

1

00:00:00,000 --> 00:00:03,300

on this episode of mythbusters

2

00:00:03,300 --> 00:00:05,660

all right we are ready to board

3

00:00:05,660 --> 00:00:09,300

it's all aboard for an aviation revolution

4

00:00:09,300 --> 00:00:12,480

in an orderly fashion

5

00:00:12,480 --> 00:00:15,940

Adam and Jamie turn air travel upside down

6

00:00:15,940 --> 00:00:17,820

apparently it saves time

7

00:00:17,820 --> 00:00:21,060

when they ask is the standard back-to-front boarding system

8

00:00:21,060 --> 00:00:25,240

really the slowest buckle up because it's gonna get bumpy

9

00:00:25,240 --> 00:00:28,280

turbulence

10

00:00:28,280 --> 00:00:31,520

then Harry Grant and Tory slug it out

11

00:00:31,520 --> 00:00:33,760

don't try this at home we're what you call compression

12

00:00:33,760 --> 00:00:36,880

to get to the root of a dental ballistic mystery

13

00:00:36,880 --> 00:00:39,000

here you go, tooth bullet

14

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

are bio bullets deadly or duds?

15

00:00:42,000 --> 00:00:44,920

and will they fox a forensic expert?

16

00:00:44,920 --> 00:00:46,400

after the pathologist

17

00:00:46,400 --> 00:00:49,400

by leaving no evidence for the autopsy

18

00:00:54,040 --> 00:00:57,080

who are the mythbusters?

19

00:00:57,080 --> 00:00:58,280

Adam Savage

20

00:00:58,280 --> 00:00:59,960

eating food cooked with C4

21

00:00:59,960 --> 00:01:02,320

and Jamie Heineman

22

00:01:02,320 --> 00:01:03,480

this is gonna kill you

23

00:01:03,480 --> 00:01:08,080

between them more than 30 years of special effects experience

24

00:01:08,080 --> 00:01:08,960

joining them

25

00:01:08,960 --> 00:01:09,960

Tory Boleci

26

00:01:09,960 --> 00:01:11,480

we're gonna die

27

00:01:11,480 --> 00:01:12,520

Carrie Byron

28

00:01:12,520 --> 00:01:13,880

right to the job

29

00:01:13,880 --> 00:01:15,720

and Grant Imahara

30

00:01:15,720 --> 00:01:17,560

who wants some?

31

00:01:17,560 --> 00:01:20,960

they don't just tell the myths

32

00:01:20,960 --> 00:01:23,960

they put them to the test

33

00:01:28,080 --> 00:01:34,080

first up Adam and Jamie are tackling the nation's vexation with aviation

34

00:01:36,080 --> 00:01:39,080

pop quiz Jamie how do you board an airplane?

35

00:01:39,080 --> 00:01:40,080

I walk

36

00:01:40,080 --> 00:01:42,080

no not so specific

37

00:01:42,080 --> 00:01:45,080

how do you and the other passengers get on an airplane?

38

00:01:45,080 --> 00:01:46,080

we walk

39

00:01:46,080 --> 00:01:50,080

this is not a trick question just how do people board an airplane?

40

00:01:50,080 --> 00:01:51,080

in zones?

41

00:01:51,080 --> 00:01:54,080

exactly in zones specifically from back to front

42

00:01:54,080 --> 00:01:56,080

and there's a myth going around

43

00:01:56,080 --> 00:01:59,080

the standard way almost all airlines use to board their planes

44

00:01:59,080 --> 00:02:00,080

from back to front

45

00:02:00,080 --> 00:02:03,080

is in fact the slowest and least efficient way

46

00:02:03,080 --> 00:02:05,080

to get people on to an airplane

47

00:02:05,080 --> 00:02:07,080

well that sounds like something we need to investigate

48

00:02:07,080 --> 00:02:09,080

that's exactly what I was thinking

49

00:02:12,080 --> 00:02:14,080

in the US in 2011

50

00:02:14,080 --> 00:02:17,080

over 700 million passengers checked in

51

00:02:17,080 --> 00:02:20,080

sat down, buckled up and took off

52

00:02:20,080 --> 00:02:22,080

their number one complaint

53

00:02:22,080 --> 00:02:24,080

the waiting around

54

00:02:24,080 --> 00:02:28,080

but Adam and Jamie want to know if the standard method of boarding is to blame

55

00:02:28,080 --> 00:02:32,080

have the airlines got it back to front with back to front boarding

56

00:02:32,080 --> 00:02:37,080

is it really the worst way of getting up, up and away?

57

00:02:37,080 --> 00:02:41,080

well it looks like we need a plane and a couple of hundred volunteer passengers

58

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

and we need a bunch of boarding methods

59

00:02:43,080 --> 00:02:46,080

well I can think of at least three or four up the top of my head

60

00:02:46,080 --> 00:02:49,080

alright sounds like we should run some volunteers through their paces

61

00:02:49,080 --> 00:02:51,080

see which one is the most efficient

62

00:02:51,080 --> 00:02:53,080

let's buckle down and do it

63

00:02:53,080 --> 00:02:56,080

it's off to a spectacular location

64

00:02:56,080 --> 00:02:59,080

so we've come to the Mayor Island Naval Base

65

00:02:59,080 --> 00:03:01,080

about an hour from the Myth Buster shop

66

00:03:01,080 --> 00:03:02,080

right there's pretty good

67

00:03:02,080 --> 00:03:06,080

this building I'm standing in used to be a storage facility for outfitting boats

68

00:03:06,080 --> 00:03:08,080

and it's over a hundred years old

69

00:03:08,080 --> 00:03:12,080

but for us today it is our mocked up airplane hangar

70

00:03:12,080 --> 00:03:16,080

the first part of the plan to be put into place is a base to build on

71

00:03:16,080 --> 00:03:18,080

it's going to be a nice set

72

00:03:18,080 --> 00:03:21,080

once their plywood platform is given a coat of paint or two

73

00:03:21,080 --> 00:03:25,080

it's ready for the all-important structural components

74

00:03:25,080 --> 00:03:28,080

just lean them up against the wall there

75

00:03:28,080 --> 00:03:32,080

and the frame for the overhead compartments is tack welded into a structure capable

76

00:03:32,080 --> 00:03:36,080

of supporting the baggage for a plain load of passengers

77

00:03:36,080 --> 00:03:39,080

and a well-oiled Myth Busters machine

78

00:03:39,080 --> 00:03:40,080

good, okay

79

00:03:40,080 --> 00:03:46,080

means the metal skeletal components are raised well before the tray tables are even stoned

80

00:03:46,080 --> 00:03:48,080

it's only about 90 minutes in

81

00:03:48,080 --> 00:03:50,080

and the steel frame is pretty much up

82

00:03:50,080 --> 00:03:55,080

it has to support both our lighting and most importantly the overhead bins

83

00:03:55,080 --> 00:03:59,080

and when you consider the 173 people are all going to be putting their luggage in them at the same time

84

00:03:59,080 --> 00:04:02,080

it pretty much has to do with an airplane has to do

85

00:04:02,080 --> 00:04:03,080

and that's a lot

86

00:04:04,080 --> 00:04:06,080

with the steel superstructure solid

87

00:04:06,080 --> 00:04:10,080

up goes the first of the recycled overhead luggage bins

88

00:04:10,080 --> 00:04:11,080

there we go

89

00:04:11,080 --> 00:04:12,080

zip ties

90

00:04:12,080 --> 00:04:14,080

and with a burst of fast forward

91

00:04:14,080 --> 00:04:15,080

up goes the last

92

00:04:15,080 --> 00:04:17,080

beautiful let's put in the chairs

93

00:04:17,080 --> 00:04:24,080

the seating also recycle from a real plane is brought in and secured

94

00:04:24,080 --> 00:04:28,080

replicating the layout of an average mid-sized airliner

95

00:04:29,080 --> 00:04:30,080

there we go

96

00:04:30,080 --> 00:04:31,080

first class is in

97

00:04:31,080 --> 00:04:33,080

next up goes the departure lounge

98

00:04:33,080 --> 00:04:37,080

with a curtain-off gangway and even a fake ticket scanner

99

00:04:37,080 --> 00:04:39,080

it doesn't beep but I can go like this

100

00:04:39,080 --> 00:04:40,080

boop

101

00:04:40,080 --> 00:04:41,080

thank you

102

00:04:41,080 --> 00:04:42,080

boop

103

00:04:42,080 --> 00:04:43,080

thank you

104

00:04:43,080 --> 00:04:44,080

boop

105

00:04:44,080 --> 00:04:49,080

which means myth bust air is ready for its maiden flight that won't leave the ground

106

00:04:49,080 --> 00:04:52,080

as you can see everything's ready

107

00:04:52,080 --> 00:04:54,080

our departure lounge is good to go

108

00:04:56,080 --> 00:04:58,080

and our plane is nearly ready

109

00:04:58,080 --> 00:05:00,080

all it needs is some passengers

110

00:05:00,080 --> 00:05:01,080

welcome

111

00:05:05,080 --> 00:05:10,080

open wide because next up is a tall tale of deadly dentistry

112

00:05:14,080 --> 00:05:16,080

what's with that smile

113

00:05:16,080 --> 00:05:18,080

we're testing a myth about teeth

114

00:05:18,080 --> 00:05:19,080

okay go on

115

00:05:19,080 --> 00:05:21,080

all right remember when we tested ice bullet

116

00:05:21,080 --> 00:05:23,080

how it was the perfect assassination tool

117

00:05:23,080 --> 00:05:25,080

because you could never trace the bullet

118

00:05:25,080 --> 00:05:29,080

oh yeah it was busted but the idea was that the bullet would melt and there'd be no evidence

119

00:05:29,080 --> 00:05:33,080

yep it's similar except instead of an ice bullet it's a tooth bullet

120

00:05:33,080 --> 00:05:36,080

now the myth says it has enough mass for penetration and accuracy

121

00:05:36,080 --> 00:05:40,080

but the best part is once it hits its target it breaks up into little fragments

122

00:05:40,080 --> 00:05:44,080

oh that's brilliant because when the pathologist goes to look at it they find the entrance wound

123

00:05:44,080 --> 00:05:48,080

and inside it's this shattered bone that could be the guy's own bone

124

00:05:48,080 --> 00:05:54,080

yeah but could a tooth bullet really be accurate penetrate and fool a pathologist

125

00:05:54,080 --> 00:05:56,080

don't know but that's what we're gonna test

126

00:05:56,080 --> 00:05:57,080

cool

127

00:05:57,080 --> 00:06:01,080

it's an intriguing firearm fabled with a ballistic bite

128

00:06:01,080 --> 00:06:05,080

the team want to know if you can make a viable bullet from a human tooth

129

00:06:05,080 --> 00:06:10,080

supposedly dental projectiles are aerodynamically accurate

130

00:06:10,080 --> 00:06:15,080

they have a lethal penetrating power and they shatter on impact

131

00:06:15,080 --> 00:06:19,080

that can't be detected by even the foremost forensic pathologist

132

00:06:21,080 --> 00:06:25,080

so the myth doesn't actually state what kind of ammunition the teeth are made into

133

00:06:25,080 --> 00:06:27,080

so I say we test various guns

134

00:06:27,080 --> 00:06:31,080

great and we'll put them through series of challenges versus irregular bullet counterparts

135

00:06:31,080 --> 00:06:34,080

and ultimately we're gonna need some human teeth

136

00:06:34,080 --> 00:06:36,080

okay

137

00:06:36,080 --> 00:06:39,080

oh there's one two

138

00:06:39,080 --> 00:06:40,080

carry

139

00:06:40,080 --> 00:06:41,080

got any more in there

140

00:06:41,080 --> 00:06:44,080

so this myth is all about turning teeth into bullets

141

00:06:44,080 --> 00:06:46,080

step one

142

00:06:46,080 --> 00:06:48,080

acquire some teeth

143

00:06:49,080 --> 00:06:55,080

these are actual human teeth that have been extracted that were given to us by a dentist

144

00:06:55,080 --> 00:06:57,080

these are canines and molars

145

00:06:57,080 --> 00:07:02,080

we're gonna carve these up and hopefully fit them into bullet casings

146

00:07:03,080 --> 00:07:04,080

hi

147

00:07:04,080 --> 00:07:09,080

now making a tooth into a bullet we're faced with some really unique tooth anatomy

148

00:07:09,080 --> 00:07:12,080

because we really want this to be as hard as it can be

149

00:07:12,080 --> 00:07:15,080

now the enamel is the hard part but this is just the shell

150

00:07:15,080 --> 00:07:18,080

then you start getting into the dentson and the pulp

151

00:07:18,080 --> 00:07:20,080

that's where it's gonna get weaker and weaker

152

00:07:20,080 --> 00:07:25,080

so we don't actually want to compromise the integrity of the tooth by grinding it down

153

00:07:25,080 --> 00:07:29,080

but we also have to actually make these teeth fit into the shells

154

00:07:29,080 --> 00:07:32,080

this is gonna be quite a difficult experiment

155

00:07:32,080 --> 00:07:36,080

it's clearly going to be tricky but what's the plan

156

00:07:36,080 --> 00:07:39,080

for this experiment we're gonna be using three different types of rounds

157

00:07:39,080 --> 00:07:42,080

Tori's gonna be adapting the shotgun shell

158

00:07:42,080 --> 00:07:44,080

Kerry's gonna work with the handgun round

159

00:07:44,080 --> 00:07:47,080

and I am going to work with the rifle round

160

00:07:47,080 --> 00:07:50,080

the myth doesn't specify the gun and ammo

161

00:07:50,080 --> 00:07:55,080

it simply states that a bullet made from a tooth will fool a pathologist

162

00:07:55,080 --> 00:07:57,080

smells like the dentist

163

00:07:57,080 --> 00:08:00,080

so the team will test three options

164

00:08:00,080 --> 00:08:04,080

Tori will re-engineer a shotgun shell with teeth instead of lead shot

165

00:08:04,080 --> 00:08:07,080

I can't wait to sink my teeth into this myth

166

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

Grant will add a little bite to a rifle round

167

00:08:10,080 --> 00:08:14,080

and Kerry will modify a handgun round with a molar

168

00:08:14,080 --> 00:08:16,080

okay so I'm pulling the 38 bullets out of the cartridge

169

00:08:16,080 --> 00:08:21,080

replacing the powder and then replacing the bullets with a tooth

170

00:08:21,080 --> 00:08:26,080

I'm using a small silicone bead to seat it and to seal the top of the bullet

171

00:08:26,080 --> 00:08:30,080

Kerry thinks retaining as much hard enamel as possible is crucial

172

00:08:30,080 --> 00:08:33,080

so she's decided not to shape her handgun bullets

173

00:08:33,080 --> 00:08:36,080

the downside will be with accuracy

174

00:08:36,080 --> 00:08:40,080

meanwhile, Grant has a different strategy

175

00:08:40,080 --> 00:08:45,080

he thinks shaping the teeth for maximum aerodynamic accuracy is essential

176

00:08:45,080 --> 00:08:49,080

so I'm grinding around the edge of the tooth

177

00:08:49,080 --> 00:08:55,080

and this is so that it can fit inside of the jacket a little bit deeper

178

00:08:55,080 --> 00:09:01,080

and then I'll seal around the edges with some epoxy and then the powder of course will be inside here

179

00:09:01,080 --> 00:09:04,080

and when it's done, it's gonna look something like that

180

00:09:04,080 --> 00:09:08,080

Tori on the other hand has it slightly easier

181

00:09:08,080 --> 00:09:13,080

now Kerry and Grant have a hard job because they actually have to make a bullet out of a tooth

182

00:09:13,080 --> 00:09:15,080

this is like pulling teeth

183

00:09:15,080 --> 00:09:18,080

me, I don't have to modify my teeth, why?

184

00:09:18,080 --> 00:09:20,080

because I'm gonna be using a shotgun shell

185

00:09:20,080 --> 00:09:23,080

now, this is a cross-section of a shotgun shell

186

00:09:23,080 --> 00:09:25,080

what we have here is our charge

187

00:09:25,080 --> 00:09:27,080

this is our plug and this is our shot

188

00:09:27,080 --> 00:09:29,080

now once this sets off, the pressure builds up

189

00:09:29,080 --> 00:09:33,080

it pushes the plug, sending the shot towards the target

190

00:09:33,080 --> 00:09:34,080

you know what time it is?

191

00:09:34,080 --> 00:09:35,080

it's 2.30

192

00:09:35,080 --> 00:09:41,080

all I need to do is replace the shot with teeth and take my shot

193

00:09:41,080 --> 00:09:43,080

back over with Grant

194

00:09:43,080 --> 00:09:45,080

there you go, tooth bullet

195

00:09:45,080 --> 00:09:47,080

and he's got his rifle rounds ready to roll

196

00:09:47,080 --> 00:09:50,080

he's also got a plan B

197

00:09:50,080 --> 00:09:51,080

B for Bone

198

00:09:51,080 --> 00:09:56,080

okay, so what I needed was the biggest bone we could find that was readily available

199

00:09:56,080 --> 00:09:59,080

and this cow femur was left over from a butcher shop

200

00:09:59,080 --> 00:10:01,080

see if I can get a bullet out of it

201

00:10:01,080 --> 00:10:05,080

of course, the myth is about teeth

202

00:10:05,080 --> 00:10:08,080

oh, we have juices

203

00:10:08,080 --> 00:10:11,080

but Grant is going with the spirit of the myth

204

00:10:11,080 --> 00:10:16,080

and that's a bullet made of biological material that will disintegrate on impact

205

00:10:16,080 --> 00:10:21,080

and the benefit of bone is that it can be shaped more effectively than the teeth

206

00:10:21,080 --> 00:10:24,080

for a more aerodynamic result

207

00:10:24,080 --> 00:10:26,080

my mast piece is complete

208

00:10:26,080 --> 00:10:31,080

Carrie is also finished, but she's still feeling skeptical

209

00:10:31,080 --> 00:10:35,080

so I'm done with my 38 very special bullets

210

00:10:35,080 --> 00:10:39,080

but the teeth don't have the same mass as the original bullets

211

00:10:39,080 --> 00:10:41,080

so they're not going to have the same destructive force

212

00:10:41,080 --> 00:10:43,080

they also aren't symmetrical

213

00:10:43,080 --> 00:10:48,080

so I have a feeling accuracy is going to be a serious issue

214

00:10:48,080 --> 00:10:51,080

still, your teeth bullets, it's cool

215

00:10:56,080 --> 00:11:00,080

it's a frustrating constant of commercial airline travel

216

00:11:00,080 --> 00:11:03,080

boarding the plane always seems to take longer than it should

217

00:11:03,080 --> 00:11:06,080

but is it down to the back to front boarding system?

218

00:11:06,080 --> 00:11:12,080

is it true that the method favored by most airlines is the least effective?

219

00:11:13,080 --> 00:11:19,080

to find out, Captain Savage and co-pilot Heinemann have replicated a commercial boarding scenario

220

00:11:19,080 --> 00:11:22,080

with a team of real flight attendants

221

00:11:22,080 --> 00:11:24,080

here's how this is going to go down

222

00:11:24,080 --> 00:11:28,080

every single one of our myth bust air test passengers will be issued a ticket

223

00:11:28,080 --> 00:11:30,080

just like this one with a specific seat assignment

224

00:11:30,080 --> 00:11:33,080

and they will board the plane through our gate right here

225

00:11:33,080 --> 00:11:38,080

as they come aboard, our cabin manager Silvia will check them in

226

00:11:38,080 --> 00:11:40,080

and send them on their way to the correct seat

227

00:11:40,080 --> 00:11:44,080

the rest of our cabin crew will be stationed just as they would be on a real airplane

228

00:11:44,080 --> 00:11:46,080

assisting the passengers in stowing their luggage

229

00:11:46,080 --> 00:11:49,080

when the luggage is stowed and everybody's properly seated

230

00:11:49,080 --> 00:11:53,080

the flight attendants will call time and the boarding is complete

231

00:11:53,080 --> 00:11:57,080

we'll be assessing each of our boarding techniques on two main metrics

232

00:11:57,080 --> 00:12:01,080

the first one being how the boarding method felt to the passengers

233

00:12:01,080 --> 00:12:03,080

so as our test subjects deplane from each test

234

00:12:03,080 --> 00:12:06,080

we will ask them to vote here on how the test felt to them

235

00:12:06,080 --> 00:12:09,080

whether they thought it was great, just okay, or in fact...

236

00:12:09,080 --> 00:12:11,080

terrible

237

00:12:11,080 --> 00:12:14,080

and the second part of the monitoring will be done by me

238

00:12:14,080 --> 00:12:16,080

up here with his timer

239

00:12:16,080 --> 00:12:18,080

and that'll determine how long the test took

240

00:12:18,080 --> 00:12:21,080

what about people who gum up the works you ask?

241

00:12:21,080 --> 00:12:23,080

I'm glad you mentioned that

242

00:12:23,080 --> 00:12:27,080

in about 5% of our ticket envelopes and consistent across all of our tests

243

00:12:27,080 --> 00:12:30,080

we've included instructions for some of our test subjects to behave

244

00:12:30,080 --> 00:12:34,080

just like those passengers who do slow boarding down

245

00:12:34,080 --> 00:12:36,080

the personality types we've identified are

246

00:12:36,080 --> 00:12:38,080

parents with tiny children

247

00:12:38,080 --> 00:12:40,080

people who go to the bathroom during boarding

248

00:12:40,080 --> 00:12:43,080

and have to swim upstream to get back to their seat

249

00:12:43,080 --> 00:12:45,080

people who sit in the wrong seat

250

00:12:45,080 --> 00:12:49,080

and people with suit coats who meticulously fold them in the aisle

251

00:12:49,080 --> 00:12:51,080

before putting them on their luggage

252

00:12:51,080 --> 00:12:54,080

we've literally thought of everything we could imagine

253

00:12:54,080 --> 00:12:57,080

so if we're gonna be testing a bunch of different ways to board an airplane

254

00:12:57,080 --> 00:13:00,080

we're gonna need an entire airplane's worth of volunteers

255

00:13:00,080 --> 00:13:03,080

well as it happens we've got some

256

00:13:03,080 --> 00:13:06,080

yeeeeeeeeeeeeeeee

257

00:13:06,080 --> 00:13:08,080

they don't seem that thrilled

258

00:13:08,080 --> 00:13:10,080

no, I don't blame them

259

00:13:11,080 --> 00:13:14,080

the first test is the control

260

00:13:14,080 --> 00:13:18,080

supposedly the slowest of all systems

261

00:13:19,080 --> 00:13:21,080

this test is the one that people are most familiar with

262

00:13:21,080 --> 00:13:23,080

it's called the back to front method

263

00:13:23,080 --> 00:13:25,080

check out this graphic

264

00:13:25,080 --> 00:13:27,080

using assigned seats

265

00:13:27,080 --> 00:13:29,080

once they've loaded business class

266

00:13:29,080 --> 00:13:31,080

then they load the back third

267

00:13:31,080 --> 00:13:34,080

the middle third and the front third

268

00:13:35,080 --> 00:13:37,080

hello

269

00:13:37,080 --> 00:13:39,080

how you guys doing?

270

00:13:41,080 --> 00:13:43,080

alright, Jamie start

271

00:13:43,080 --> 00:13:47,080

welcome to myth bust air flight 3.1415927

272

00:13:47,080 --> 00:13:49,080

we are ready to begin pre-boarding

273

00:13:49,080 --> 00:13:51,080

parents with children and business class passengers

274

00:13:51,080 --> 00:13:53,080

may now board the airplane

275

00:13:53,080 --> 00:13:55,080

step up to the gate and hand over your ticket

276

00:13:55,080 --> 00:13:58,080

with the clock ticking the boarding commences

277

00:13:58,080 --> 00:14:00,080

this is awesome

278

00:14:00,080 --> 00:14:02,080

and it really couldn't be better

279

00:14:02,080 --> 00:14:04,080

you guys need any help? are you okay?

280

00:14:04,080 --> 00:14:06,080

you okay? alright, welcome aboard

281

00:14:06,080 --> 00:14:08,080

the gangway and replica plane interior

282

00:14:08,080 --> 00:14:11,080

ensure everything proceeds exactly as it would

283

00:14:11,080 --> 00:14:14,080

during a standard back to front boarding

284

00:14:14,080 --> 00:14:17,080

if you are seated in rows 20 through 30

285

00:14:17,080 --> 00:14:19,080

you may now board the plane

286

00:14:19,080 --> 00:14:21,080

rows 20 through 30 board the plane

287

00:14:21,080 --> 00:14:23,080

welcome

288

00:14:23,080 --> 00:14:26,080

the advantages of the replica setup soon become clear

289

00:14:26,080 --> 00:14:29,080

the open-sided structure allows full access to the cameras

290

00:14:29,080 --> 00:14:32,080

and we can really see how the boarding is progressing

291

00:14:32,080 --> 00:14:35,080

alright, we are now ready to board rows 10 through 19

292

00:14:35,080 --> 00:14:37,080

if you are on row 10 through 19

293

00:14:37,080 --> 00:14:39,080

you may now start to board the airplane

294

00:14:39,080 --> 00:14:41,080

once the plane is almost full

295

00:14:41,080 --> 00:14:43,080

familiar pre-flight patterns emerge

296

00:14:43,080 --> 00:14:45,080

hello, 2019

297

00:14:45,080 --> 00:14:48,080

there's a backlog of passengers on the gangway

298

00:14:48,080 --> 00:14:52,080

passengers in aisle seats have to get up to allow access to the middle and window seats

299

00:14:52,080 --> 00:14:56,080

and inevitably there's plenty of carry-on luggage

300

00:14:56,080 --> 00:15:00,080

too large to fit in the overhead compartments

301

00:15:00,080 --> 00:15:04,080

we're gate checking bags, that's awesome

302

00:15:04,080 --> 00:15:09,080

I have to admit I was kind of shocked by how much gate checked luggage there was

303

00:15:09,080 --> 00:15:13,080

but according to the flight attendants it's pretty average

304

00:15:13,080 --> 00:15:15,080

there's no space

305

00:15:15,080 --> 00:15:17,080

okay, what's your final destination? Springfield

306

00:15:17,080 --> 00:15:18,080

okay, I'll get that tacky

307

00:15:18,080 --> 00:15:19,080

okay, thanks

308

00:15:19,080 --> 00:15:22,080

it's not just excess baggage delaying departure

309

00:15:22,080 --> 00:15:26,080

the wild cards also gum up the works in a realistic way

310

00:15:26,080 --> 00:15:31,080

but eventually everyone is seated and the plane is ready for takeoff

311

00:15:31,080 --> 00:15:32,080

stop Jamie

312

00:15:32,080 --> 00:15:34,080

but what's the damage?

313

00:15:34,080 --> 00:15:39,080

from the time that boarding was announced to the time that the last bin was closed

314

00:15:39,080 --> 00:15:43,080

for back to front boarding it was 24 minutes and 29 seconds

315

00:15:43,080 --> 00:15:46,080

now that's a fairly common method of boarding

316

00:15:46,080 --> 00:15:49,080

and that'll form our baseline for the other tests

317

00:15:49,080 --> 00:15:52,080

the time is of course crucial for that comparison

318

00:15:52,080 --> 00:15:54,080

but so is customer satisfaction

319

00:15:54,080 --> 00:15:55,080

let's see what we've got

320

00:15:55,080 --> 00:15:56,080

alright

321

00:15:56,080 --> 00:15:58,080

each positive experience is scored plus one

322

00:15:58,080 --> 00:16:02,080

a terrible vote is minus one and each neutral okay is zero

323

00:16:02,080 --> 00:16:07,080

which for back to front gives a final tally of plus 19

324

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

but the score and time don't mean anything on their own

325

00:16:10,080 --> 00:16:11,080

comparisons are required

326

00:16:11,080 --> 00:16:15,080

so to find out if the myth will soar or crash land

327

00:16:15,080 --> 00:16:19,080

captain Savage will need to log a few more bumpy flights

328

00:16:23,080 --> 00:16:26,080

Carrie Grant and Tory are testing the myth

329

00:16:26,080 --> 00:16:27,080

bite the bullet

330

00:16:27,080 --> 00:16:29,080

supposedly a bullet made from a fang

331

00:16:29,080 --> 00:16:34,080

fragments on impact leaving no evidence for a forensic pathologist

332

00:16:34,080 --> 00:16:36,080

to sink their teeth into

333

00:16:37,080 --> 00:16:38,080

don't try this at home

334

00:16:38,080 --> 00:16:40,080

we're what you call professionals

335

00:16:40,080 --> 00:16:42,080

to assess this ballistic mystery

336

00:16:42,080 --> 00:16:45,080

Carrie Grant and Tory have made biological bullets

337

00:16:45,080 --> 00:16:47,080

for a variety of guns

338

00:16:47,080 --> 00:16:49,080

you guys ready to bite the bullet

339

00:16:49,080 --> 00:16:51,080

but before they take on the medical examiner

340

00:16:51,080 --> 00:16:54,080

they want to know will their bullets even work

341

00:16:54,080 --> 00:17:00,080

will they have lethal penetration and aerodynamic accuracy

342

00:17:00,080 --> 00:17:04,080

for our accuracy test we're going to be at a common standoff distance

343

00:17:04,080 --> 00:17:06,080

we're going to fire our revolver

344

00:17:06,080 --> 00:17:07,080

our shotgun

345

00:17:07,080 --> 00:17:09,080

and our 308 rifle

346

00:17:09,080 --> 00:17:10,080

and our targets

347

00:17:10,080 --> 00:17:13,080

we're going to shoot at ourselves in an alternative universe

348

00:17:13,080 --> 00:17:15,080

where the dentistry is questionable

349

00:17:16,080 --> 00:17:18,080

do my teeth really look like that

350

00:17:20,080 --> 00:17:22,080

this is a 357 magnum revolver

351

00:17:22,080 --> 00:17:24,080

we're going to be firing 38 special rounds

352

00:17:24,080 --> 00:17:28,080

giving us a muzzle velocity of approximately 800 feet per second

353

00:17:28,080 --> 00:17:29,080

going up

354

00:17:29,080 --> 00:17:31,080

now the plan for our accuracy test

355

00:17:31,080 --> 00:17:34,080

is to fire off three lead bullets in a row

356

00:17:36,080 --> 00:17:38,080

oh nice that's a really tight group

357

00:17:38,080 --> 00:17:40,080

and then fire off our tooth bullet

358

00:17:40,080 --> 00:17:42,080

and see how far that is from the cluster

359

00:17:42,080 --> 00:17:45,080

that grouping is the accuracy benchmark

360

00:17:45,080 --> 00:17:46,080

okay we're high

361

00:17:46,080 --> 00:17:49,080

for the hang-on tooth bullet to have a chance to fool the pathologist

362

00:17:49,080 --> 00:17:51,080

it first has to hit the target

363

00:17:51,080 --> 00:17:55,080

alright here we go in three, two, one, fire

364

00:17:58,080 --> 00:17:59,080

swing and a miss

365

00:17:59,080 --> 00:18:00,080

man

366

00:18:00,080 --> 00:18:03,080

Carrie's decision to retain the enamel

367

00:18:03,080 --> 00:18:07,080

and not smooth the tooth surface has come back to bite her

368

00:18:07,080 --> 00:18:10,080

the poor aerodynamics meant that from just 21 feet

369

00:18:10,080 --> 00:18:12,080

it missed by quite a distance

370

00:18:12,080 --> 00:18:15,080

so the hang-on has fallen at the first hurdle

371

00:18:15,080 --> 00:18:18,080

but what's next?

372

00:18:18,080 --> 00:18:21,080

what I have here is a 12 gauge pump shotgun

373

00:18:21,080 --> 00:18:24,080

it fires rounds at 1200 feet per second

374

00:18:24,080 --> 00:18:25,080

going hot

375

00:18:25,080 --> 00:18:27,080

now unlike the pistol or the rifle

376

00:18:27,080 --> 00:18:29,080

it's not a pinpoint accurate weapon

377

00:18:29,080 --> 00:18:30,080

it hits an area

378

00:18:31,080 --> 00:18:34,080

so in order for us to call our tee shot accurate

379

00:18:34,080 --> 00:18:37,080

it has to hit the same area as our buck shot

380

00:18:38,080 --> 00:18:39,080

look at that

381

00:18:39,080 --> 00:18:40,080

shot him in the nostril

382

00:18:40,080 --> 00:18:41,080

that's a good group

383

00:18:41,080 --> 00:18:43,080

that's about a 10 inch group right there

384

00:18:43,080 --> 00:18:44,080

that's the benchmark

385

00:18:44,080 --> 00:18:47,080

let's see what the teeth filled shell can do

386

00:18:47,080 --> 00:18:49,080

alright this is 12 gauge teeth shot

387

00:18:49,080 --> 00:18:50,080

accuracy test

388

00:18:50,080 --> 00:18:51,080

going hot

389

00:18:52,080 --> 00:18:53,080

alright here we go

390

00:18:54,080 --> 00:18:55,080

eyes and ears

391

00:18:55,080 --> 00:18:56,080

in teeth

392

00:18:56,080 --> 00:18:58,080

three, two, one

393

00:19:01,080 --> 00:19:03,080

let's see how close they got to the buck shot

394

00:19:04,080 --> 00:19:06,080

not bad, not bad

395

00:19:06,080 --> 00:19:08,080

you know what I think we have to give it to the teeth

396

00:19:08,080 --> 00:19:11,080

because they hit in the same area as the buck shot

397

00:19:11,080 --> 00:19:13,080

yeah that's a really tight group

398

00:19:13,080 --> 00:19:14,080

that's great

399

00:19:14,080 --> 00:19:16,080

that's a success

400

00:19:16,080 --> 00:19:19,080

in a weapon designed to fire it's shot over a short distance

401

00:19:19,080 --> 00:19:21,080

the teeth more or less match the real thing

402

00:19:21,080 --> 00:19:23,080

and that means unlike the hang-on

403

00:19:23,080 --> 00:19:26,080

the shotgun has qualified for the next stage

404

00:19:26,080 --> 00:19:29,080

but before that it's Grant and a big gun

405

00:19:30,080 --> 00:19:32,080

next up the rifle accuracy test

406

00:19:32,080 --> 00:19:35,080

we're going to be firing a 308 round out of this rifle

407

00:19:35,080 --> 00:19:37,080

at a standard distance of 25 yards

408

00:19:38,080 --> 00:19:40,080

then we're going to load up the tooth bullet

409

00:19:40,080 --> 00:19:42,080

and see how close we can come to that target

410

00:19:42,080 --> 00:19:44,080

tooth bullet in the rifle

411

00:19:44,080 --> 00:19:47,080

in three, two, one

412

00:19:47,080 --> 00:19:50,080

with over 10 times the power of the hang-on

413

00:19:50,080 --> 00:19:53,080

the extra powder in the round destroyed the tooth bullet

414

00:19:53,080 --> 00:19:55,080

before it even left the rifle's barrel

415

00:19:55,080 --> 00:20:00,080

which is the scenario Grant feared when he came up with his plan B

416

00:20:01,080 --> 00:20:02,080

see this?

417

00:20:03,080 --> 00:20:04,080

this is my secret weapon

418

00:20:04,080 --> 00:20:07,080

his bullet made of bone

419

00:20:08,080 --> 00:20:10,080

safety's off we're hot

420

00:20:10,080 --> 00:20:12,080

looks like Grant's been boning up

421

00:20:12,080 --> 00:20:14,080

alright here we go bone bullet

422

00:20:14,080 --> 00:20:16,080

in the rifle

423

00:20:17,080 --> 00:20:19,080

and what do you know

424

00:20:19,080 --> 00:20:22,080

it's slightly off the original but it's in the ballpark

425

00:20:22,080 --> 00:20:23,080

we hit it

426

00:20:23,080 --> 00:20:24,080

hey hey hey

427

00:20:24,080 --> 00:20:26,080

that's actually not bad for this range

428

00:20:26,080 --> 00:20:28,080

you know what this is actually pretty promising for the myth

429

00:20:28,080 --> 00:20:30,080

let's see how the bone bullet does on the penetration test

430

00:20:30,080 --> 00:20:33,080

absolutely bone bullet

431

00:20:33,080 --> 00:20:36,080

so far this myth is looking pretty good

432

00:20:36,080 --> 00:20:40,080

now we didn't have much accuracy with the pistol and the tooth bullet

433

00:20:40,080 --> 00:20:42,080

with the shotgun and the tee shot

434

00:20:42,080 --> 00:20:45,080

and the bone bullet with the rifle we had very good accuracy

435

00:20:45,080 --> 00:20:48,080

so we can say that this is a viable ammunition

436

00:20:48,080 --> 00:20:52,080

but it's time to see how well they penetrate once they hit their target

437

00:20:58,080 --> 00:21:03,080

so far Carrie Grant and Tori have tested the accuracy of their bio bullets

438

00:21:03,080 --> 00:21:07,080

the handgun and rifle fangs failed at the first hurdle

439

00:21:07,080 --> 00:21:09,080

swing and a miss

440

00:21:09,080 --> 00:21:13,080

but the shotgun shell and bone bullet were a success

441

00:21:13,080 --> 00:21:15,080

not bad not bad

442

00:21:16,080 --> 00:21:20,080

the next question to be faced is will they penetrate with a lethal impact

443

00:21:20,080 --> 00:21:25,080

so back down at the gun range to test the bio bullets for a lethal penetration

444

00:21:25,080 --> 00:21:29,080

the guys will once again compare them to the real thing

445

00:21:29,080 --> 00:21:31,080

for this test we're taking accuracy out of the equation

446

00:21:31,080 --> 00:21:34,080

we're going to fire at close range into the gelatin

447

00:21:34,080 --> 00:21:38,080

now we know that the actual bullets are going to do more damage

448

00:21:38,080 --> 00:21:40,080

physics tells us they have more mass

449

00:21:40,080 --> 00:21:42,080

they have more power

450

00:21:42,080 --> 00:21:46,080

but the question is can these crazy bullets actually do enough damage

451

00:21:46,080 --> 00:21:48,080

to make them a viable round

452

00:21:49,080 --> 00:21:53,080

the answer to that question will come if the bone bullet and teeth filled shotgun shell

453

00:21:53,080 --> 00:21:58,080

have enough energy to penetrate the ballistics gel deeper than four inches

454

00:21:58,080 --> 00:22:02,080

that's the benchmark experts deem to be a lethal hit

455

00:22:02,080 --> 00:22:05,080

and the benchmark for success in this test

456

00:22:07,080 --> 00:22:11,080

first up is the 12-gauge shotgun with a standard shell

457

00:22:11,080 --> 00:22:14,080

alright here we go in three, two, one

458

00:22:17,080 --> 00:22:20,080

it looked like it passed right through and I saw it hit the back of the bird

459

00:22:20,080 --> 00:22:22,080

it jumped

460

00:22:22,080 --> 00:22:25,080

with a muzzle velocity of 1800 feet per second

461

00:22:25,080 --> 00:22:29,080

the spray of buckshot really packs a penetrative punch

462

00:22:30,080 --> 00:22:33,080

exit, exit, exit, exit, they all came all the way through

463

00:22:33,080 --> 00:22:35,080

I love the shotgun, let's see what the teeth can do

464

00:22:35,080 --> 00:22:36,080

alright

465

00:22:36,080 --> 00:22:42,080

the question is will they match the real thing or at least punch a lethal four inch hole

466

00:22:42,080 --> 00:22:46,080

here we go in three, two, one

467

00:22:47,080 --> 00:22:51,080

a close inspection reveals that not only did it not match the real round

468

00:22:51,080 --> 00:22:56,080

and penetrate clean through but it also failed to beat that four inch benchmark

469

00:22:56,080 --> 00:22:58,080

inch and a half

470

00:22:58,080 --> 00:23:02,080

alright so even at close range this is not an effective assassination round

471

00:23:02,080 --> 00:23:06,080

yeah I mean the regular buckshot passed all the way through the ballistics gel

472

00:23:06,080 --> 00:23:07,080

this only went in a couple inches

473

00:23:07,080 --> 00:23:12,080

the team decides that while it may not be lethal it would certainly cause severe injury

474

00:23:12,080 --> 00:23:16,080

and that's good enough to take it onto the next round just barely

475

00:23:16,080 --> 00:23:20,080

okay so the shotgun didn't give us that four inch lethal penetration that we were looking for

476

00:23:20,080 --> 00:23:24,080

but after looking at the high speed we're going to give it the benefit of the doubt

477

00:23:24,080 --> 00:23:28,080

because it can give us six to seven hits that penetrated two inches

478

00:23:28,080 --> 00:23:34,080

now combining that trauma the victim could potentially be sent to the pathologist's slab

479

00:23:35,080 --> 00:23:39,080

so the shotgun squeaked past the penetration test by the skin of its teeth

480

00:23:39,080 --> 00:23:42,080

and it's time to up the ante

481

00:23:42,080 --> 00:23:48,080

the massive muzzle velocity of 2800 feet per second might pack the punch required

482

00:23:49,080 --> 00:23:54,080

so just like the shotgun we're going to be firing the rifle from the minimum possible range

483

00:23:54,080 --> 00:23:56,080

and for this weapon that's 10 feet

484

00:23:56,080 --> 00:23:59,080

any closer in the pressure wave would actually disturb the ballistics gel

485

00:23:59,080 --> 00:24:01,080

and it's no surprise

486

00:24:05,080 --> 00:24:08,080

when the control round blasts clean through

487

00:24:09,080 --> 00:24:11,080

well then I think it might have done a backflip

488

00:24:11,080 --> 00:24:16,080

remember Grant's bone bullet doesn't have to match that devastating level of destruction

489

00:24:16,080 --> 00:24:22,080

because the projectile just has to penetrate to four inches to be deemed lethal

490

00:24:22,080 --> 00:24:26,080

here we go in three two one

491

00:24:28,080 --> 00:24:29,080

alright let's see how far it went in

492

00:24:29,080 --> 00:24:32,080

oh no it went in that far

493

00:24:32,080 --> 00:24:35,080

that is not a lethal shot at all

494

00:24:35,080 --> 00:24:38,080

at just two inches it's another non-lethal shot

495

00:24:38,080 --> 00:24:43,080

but Tori isn't surprised because even their biggest bio bullet has a weight problem

496

00:24:43,080 --> 00:24:47,080

so we just took the shot and it did not go that far into the blitz-schick's gel

497

00:24:47,080 --> 00:24:51,080

but that's not a big surprise because as we know kinetic energy

498

00:24:51,080 --> 00:24:55,080

is one half times mass times velocity squared

499

00:24:55,080 --> 00:25:01,080

now since we don't have the mass or the velocity we don't have the energy for that tooth to penetrate that deep

500

00:25:02,080 --> 00:25:07,080

but all is not lost because back at the shop the guys are beefing up their bone bullets

501

00:25:07,080 --> 00:25:09,080

the science says that bigger is better

502

00:25:09,080 --> 00:25:16,080

so with a super-sized bone slug will they finally get the penetration this myth needs

503

00:25:16,080 --> 00:25:21,080

now I made the bone bullet much larger this is going to give us more mass for more penetration power

504

00:25:21,080 --> 00:25:24,080

hopefully this will give us a lethal shot

505

00:25:24,080 --> 00:25:30,080

and outside in the bulletproof bunker the proof will be in a fresh ballistics gel pudding

506

00:25:30,080 --> 00:25:33,080

in three two one

507

00:25:33,080 --> 00:25:39,080

in real time there seems to be more gel jiggling but there's only one measure that counts

508

00:25:39,080 --> 00:25:43,080

look at that we have bone fragments six inches deep

509

00:25:43,080 --> 00:25:46,080

yes the extra mass made all the difference

510

00:25:46,080 --> 00:25:51,080

this is a success alright next step we got to do is test out on our human analog

511

00:25:51,080 --> 00:25:57,080

alright so the shotgun and now the rifle have passed the accuracy and penetration tests

512

00:25:57,080 --> 00:26:01,080

and that means next up can the team get away with murder

513

00:26:04,080 --> 00:26:10,080

for this test we've set everything up exactly like it would be on a real airplane

514

00:26:10,080 --> 00:26:13,080

from the dimensions of the plane to using real seats

515

00:26:13,080 --> 00:26:20,080

and given the fact that stowing luggage and hand luggage is a very time-consuming part of that process

516

00:26:20,080 --> 00:26:23,080

we're using genuine overhead bins

517

00:26:23,080 --> 00:26:28,080

we strive for accuracy in all of our tests that's why in setting this up we

518

00:26:34,080 --> 00:26:37,080

I'm ready to come out now

519

00:26:37,080 --> 00:26:43,080

Adam and Jamie already have a back to front baseline but there's a whole barrage of boarding baloney still to come

520

00:26:43,080 --> 00:26:48,080

and next up families with small children in business class may board the plane now

521

00:26:48,080 --> 00:26:52,080

is the perfect method to contrast with the control

522

00:26:52,080 --> 00:26:55,080

test number two and that's no system at all

523

00:26:55,080 --> 00:27:00,080

next on the menu is a semi-random boarding method in which people have assigned seats

524

00:27:00,080 --> 00:27:05,080

but we are only boarding in two groups that is business class and everybody else

525

00:27:05,080 --> 00:27:09,080

I'm just kind of curious about how this one's going to turn out

526

00:27:09,080 --> 00:27:13,080

we are going to board all rows all seats

527

00:27:13,080 --> 00:27:16,080

all rows all seats may now board the plane

528

00:27:16,080 --> 00:27:18,080

over there

529

00:27:18,080 --> 00:27:20,080

whoa whoa whoa your seat

530

00:27:21,080 --> 00:27:26,080

each passenger has an assigned seat and there are the usual wildcards like jacket folders

531

00:27:26,080 --> 00:27:30,080

but other than that it simply first come first boarded

532

00:27:30,080 --> 00:27:36,080

we wanted to make sure we set this test up that people would be likely to behave in the way that

they would in the airport

533

00:27:36,080 --> 00:27:38,080

can we get some order here?

534

00:27:38,080 --> 00:27:40,080

line up please

535

00:27:40,080 --> 00:27:41,080

line line please

536

00:27:41,080 --> 00:27:46,080

for the random test it seems to be the case as soon as I called all seats all rows

537

00:27:46,080 --> 00:27:49,080

everyone ran to the front of the counter to board the plane

538

00:27:49,080 --> 00:27:50,080

one line thank you

539

00:27:50,080 --> 00:27:54,080

that is exactly the kind of behavior I would expect to see in an airport

540

00:27:54,080 --> 00:27:56,080

it's awesome that we got an experiment

541

00:27:56,080 --> 00:28:00,080

aside from the rush to board first there don't seem to be any issues

542

00:28:00,080 --> 00:28:03,080

hi are you my last passenger?

543

00:28:03,080 --> 00:28:07,080

and the passengers found their assigned seats in a surprisingly short amount of time

544

00:28:07,080 --> 00:28:12,080

so this test was random once first class and parents with small children had boarded

545

00:28:12,080 --> 00:28:15,080

and it came in at 17 minutes which is pretty quick

546

00:28:15,080 --> 00:28:17,080

you guys may now de-play

547

00:28:18,080 --> 00:28:21,080

that's an astonishing 8 minutes faster than the control

548

00:28:21,080 --> 00:28:24,080

but remember time isn't the only factor

549

00:28:24,080 --> 00:28:27,080

each passenger gets to vote on the overall experience

550

00:28:28,080 --> 00:28:31,080

on the last test they were almost all okay

551

00:28:31,080 --> 00:28:34,080

in this test they're either loving them or hating them

552

00:28:34,080 --> 00:28:37,080

because we're either getting great or terrible

553

00:28:37,080 --> 00:28:40,080

the random boarding clearly polarized opinion

554

00:28:40,080 --> 00:28:44,080

but despite the significantly faster time when the votes are tallied

555

00:28:44,080 --> 00:28:47,080

it turns out it was less popular than the control

556

00:28:48,080 --> 00:28:50,080

this is a stunning result

557

00:28:50,080 --> 00:28:53,080

random boarding with allocated seats was far quicker and yet

558

00:28:53,080 --> 00:28:57,080

a much less positive experience for the passengers

559

00:28:57,080 --> 00:29:00,080

this tells me that there is definitely something to this myth

560

00:29:00,080 --> 00:29:03,080

if random is so much quicker then back to front is clearly flawed

561

00:29:03,080 --> 00:29:05,080

in terms of speed and efficiency

562

00:29:05,080 --> 00:29:09,080

but whether there's a better method that yields a more positive passenger result

563

00:29:09,080 --> 00:29:11,080

I think requires more testing

564

00:29:11,080 --> 00:29:13,080

shall we?

565

00:29:13,080 --> 00:29:15,080

next up is what we call the Wilma technique

566

00:29:15,080 --> 00:29:18,080

it stands for windows, middle and aisle

567

00:29:18,080 --> 00:29:20,080

once you've boarded business class

568

00:29:20,080 --> 00:29:22,080

then you load those with window seats

569

00:29:22,080 --> 00:29:25,080

then the middle seats and then the aisle

570

00:29:25,080 --> 00:29:27,080

seems pretty logical to me

571

00:29:27,080 --> 00:29:30,080

it's a standard rarely used technique with a cute

572

00:29:30,080 --> 00:29:32,080

not quite accurate acronym

573

00:29:32,080 --> 00:29:36,080

and it's down to Adam to explain the unfamiliar procedure

574

00:29:37,080 --> 00:29:40,080

okay we are now going to board people seated at window seats

575

00:29:40,080 --> 00:29:43,080

if your ticket has a letter A or a letter F on it

576

00:29:43,080 --> 00:29:47,080

you may board all rows with letters A or F

577

00:29:48,080 --> 00:29:51,080

I was a little nervous about how that was going to work out

578

00:29:51,080 --> 00:29:53,080

but it seems like everyone's getting it pretty clearly

579

00:29:53,080 --> 00:29:56,080

as it turns out with some clear instructions

580

00:29:56,080 --> 00:29:58,080

it's quite simple

581

00:29:58,080 --> 00:30:00,080

we are now going to board middle seats

582

00:30:00,080 --> 00:30:03,080

if your seat number has a letter B or E attached to it

583

00:30:03,080 --> 00:30:05,080

you may now board the plane

584

00:30:05,080 --> 00:30:07,080

one of the problems when back to front boarding

585

00:30:07,080 --> 00:30:10,080

is aisle seat passengers getting up to allow window seat passengers

586

00:30:10,080 --> 00:30:12,080

to get to their seats

587

00:30:12,080 --> 00:30:14,080

causing congestion in the aisle

588

00:30:14,080 --> 00:30:17,080

but this method is specifically designed to avoid that

589

00:30:19,080 --> 00:30:22,080

and the result is an even quicker time

590

00:30:22,080 --> 00:30:24,080

what was the time on that one Jamie?

591

00:30:24,080 --> 00:30:26,080

14 minutes 55 seconds

592

00:30:26,080 --> 00:30:27,080

nice

593

00:30:27,080 --> 00:30:31,080

the faster smoother style is also reflected in the satisfaction score

594

00:30:31,080 --> 00:30:34,080

a fulfilling 102

595

00:30:34,080 --> 00:30:37,080

and that has Jamie convinced of the result

596

00:30:37,080 --> 00:30:39,080

Wilma is significantly faster

597

00:30:39,080 --> 00:30:42,080

and five times better in terms of customer satisfaction than the control

598

00:30:42,080 --> 00:30:45,080

for me that means the myth is confirmed right here

599

00:30:45,080 --> 00:30:48,080

the method in use by the vast majority of airlines

600

00:30:48,080 --> 00:30:50,080

is simply not the best available

601

00:30:50,080 --> 00:30:52,080

what we have to determine now

602

00:30:52,080 --> 00:30:55,080

is what is exactly the best method

603

00:30:55,080 --> 00:30:58,080

well the straight windows middle aisle or Wilma boarding

604

00:30:58,080 --> 00:31:01,080

worked pretty fast but there's apparently a Wilma method

605

00:31:01,080 --> 00:31:03,080

that's even more sophisticated

606

00:31:03,080 --> 00:31:06,080

it breaks it out into windows middle aisle in separate blocks

607

00:31:06,080 --> 00:31:10,080

and it is going to tax all my faculties of being a clear announcer

608

00:31:10,080 --> 00:31:12,080

of who gets seated when

609

00:31:12,080 --> 00:31:14,080

they're going to be seated in ten separate blocks

610

00:31:14,080 --> 00:31:20,080

one, two, three, four, five, six, seven, eight, nine and ten

611

00:31:21,080 --> 00:31:24,080

it makes me tired just looking at it

612

00:31:25,080 --> 00:31:27,080

all right Jamie you can start the timer

613

00:31:27,080 --> 00:31:30,080

once again Adam Usher's on business class and families

614

00:31:30,080 --> 00:31:32,080

and then it gets complicated

615

00:31:32,080 --> 00:31:35,080

the first group to board grows 22 through 30

616

00:31:35,080 --> 00:31:37,080

but only the window seats

617

00:31:37,080 --> 00:31:40,080

seats A or F may now board the plane

618

00:31:40,080 --> 00:31:43,080

despite the complexity Adam rises to the occasion

619

00:31:43,080 --> 00:31:47,080

I feel that this loudspeaker makes me virile and more powerful

620

00:31:47,080 --> 00:31:49,080

and it all goes swimmingly

621

00:31:49,080 --> 00:31:51,080

this is fascinating

622

00:31:51,080 --> 00:31:53,080

here's what I really hope for this story

623

00:31:53,080 --> 00:31:55,080

is that we actually come up with a result

624

00:31:55,080 --> 00:31:59,080

that gets utilized by airlines to cut down on the amount of time it takes to fly

625

00:31:59,080 --> 00:32:00,080

that'd be great

626

00:32:00,080 --> 00:32:03,080

and with another fast time under their seatbelts

627

00:32:03,080 --> 00:32:04,080

that's time

628

00:32:04,080 --> 00:32:06,080

this myth is really taking off

629

00:32:06,080 --> 00:32:08,080

I fly a heck of a lot

630

00:32:08,080 --> 00:32:11,080

and I'm pretty sure that every plane I've ever gotten on

631

00:32:11,080 --> 00:32:14,080

has boarded the passengers in the back to front zone system

632

00:32:14,080 --> 00:32:16,080

and we're not done testing

633

00:32:16,080 --> 00:32:20,080

but we've already determined that the back to front zone system

634

00:32:20,080 --> 00:32:23,080

is pretty terrible compared to almost everything else

635

00:32:23,080 --> 00:32:28,080

so far for our bite the bullet myth

636

00:32:28,080 --> 00:32:32,080

we have tested accuracy and penetration

637

00:32:32,080 --> 00:32:35,080

now it's time to test deception

638

00:32:35,080 --> 00:32:39,080

now the way we're going to do that is we're going to fire our bone and our teeth bullets

639

00:32:39,080 --> 00:32:41,080

into a human analog

640

00:32:41,080 --> 00:32:42,080

basically a pig

641

00:32:42,080 --> 00:32:47,080

then what we're going to do is have a forensic pathologist

642

00:32:47,080 --> 00:32:51,080

take a look at the evidence and see if he can detect the lethal projectile

643

00:32:51,080 --> 00:32:55,080

now unfortunately butchers are not allowed to give us pigs with their innards intact

644

00:32:55,080 --> 00:32:59,080

so we are going to have to fill up the chest cavity with our own organs

645

00:32:59,080 --> 00:33:01,080

you got a lot of heart, Carrie

646

00:33:01,080 --> 00:33:02,080

oh, jeez

647

00:33:02,080 --> 00:33:05,080

so basically Carrie and I are going to be playing doctor

648

00:33:05,080 --> 00:33:07,080

prank or something like that is

649

00:33:12,080 --> 00:33:13,080

alright, we're done

650

00:33:13,080 --> 00:33:14,080

see, it wasn't that bad

651

00:33:14,080 --> 00:33:16,080

no, that was pretty bad

652

00:33:16,080 --> 00:33:19,080

today's show is sponsored by the letter A

653

00:33:19,080 --> 00:33:21,080

so back down at the gun range

654

00:33:21,080 --> 00:33:24,080

alright, who ordered the human analog

655

00:33:24,080 --> 00:33:26,080

alright, so our human analog is in place

656

00:33:26,080 --> 00:33:29,080

and we're going to shoot at close range directly into the sternum

657

00:33:29,080 --> 00:33:30,080

with our top two ammunition

658

00:33:30,080 --> 00:33:32,080

which is the teeth shot

659

00:33:32,080 --> 00:33:33,080

and the bone bullet

660

00:33:33,080 --> 00:33:37,080

now the idea here is that when a pathologist is examining the victim

661

00:33:37,080 --> 00:33:39,080

they'll just be shattered bone everywhere

662

00:33:39,080 --> 00:33:41,080

and there won't be direct traceable evidence

663

00:33:41,080 --> 00:33:43,080

like you might see with a lead bullet

664

00:33:43,080 --> 00:33:44,080

alright, we're going hot

665

00:33:44,080 --> 00:33:47,080

and first up versus human analog number one

666

00:33:47,080 --> 00:33:49,080

is the supersized bone bullet

667

00:33:49,080 --> 00:33:51,080

here we go

668

00:33:51,080 --> 00:33:54,080

in three, two, one

669

00:33:59,080 --> 00:34:00,080

cool

670

00:34:00,080 --> 00:34:02,080

ah, we got a hit and we got penetration

671

00:34:02,080 --> 00:34:03,080

hot to the pathologist

672

00:34:03,080 --> 00:34:04,080

alright

673

00:34:05,080 --> 00:34:07,080

so the bone bullet did exactly what we wanted it to

674

00:34:07,080 --> 00:34:09,080

we've got great penetration

675

00:34:09,080 --> 00:34:13,080

high accuracy, this black dot right here is where I was aiming

676

00:34:13,080 --> 00:34:16,080

and I can see inside that there are bone fragments

677

00:34:16,080 --> 00:34:18,080

so it's looking really good for the myth right now

678

00:34:18,080 --> 00:34:21,080

but we won't know for sure until we get to the doctor

679

00:34:21,080 --> 00:34:25,080

and until then, it's time to take him down and put him on ice

680

00:34:25,080 --> 00:34:28,080

so while target number one is chilling out

681

00:34:28,080 --> 00:34:31,080

awaiting an examination by our medical examiner

682

00:34:32,080 --> 00:34:36,080

Q target two and a shotgun shell with a bite

683

00:34:36,080 --> 00:34:37,080

so the shotgun's still in the running

684

00:34:37,080 --> 00:34:40,080

this may be our last chance for an actual teeth bullet

685

00:34:40,080 --> 00:34:43,080

now the idea is that maybe it won't penetrate the way the bone does

686

00:34:43,080 --> 00:34:46,080

but it'll spray and you might bleed out

687

00:34:46,080 --> 00:34:48,080

it still might be viable ammunition

688

00:34:48,080 --> 00:34:50,080

it penetrates enough, it's got good aim

689

00:34:50,080 --> 00:34:52,080

and it destroys on impact

690

00:34:52,080 --> 00:34:55,080

alright, teeth shot, we're hot

691

00:34:55,080 --> 00:34:57,080

so if the teeth bullet is going to be plausible

692

00:34:57,080 --> 00:34:59,080

it's going to be right here

693

00:34:59,080 --> 00:35:01,080

three, two, one

694

00:35:04,080 --> 00:35:06,080

yeah, that looks great

695

00:35:07,080 --> 00:35:08,080

I am shocked by this result

696

00:35:08,080 --> 00:35:11,080

especially after we shot into the ballistic shell

697

00:35:11,080 --> 00:35:14,080

I mean we were only getting about two inches of penetration

698

00:35:14,080 --> 00:35:16,080

which didn't seem like a lethal shot

699

00:35:16,080 --> 00:35:18,080

but after we fired into our human analog

700

00:35:18,080 --> 00:35:20,080

I mean this looks like a lethal shot

701

00:35:20,080 --> 00:35:22,080

it punched through the skin into the organs

702

00:35:22,080 --> 00:35:25,080

and the best part is it actually went through the rib cage

703

00:35:25,080 --> 00:35:28,080

now the big test is will the pathologist be able to identify

704

00:35:28,080 --> 00:35:30,080

what did this damage

705

00:35:30,080 --> 00:35:32,080

right now, this myth is looking very good

706

00:35:38,080 --> 00:35:41,080

Carrie, Grant and Tori are playing with guns and

707

00:35:41,080 --> 00:35:43,080

Hamo

708

00:35:43,080 --> 00:35:46,080

they've been trying to find out if bio bullets

709

00:35:46,080 --> 00:35:49,080

made of teeth and bone would be accurate, lethal

710

00:35:49,080 --> 00:35:52,080

and full-lay forensic scientist

711

00:35:52,080 --> 00:35:54,080

let's take it to the pathologist

712

00:35:54,080 --> 00:35:55,080

alright

713

00:35:55,080 --> 00:35:58,080

Q expert medical examiner Dr Melanik

714

00:35:58,080 --> 00:36:00,080

and her oscillating sore

715

00:36:01,080 --> 00:36:05,080

her challenge, well the team has brought home the bacon in body bags

716

00:36:05,080 --> 00:36:07,080

and without knowing the cause of the injuries

717

00:36:07,080 --> 00:36:09,080

she has to autopsy the two victims

718

00:36:09,080 --> 00:36:12,080

first up, the bone bullet

719

00:36:12,080 --> 00:36:17,080

so I'm just looking to see if there are any signs of injury to the animal

720

00:36:17,080 --> 00:36:20,080

and what I see is I see that a wound over here

721

00:36:20,080 --> 00:36:23,080

but it looks like a sharp force injury like from a knife

722

00:36:23,080 --> 00:36:27,080

it doesn't look like from a gunshot wound

723

00:36:27,080 --> 00:36:30,080

this is looking really good for the myth, she thinks it's a stab wound

724

00:36:30,080 --> 00:36:32,080

for the myth to be confirmed

725

00:36:32,080 --> 00:36:35,080

traceable evidence will elude the doc

726

00:36:35,080 --> 00:36:39,080

and she won't be able to work out what punched a hole in porcupine here

727

00:36:39,080 --> 00:36:43,080

so I'm just reflecting this backwards to see where this injury is going

728

00:36:43,080 --> 00:36:45,080

and how deep it's going

729

00:36:45,080 --> 00:36:48,080

the doc follows the injury through the skin and muscle in the chest wall

730

00:36:48,080 --> 00:36:53,080

getting a picture of the force and trajectory of the trauma that caused it

731

00:36:53,080 --> 00:36:56,080

okay penetrated four inches

732

00:36:56,080 --> 00:36:58,080

what the heck is that?

733

00:36:58,080 --> 00:37:00,080

this is not normal for a heart

734

00:37:00,080 --> 00:37:02,080

damage the heart, damage the liver

735

00:37:02,080 --> 00:37:05,080

broke three ribs, definitely a lethal blow

736

00:37:05,080 --> 00:37:08,080

the bone bullet clearly fulfilled the lethal requirement

737

00:37:08,080 --> 00:37:11,080

but will it fool the pathologist?

738

00:37:11,080 --> 00:37:13,080

if you hold the evidence

739

00:37:13,080 --> 00:37:16,080

which I've recovered from the injured organs

740

00:37:16,080 --> 00:37:18,080

side by side

741

00:37:18,080 --> 00:37:20,080

next to the cut rib

742

00:37:20,080 --> 00:37:23,080

you'll notice that they're different in appearance

743

00:37:23,080 --> 00:37:26,080

it doesn't appear to be either like the bone

744

00:37:26,080 --> 00:37:27,080

which has a marrow

745

00:37:27,080 --> 00:37:29,080

or like the cartilage that it went through

746

00:37:29,080 --> 00:37:31,080

so you're saying whatever that is

747

00:37:31,080 --> 00:37:32,080

it's not part of this pig?

748

00:37:32,080 --> 00:37:33,080

it's not part of this pig

749

00:37:33,080 --> 00:37:36,080

this is a foreign object that was introduced into this pig

750

00:37:36,080 --> 00:37:37,080

she's good

751

00:37:37,080 --> 00:37:38,080

she's very good

752

00:37:38,080 --> 00:37:39,080

she's really good

753

00:37:39,080 --> 00:37:40,080

nothing getting by you

754

00:37:40,080 --> 00:37:42,080

with some patient skill and experience

755

00:37:42,080 --> 00:37:46,080

Dr. Melanik recovers all of the foreign objects from the injury

756

00:37:46,080 --> 00:37:50,080

and soon has the answer to this porcine puzzle

757

00:37:50,080 --> 00:37:52,080

alright so doctor after all of this

758

00:37:52,080 --> 00:37:53,080

what are your findings?

759

00:37:53,080 --> 00:37:54,080

inside the body

760

00:37:54,080 --> 00:37:56,080

I saw damage to the organs

761

00:37:56,080 --> 00:38:00,080

that is consistent with gunshot injury

762

00:38:00,080 --> 00:38:03,080

and then I found the pieces that we put together

763

00:38:03,080 --> 00:38:04,080

in the shape of a bullet

764

00:38:04,080 --> 00:38:06,080

alright so our technique of using a bone bullet

765

00:38:06,080 --> 00:38:07,080

to disguise the cause of death

766

00:38:07,080 --> 00:38:08,080

is not going to fool you

767

00:38:08,080 --> 00:38:09,080

no

768

00:38:09,080 --> 00:38:11,080

alright well we're not finished

769

00:38:11,080 --> 00:38:13,080

we got one more technique to see if we can fool you

770

00:38:13,080 --> 00:38:14,080

okay

771

00:38:14,080 --> 00:38:17,080

now our forensic pathologist is examining

772

00:38:17,080 --> 00:38:19,080

for the teeth shot

773

00:38:19,080 --> 00:38:21,080

on the one hand it could be more crushed up

774

00:38:21,080 --> 00:38:22,080

less evidence

775

00:38:22,080 --> 00:38:25,080

but on the other it could be more foreign

776

00:38:25,080 --> 00:38:27,080

alright so doctor just on first glance

777

00:38:27,080 --> 00:38:29,080

what do you think happened here?

778

00:38:29,080 --> 00:38:32,080

well I see an entrance wound with scalloped edges

779

00:38:32,080 --> 00:38:34,080

like a cookie cutter or flower

780

00:38:34,080 --> 00:38:36,080

and then I see some satellite wounds

781

00:38:36,080 --> 00:38:39,080

which have particular material that look like

782

00:38:39,080 --> 00:38:41,080

not like shot but like

783

00:38:41,080 --> 00:38:43,080

tooth or bone

784

00:38:43,080 --> 00:38:46,080

I think that this is most consistent with a shotgun wound

785

00:38:46,080 --> 00:38:49,080

once again the doc has it all worked out

786

00:38:49,080 --> 00:38:51,080

first that it's a wound from a shotgun

787

00:38:51,080 --> 00:38:54,080

second that its pellets were not BB's

788

00:38:54,080 --> 00:38:55,080

but teeth

789

00:38:55,080 --> 00:38:58,080

and finally even if the wound had been near the mouth

790

00:38:58,080 --> 00:38:59,080

just like the bone fragments

791

00:38:59,080 --> 00:39:03,080

the doc would have easily detected the foreign material

792

00:39:03,080 --> 00:39:06,080

you can't fool the forensic pathologist this one's busted

793

00:39:06,080 --> 00:39:07,080

definitely busted

794

00:39:07,080 --> 00:39:08,080

totally busted

795

00:39:08,080 --> 00:39:10,080

thank you so much for your help

796

00:39:10,080 --> 00:39:11,080

thank you

797

00:39:11,080 --> 00:39:12,080

Jeff Han

798

00:39:12,080 --> 00:39:13,080

I had a lot of fun thank you

799

00:39:13,080 --> 00:39:14,080

yeah I didn't

800

00:39:14,080 --> 00:39:15,080

that was disgusting

801

00:39:15,080 --> 00:39:17,080

it's a definitive result

802

00:39:17,080 --> 00:39:19,080

the slugs may have been moderately accurate

803

00:39:19,080 --> 00:39:21,080

and barely lethal

804

00:39:21,080 --> 00:39:23,080

yeah that's a really tight group

805

00:39:23,080 --> 00:39:28,080

but the crucial criterion was that they could fool a pathologist

806

00:39:28,080 --> 00:39:32,080

and on that they failed meaning this myth is busted

807

00:39:39,080 --> 00:39:43,080

with the help of an excited plane load of volunteers

808

00:39:43,080 --> 00:39:44,080

oh you little turblants

809

00:39:44,080 --> 00:39:45,080

woo

810

00:39:45,080 --> 00:39:48,080

Adam and Jamie are asking if airlines around the world

811

00:39:48,080 --> 00:39:49,080

have got it wrong

812

00:39:49,080 --> 00:39:51,080

so far the answer is yes

813

00:39:51,080 --> 00:39:54,080

the usual method of boarding does appear to be the slowest

814

00:39:54,080 --> 00:39:56,080

and one of the least popular

815

00:39:56,080 --> 00:39:59,080

and next up is an experiment in Anarchy

816

00:39:59,080 --> 00:40:01,080

after business class

817

00:40:01,080 --> 00:40:03,080

it's every passenger for themselves

818

00:40:03,080 --> 00:40:05,080

now all the rest of you

819

00:40:05,080 --> 00:40:08,080

there are no assigned seats and no assigned rows

820

00:40:08,080 --> 00:40:09,080

so when I say

821

00:40:09,080 --> 00:40:12,080

which is now you can all board the airplane

822

00:40:12,080 --> 00:40:13,080

whoa

823

00:40:14,080 --> 00:40:17,080

in an orderly fashion

824

00:40:19,080 --> 00:40:20,080

wow

825

00:40:20,080 --> 00:40:23,080

in the earlier random test there were assigned seats

826

00:40:23,080 --> 00:40:25,080

but this is just a free-for-all

827

00:40:25,080 --> 00:40:26,080

this is interesting

828

00:40:26,080 --> 00:40:29,080

there's no assigned seating no order at all

829

00:40:29,080 --> 00:40:33,080

and so what they're doing is actually the opposite of the back to front

830

00:40:33,080 --> 00:40:36,080

they're filling up the front first

831

00:40:36,080 --> 00:40:37,080

and then going backwards

832

00:40:37,080 --> 00:40:41,080

which doesn't seem like it would be the most efficient way of doing it

833

00:40:41,080 --> 00:40:45,080

because they're blocking the aisle right in the beginning of the plane

834

00:40:45,080 --> 00:40:47,080

but somewhat counter-intuitively

835

00:40:47,080 --> 00:40:49,080

the lack of seat assignments

836

00:40:49,080 --> 00:40:52,080

leads to the fastest time so far

837

00:40:52,080 --> 00:40:54,080

the only reason for that that I can think of

838

00:40:54,080 --> 00:40:57,080

is that nobody's looking for any specific seat

839

00:40:57,080 --> 00:41:00,080

they're just taking the first one they come across

840

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

apparently it saves time

841

00:41:02,080 --> 00:41:03,080

it saves on time

842

00:41:03,080 --> 00:41:06,080

but according to a customer sir they score of minus five

843

00:41:06,080 --> 00:41:08,080

not on stress

844

00:41:09,080 --> 00:41:10,080

this is fascinating

845

00:41:10,080 --> 00:41:13,080

I've just finished scoring the random random boarding method

846

00:41:13,080 --> 00:41:15,080

and they hated this method

847

00:41:15,080 --> 00:41:18,080

overwhelmingly they voted it as terrible

848

00:41:18,080 --> 00:41:21,080

and I think this is an interesting window into human psychology

849

00:41:21,080 --> 00:41:24,080

I think humans like structure

850

00:41:24,080 --> 00:41:26,080

we want to know that there's a structure

851

00:41:26,080 --> 00:41:27,080

even if it takes us longer

852

00:41:27,080 --> 00:41:29,080

it appeals to our sense of justice

853

00:41:29,080 --> 00:41:31,080

that things are happening for a reason

854

00:41:31,080 --> 00:41:32,080

that's fascinating

855

00:41:32,080 --> 00:41:35,080

which leaves the results looking like this

856

00:41:35,080 --> 00:41:42,080

despite surveys indicating that waiting and queuing is the single biggest complaint for frequent flyers

857

00:41:42,080 --> 00:41:45,080

it seems a sense of order and structure is just as important

858

00:41:45,080 --> 00:41:48,080

which leaves one final attempt by the team

859

00:41:48,080 --> 00:41:50,080

to find the perfect boarding solution

860

00:41:50,080 --> 00:41:55,080

one that might provide speed, structure and satisfaction

861

00:41:55,080 --> 00:41:58,080

next up is a method called the reverse pyramid

862

00:41:58,080 --> 00:41:59,080

it's pretty complex

863

00:41:59,080 --> 00:42:02,080

in fact the passengers are told merely to board by zones

864

00:42:02,080 --> 00:42:04,080

which are pre-sorted on their tickets

865

00:42:04,080 --> 00:42:07,080

the best way to explain it to you guys is with the editor's help

866

00:42:07,080 --> 00:42:09,080

editors if you put up a graphic please

867

00:42:09,080 --> 00:42:10,080

and show the zones as they board

868

00:42:10,080 --> 00:42:15,080

one, two, three, four, five and six

869

00:42:15,080 --> 00:42:16,080

it's pretty complicated

870

00:42:16,080 --> 00:42:18,080

it's supposed to be pretty fast

871

00:42:18,080 --> 00:42:19,080

we're gonna find out

872

00:42:19,080 --> 00:42:24,080

we are going to begin boarding myth bust air flight 3.1415927

873

00:42:24,080 --> 00:42:26,080

with service to myths unknown

874

00:42:26,080 --> 00:42:31,080

it appears complicated but with zones and seat numbers printed on the tickets

875

00:42:31,080 --> 00:42:33,080

it's actually incredibly simple

876

00:42:33,080 --> 00:42:35,080

you have group two on your ticket

877

00:42:35,080 --> 00:42:36,080

you may board the airplane

878

00:42:36,080 --> 00:42:39,080

this one appears to be working kind of like the Wilma techniques

879

00:42:39,080 --> 00:42:41,080

where it's filling on the outside

880

00:42:41,080 --> 00:42:44,080

and then gradually works its way towards the middle

881

00:42:44,080 --> 00:42:47,080

group three may now board the airplane

882

00:42:47,080 --> 00:42:51,080

but the pyramid strategy ends up doing that in blocks

883

00:42:51,080 --> 00:42:53,080

which may or may not help it

884

00:42:53,080 --> 00:42:56,080

and when the timer stops at 15.10

885

00:42:56,080 --> 00:42:59,080

it's back to the shop on an imaginary flight

886

00:42:59,080 --> 00:43:01,080

to make their final assessment

887

00:43:02,080 --> 00:43:03,080

buckle in

888

00:43:03,080 --> 00:43:08,080

here we go

889

00:43:08,080 --> 00:43:10,080

three, two, one, three

890

00:43:12,080 --> 00:43:13,080

so where do we stand?

891

00:43:13,080 --> 00:43:17,080

well the myth was that the most common technique that airlines use for boarding a plane

892

00:43:17,080 --> 00:43:18,080

that is from back to front

893

00:43:18,080 --> 00:43:22,080

also happened to be the slowest and least efficient method

894

00:43:22,080 --> 00:43:23,080

of putting people onto an airplane

895

00:43:23,080 --> 00:43:25,080

and based on our testing

896

00:43:25,080 --> 00:43:26,080

I have to say it's myth confirmed

897

00:43:26,080 --> 00:43:27,080

indeed

898

00:43:27,080 --> 00:43:31,080

but you know what's interesting is that the fastest technique we tried

899

00:43:31,080 --> 00:43:33,080

was also the least popular

900

00:43:33,080 --> 00:43:35,080

that might be why most airlines don't use it

901

00:43:35,080 --> 00:43:39,080

well the good news is that the three most popular techniques we tried

902

00:43:39,080 --> 00:43:42,080

are significantly faster than the back to front technique

903

00:43:42,080 --> 00:43:44,080

so those are the ones we should be using

904

00:43:44,080 --> 00:43:45,080

absolutely

905

00:43:45,080 --> 00:43:47,080

you hear that airlines?