybe a little refinement on the device,

617

00:37:53,000 --> 00:37:56,000

it could quite possibly do some serious damage to somebody.

618

00:37:57,000 --> 00:37:58,000

Happy days.

619

00:37:58,000 --> 00:38:01,000

Jamie tightens his bow and loads another bolt.

620

00:38:01,000 --> 00:38:02,000

Good.

621

00:38:06,000 --> 00:38:07,000

Let's go again.

622

00:38:09,000 --> 00:38:11,000

It's 68 feet per second.

623

00:38:11,000 --> 00:38:12,000

Okay.

624

00:38:12,000 --> 00:38:14,000

It hit his head.

625

00:38:14,000 --> 00:38:17,000

It looked like it hit just to the left of his right eye.

626

00:38:18,000 --> 00:38:20,000

Let's go one sideways.

627

00:38:22,000 --> 00:38:24,000

Okay, I think this is done.

628

00:38:24,000 --> 00:38:26,000

You can see the crinkle starting to form here.

629

00:38:26,000 --> 00:38:31,000

We actually got quite a few shots out of it though and close to 70 feet a second, is it?

630

00:38:31,000 --> 00:38:33,000

That's not half bad.

631

00:38:33,000 --> 00:38:36,000

Jamie's crossbow has shot its bow.

632

00:38:36,000 --> 00:38:37,000

So what's the verdict?

633

00:38:37,000 --> 00:38:42,000

While I can't say that this particular device is lethal based on what I've seen today,

634

00:38:42,000 --> 00:38:47,000

I can tell you that I would not want to get hit in the eye with one of these things

635

00:38:47,000 --> 00:38:49,000

and if I did, I might die.

636

00:38:50,000 --> 00:38:57,000

He might, but calculations show that the kinetic energy of Jamie's fastest bolt was just four foot pounds.

637

00:38:58,000 --> 00:39:01,000

Compared to 60 foot pounds for a real crossbow.

638

00:39:01,000 --> 00:39:04,000

Time for a scientific timeout.

639

00:39:08,000 --> 00:39:17,000

I found a chart that lists the kinetic energy in foot pounds of the average amount that you need to take down certain kinds of game.

640

00:39:17,000 --> 00:39:22,000

Less than 25 foot pounds of kinetic energy is only good for small game.

641

00:39:22,000 --> 00:39:25,000

25 to 41, medium game like Deer or Analope.

642

00:39:25,000 --> 00:39:30,000

42 to 65 foot pounds, large game like Elk and Black Bear.

643

00:39:30,000 --> 00:39:36,000

And above 66 foot pounds, we're talking the toughest game, Grizzly, Buffalo, that kind of thing.

644

00:39:36,000 --> 00:39:41,000

Well, I would say that a human would qualify as medium game actually because, you know,

645

00:39:41,000 --> 00:39:44,000

a full-sized deer can weigh as much or more than a human.

646

00:39:44,000 --> 00:39:51,000

So according to the official numbers, Jamie's paper crossbow could only bring down small game.

647

00:39:51,000 --> 00:39:55,000

Notwithstanding a one in a million right in the eye shot.

648

00:39:56,000 --> 00:39:59,000

Over to Adam, our second would-be assassin.

649

00:39:59,000 --> 00:40:05,000

Alright, I am ready to fire my crossbow, which I have nicknamed the Dream Catcher.

650

00:40:06,000 --> 00:40:08,000

Dream Catcher sounds about right.

651

00:40:08,000 --> 00:40:14,000

For this myth to be plausible, Adam must combine more power with deadly accuracy.

652

00:40:14,000 --> 00:40:18,000

And he must do it with his very first shot.

653

00:40:18,000 --> 00:40:22,000

Alright, Grant. Going for the neck.

654

00:40:22,000 --> 00:40:26,000

In three, two, one.

655

00:40:27,000 --> 00:40:29,000

Hey!

656

00:40:32,000 --> 00:40:34,000

Good shot.

657

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

85 feet per second, baby.

658

00:40:41,000 --> 00:40:43,000

Yay!

659

00:40:43,000 --> 00:40:46,000

He hit him right in the neck, man.

660

00:40:46,000 --> 00:40:50,000

Oh, man, look at that, right in the jugular.

661

00:40:50,000 --> 00:40:53,000

That's a full inch of penetration there.

662

00:40:53,000 --> 00:40:55,000

It's an amazing result.

663

00:40:55,000 --> 00:40:57,000

But how about the kinetic energy?

664

00:40:57,000 --> 00:40:59,000

Was it enough to be a killer bolt?

665

00:40:59,000 --> 00:41:06,000

I also come out with a total amount of foot pounds expended by the projectile of 7.5,

666

00:41:06,000 --> 00:41:10,000

which is pretty much by what I've been reading, good for small game.

667

00:41:10,000 --> 00:41:13,000

Not necessarily good for bringing down a full-size human.

668

00:41:13,000 --> 00:41:18,000

Yeah, but you hit that guy right in the jugular, and that's enough to kill somebody.

669

00:41:18,000 --> 00:41:20,000

It went in a solid inch.

670

00:41:20,000 --> 00:41:25,000

Small game, weapon or not, if you hit somebody like that, they're gone.

671

00:41:25,000 --> 00:41:28,000

There we go. In the interests of science,

672

00:41:29,000 --> 00:41:31,000

and shooting stuff,

673

00:41:31,000 --> 00:41:32,000

91.

674

00:41:32,000 --> 00:41:35,000

Adam pushes his paper crossbow to the limit.

675

00:41:36,000 --> 00:41:38,000

What did I hit?

676

00:41:38,000 --> 00:41:40,000

You shot the apple box.

677

00:41:42,000 --> 00:41:44,000

All right, go on again, go on again.

678

00:41:46,000 --> 00:41:53,000

Yeah, I think we've exhausted all of the power of this thing, but I got up to 91.

679

00:41:53,000 --> 00:41:58,000

In the end, like Jamie, he could never quite match the high of that very first hit.

680

00:42:00,000 --> 00:42:08,000

I think it's notable that both his and my crossbows performed much better on their first and second shots than they did ever again.

681

00:42:08,000 --> 00:42:13,000

That's a real key part of this myth. Making a paper crossbow, it's a one-shot deal.

682

00:42:13,000 --> 00:42:18,000

I mean, maybe you can hide this somewhere, but as soon as you shoot it, they're going to know you have it.

683

00:42:18,000 --> 00:42:21,000

So you better get it right on the first shot.

684

00:42:22,000 --> 00:42:28,000

Which is exactly what he did, making Adam the undisputed paper crossbow champion.

685

00:42:30,000 --> 00:42:33,000

Adam, what do you think we should call this one?

686

00:42:33,000 --> 00:42:39,000

I mean, we can't call it confirmed because we couldn't find a single case where somebody had actually been killed by a paper crossbow.

687

00:42:39,000 --> 00:42:44,000

We couldn't even turn up one where someone had been seriously injured by a paper crossbow.

688

00:42:44,000 --> 00:42:50,000

I'm actually super impressed with the amount of power we got out of these on our first attempt at it.

689

00:42:50,000 --> 00:42:57,000

I mean, seven and a half foot pounds, granted, that's far under the 25 foot pounds that was recommended for bringing down medium-sized game.

690

00:42:57,000 --> 00:43:02,000

But still, my shot at Inmate Amihara's throat, I think would have brought him down.

691

00:43:02,000 --> 00:43:04,000

I'm really leaning towards plausible.

692

00:43:04,000 --> 00:43:08,000

Yeah, that was a lucky shot. I guess, you know, accuracy is the key here.

693

00:43:08,000 --> 00:43:14,000

And you get a small, sharp object going pretty quick. It's plausible.

694

00:43:14,000 --> 00:43:15,000

Yeah, I think it's plausible.

695

00:43:16,000 --> 00:43:17,000

Unlikely.