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

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

...

4

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

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5

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

...

6

00:00:37,000 --> 00:00:47,000

...

7

00:00:47,000 --> 00:00:55,000

...

8

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

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9

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

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

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00:01:15,000 --> 00:01:25,000

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00:01:25,000 --> 00:01:35,000

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00:01:35,000 --> 00:01:43,000

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00:01:43,000 --> 00:01:53,000

...

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00:01:53,000 --> 00:01:55,000

...

16

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

...

17

00:01:59,000 --> 00:02:03,000

...

18

00:02:03,000 --> 00:02:07,000

...

19

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

...

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00:02:11,000 --> 00:02:17,000

...

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00:02:17,000 --> 00:02:21,000

...

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

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

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

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

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00:02:33,000 --> 00:02:37,000

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00:02:37,000 --> 00:02:43,000

...

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00:02:43,000 --> 00:02:47,000

...

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00:02:47,000 --> 00:02:49,000

...

30

00:02:49,000 --> 00:02:53,000

...

31

00:02:53,000 --> 00:02:57,000

...

32

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

...

33

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

...

34

00:03:09,000 --> 00:03:13,000

...

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00:03:13,000 --> 00:03:15,000

...

36

00:03:15,000 --> 00:03:19,000

...

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00:03:19,000 --> 00:03:21,000

...

38

00:03:21,000 --> 00:03:23,000

...

39

00:03:23,000 --> 00:03:25,000

...

40

00:03:25,000 --> 00:03:29,000

...

41

00:03:29,000 --> 00:03:33,000

We're screwed.

42

00:03:33,000 --> 00:03:35,000

Yes, we could do this test on a real lawn,

43

00:03:35,000 --> 00:03:39,000

but remember, this isn't about whether lawn mowers cut grass.

44

00:03:39,000 --> 00:03:40,000

We know this.

45

00:03:40,000 --> 00:03:42,000

This is about what happens to rocks

46

00:03:42,000 --> 00:03:44,000

when they interact with lawn mowers.

47

00:03:44,000 --> 00:03:47,000

I walked in my own path.

48

00:03:47,000 --> 00:03:50,000

So we've created our lawn laboratory here

49

00:03:50,000 --> 00:03:52,000

in order to remove variables

50

00:03:52,000 --> 00:03:55,000

and to clearly see what happens to those rocks.

51

00:03:55,000 --> 00:03:59,000

Our experimental design today is pretty straightforward.

52

00:03:59,000 --> 00:04:01,000

We are going to lay down these rocks.

53

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

Now it's starting to sink into me what we're about to do.

54

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

Turn on this gas-powered motor and run it over them.

55

00:04:08,000 --> 00:04:11,000

What we want to witness is what happens in the reaction

56

00:04:11,000 --> 00:04:14,000

between the stones and the blade of the lawn mower.

57

00:04:14,000 --> 00:04:17,000

This is going to be a horror shot.

58

00:04:17,000 --> 00:04:19,000

Ha ha ha.

59

00:04:19,000 --> 00:04:22,000

Our blue figures are painted onto styrofoam,

60

00:04:22,000 --> 00:04:25,000

and so if any rocks come out of the mower with any force,

61

00:04:25,000 --> 00:04:28,000

this foam is soft enough that it should easily show it.

62

00:04:31,000 --> 00:04:35,000

The mowers when Jamie was a kid didn't even have wheels.

63

00:04:35,000 --> 00:04:37,000

They had a really interesting name.

64

00:04:37,000 --> 00:04:39,000

I recall it was it.

65

00:04:39,000 --> 00:04:41,000

It was called the Mawar.

66

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

It was called the Mawar.

67

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

It was called the Mawar.

68

00:04:46,000 --> 00:04:48,000

They had a really interesting name.

69

00:04:48,000 --> 00:04:50,000

I recall it was it.

70

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

Oh, goats.

71

00:04:52,000 --> 00:04:54,000

Okay, let's see if this thing starts up.

72

00:04:54,000 --> 00:04:58,000

Modern metal mowers have to breed a flexion more than covered

73

00:04:58,000 --> 00:05:00,000

with this spring-loaded safety flout.

74

00:05:06,000 --> 00:05:09,000

Nothing came out. We got to pull that door.

75

00:05:09,000 --> 00:05:11,000

But Adam and Jamie want to know what happens

76

00:05:11,000 --> 00:05:13,000

in the worst-case scenario.

77

00:05:13,000 --> 00:05:16,000

It seems like the safety features work beautifully,

78

00:05:16,000 --> 00:05:18,000

but as you know on Mythbusters, that's never stopped us.

79

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

The first order of business,

80

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

remove this little door with a word danger on it.

81

00:05:24,000 --> 00:05:27,000

There we go. Safety feature removed.

82

00:05:27,000 --> 00:05:30,000

With the mower now poorly maintained,

83

00:05:30,000 --> 00:05:32,000

the opening on the right-hand side

84

00:05:32,000 --> 00:05:34,000

means any debris propelled by the blades

85

00:05:34,000 --> 00:05:37,000

will hit the styrofoam targets.

86

00:05:37,000 --> 00:05:41,000

Adam, standing behind the mower, should be safe.

87

00:05:41,000 --> 00:05:43,000

What's going to happen?

88

00:05:43,000 --> 00:05:46,000

Well, one thing's for certain.

89

00:05:46,000 --> 00:05:49,000

Unless you're wearing hockey armor,

90

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

you don't want to stand in front of the opening to that mower.

91

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

I don't want to do this anymore. This is terrifying.

92

00:06:15,000 --> 00:06:19,000

I start out, I start the mower, and I get into a rhythm.

93

00:06:21,000 --> 00:06:23,000

It's the most terrifying rhythm I've ever been in.

94

00:06:26,000 --> 00:06:31,000

I actually ended up turning my entire body away from this rain,

95

00:06:31,000 --> 00:06:34,000

this shower, this firestorm of little tiny bubbles

96

00:06:34,000 --> 00:06:37,000

that won't even flew up in the air and landed on my hat.

97

00:06:37,000 --> 00:06:41,000

And I can't even picture the physics required for that to occur.

98

00:06:41,000 --> 00:06:43,000

Good lord!

99

00:06:43,000 --> 00:06:46,000

I ran out of steam, and that is fine with me.

100

00:06:46,000 --> 00:06:51,000

I'm no expert with cameras, but that's bad. Am I right? That's bad.

101

00:06:51,000 --> 00:06:55,000

I don't ever want to be behind a mower doing that again.

102

00:06:56,000 --> 00:07:00,000

While Adam was behind the mower out of the line of fire.

103

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

I'm really sorry about that. I apologize.

104

00:07:03,000 --> 00:07:05,000

I'll put that right there.

105

00:07:05,000 --> 00:07:09,000

A veritable firestorm of stones and ricochets meant no one was safe.

106

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

Come here. Oh my gosh.

107

00:07:11,000 --> 00:07:13,000

Hit, hit, hit.

108

00:07:13,000 --> 00:07:15,000

With the foam on Looker's pepper.

109

00:07:15,000 --> 00:07:17,000

That went all the way through.

110

00:07:17,000 --> 00:07:19,000

Wow!

111

00:07:19,000 --> 00:07:22,000

The myth that a lawn mower can fling rocks at bullet-like force

112

00:07:22,000 --> 00:07:24,000

is clearly on the right track.

113

00:07:24,000 --> 00:07:27,000

It threw this. This...

114

00:07:27,000 --> 00:07:29,000

That's heavy.

115

00:07:29,000 --> 00:07:33,000

With enough force to embed itself in this.

116

00:07:33,000 --> 00:07:36,000

I mean, I know that it's foam, but this is...

117

00:07:36,000 --> 00:07:39,000

I'm amazed.

118

00:07:41,000 --> 00:07:45,000

So, there's evidence the ballistic fallout is significant.

119

00:07:45,000 --> 00:07:47,000

But the Heinemann...

120

00:07:47,000 --> 00:07:49,000

Wee!

121

00:07:49,000 --> 00:07:53,000

Can't resist ramping it up.

122

00:07:53,000 --> 00:07:56,000

This thing here is, uh,

123

00:07:56,000 --> 00:07:59,000

what you call a premium domestic lawn mower.

124

00:07:59,000 --> 00:08:03,000

It's a ride-on and it's made to mow lawns fast.

125

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

It's fun.

126

00:08:05,000 --> 00:08:07,000

That's beautiful!

127

00:08:07,000 --> 00:08:09,000

Ha, ha, ha, ha!

128

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

With an engine four times more powerful...

129

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

Jamie, are you ready?

130

00:08:19,000 --> 00:08:21,000

I'm ready.

131

00:08:21,000 --> 00:08:24,000

How much more havoc will Jamie wreak?

132

00:08:24,000 --> 00:08:28,000

Three, two, one, go!

133

00:08:36,000 --> 00:08:38,000

Oh, no.

134

00:08:42,000 --> 00:08:44,000

Ha, ha, ha, ha!

135

00:08:44,000 --> 00:08:46,000

I brought in the riding lawn mower

136

00:08:46,000 --> 00:08:48,000

and picked up where Adam left off.

137

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

Oh, oh, my God!

138

00:08:50,000 --> 00:08:52,000

Stop, stop!

139

00:08:52,000 --> 00:08:56,000

As you can see, there are no rocks left where I mowed.

140

00:08:56,000 --> 00:09:00,000

That mower moved them successfully off to the side with vigor.

141

00:09:00,000 --> 00:09:02,000

Ha, ha, ha!

142

00:09:02,000 --> 00:09:04,000

Turn it up! How'd I do?

143

00:09:06,000 --> 00:09:08,000

Um...

144

00:09:08,000 --> 00:09:10,000

Ha, ha, ha, ha!

145

00:09:10,000 --> 00:09:12,000

I'm going to go get a new mower.

146

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

I'm going to get a new mower.

147

00:09:14,000 --> 00:09:16,000

I'm going to get a new mower.

148

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

I'm going to get a new mower.

149

00:09:18,000 --> 00:09:20,000

Ha, ha, ha, ha!

150

00:09:22,000 --> 00:09:24,000

You know, I don't really care.

151

00:09:24,000 --> 00:09:26,000

Ha, ha, ha, ha!

152

00:09:26,000 --> 00:09:30,000

You might want to think twice before inviting a myth buster to mow your lawn.

153

00:09:30,000 --> 00:09:32,000

I'm just saying.

154

00:09:32,000 --> 00:09:34,000

Look, we have had fun so far.

155

00:09:34,000 --> 00:09:36,000

But it is important to remember that this entire story

156

00:09:36,000 --> 00:09:40,000

is about the interaction between a spinning lawn mower blade

157

00:09:40,000 --> 00:09:42,000

and a rock.

158

00:09:42,000 --> 00:09:44,000

How fast does it leave and with how much energy?

159

00:09:44,000 --> 00:09:47,000

Now, were those rocks leaving the lawn mower at the speed of a bullet?

160

00:09:47,000 --> 00:09:49,000

Or were the same amount of energy?

161

00:09:49,000 --> 00:09:51,000

That we don't yet know.

162

00:09:51,000 --> 00:09:53,000

I think what we've got to do is take some of this equipment

163

00:09:53,000 --> 00:09:55,000

back into the shop and remove even more variables

164

00:09:55,000 --> 00:09:59,000

and hone in to find out if they really are kicking those rocks

165

00:09:59,000 --> 00:10:01,000

with the energy of a 357.

166

00:10:01,000 --> 00:10:03,000

The mower mayhem is set to continue.

167

00:10:03,000 --> 00:10:05,000

Everybody okay?

168

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

But coming up next...

169

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

The accidental ammo armor-geddon...

170

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

Two... one...

171

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

It's Dangerous New Heights.

172

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

I did not expect that level of carnage from our lawn mower.

173

00:10:21,000 --> 00:10:23,000

Yeah, we might be onto something with that.

174

00:10:23,000 --> 00:10:27,000

True, but a lot is going to rest on exactly how fast those rocks are actually going.

175

00:10:27,000 --> 00:10:29,000

But before we get to that,

176

00:10:29,000 --> 00:10:31,000

what's if we crank up the gore on another story?

177

00:10:31,000 --> 00:10:33,000

You're talking about glass guillotine.

178

00:10:33,000 --> 00:10:36,000

Yes, the myth is that if a pane of glass falls out of an office building

179

00:10:36,000 --> 00:10:39,000

and you're unlucky enough for it to find you in the street,

180

00:10:39,000 --> 00:10:42,000

it will shing cleave you right in twain.

181

00:10:42,000 --> 00:10:44,000

Well, I don't know about that,

182

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

but whatever happens, it ain't going to be pretty.

183

00:10:47,000 --> 00:10:49,000

No.

184

00:10:53,000 --> 00:10:55,000

For us to do our glass guillotine experiment,

185

00:10:55,000 --> 00:10:57,000

we need something to cut,

186

00:10:57,000 --> 00:11:00,000

something that ideally would be like a human.

187

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

And, well, I asked for some volunteers from the shock crew,

188

00:11:04,000 --> 00:11:06,000

but nobody stepped up,

189

00:11:06,000 --> 00:11:08,000

so I'm going to have to make my own,

190

00:11:08,000 --> 00:11:12,000

and to do that, I'm going to melt down a clear flesh like a human.

191

00:11:12,000 --> 00:11:15,000

I'm going to melt down a clear flesh like material

192

00:11:15,000 --> 00:11:18,000

and pour it into this human sized torso mold.

193

00:11:18,000 --> 00:11:20,000

Yep, for anatomical accuracy,

194

00:11:23,000 --> 00:11:27,000

Jamie's using a creepy mix of realistic materials.

195

00:11:27,000 --> 00:11:29,000

See the way that tears?

196

00:11:29,000 --> 00:11:32,000

This is a polyethylene material,

197

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

and it actually rips,

198

00:11:34,000 --> 00:11:37,000

just like flesh will rip.

199

00:11:37,000 --> 00:11:40,000

So I'm going to use this as a filler material

200

00:11:40,000 --> 00:11:44,000

so that when our plastic dummy gets impacted,

201

00:11:44,000 --> 00:11:48,000

it actually cleaves if it's going to like flesh.

202

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

Getting a human-like texture for their torso is critical.

203

00:11:53,000 --> 00:11:56,000

Adding bags of blood?

204

00:11:56,000 --> 00:11:57,000

Not so much.

205

00:11:57,000 --> 00:12:00,000

These bags are made for what's known as sous vide.

206

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

It's a method of cooking,

207

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

and it means that the plastic's able to withstand a fair amount of heat,

208

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

and this will provide a container for the blood,

209

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

which when we float this or hang it inside our mold,

210

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

hopefully if it gets hit with our class guillotine, it'll bleed.

211

00:12:19,000 --> 00:12:22,000

With the gratuitously gory innards placed,

212

00:12:22,000 --> 00:12:26,000

the pouring of the now superheated gel commences.

213

00:12:26,000 --> 00:12:27,000

Lower down.

214

00:12:27,000 --> 00:12:33,000

It's funny to go back through our whole entire history of human analogue production.

215

00:12:33,000 --> 00:12:34,000

There we go.

216

00:12:34,000 --> 00:12:36,000

I mean, we started off so primitively,

217

00:12:36,000 --> 00:12:39,000

just filling molds like this with dessert gelatin.

218

00:12:39,000 --> 00:12:43,000

All the way up to, you know, last year we made a human analogue

219

00:12:43,000 --> 00:12:46,000

that would actually get hypothermia while you watch.

220

00:12:46,000 --> 00:12:49,000

It's all looking good. It's nice and clear.

221

00:12:49,000 --> 00:12:53,000

In this case, for our class guillotine, this one bleeds,

222

00:12:53,000 --> 00:12:57,000

and in 12 hours when it cools, we're going to try it out.

223

00:12:57,000 --> 00:12:58,000

It's a beautiful start.

224

00:12:58,000 --> 00:13:00,000

Oh, it's beautiful.

225

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

But their bubble is soon burst.

226

00:13:03,000 --> 00:13:06,000

That right there, that's a breach of one of our blood bags

227

00:13:06,000 --> 00:13:08,000

inside our human analogue here.

228

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

It doesn't look like they've all breached, but if one has,

229

00:13:12,000 --> 00:13:14,000

well, there's only one of two reasons,

230

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

either because the bag wasn't properly constructed

231

00:13:16,000 --> 00:13:18,000

or because they're all going to breach.

232

00:13:18,000 --> 00:13:21,000

What this means to the final product, I have no idea.

233

00:13:21,000 --> 00:13:24,000

We just got to wait till this cools and see what we get.

234

00:13:29,000 --> 00:13:31,000

This is how Jamie was born.

235

00:13:34,000 --> 00:13:36,000

Ta-da!

236

00:13:36,000 --> 00:13:38,000

Hey!

237

00:13:38,000 --> 00:13:41,000

Oh, he looks a lot better than I was afraid he'd look.

238

00:13:43,000 --> 00:13:44,000

Yeah.

239

00:13:44,000 --> 00:13:46,000

Wow.

240

00:13:46,000 --> 00:13:49,000

I'd say it looks pretty usable.

241

00:13:49,000 --> 00:13:50,000

Nice!

242

00:13:50,000 --> 00:13:52,000

This is the first of our castings,

243

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

and frankly, we were worried that we had ruined it,

244

00:13:55,000 --> 00:13:57,000

but while it's not perfect,

245

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

hey, sorry, it's usable,

246

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

and it'll serve for one of our tests.

247

00:14:03,000 --> 00:14:05,000

That's the deal.

248

00:14:05,000 --> 00:14:08,000

All of this is done in a way that we can do it,

249

00:14:08,000 --> 00:14:10,000

and that's a big challenge.

250

00:14:10,000 --> 00:14:12,000

Can we just build something like this?

251

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

We can build a company,

252

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

and we can do it.

253

00:14:18,000 --> 00:14:20,000

Clearly, if we're going to be experimenting

254

00:14:20,000 --> 00:14:22,000

with glass falling from great heights,

255

00:14:22,000 --> 00:14:25,000

we're going to need glass and we're going to need great height.

256

00:14:25,000 --> 00:14:26,000

Too low.

257

00:14:26,000 --> 00:14:29,000

Now, glass is easy, great heights, not so much.

258

00:14:29,000 --> 00:14:31,000

A little bit better.

259

00:14:31,000 --> 00:14:34,000

Today, I hate heights.

260

00:14:34,000 --> 00:14:36,000

We're gonna be dropping large panes of glass

261

00:14:36,000 --> 00:14:40,000

onto unwilling ballistics gelatin test subjects.

262

00:14:40,000 --> 00:14:42,000

Absolutely perfect.

263

00:14:44,000 --> 00:14:48,000

So we've got a 4-foot by 6-foot piece of 3-eighths inch thick glass,

264

00:14:48,000 --> 00:14:51,000

like what they would have on top of a high-rise.

265

00:14:51,000 --> 00:14:52,000

Not many people know this,

266

00:14:52,000 --> 00:14:55,000

but Mime's actually practiced behind an actual pane of glass.

267

00:14:55,000 --> 00:14:58,000

And I'm gonna hoist it to 75 feet.

268

00:14:58,000 --> 00:14:59,000

Good.

269

00:14:59,000 --> 00:15:01,000

We're Adam and I are gonna drop it.

270

00:15:01,000 --> 00:15:02,000

Looking good.

271

00:15:02,000 --> 00:15:05,000

Now, when you're visualizing a pane of glass falling

272

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

and slicing through someone like a guillotine or a sword,

273

00:15:08,000 --> 00:15:11,000

you're probably thinking of something that looks a little like this.

274

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

But you also probably were watching us move around our pane of glass

275

00:15:17,000 --> 00:15:19,000

and thinking, wait a minute, that glass doesn't look sharp.

276

00:15:19,000 --> 00:15:22,000

It looks like it's got a kind of a square edge, kind of like that.

277

00:15:22,000 --> 00:15:25,000

That's because the glass in an office building is called tempered glass.

278

00:15:25,000 --> 00:15:28,000

It's made to be very hard and it also doesn't break into shards.

279

00:15:28,000 --> 00:15:32,000

It actually breaks into many, many thousands of little tiny chunks,

280

00:15:32,000 --> 00:15:33,000

kind of like this.

281

00:15:34,000 --> 00:15:35,000

It didn't break.

282

00:15:36,000 --> 00:15:37,000

Let me just say this again.

283

00:15:37,000 --> 00:15:39,000

It breaks into many little pieces like this.

284

00:15:44,000 --> 00:15:45,000

There you go.

285

00:15:45,000 --> 00:15:48,000

So it's more akin to actually hitting the melon with the back of my blade

286

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

rather than the front, like this.

287

00:15:53,000 --> 00:15:56,000

Now, is that what's gonna happen to our guy when our glass falls on him?

288

00:15:56,000 --> 00:15:59,000

Frankly, I have no idea. I'm just as curious as you are.

289

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

All right.

290

00:16:01,000 --> 00:16:02,000

Nobody underneath this.

291

00:16:02,000 --> 00:16:04,000

Jamie, I will meet you up at the top.

292

00:16:07,000 --> 00:16:08,000

Here we go.

293

00:16:12,000 --> 00:16:14,000

I hate heights.

294

00:16:14,000 --> 00:16:17,000

I know nothing's gonna happen to me when I'm in these things.

295

00:16:17,000 --> 00:16:19,000

Man, this is scary.

296

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

But I've always been that way.

297

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

I just hate heights so intensely.

298

00:16:24,000 --> 00:16:26,000

It's just awful.

299

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

Yeah, that's it.

300

00:16:29,000 --> 00:16:31,000

Jamie, this is working beautifully.

301

00:16:47,000 --> 00:16:50,000

You know, I can't help but feel like we're about to enact a scene in a movie

302

00:16:50,000 --> 00:16:52,000

called Clumsy Window Movers.

303

00:16:54,000 --> 00:16:58,000

For clarity, it is worth restating that what we are looking for from the glass here

304

00:16:58,000 --> 00:17:00,000

is not whether or not it kills him.

305

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

Okay, now, I figure we hoisted over our heads.

306

00:17:04,000 --> 00:17:07,000

Yeah, although that would be the end result no matter what, if it hit him.

307

00:17:07,000 --> 00:17:08,000

Okay.

308

00:17:08,000 --> 00:17:09,000

Three.

309

00:17:09,000 --> 00:17:10,000

Oh my God.

310

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

It's that it would cleave him in two like my sword did with the melon.

311

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

Sheen.

312

00:17:16,000 --> 00:17:19,000

Three, two, one.

313

00:17:24,000 --> 00:17:26,000

Oh.

314

00:17:26,000 --> 00:17:29,000

It did a little turn right at the very end.

315

00:17:29,000 --> 00:17:33,000

It looked like it was gonna be perfect and at the very end at fish tail.

316

00:17:33,000 --> 00:17:35,000

Oh my gosh.

317

00:17:35,000 --> 00:17:37,000

It was so close.

318

00:17:37,000 --> 00:17:42,000

For like the first couple of seconds, it seemed to be falling perfectly like a knife towards him.

319

00:17:42,000 --> 00:17:44,000

I'm like, oh my God, it's gonna hit him.

320

00:17:44,000 --> 00:17:45,000

It's gonna hit him.

321

00:17:45,000 --> 00:17:50,000

And then what feels like just before it got to our dude and went like this

322

00:17:50,000 --> 00:17:56,000

and hit the ground perfectly flat and spread in every direction.

323

00:17:56,000 --> 00:17:58,000

Oh my goodness.

324

00:17:58,000 --> 00:18:01,000

It looks worse down here than it did up there.

325

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

Oh my God, it's so pretty.

326

00:18:04,000 --> 00:18:10,000

When I was like 10, I would have taken these home and pretended they were diamonds and pretended I had treasure.

327

00:18:10,000 --> 00:18:14,000

I would have sold them to the neighborhood kids and made a profit.

328

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

It's clear that this test was a fling and a miss.

329

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

To stand a chance of a direct hit split, they're gonna need a plan B.

330

00:18:23,000 --> 00:18:24,000

What do you think?

331

00:18:24,000 --> 00:18:26,000

Should we head back to the shop and make a system for guiding the glass?

332

00:18:26,000 --> 00:18:28,000

Yeah, I've got some ideas.

333

00:18:28,000 --> 00:18:30,000

Me too.

334

00:18:37,000 --> 00:18:43,000

Lurking innocently in your garden shed, a lethal accident is waiting to happen.

335

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

Or is it?

336

00:18:46,000 --> 00:18:53,000

We have been trying to determine whether a lawnmower can fling rocks with the same amount of energy as a bullet.

337

00:18:53,000 --> 00:18:57,000

What we'd like to do is measure the speed at which the rocks are leaving the lawnmower

338

00:18:57,000 --> 00:19:03,000

and then see how that compares to the speed of an actual bullet.

339

00:19:03,000 --> 00:19:07,000

Before comparing actual bullets, they're measuring the mower.

340

00:19:07,000 --> 00:19:09,000

Why am I taking the motor off?

341

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

Well, for us to test it in the shop, we need to look closely at it and run it for a while.

342

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

And so instead of having this noisy, smelly, gasoline engine going in here,

343

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

we're just gonna swap it out with an electric motor, nice and clean and quiet.

344

00:19:28,000 --> 00:19:30,000

This thing's stuck.

345

00:19:30,000 --> 00:19:39,000

And we got it.

346

00:19:39,000 --> 00:19:45,000

The way this motor is wound, it's gonna give us 100 rpm for every bolt that it sees.

347

00:19:45,000 --> 00:19:54,000

And so given that the gas engine ran at 3600 rpm, we need to feed this 36 volts to see the same rpm.

348

00:19:54,000 --> 00:20:02,000

But the thing is, if we give it that voltage all at once, it's gonna spin that blade up to full rpm in like a millisecond.

349

00:20:02,000 --> 00:20:08,000

It's, it's, it's, you just build a lawnmower that I want to be behind a blast shield in order to start.

350

00:20:08,000 --> 00:20:14,000

And that's scary. It might end up putting the blade in the wall or in me or something,

351

00:20:14,000 --> 00:20:19,000

because something's gonna break. So I've got to figure out a way of doing it a little more gently.

352

00:20:19,000 --> 00:20:26,000

To gently deliver that power, once again, Jamie uses equipment in ways for which it was never intended.

353

00:20:26,000 --> 00:20:28,000

This is working perfectly.

354

00:20:28,000 --> 00:20:32,000

He's hooked up a DC-powered welding machine to a lawnmower.

355

00:20:32,000 --> 00:20:41,000

I love it when things actually work the way you hope. I mean, it is somehow a little counterintuitive to run a motor off of a welder,

356

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

but DC power is DC power.

357

00:20:43,000 --> 00:20:46,000

That's amazing. All right, let's get it up on a stand.

358

00:20:50,000 --> 00:20:56,000

We need to be able to deliver the rock to the spinning blade in a way that we can actually see what's going on.

359

00:20:56,000 --> 00:20:58,000

Now it's looking like something.

360

00:20:58,000 --> 00:21:06,000

But Adam and I have come up with a way of doing it, which involves putting the whole mower up on top of a sheet of clear acrylic,

361

00:21:06,000 --> 00:21:08,000

and then we can see from underneath.

362

00:21:08,000 --> 00:21:16,000

Yet another in a long line of pristine surfaces soon to be destroyed and sullied in our hunt for the truth.

363

00:21:16,000 --> 00:21:23,000

And we'll simply raise the mower, get the mower up to speed, and then lower it down onto the rock.

364

00:21:23,000 --> 00:21:24,000

Bang.

365

00:21:24,000 --> 00:21:27,000

So how are we going to keep this stuff from going all over the shop?

366

00:21:27,000 --> 00:21:33,000

Well, we've cut away the whole side here, so we wanted to go there, so I thought we'd put some upright supply wood here to protect the walls.

367

00:21:33,000 --> 00:21:37,000

We already know that a lawnmower can curl a rock at a fairly good speed.

368

00:21:38,000 --> 00:21:41,000

We don't know what that speed is.

369

00:21:41,000 --> 00:21:42,000

Cool. All right.

370

00:21:42,000 --> 00:21:45,000

That's position one, medium-sized rock.

371

00:21:45,000 --> 00:21:47,000

So we're going to power up this lawnmower to its full speed.

372

00:21:47,000 --> 00:21:54,000

We're going to feed rocks into it, watch them on our high-speed camera, and measure exactly how fast they leave.

373

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

You ready?

374

00:21:55,000 --> 00:21:56,000

I'm ready.

375

00:21:56,000 --> 00:21:57,000

Let's do this.

376

00:21:59,000 --> 00:22:06,000

18, 25, 32.

377

00:22:09,000 --> 00:22:11,000

34.

378

00:22:12,000 --> 00:22:13,000

Speed.

379

00:22:13,000 --> 00:22:15,000

All right. Here we go.

380

00:22:15,000 --> 00:22:17,000

Dropping a lawnmower onto a rock.

381

00:22:17,000 --> 00:22:19,000

Three, two, one.

382

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

Cut it.

383

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

Blink, and it's gone.

384

00:22:26,000 --> 00:22:31,000

Because when the mower is lowered, the blade instantly slices the stone into chunks.

385

00:22:32,000 --> 00:22:36,000

Oh, wow. Just absolutely decimated that piece.

386

00:22:36,000 --> 00:22:41,000

Question is, were any of the fragments moving at a bullet-like velocity?

387

00:22:41,000 --> 00:22:49,000

The fastest chunk was going 250 feet per second, and that's actually pretty significant for a chunk of rock about one inch long and a half inch wide.

388

00:22:49,000 --> 00:22:53,000

But we're going to keep running this, see if we can't find even faster debris.

389

00:22:54,000 --> 00:22:57,000

250 feet per second is a good start.

390

00:22:57,000 --> 00:22:59,000

Okay, sir. We got a whole pile going in.

391

00:22:59,000 --> 00:23:03,000

But this time, they're giving their mower more to aim for.

392

00:23:03,000 --> 00:23:04,000

Start her up.

393

00:23:04,000 --> 00:23:06,000

What could possibly go wrong?

394

00:23:08,000 --> 00:23:09,000

Speed.

395

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

Dropping big pile of rocks.

396

00:23:13,000 --> 00:23:14,000

Cover your eyes.

397

00:23:14,000 --> 00:23:15,000

Three, two, one.

398

00:23:20,000 --> 00:23:21,000

Cut it.

399

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

Everybody okay?

400

00:23:25,000 --> 00:23:26,000

Chunk.

401

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

Chunk made it out.

402

00:23:31,000 --> 00:23:35,000

I hope we got the shot because that was the sound of the blade coming off of the motor.

403

00:23:35,000 --> 00:23:36,000

Oh, really?

404

00:23:36,000 --> 00:23:37,000

Yeah.

405

00:23:38,000 --> 00:23:41,000

While Jamie inspects the carnage.

406

00:23:41,000 --> 00:23:42,000

Wow.

407

00:23:42,000 --> 00:23:46,000

We cracked our acrylic bottom.

408

00:23:46,000 --> 00:23:48,000

Adam, ignoring the mess he's made.

409

00:23:48,000 --> 00:23:49,000

Here's the blade.

410

00:23:49,000 --> 00:23:50,000

Cues up the high speed.

411

00:23:50,000 --> 00:23:52,000

Wow, dude.

412

00:23:52,000 --> 00:23:54,000

We got the hit that I was hoping to get.

413

00:23:56,000 --> 00:23:58,000

Watch the leading edge of the blade here.

414

00:23:58,000 --> 00:23:59,000

Boom.

415

00:23:59,000 --> 00:24:00,000

That piece.

416

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

400 feet per second.

417

00:24:02,000 --> 00:24:05,000

272 miles per hour.

418

00:24:05,000 --> 00:24:06,000

Well.

419

00:24:07,000 --> 00:24:10,000

I feel like we're in some very dangerous territory.

420

00:24:10,000 --> 00:24:11,000

Dangerous for sure.

421

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

But the crucial question is, how does it compare to the speed of a bullet?

422

00:24:17,000 --> 00:24:23,000

Well, Jamie, with high speed camera in tow, fired up at the gun range.

423

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

Define that.

424

00:24:27,000 --> 00:24:30,000

Three, two, one.

425

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

The slowest bullet we measured went at 1,000 feet per second.

426

00:24:35,000 --> 00:24:40,000

The 357, which was much faster, went at 1,400 feet per second.

427

00:24:40,000 --> 00:24:48,000

Now, the fastest rock we got off of our lawnmower went 400 feet per second, which is nowhere close.

428

00:24:48,000 --> 00:24:50,000

But it's not busted right there.

429

00:24:50,000 --> 00:24:51,000

No, no, no, no.

430

00:24:51,000 --> 00:24:55,000

Because while this rock is bigger and slower than this bullet, it's heavier.

431

00:24:55,000 --> 00:25:02,000

What I'm wondering now is, is there a rig I can build that can compare the amount of energy the bullet brings to the equation

432

00:25:02,000 --> 00:25:05,000

and compare it to the amount of energy the rock brings?

433

00:25:06,000 --> 00:25:07,000

I think I can.

434

00:25:07,000 --> 00:25:09,000

Three, two, one.

435

00:25:09,000 --> 00:25:18,000

While Adam cogitates on how to illustrate energy comparison, he's thinking outside the box for glass guillotine.

436

00:25:19,000 --> 00:25:24,000

Clearly dropping glass off the building isn't going to be a repeatable way for us to test this story.

437

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

Oh!

438

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

So we're going to need to come up with a mechanism for reliably making the glass hit exactly where we want.

439

00:25:30,000 --> 00:25:35,000

And I have an idea, except in order to talk about it, I want to build a little model of the fire training tower.

440

00:25:35,000 --> 00:25:39,000

And instead of an exotic material, I love making corners match up.

441

00:25:39,000 --> 00:25:42,000

I'm just going to use this cardboard box we just got in the mail.

442

00:25:42,000 --> 00:25:43,000

Ta-da!

443

00:25:43,000 --> 00:25:46,000

I know it doesn't look like much, but check this out.

444

00:25:46,000 --> 00:25:51,000

This coat hanger will be a welded steel rack which we sit on the lip of the building.

445

00:25:51,000 --> 00:25:52,000

You are clear.

446

00:25:52,000 --> 00:25:57,000

These red pieces of parachute cord are guide wires which we mount to the ground.

447

00:25:57,000 --> 00:25:58,000

Awesome.

448

00:25:58,000 --> 00:26:03,000

The glass has riders on it that keep it aligned with the guide wires.

449

00:26:03,000 --> 00:26:07,000

They say the glass is tempered, but is it bad tempered?

450

00:26:07,000 --> 00:26:09,000

We bring it up with a winch.

451

00:26:09,000 --> 00:26:11,000

Go ahead and winch up the glass.

452

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

Oh, here she comes.

453

00:26:13,000 --> 00:26:15,000

Drop it from the top and...

454

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

Think!

455

00:26:17,000 --> 00:26:23,000

It hits our test subject square where we want him to and slices him right in half.

456

00:26:23,000 --> 00:26:24,000

Or not.

457

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

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

458

00:26:28,000 --> 00:26:35,000

And with Adam's model design rigged, the glass is poised to come crashing down in controlled fashion.

459

00:26:35,000 --> 00:26:38,000

It is really just about to happen.

460

00:26:38,000 --> 00:26:40,000

I can't wait to see this.

461

00:26:40,000 --> 00:26:46,000

It's time to find out if our unsuspecting bystander will be neatly split in two.

462

00:26:46,000 --> 00:26:51,000

In three, two, one.

463

00:26:51,000 --> 00:26:54,000

Here it comes.

464

00:26:54,000 --> 00:26:59,000

That was perfect.

465

00:26:59,000 --> 00:27:02,000

Dude, that was beautiful.

466

00:27:02,000 --> 00:27:04,000

He's still in one piece.

467

00:27:04,000 --> 00:27:06,000

It looks like he's still in one piece.

468

00:27:06,000 --> 00:27:07,000

Of course.

469

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

There's blood everywhere.

470

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

Well, every one of our methodologies worked beautifully.

471

00:27:16,000 --> 00:27:20,000

The glass dropped, it hit our dude exactly where we wanted it to,

472

00:27:20,000 --> 00:27:23,000

and it did not leave him in twain.

473

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

No, it merely became a piece of glass.

474

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

But there's still only one dude. There's not two half dudes.

475

00:27:32,000 --> 00:27:34,000

I've got to try something else.

476

00:27:36,000 --> 00:27:42,000

Yep, this slasher story is about to get real edgy.

477

00:27:57,000 --> 00:28:06,000

Could a one in a million high-rise slip ever really slice you in half?

478

00:28:06,000 --> 00:28:09,000

Not according to the evidence so far.

479

00:28:09,000 --> 00:28:12,000

And you might be watching thinking, of course it didn't you, idiot.

480

00:28:12,000 --> 00:28:15,000

It's that tempered glass you dropped, had this big square edge on it.

481

00:28:15,000 --> 00:28:17,000

But that's the thing with tempered glass.

482

00:28:17,000 --> 00:28:19,000

It doesn't break and have sharp edges.

483

00:28:19,000 --> 00:28:22,000

For that, you've got to move to plate glass.

484

00:28:22,000 --> 00:28:26,000

Now, they don't use plate glass in office buildings specifically for this reason,

485

00:28:26,000 --> 00:28:29,000

but for due diligence, we've got a piece of plate glass here.

486

00:28:29,000 --> 00:28:36,000

And we're going to break this so that we get a nice, clean, broken edge of plate glass.

487

00:28:36,000 --> 00:28:38,000

All right.

488

00:28:38,000 --> 00:28:42,000

And we're going to drop that on the next unsuspecting bystander we pulled out of our mold.

489

00:28:42,000 --> 00:28:44,000

Okay, I'm going to move them in.

490

00:28:44,000 --> 00:28:45,000

Yep.

491

00:28:45,000 --> 00:28:48,000

Our next victim doesn't have blood bags.

492

00:28:48,000 --> 00:28:50,000

That is right down the center.

493

00:28:50,000 --> 00:28:55,000

Not quite as much fun, but a little bit more consistent as far as the physics.

494

00:28:55,000 --> 00:28:59,000

Go ahead and raise him in three, two, one, go.

495

00:28:59,000 --> 00:29:05,000

While it's on its way up, I feel confident that I think that that is going to slice our dude in half.

496

00:29:05,000 --> 00:29:08,000

The edges of that glass, they're really sharp.

497

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

It's going to be a hard shot.

498

00:29:12,000 --> 00:29:15,000

All right, go ahead and count it down and let it go.

499

00:29:15,000 --> 00:29:23,000

And three, two, one.

500

00:29:23,000 --> 00:29:24,000

Here it comes.

501

00:29:24,000 --> 00:29:26,000

Oh, it's good. It's good.

502

00:29:35,000 --> 00:29:37,000

That was beautiful.

503

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

I mean, I don't know how well it worked, but it looked great.

504

00:29:40,000 --> 00:29:56,000

Dude, that would be cleaved as I've been saying all that episode long in twain.

505

00:29:56,000 --> 00:30:02,000

Not exactly a bullseye to the brain, but in twain he truly is.

506

00:30:02,000 --> 00:30:07,000

I couldn't see that chunk fly off of him from where I was standing.

507

00:30:07,000 --> 00:30:12,000

It looked like unfettered destruction, but dude, that is, that's amazing.

508

00:30:12,000 --> 00:30:15,000

These two dummies tell the whole story.

509

00:30:15,000 --> 00:30:22,000

The first one we dropped a piece of temperate glass onto, and they manufacture that glass so that people don't get cut.

510

00:30:22,000 --> 00:30:24,000

And the result is appropriate to that.

511

00:30:24,000 --> 00:30:31,000

Our guy would have had his skull crushed with a lot of bones broken, but he wouldn't have been cleaved in half.

512

00:30:31,000 --> 00:30:36,000

The other one we dropped a piece of plate glass on that had a broken edge that was very sharp.

513

00:30:36,000 --> 00:30:40,000

And as a result, he got cut cleanly in half.

514

00:30:40,000 --> 00:30:44,000

The end result is the same. You would have died.

515

00:30:44,000 --> 00:30:46,000

Take your pick.

516

00:30:46,000 --> 00:30:49,000

Can glass falling from a high rise cut you in two?

517

00:30:49,000 --> 00:30:52,000

This is an interesting one because it's kind of a yes or no situation.

518

00:30:52,000 --> 00:30:57,000

If it's the glass they make high rises from, then no, it's not going to cut you in two.

519

00:30:57,000 --> 00:31:00,000

It's going to kill you, but it's not going to leave you in two parts.

520

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

But if it's the wrong kind of glass, then absolutely it can leave you in two big chunks.

521

00:31:06,000 --> 00:31:10,000

So right kind is busted, but wrong kind is plausible.

522

00:31:10,000 --> 00:31:12,000

Bless a plausible.

523

00:31:12,000 --> 00:31:13,000

Alright, I'll buy that.

524

00:31:13,000 --> 00:31:14,000

Alright, let's get out of here.

525

00:31:24,000 --> 00:31:26,000

Back on the trail of the stone cold killer.

526

00:31:27,000 --> 00:31:33,000

Adam and Jamie have proven a rock from a mower does not travel as fast as a bullet,

527

00:31:33,000 --> 00:31:37,000

but speed is not the only vicious vector.

528

00:31:37,000 --> 00:31:41,000

So we are looking to compare the amount of energy generated from an impact with a bullet

529

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

with the energy generated from the impact with a rock.

530

00:31:45,000 --> 00:31:49,000

So imagine that this hammer can swing like a pendulum.

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00:31:49,000 --> 00:31:52,000

Then let's take a gun and shoot the face of this hammer.

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00:31:52,000 --> 00:31:53,000

What's going to happen?

533

00:31:53,000 --> 00:31:56,000

It's an indicator of how much energy the bullet brings to the equation.

534

00:31:56,000 --> 00:32:01,000

Now if I fire a stone at the same hammer at this speed it would be kicked by a lawn mower

535

00:32:01,000 --> 00:32:07,000

and the hammer moves the same amount, well then we could conclude that the amount of energy

536

00:32:07,000 --> 00:32:11,000

being brought to the equation by the bullet is the same as the stone.

537

00:32:11,000 --> 00:32:13,000

That's the theory anyway.

538

00:32:13,000 --> 00:32:15,000

Let's see if it works.

539

00:32:15,000 --> 00:32:19,000

Yep, the heavy stone may have been moving more slowly than the lighter bullet.

540

00:32:22,000 --> 00:32:23,000

That's beautiful.

541

00:32:23,000 --> 00:32:28,000

But this pendulum rig will illustrate and compare the energy of each.

542

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

Its acrylic impact pad will efficiently transfer the energy of the bullet to the pendulum

543

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

and can be replaced for each test.

544

00:32:38,000 --> 00:32:40,000

Well that looks nifty.

545

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

With the rig ready to swing, the first test will be to measure the bullet's impact.

546

00:32:44,000 --> 00:32:45,000

Okay.

547

00:32:45,000 --> 00:32:48,000

And for that, it's back down to the gun range.

548

00:32:51,000 --> 00:32:52,000

Gun is hot.

549

00:32:53,000 --> 00:32:56,000

Alright, 357 on your mark.

550

00:32:56,000 --> 00:32:57,000

Okay, here we go.

551

00:32:57,000 --> 00:32:59,000

Hopefully this doesn't wreck the rig.

552

00:32:59,000 --> 00:33:03,000

And three, two, one.

553

00:33:06,000 --> 00:33:10,000

The pendulum peaked at 60 degrees, but working on the basis that

554

00:33:10,000 --> 00:33:12,000

If it ain't repeatable, it ain't science.

555

00:33:12,000 --> 00:33:14,000

The guys go again.

556

00:33:15,000 --> 00:33:18,000

And three, two, one.

557

00:33:21,000 --> 00:33:22,000

Nice.

558

00:33:22,000 --> 00:33:24,000

It looked pretty consistent.

559

00:33:25,000 --> 00:33:28,000

We did our two tests with 357 and they were consistent.

560

00:33:28,000 --> 00:33:30,000

They were about 60 degrees.

561

00:33:30,000 --> 00:33:35,000

So we've got the data we need to move on to stones out of the lawnmower.

562

00:33:35,000 --> 00:33:45,000

But if you thought that means no more guns, then think again.

563

00:33:52,000 --> 00:33:53,000

Wow.

564

00:33:55,000 --> 00:34:01,000

Because stones from the lawnmower are hard to aim, because Adam's pendulum target is very small.

565

00:34:01,000 --> 00:34:06,000

We're going to take the lawnmower out of the equation and use a pneumatic launcher instead.

566

00:34:07,000 --> 00:34:11,000

I'm going to first check to see that it's shooting the rocket at the correct speed.

567

00:34:11,000 --> 00:34:12,000

406.

568

00:34:12,000 --> 00:34:13,000

Seriously?

569

00:34:14,000 --> 00:34:16,000

Awesome. Let's bring it in and shoot this thing.

570

00:34:16,000 --> 00:34:21,000

And then we're going to bring in Adam's energy rig, hit it with a rock shot at 400 feet per second,

571

00:34:21,000 --> 00:34:24,000

and see how far a pendulum goes.

572

00:34:24,000 --> 00:34:25,000

This is it.

573

00:34:25,000 --> 00:34:26,000

Good to go.

574

00:34:26,000 --> 00:34:28,000

And his safety's off.

575

00:34:28,000 --> 00:34:39,000

Will a stone the same mass and velocity as the fastest speed test stone match the energy of the lighter lethal bullet?

576

00:34:46,000 --> 00:34:51,000

Dude, we got to see the video, but I swear that went past 60 degrees.

577

00:34:52,000 --> 00:34:57,000

With the crucial shot queued up, did the rock hit the right angle?

578

00:34:57,000 --> 00:34:59,000

Let's see how high it actually went.

579

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

Wait. Oh my gosh. Dude! Dude!

580

00:35:04,000 --> 00:35:06,000

It went above the 357.

581

00:35:06,000 --> 00:35:09,000

That's 66 degrees.

582

00:35:11,000 --> 00:35:13,000

That is more energy from the rock.

583

00:35:14,000 --> 00:35:17,000

I'm sorry I'm yelling, but I totally didn't expect this result.

584

00:35:17,000 --> 00:35:21,000

That is more energy from the rock than from a bullet from a 357.

585

00:35:21,000 --> 00:35:23,000

That is amazing.

586

00:35:24,000 --> 00:35:25,000

Shocking.

587

00:35:25,000 --> 00:35:27,000

Totally awesome.

588

00:35:27,000 --> 00:35:31,000

I have been expressing my doubts about confirming this story.

589

00:35:31,000 --> 00:35:38,000

Since the beginning, I just never thought the rock was going to have anywhere close to the amount of energy of a 357 bullet,

590

00:35:38,000 --> 00:35:41,000

and yet it exceeded it.

591

00:35:41,000 --> 00:35:44,000

That, I knew lawnmowers were scary.

592

00:35:44,000 --> 00:35:46,000

I just didn't know how scary.

593

00:35:46,000 --> 00:35:51,000

So with everything that we tested, I think we have definitively proven, and frankly I'm astonished by this,

594

00:35:51,000 --> 00:35:57,000

but that a rock thrown from a lawnmower can possibly have as much or more power than a bullet from a 357.

595

00:35:59,000 --> 00:36:01,000

I'm astonished, but this one's confirmed.

596

00:36:01,000 --> 00:36:03,000

Yeah, I was surprised too.

597

00:36:03,000 --> 00:36:06,000

But you know that gave me an idea.

598

00:36:06,000 --> 00:36:07,000

What?

599

00:36:07,000 --> 00:36:11,000

I want to make the lawnmower from hell.

600

00:36:13,000 --> 00:36:16,000

You do that, I'm going to go home and hide.

601

00:36:21,000 --> 00:36:23,000

Yeah!

602

00:36:29,000 --> 00:36:33,000

With typical enthusiasm for engineering extremes,

603

00:36:33,000 --> 00:36:41,000

the Heinemann's going all out to turn a dream domestic mower into a deadly weaponized nightmare.

604

00:36:41,000 --> 00:36:44,000

And the key to his hellish vision...

605

00:36:44,000 --> 00:36:45,000

That's going to be sweet.

606

00:36:45,000 --> 00:36:48,000

...is to load up with a whole load more power.

607

00:36:48,000 --> 00:36:51,000

Oh my god, that's one big battery.

608

00:36:51,000 --> 00:36:57,000

What this is, is a bank of about 90 volts at about 1800 amps.

609

00:36:57,000 --> 00:37:04,000

That means that shorting some of these would pretty much be like setting off a stick of dynamite.

610

00:37:09,000 --> 00:37:12,000

What are we doing back here at the Chabot gun range?

611

00:37:12,000 --> 00:37:16,000

Well, remember that we have absolutely determined that a lawnmower can curl a rod

612

00:37:16,000 --> 00:37:21,000

with the same amount or greater force than a bullet from a 357.

613

00:37:21,000 --> 00:37:25,000

That means that a lawnmower can be weaponized and that fact...

614

00:37:26,000 --> 00:37:29,000

Well, let's just say that fact was too tempting for Jamie.

615

00:37:29,000 --> 00:37:34,000

When it comes to terrifying engineering and gratuitous ramping up,

616

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

the Heinemann has history.

617

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

I call it my little pop gun.

618

00:37:39,000 --> 00:37:44,000

When he decides to go over the top, it's a good idea to duck, cover,

619

00:37:44,000 --> 00:37:48,000

and wear a hard hat at a safe distance.

620

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

Introducing the lawnmower from hell.

621

00:38:03,000 --> 00:38:06,000

You've got 200 horsepower of electric car motors,

622

00:38:06,000 --> 00:38:10,000

1800 amps of lithium batteries.

623

00:38:10,000 --> 00:38:17,000

They'll be spinning a 50-pound tool steel blade at upwards of 5,000 RPM.

624

00:38:17,000 --> 00:38:22,000

Put it all together and you really don't want to try this at home.

625

00:38:26,000 --> 00:38:29,000

First up, we're going to get the beast here a little taste.

626

00:38:29,000 --> 00:38:31,000

Just a little taste.

627

00:38:31,000 --> 00:38:33,000

It's a bucket of blue water.

628

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

Go for it.

629

00:38:36,000 --> 00:38:47,000

Oh, I've barely been so happy to be behind the bulletproof shields.

630

00:38:51,000 --> 00:38:52,000

He's approaching.

631

00:38:52,000 --> 00:38:57,000

Six feet, four feet, two feet, it goes!

632

00:39:06,000 --> 00:39:16,000

Dude, that was beautiful.

633

00:39:16,000 --> 00:39:19,000

Tell you what, why don't you take this thing around the corner?

634

00:39:19,000 --> 00:39:24,000

I'll set up a really fun course for you to implement as much destruction as possible.

635

00:39:24,000 --> 00:39:25,000

I'll let you know when we're ready for you.

636

00:39:25,000 --> 00:39:27,000

Okay.

637

00:39:27,000 --> 00:39:32,000

So how do you put ridiculously souped up and almost definitely dangerous lawnmower through its paces?

638

00:39:32,000 --> 00:39:36,000

I decided on a broad range of material.

639

00:39:36,000 --> 00:39:38,000

Now we're getting serious.

640

00:39:38,000 --> 00:39:43,000

I wanted some small hard things to get that bullet-like carnage like a frat house lawn.

641

00:39:43,000 --> 00:39:47,000

And I wanted some big things to get some awesome high-speed camera carnage.

642

00:39:47,000 --> 00:39:51,000

I call this section the pallet cleanser.

643

00:39:51,000 --> 00:39:53,000

My prediction?

644

00:39:53,000 --> 00:39:55,000

Got to have some willing victims.

645

00:39:55,000 --> 00:39:57,000

Frankly, I just hope no one gets hurt.

646

00:39:57,000 --> 00:40:01,000

Last one, like some sort of kumbaya dance circle.

647

00:40:01,000 --> 00:40:05,000

In fact, it's a circle de los muertos.

648

00:40:16,000 --> 00:40:17,000

Here it comes.

649

00:40:21,000 --> 00:40:24,000

I bet Jamie's just a little bit nervous right now.

650

00:40:25,000 --> 00:40:28,000

Oh yeah, watermelons are first on the menu.

651

00:40:31,000 --> 00:40:34,000

Holy crap, something went flying!

652

00:40:36,000 --> 00:40:39,000

I think we had a total failure of the rig there.

653

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

What just happened?

654

00:40:44,000 --> 00:40:47,000

What happened was scary as hell.

655

00:40:47,000 --> 00:40:49,000

The axle broke.

656

00:40:51,000 --> 00:40:52,000

Oh yeah.

657

00:40:52,000 --> 00:40:54,000

Oh dude, the axle sheared.

658

00:40:55,000 --> 00:40:57,000

Look at this.

659

00:40:58,000 --> 00:41:00,000

Oh my gosh.

660

00:41:12,000 --> 00:41:14,000

Well there's your problem.

661

00:41:16,000 --> 00:41:17,000

Oh shoot.

662

00:41:18,000 --> 00:41:21,000

Well, that's the end of today's fun.

663

00:41:21,000 --> 00:41:26,000

Well, you know, I intended to go over the top with my lawnmower from hell.

664

00:41:27,000 --> 00:41:30,000

And I guess I did.

665

00:41:33,000 --> 00:41:35,000

Maybe a little too much though.

666

00:41:37,000 --> 00:41:40,000

Like we always say, failure is always an option.

667

00:41:44,000 --> 00:41:50,000

And you know, this is the perfect example that you can learn as much from a failed test as a successful one.

668

00:41:50,000 --> 00:41:56,000

What we learned in this test is, well that Jamie has built something far too dangerous to turn on again.

669

00:41:56,000 --> 00:42:03,000

He is literally sitting on a drivable, cutting, whirling, slicing blender of death.

670

00:42:06,000 --> 00:42:10,000

Well we could put another blade on it to be sure, but we're gonna bow out for right now.

671

00:42:10,000 --> 00:42:13,000

At least until Jamie can figure out how to make this thing safe.

672

00:42:13,000 --> 00:42:15,000

Then we will be back.

673

00:42:26,000 --> 00:42:28,000

Thanks for watching.