

1

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

Don't try anything you see on the show at home.

2

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

The things we do on this show are dangerous.

3

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

We have experts to help keep us safe.

4

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

The obstacles at home.

5

00:00:40,000 --> 00:01:00,360

We've got him.

6

00:01:00,360 --> 00:01:04,320

Sophia Bush is Princess Leia.

7

00:01:04,320 --> 00:01:13,520

We want to know if you could make that swing using grappling hook.

8

00:01:13,520 --> 00:01:18,600

It's about a log crushing an armored vehicle.

9

00:01:18,600 --> 00:01:20,720

Beautiful.

10

00:01:20,720 --> 00:01:22,600

Perfect.

11

00:01:22,600 --> 00:01:27,400

Luke is going into the tongue tongue.

12

00:01:27,400 --> 00:01:31,560

And I thought they smelled bad on the outside.

13

00:01:31,560 --> 00:01:34,560

It's the Mythbusters Star Wars Special.

14

00:01:34,560 --> 00:01:41,560

Who are the Mythbusters?

15

00:01:41,560 --> 00:01:42,560

Adam Savage.

16

00:01:42,560 --> 00:01:44,560

I am your father.

17

00:01:44,560 --> 00:01:45,560

And Jamie Heineman.

18

00:01:45,560 --> 00:01:47,560

I kind of like it in here.

19

00:01:47,560 --> 00:01:48,560

It's private.

20

00:01:48,560 --> 00:01:52,560

Between them more than 30 years of special effects experience.

21

00:01:52,560 --> 00:01:54,560

Together with Carrie Byron.

22

00:01:54,560 --> 00:01:56,560

How will you be one Kenobi?

23

00:01:56,560 --> 00:01:57,560

Tori Belichi.

24

00:01:57,560 --> 00:01:58,560

Ah, never.

25

00:01:58,560 --> 00:01:59,560

And Grant Himahara.

26

00:01:59,560 --> 00:02:02,560

We could move the universe together.

27

00:02:02,560 --> 00:02:04,560

They don't just tell the Myths.

28

00:02:04,560 --> 00:02:07,560

They put them to the test.

29

00:02:07,560 --> 00:02:19,560

I really don't get why you're into these things.

30

00:02:19,560 --> 00:02:20,560

Into what things?

31

00:02:20,560 --> 00:02:21,560

Costumes.

32

00:02:21,560 --> 00:02:27,560

I appreciate you trying to understand, but have you even seen Star Wars?

33

00:02:27,560 --> 00:02:28,560

Probably.

34

00:02:28,560 --> 00:02:31,560

Should we just get started?

35

00:02:31,560 --> 00:02:32,560

Sure.

36

00:02:32,560 --> 00:02:33,560

Okay.

37

00:02:33,560 --> 00:02:36,560

In Star Wars, Luke Skywalker and Princess Leia are trying to escape the Death Star.

38

00:02:36,560 --> 00:02:40,560

They're running from stormtroopers and they get behind a closed door only to find their

39

00:02:40,560 --> 00:02:43,560

path blocked by a chasm they cannot cross.

40

00:02:43,560 --> 00:02:46,560

Quick, we've got to get across.

41

00:02:46,560 --> 00:02:53,560

Luke pulls a grappling hook from his belt, swings it across some piece of Death Star hardware,

42

00:02:53,560 --> 00:02:57,560

grabs Leia in his arm, and swings to safety.

43

00:02:57,560 --> 00:03:02,560

So, we want to know if you could make that swing using a cable and a grappling hook while

44

00:03:02,560 --> 00:03:05,560

holding on to your sister who you have the hots for.

45

00:03:05,560 --> 00:03:09,560

That is one way of looking at it, yes.

46

00:03:09,560 --> 00:03:11,560

Spoiler alert.

47

00:03:11,560 --> 00:03:26,560

So with a battalion of stormtroopers in hot pursuit, can Luke's unlikely leap really be done?

48

00:03:26,560 --> 00:03:38,560

Earning you a little short for a stormtrooper?

49

00:03:38,560 --> 00:03:45,560

It's actually funny that you say that because in point of fact, I'm a little tall to be a stormtrooper.

50

00:03:45,560 --> 00:03:47,560

Yeah, whatever.

51

00:03:47,560 --> 00:03:48,560

Let's shoot this pig.

52

00:03:48,560 --> 00:03:50,560

Not so fast, Heinemann.

53

00:03:50,560 --> 00:03:54,560

I know with the stormtrooper costume and all, it looks like we're ready to dive whole hog

54

00:03:54,560 --> 00:03:56,560

into the Star Wars universe.

55

00:03:56,560 --> 00:04:02,560

But wait, hold your horses because there's a whole bunch of setup to tell you about before we even get to this point.

56

00:04:02,560 --> 00:04:09,560

Our awesome group of stormtroopers today comes courtesy of the 501st Legion, an international group of thousands of

57

00:04:09,560 --> 00:04:17,560

Star Wars fans and cosplayers who like two things, dressing up as the bad guys and raising money for charity.

58

00:04:17,560 --> 00:04:19,560

I myself am an honorary member.

59

00:04:19,560 --> 00:04:21,560

Now here's the thing about these costumes.

60

00:04:21,560 --> 00:04:23,560

The costume has to be perfectly movie accurate.

61

00:04:23,560 --> 00:04:30,560

I can guarantee you that everybody behind me has spent hundreds of hours making their costumes perfect, didn't you?

62

00:04:30,560 --> 00:04:33,560

Exactly.

63

00:04:33,560 --> 00:04:40,560

Now we ran into a unique problem when we were planning out for this episode, which is that all of the Death Stars in California are being hired

64

00:04:40,560 --> 00:04:42,560

and we couldn't use any of them.

65

00:04:42,560 --> 00:04:49,560

So second best was to come here to this beautiful previous century supply warehouse on Mare Island up in Northern California.

66

00:04:49,560 --> 00:04:52,560

This is one of our favorite locations and we've shot a few great stories here.

67

00:04:58,560 --> 00:05:03,560

It's kind of like Death Star 1860, don't you think? It's beautiful.

68

00:05:03,560 --> 00:05:15,560

And when it comes to the spectacular special guest starring grand finale, it has the height required for the stomach churning leap for freedom.

69

00:05:15,560 --> 00:05:17,560

They're coming.

70

00:05:17,560 --> 00:05:18,560

We've got to get out of here.

71

00:05:18,560 --> 00:05:22,560

But first, what's the experimental plan of action?

72

00:05:22,560 --> 00:05:29,560

Now in examining Luke's swing across the chasm, Jamie and I have broken it down into three distinct elements, each of which that needs testing.

73

00:05:29,560 --> 00:05:32,560

Number one is the paver of the grappling hook.

74

00:05:32,560 --> 00:05:38,560

Second would be his belt. Would that be sufficient to support him while swinging on a line?

75

00:05:38,560 --> 00:05:45,560

And third is the addition of Princess Leia. Luke doesn't swing alone across the chasm. He's got a passenger.

76

00:05:45,560 --> 00:05:49,560

Since this first test involves a grappling hook, I'm going to have to make one.

77

00:05:49,560 --> 00:05:54,560

And it's going to have to be identical to what Luke used in the movie.

78

00:05:57,560 --> 00:05:59,560

And there we go.

79

00:06:02,560 --> 00:06:03,560

Sweet.

80

00:06:04,560 --> 00:06:06,560

And with accurate grappling hook in hand,

81

00:06:06,560 --> 00:06:10,560

Oh, that is gorgeous, dude. That looks exactly like the movie.

82

00:06:10,560 --> 00:06:16,560

It's test one. Can you hit the target and wrap and hook as easily as Luke?

83

00:06:16,560 --> 00:06:17,560

What are we throwing it over?

84

00:06:17,560 --> 00:06:21,560

We got a nice target right from the Death Star for you right up there.

85

00:06:21,560 --> 00:06:24,560

Well, that's quite a ways away.

86

00:06:24,560 --> 00:06:31,560

That thing is about 30, 35 feet away. And I got to tell you, that's quite a shock to do in one go.

87

00:06:31,560 --> 00:06:34,560

Can I use the force or do you want me to do this manually?

88

00:06:34,560 --> 00:06:36,560

Whatever works for you.

89

00:06:36,560 --> 00:06:41,560

Okay. I have no idea where this is going to go.

90

00:06:46,560 --> 00:06:48,560

Catch it. Thanks.

91

00:06:48,560 --> 00:06:53,560

Clearly, it's not as simple as the young Skywalker would have us believe.

92

00:06:53,560 --> 00:06:56,560

The height was about sufficient.

93

00:06:56,560 --> 00:07:00,560

From the same distance and angle as in the movie.

94

00:07:02,560 --> 00:07:05,560

Alright, so now it's up there.

95

00:07:05,560 --> 00:07:08,560

Jamie's struggling to get close.

96

00:07:08,560 --> 00:07:12,560

Oh, I'm heading everywhere to butt the mats.

97

00:07:13,560 --> 00:07:16,560

It's clear he needs a whole Yoda practice.

98

00:07:16,560 --> 00:07:18,560

So close.

99

00:07:18,560 --> 00:07:21,560

Now, Luke is clearly the quintessential action heroine.

100

00:07:21,560 --> 00:07:26,560

Not only needing one chance, one try to get the grappling hook over the correct target.

101

00:07:26,560 --> 00:07:27,560

Not quite.

102

00:07:27,560 --> 00:07:33,560

In reality, at this point, if Jamie was Luke, Luke and Leo would be clapped in iron somewhere in a trash disposal,

103

00:07:33,560 --> 00:07:36,560

somewhere in the depths of the Death Star, and the movie's over.

104

00:07:36,560 --> 00:07:40,560

But it can't end there. It's got to eventually get it.

105

00:07:40,560 --> 00:07:42,560

Okay, man, this one's for the princess.

106

00:07:46,560 --> 00:07:48,560

Yes!

107

00:07:48,560 --> 00:07:53,560

He finally made the throw, but will it grapple and catch like in the movie?

108

00:07:53,560 --> 00:07:54,560

That's a hook.

109

00:07:54,560 --> 00:07:57,560

Get me high five. He got it. He got it.

110

00:07:57,560 --> 00:07:59,560

Look at that. Look at that.

111

00:08:00,560 --> 00:08:05,560

I think you get full marks for not using the force, because it's clear that you weren't.

112

00:08:10,560 --> 00:08:16,560

It's plausible, but unlikely. Let's face it, Jamie had all the time in the world and as many tries as he wanted,

113

00:08:16,560 --> 00:08:18,560

and you can have anyone shooting at him.

114

00:08:19,560 --> 00:08:20,560

Yes!

115

00:08:21,560 --> 00:08:23,560

He got it. He got it.

116

00:08:23,560 --> 00:08:24,560

He got it.

117

00:08:27,560 --> 00:08:35,560

Next up, we're going to have a closer look at Luke's belt, because that's what his grappling hook appears to be attached to when he does his swing.

118

00:08:35,560 --> 00:08:42,560

Now, I know this would work with a harness, but that's an awful lot of weight to support on a belt.

119

00:08:42,560 --> 00:08:44,560

We're going to have to try it out.

120

00:08:44,560 --> 00:08:45,560

Ready, Wookiee?

121

00:08:45,560 --> 00:08:46,560

Wookiee.

122

00:08:48,560 --> 00:08:53,560

So can a waist belt really support you and your twin without serious injury?

123

00:08:53,560 --> 00:08:55,560

Yeah, a little bit more this way.

124

00:08:55,560 --> 00:09:04,560

To find out Adam and the Walking Carpet, go to work matching the exact layout from the silver screen scene.

125

00:09:06,560 --> 00:09:12,560

But when he gets a look at the 30-foot wide chasm, our stand-in sky walkers worried.

126

00:09:12,560 --> 00:09:17,560

So you want me to swing from here to there, just using that?

127

00:09:18,560 --> 00:09:20,560

I don't think so.

128

00:09:21,560 --> 00:09:23,560

This is more like it. Baby steps first.

129

00:09:24,560 --> 00:09:28,560

Jamie's concerns supporting the weight at his waist will lead to serious injury.

130

00:09:29,560 --> 00:09:36,560

So, with crash pads at a shorter swing distance closer to the ground, he can be lowered immediately if there's any danger.

131

00:09:37,560 --> 00:09:43,560

Normally, if you knew that you were going to take a fall or swing on a rope, you'd wear a harness that went between the legs.

132

00:09:43,560 --> 00:09:44,560

Do you want me to hop up?

133

00:09:44,560 --> 00:09:45,560

Okay.

134

00:09:45,560 --> 00:09:50,560

If I jumped off of a height on a rope on this thing, I'd be worried about breaking some ribs.

135

00:09:51,560 --> 00:09:52,560

Let's take it up.

136

00:09:52,560 --> 00:09:54,560

I guess we're going to have to try it to find out.

137

00:09:54,560 --> 00:10:01,560

Jamie is clearly uncomfortable with the belt bruising his ribs.

138

00:10:01,560 --> 00:10:03,560

Princess delivery, here you go.

139

00:10:03,560 --> 00:10:07,560

And with the added weight of a twin, will he even make it?

140

00:10:07,560 --> 00:10:09,560

She just turned around, I think.

141

00:10:13,560 --> 00:10:14,560

Oh, God.

142

00:10:14,560 --> 00:10:16,560

Remember, stormtroopers are shooting at you.

143

00:10:18,560 --> 00:10:19,560

You ready, girl?

144

00:10:28,560 --> 00:10:30,560

How are you doing, sport?

145

00:10:31,560 --> 00:10:34,560

I'm alright, but man, that hurts.

146

00:10:34,560 --> 00:10:37,560

Over the short distance, it was agony.

147

00:10:38,560 --> 00:10:42,560

Over the full 30 feet, it would be excruciating.

148

00:10:43,560 --> 00:10:45,560

But it can be done.

149

00:10:45,560 --> 00:10:53,560

So, when it comes to the belt, I have to admit it might be a plausible way to survive a 30-foot chasm swing.

150

00:10:53,560 --> 00:11:00,560

But it ain't a safe way, i.e. injury freeway, especially when one is holding onto precious cargo like a princess.

151

00:11:00,560 --> 00:11:05,560

With two marginally plausible calls, this myth is barely hanging on.

152

00:11:07,560 --> 00:11:10,560

We're going to need a different solution for the real swing.

153

00:11:12,560 --> 00:11:22,560

Can part three, the full swing with a real twin, rescue the result from the Darth Maul of defeat to find out its safety first.

154

00:11:23,560 --> 00:11:29,560

For this third and final test, I'm going to be swinging from 30 feet away over there to here.

155

00:11:29,560 --> 00:11:34,560

Of course, this time around, I'm going to be wearing a proper safety harness, which hopefully won't hurt me.

156

00:11:34,560 --> 00:11:38,560

And we put safety mats down in case something goes horribly wrong.

157

00:11:38,560 --> 00:11:40,560

Hopefully not.

158

00:11:41,560 --> 00:11:43,560

Now that is a harness.

159

00:11:43,560 --> 00:11:52,560

The belt, already proven to work in a pinch, literally, has been put aside in favor of a harness that will allow not-so-gen-eye Jamie

160

00:11:52,560 --> 00:11:55,560

to complete the final test pain-free.

161

00:11:55,560 --> 00:11:56,560

Addy, sir.

162

00:11:56,560 --> 00:12:00,560

All Adam and Jamie are missing is a real-life Leia look-alike.

163

00:12:03,560 --> 00:12:09,560

Dear Adam and Jamie, one of the things I love the most in the world is myth busters.

164

00:12:09,560 --> 00:12:16,560

It would be my dream come true if I could help you guys bust a Star Wars myth.

165

00:12:16,560 --> 00:12:18,560

Love, Sophia.

166

00:12:19,560 --> 00:12:21,560

What was that?

167

00:12:21,560 --> 00:12:25,560

That was our awkward transition to introduce our actress, Sophia Bush.

168

00:12:27,560 --> 00:12:34,560

Q star of NBC, Chicago PD and massive myth busters fan, Sophia Bush.

169

00:12:34,560 --> 00:12:36,560

Hello, gentlemen.

170

00:12:36,560 --> 00:12:39,560

Jamie, can I be your princess Leia?

171

00:12:39,560 --> 00:12:41,560

Aw, shucks.

172

00:12:42,560 --> 00:12:47,560

Now, Jamie, do you want to point out that Sophia came to play dressed part and everything?

173

00:12:47,560 --> 00:12:51,560

Don't you think you might want to put on something a little more appropriate?

174

00:12:51,560 --> 00:12:53,560

Fine.

175

00:12:59,560 --> 00:13:01,560

You look fantastic.

176

00:13:01,560 --> 00:13:04,560

Okay, well, let's get started.

177

00:13:04,560 --> 00:13:06,560

Coming up next on Myth Busters.

178

00:13:06,560 --> 00:13:09,560

We tackle myths from a movie you may have heard of.

179

00:13:09,560 --> 00:13:11,560

May the Force be with you.

180

00:13:13,560 --> 00:13:16,560

Yeah, I'm getting excited.

181

00:13:18,560 --> 00:13:19,560

Tauntaunguts.

182

00:13:19,560 --> 00:13:21,560

They're coming.

183

00:13:21,560 --> 00:13:23,560

Luke is going into the tauntaung.

184

00:13:23,560 --> 00:13:25,560

Ah, f***.

185

00:13:25,560 --> 00:13:28,560

Getting you thought myth busters couldn't get me cooler.

186

00:13:40,560 --> 00:13:44,560

In a redwood forest not so far far away,

187

00:13:44,560 --> 00:13:48,560

it's Carrie, Grant and Tori's turn to get their nerd on.

188

00:13:48,560 --> 00:13:52,560

Okay, guys, so this is the Star Wars special and we're in a forest.

189

00:13:52,560 --> 00:13:53,560

Guess where we are.

190

00:13:53,560 --> 00:13:55,560

So clearly we're on indoor.

191

00:13:55,560 --> 00:13:57,560

So we must be doing Ewok myth.

192

00:13:57,560 --> 00:13:58,560

That's exactly right.

193

00:13:58,560 --> 00:14:03,560

We're doing the scene from Return of the Jedi where the Ewoks attack the all terrain scout transport

194

00:14:03,560 --> 00:14:05,560

and smash it with two giant logs.

195

00:14:05,560 --> 00:14:12,560

We're basically going to see how much damage we can do to an armored vehicle using nothing but giant swinging logs.

196

00:14:12,560 --> 00:14:15,560

Essentially this is a physics myth about forces.

197

00:14:15,560 --> 00:14:16,560

Not the force?

198

00:14:16,560 --> 00:14:17,560

No, Grant.

199

00:14:17,560 --> 00:14:19,560

Use the science, Grant.

200

00:14:19,560 --> 00:14:20,560

Yep, yep.

201

00:14:20,560 --> 00:14:22,560

R2, roll the clip.

202

00:14:25,560 --> 00:14:28,560

It's a fictional battle scene from a fictional universe,

203

00:14:28,560 --> 00:14:31,560

but the hypothesis still stands.

204

00:14:31,560 --> 00:14:34,560

Could a primitive log swing weapon

205

00:14:34,560 --> 00:14:38,560

really take out a reinforced armored vehicle?

206

00:14:38,560 --> 00:14:40,560

Shouldn't we be in character?

207

00:14:43,560 --> 00:14:45,560

Uh, no.

208

00:14:47,560 --> 00:14:48,560

It's much better.

209

00:14:48,560 --> 00:14:49,560

That was totally the wrong layer.

210

00:14:49,560 --> 00:14:50,560

It's indoor layer.

211

00:14:50,560 --> 00:14:54,560

So it occurs to me that we're going to need two things for this,

212

00:14:54,560 --> 00:14:57,560

an AT-ST and a giant swinging log rig.

213

00:14:57,560 --> 00:15:00,560

The builds for this experiment are going to be insane.

214

00:15:00,560 --> 00:15:03,560

That log crushing rig looks gigantic.

215

00:15:04,560 --> 00:15:06,560

It's a very big log.

216

00:15:09,560 --> 00:15:11,560

Alright, sounds good.

217

00:15:11,560 --> 00:15:13,560

I guess we better get started.

218

00:15:14,560 --> 00:15:15,560

Back here on Earth,

219

00:15:15,560 --> 00:15:16,560

let's put it over there.

220

00:15:16,560 --> 00:15:21,560

The team prepares for one of the biggest builds it's ever attempted.

221

00:15:21,560 --> 00:15:23,560

Hey, R2. Who's your favorite myth buster?

222

00:15:25,560 --> 00:15:27,560

Aw, you're just saying that.

223

00:15:29,560 --> 00:15:32,560

They're recreating the massive forest of Endor.

224

00:15:32,560 --> 00:15:40,400

And the Ewoks in genius giant log swing.

225

00:15:40,400 --> 00:15:42,080

Why this abandoned field you ask?

226

00:15:42,080 --> 00:15:46,000

Why not something that looks more like the forced moon of Endor, the natural habitat

227

00:15:46,000 --> 00:15:47,000

of the Ewoks?

228

00:15:47,000 --> 00:15:52,280

Well, we don't actually know what's going to happen when the logs hit their target.

229

00:15:52,280 --> 00:15:55,840

So we need a safety perimeter, a large, wide open space.

230

00:15:55,840 --> 00:16:00,120

And that makes this the ideal location.

231

00:16:00,120 --> 00:16:03,520

The question is how are we going to suspend them in midair so that way we can actually

232

00:16:03,520 --> 00:16:06,560

pull them apart and let them crush our walker?

233

00:16:06,560 --> 00:16:10,720

Well, we're going to plant our own trees, or telephone poles at least, with the help

234

00:16:10,720 --> 00:16:12,200

of industrial power solutions.

235

00:16:12,200 --> 00:16:16,120

They're going to auger some holes, we're going to lower the poles into it and save a bunch

236

00:16:16,120 --> 00:16:17,120

of time.

237

00:16:17,120 --> 00:16:21,320

You know what I don't really care what your script says.

238

00:16:21,320 --> 00:16:24,480

I don't think slave Leia was in this scene.

239

00:16:24,480 --> 00:16:27,080

No.

240

00:16:27,080 --> 00:16:31,880

In the movie, the team has determined that the height of the chicken walker is 20 feet,

241

00:16:31,880 --> 00:16:37,760

the logs swing from 45 degrees, and what the relative size of those logs are.

242

00:16:37,760 --> 00:16:41,920

At 10 feet long and 5 feet in diameter, the answer is...

243

00:16:41,920 --> 00:16:42,920

Whoa!

244

00:16:42,920 --> 00:16:43,920

That's insane!

245

00:16:43,920 --> 00:16:44,920

Oh my God!

246

00:16:44,920 --> 00:16:45,920

Big!

247

00:16:45,920 --> 00:16:54,240

Now in the movie it looks like the Ewoks used redwood, but since it wasn't planted

248

00:16:54,240 --> 00:17:02,560

on Earth, we don't really know what kind of wood it was.

249

00:17:02,560 --> 00:17:06,680

So we decided here on Earth we wanted to go with the hardest wood we could find, which

250

00:17:06,680 --> 00:17:09,680

happens to be Eucalyptus.

251

00:17:09,680 --> 00:17:15,800

Weighing in at 10,000 pounds each, the guys get busy cross bracing and cable anchoring

252

00:17:15,800 --> 00:17:17,800

the structure to support them.

253

00:17:17,800 --> 00:17:18,800

That's 45?

254

00:17:18,800 --> 00:17:23,080

I mean, that's 45-ish.

255

00:17:23,080 --> 00:17:26,640

With that done, it's time to log and roll.

256

00:17:26,640 --> 00:17:29,080

Tori and I are putting the logs into place.

257

00:17:29,080 --> 00:17:38,520

Now how do you move a 10,000-pound log when your forklift only has a 9,000-pound capacity?

258

00:17:38,520 --> 00:17:40,520

Yee-haw!

259

00:17:40,520 --> 00:17:43,720

Log rodeo!

260

00:17:43,720 --> 00:17:44,720

Carefully.

261

00:17:44,720 --> 00:17:52,160

Out of my way, people!

262

00:17:52,160 --> 00:17:57,720

Next up, the mission critical operation of craning the logs into position.

263

00:17:57,720 --> 00:18:01,680

Now it's going to be very tricky because as you can see the structure has a lot of bracing

264

00:18:01,680 --> 00:18:06,680

and it's going to be difficult to actually get the logs inside of it.

265

00:18:06,680 --> 00:18:07,680

That's terrifying.

266

00:18:07,680 --> 00:18:13,440

Now remember, these things are 10,000 pounds and there's not a lot of room for mistakes.

267

00:18:13,440 --> 00:18:15,880

That's a lot of stretch right there.

268

00:18:15,880 --> 00:18:20,120

I mean, if this 10,000-pound goes crashing to one side or the other, the whole thing

269

00:18:20,120 --> 00:18:21,120

could come down.

270

00:18:21,120 --> 00:18:22,880

Okay, well, it's holding the log up.

271

00:18:22,880 --> 00:18:25,160

That's good.

272

00:18:25,160 --> 00:18:26,400

Round two.

273

00:18:26,400 --> 00:18:28,840

Looking good.

274

00:18:28,840 --> 00:18:29,840

And trunk two.

275

00:18:29,840 --> 00:18:30,840

Whoa.

276

00:18:30,840 --> 00:18:33,840

Why is that spinning like that?

277

00:18:33,840 --> 00:18:35,360

Holy crap.

278

00:18:35,360 --> 00:18:36,360

All right.

279

00:18:36,360 --> 00:18:37,360

Is nervously...

280

00:18:37,360 --> 00:18:38,760

Keep coming.

281

00:18:38,760 --> 00:18:40,560

...maneuvered into position.

282

00:18:40,560 --> 00:18:42,480

And despite the structure protesting...

283

00:18:42,480 --> 00:18:48,040

Can you hear the cracking?

284

00:18:48,040 --> 00:18:52,320

It's raised and supported.

285

00:18:52,320 --> 00:18:54,000

It seems to be holding.

286

00:18:54,000 --> 00:18:55,000

That's pretty gorgeous.

287

00:18:55,000 --> 00:18:56,000

Okay, you were good.

288

00:18:56,000 --> 00:19:02,000

As far as stressful work days go, this is reasonably stressful.

289

00:19:02,000 --> 00:19:04,840

And with the relief comes the anticipation.

290

00:19:04,840 --> 00:19:06,840

I'm getting excited.

291

00:19:06,840 --> 00:19:09,240

Is this so cool?

292

00:19:09,240 --> 00:19:12,960

Now the question is, will the rig actually rock?

293

00:19:12,960 --> 00:19:17,720

To find out, they're starting out with a test swing on a test vehicle.

294

00:19:17,720 --> 00:19:21,720

We just want to make sure that our logs are lined up, that our rig is working, and it's

295

00:19:21,720 --> 00:19:25,080

going to be a lot of fun to see this thing crush.

296

00:19:25,080 --> 00:19:26,080

God, that's right.

297

00:19:26,080 --> 00:19:27,080

Look.

298

00:19:27,080 --> 00:19:29,360

You're the fourth.

299

00:19:29,360 --> 00:19:34,840

Once all the pieces are in place, their incredible achievement dawns on Tori.

300

00:19:34,840 --> 00:19:35,840

Look at this.

301

00:19:35,840 --> 00:19:37,000

I mean, how surreal is this situation?

302

00:19:37,000 --> 00:19:41,640

I mean, this looks more like a Burning Man installation than a Mythbusters experiment.

303

00:19:41,640 --> 00:19:46,040

But the crazy thing is, we are actually replicating a Star Wars scene.

304

00:19:46,520 --> 00:19:51,000

So in the movie, the Ewoks cut one log, then they cut the other log.

305

00:19:51,000 --> 00:19:54,480

Here in the real world, we're going to release both logs simultaneously.

306

00:19:54,480 --> 00:19:57,640

Now, how much energy are we talking about here?

307

00:19:57,640 --> 00:20:00,760

Well, each log weighs 10,000 pounds.

308

00:20:00,760 --> 00:20:03,760

We raise them up to approximately 45 degrees.

309

00:20:03,760 --> 00:20:05,760

Get your hold there, Tori.

310

00:20:05,760 --> 00:20:08,360

Let's have you boom in.

311

00:20:08,360 --> 00:20:09,360

Back to the envelope.

312

00:20:09,360 --> 00:20:12,720

Matt says that that's upwards of a million joules.

313

00:20:16,040 --> 00:20:23,040

You know, the structure is making a lot of noise right now.

314

00:20:23,040 --> 00:20:27,480

This is looking crazy.

315

00:20:27,480 --> 00:20:34,040

And oh yeah, that's each log, which means two million joules of energy hitting that

316

00:20:34,040 --> 00:20:35,040

van.

317

00:20:35,040 --> 00:20:44,360

I don't know if we're going to be able to get it to 45 degrees.

318

00:20:44,360 --> 00:20:46,360

I don't think it's going to hold.

319

00:20:46,360 --> 00:20:47,360

Yeah, I agree.

320

00:20:47,360 --> 00:20:49,640

This is not looking that good.

321

00:20:49,640 --> 00:20:56,560

With neither log close to 45 degrees and the rig in real danger of collapse, the team decides

322

00:20:56,560 --> 00:20:59,040

to cut their losses and let loose.

323

00:20:59,040 --> 00:21:00,760

Is that what we call right here?

324

00:21:00,760 --> 00:21:02,840

Okay, I'm getting out of here.

325

00:21:02,840 --> 00:21:10,360

In three, two, one.

326

00:21:10,360 --> 00:21:14,320

Jamie has slipped into something a little more uncomfortable.

327

00:21:14,320 --> 00:21:17,480

You look fantastic.

328

00:21:17,480 --> 00:21:22,240

To find out if the Star Wars swing is possible.

329

00:21:22,240 --> 00:21:29,040

With the rip breaking belt benched in favor of a safety first harness, can he hang on to

330

00:21:29,040 --> 00:21:32,000

Sophia while crossing the chasm?

331

00:21:32,000 --> 00:21:34,960

To check the rig, Jamie first flies solo.

332

00:21:34,960 --> 00:21:42,840

Three, two, one.

333

00:21:42,840 --> 00:21:45,720

And then prepares himself for the real deal.

334

00:21:45,720 --> 00:21:46,720

Nicely done.

335

00:21:46,720 --> 00:21:47,720

Well done.

336

00:21:47,720 --> 00:21:51,280

With a dummy demo.

337

00:21:51,280 --> 00:21:55,880

Sophia, this is what it's going to sort of be like when you're up here with me.

338

00:21:55,880 --> 00:22:00,280

So here we go.

339

00:22:00,280 --> 00:22:01,280

Oops.

340

00:22:01,280 --> 00:22:06,280

It's going to be like that?

341

00:22:06,280 --> 00:22:08,280

No, I'm really excited.

342

00:22:08,280 --> 00:22:10,280

It won't be like that.

343

00:22:10,280 --> 00:22:12,280

You'll be able to hold on.

344

00:22:12,720 --> 00:22:14,720

Over there.

345

00:22:14,720 --> 00:22:15,720

Okay.

346

00:22:15,720 --> 00:22:17,720

Nice work, Jamie.

347

00:22:17,720 --> 00:22:23,160

I am confident that Jamie's not going to drop me.

348

00:22:23,160 --> 00:22:25,440

So I'm excited just to get up there and do it.

349

00:22:25,440 --> 00:22:26,960

That is exactly the right attitude.

350

00:22:26,960 --> 00:22:28,400

I think you're going to have a lot of fun.

351

00:22:28,400 --> 00:22:29,400

Me too.

352

00:22:29,400 --> 00:22:33,480

And you know, if not, I'm sure my buttons will save me.

353

00:22:33,480 --> 00:22:35,200

Both arms are around like that.

354

00:22:35,200 --> 00:22:37,520

And so it comes down to this.

355

00:22:37,520 --> 00:22:39,200

How are you holding the rope?

356

00:22:39,200 --> 00:22:41,000

I'm holding it with this hand.

357

00:22:41,440 --> 00:22:45,200

With the first two pieces of the puzzle already proven plausible.

358

00:22:45,200 --> 00:22:48,200

I've got to come down.

359

00:22:48,200 --> 00:22:50,200

Coming in.

360

00:22:50,200 --> 00:22:56,720

Jamie's expertly strapped in for the third and final test, the twin toe.

361

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

Stormtroopers ready.

362

00:23:06,000 --> 00:23:08,680

All right, Luke and Leia, it's up to you.

363

00:23:08,680 --> 00:23:10,680

Get in the character and make this happen on your mark.

364

00:23:16,680 --> 00:23:17,680

They're coming.

365

00:23:17,680 --> 00:23:19,680

We've got to get out of here.

366

00:23:39,680 --> 00:23:41,680

You totally did it.

367

00:23:41,680 --> 00:23:42,680

Excellent.

368

00:23:42,680 --> 00:23:43,680

Well done.

369

00:23:50,680 --> 00:23:52,680

Fite the empire.

370

00:23:52,680 --> 00:23:57,680

After all of this breakdown and all of this planning that could not have gone better.

371

00:23:59,680 --> 00:24:01,680

Very satisfying.

372

00:24:01,680 --> 00:24:03,680

Every bit as much fun as you'd think.

373

00:24:05,680 --> 00:24:07,680

You totally made it.

374

00:24:08,680 --> 00:24:09,680

Well done.

375

00:24:09,680 --> 00:24:11,680

That was awesome.

376

00:24:11,680 --> 00:24:12,680

So fun.

377

00:24:12,680 --> 00:24:13,680

Can we do it again?

378

00:24:13,680 --> 00:24:14,680

Fite the empire.

379

00:24:22,680 --> 00:24:29,680

Well, we pretty much nailed that, but I got to say most of the stuff we're testing here has been pretty borderline.

380

00:24:29,680 --> 00:24:34,680

If it's a life and death situation, sure, you can throw a grappling hook,

381

00:24:34,680 --> 00:24:37,680

but are you going to be able to get it in one go?

382

00:24:37,680 --> 00:24:43,680

And yes, you can swing on a cable, but tying it onto your belt and carrying another person.

383

00:24:43,680 --> 00:24:48,680

Life and death situation, sure, but it's all pretty dodgy really.

384

00:24:53,680 --> 00:24:56,680

All right, dudes, we don't have much time because the empire is coming.

385

00:24:56,680 --> 00:24:57,680

How do you want to call this one?

386

00:24:57,680 --> 00:24:58,680

Sophia.

387

00:24:58,680 --> 00:24:59,680

We made it across.

388

00:24:59,680 --> 00:25:00,680

I say plausible.

389

00:25:00,680 --> 00:25:01,680

Jamie.

390

00:25:01,680 --> 00:25:06,680

You know, it's clearly possible, but that makes me want to say it's confirmed.

391

00:25:06,680 --> 00:25:07,680

Okay.

392

00:25:07,680 --> 00:25:08,680

Okay.

393

00:25:08,680 --> 00:25:09,680

Possible.

394

00:25:12,680 --> 00:25:13,680

Got that gravel.

395

00:25:13,680 --> 00:25:14,680

Got that gravel.

396

00:25:14,680 --> 00:25:33,680

Coming up on Mythbusters, we find out if Luke really could have survived a night on Hoth inside a tauntaun.

397

00:25:33,680 --> 00:25:36,680

It's a Star Wars Mythbusters, baby.

398

00:25:37,680 --> 00:25:42,680

Are you ready for the next one?

399

00:25:42,680 --> 00:25:43,680

I guess.

400

00:25:43,680 --> 00:25:47,680

The myth we've got comes from the Star Wars movie, The Empire Strikes Back.

401

00:25:47,680 --> 00:25:48,680

Luke!

402

00:25:48,680 --> 00:25:54,680

Darkness is falling on the ice planet of Hoth.

403

00:25:54,680 --> 00:25:55,680

Don't do this, Luke.

404

00:25:55,680 --> 00:25:59,680

Han has ridden the beast called a tauntaun to find Luke.

405

00:25:59,680 --> 00:26:05,680

Han slices open the belly of the tauntaun and puts Luke inside and says...

406

00:26:05,680 --> 00:26:06,680

This may smell bad, kid.

407

00:26:06,680 --> 00:26:10,680

You know, it'll keep you warm until I get the shelter up.

408

00:26:10,680 --> 00:26:16,680

The question for us to answer is did Han make the right cold weather survival call for Luke?

409

00:26:16,680 --> 00:26:17,680

Great.

410

00:26:17,680 --> 00:26:19,680

Let's go to Hoth and test it.

411

00:26:19,680 --> 00:26:20,680

Cool.

412

00:26:20,680 --> 00:26:22,680

I thought they smelled bad.

413

00:26:22,680 --> 00:26:24,680

I thought they smelled bad.

414

00:26:24,680 --> 00:26:25,680

Jamie's got a point.

415

00:26:25,680 --> 00:26:31,680

To bring the myth back to Earth, Adam and Jamie will eventually replicate Hoth's inhospitable

416

00:26:31,680 --> 00:26:39,680

environment and find a way to safely test human hypothermia while neck deep in internal

417

00:26:39,680 --> 00:26:40,680

organs.

418

00:26:40,680 --> 00:26:41,680

Here comes the spleen.

419

00:26:41,680 --> 00:26:46,680

But the first task is to make a tauntaun to house those guts.

420

00:26:46,680 --> 00:26:53,680

And barking on a build like a eight foot tall tauntaun in two days with one hand is kind

421

00:26:53,680 --> 00:26:56,680

of like a circus performer putting his head in the lion's mouth.

422

00:26:56,680 --> 00:26:59,680

He's pretty sure it's going to go okay.

423

00:26:59,680 --> 00:27:03,680

From using the grid system to transfer the image of the tauntaun to this block of foam,

424

00:27:03,680 --> 00:27:05,680

I couldn't even lift by myself.

425

00:27:05,680 --> 00:27:09,680

The first cut contrary to popular belief is not the deepest.

426

00:27:09,680 --> 00:27:14,680

To the fact that just cutting out the basic shape of the tauntaun in that block of foam

427

00:27:14,680 --> 00:27:20,680

took two hours and left me sweaty and spent and exhausted.

428

00:27:20,680 --> 00:27:23,680

Oh, get a big piece of foam, I said.

429

00:27:23,680 --> 00:27:26,680

I'll carve a tauntaun out of it, I said.

430

00:27:26,680 --> 00:27:31,680

Luckily, Jamie gave me advice about when he used to slice whale blubber off the minky

431

00:27:31,680 --> 00:27:34,680

whales in the 1870s.

432

00:27:34,680 --> 00:27:36,680

There we go.

433

00:27:36,680 --> 00:27:41,680

Once I finally got my foam tool out and started cutting the contours of the tauntaun, the

434

00:27:41,680 --> 00:27:43,680

shape came in pretty good.

435

00:27:43,680 --> 00:27:46,680

I'm going to go ahead and cut the foam.

436

00:27:46,680 --> 00:27:49,680

I'm going to go ahead and cut the foam.

437

00:27:49,680 --> 00:27:52,680

I'm going to go ahead and cut the foam.

438

00:27:52,680 --> 00:27:55,680

I'm going to pull out and started cutting the contours of the tauntaun.

439

00:27:55,680 --> 00:27:59,680

The shape came in to being much faster than I expected.

440

00:27:59,680 --> 00:28:02,680

Oh, right, you've been wondering why I'm wearing a splint.

441

00:28:02,680 --> 00:28:08,680

It's because I was moving a piece of safety equipment and it fell on my hand and crushed the top of my second

442

00:28:08,680 --> 00:28:09,680

metacarpal.

443

00:28:09,680 --> 00:28:12,680

Ow, and ironic.

444

00:28:12,680 --> 00:28:14,680

All right.

445

00:28:14,680 --> 00:28:20,680

My tauntaun is totally complete in terms of being sculpted, but he needs an outer layer of skin and fur.

446

00:28:20,680 --> 00:28:22,680

And that's where this comes in.

447

00:28:22,680 --> 00:28:24,680

Time to fur you up, dude.

448

00:28:24,680 --> 00:28:30,680

I'm making literally the stuffed animal I dreamed about when I was 12 years old.

449

00:28:30,680 --> 00:28:32,680

You're a good boy.

450

00:28:32,680 --> 00:28:34,680

Monsters are such interesting people.

451

00:28:34,680 --> 00:28:36,680

Fuck.

452

00:28:36,680 --> 00:28:38,680

There we go.

453

00:28:38,680 --> 00:28:40,680

He's no longer homeless.

454

00:28:40,680 --> 00:28:45,680

Meanwhile, Jamie's ensuring he's not gutless either.

455

00:28:46,680 --> 00:28:54,680

Tantans are made up of all sorts of stuff, but we're interested in the gut cavity because that's where Luke is going to be spending the night.

456

00:28:54,680 --> 00:29:00,680

So I've got to make a whole bunch of disgusting organs and viscera.

457

00:29:00,680 --> 00:29:01,680

Yeah, baby.

458

00:29:01,680 --> 00:29:06,680

And that will conduct heat the same way it would on the planet Hoth.

459

00:29:06,680 --> 00:29:11,680

QR resident mad scientist.

460

00:29:11,680 --> 00:29:19,680

Using a melt and mold plastic, Jamie searches for the perfect recipe for the perfect fake organ lining.

461

00:29:19,680 --> 00:29:24,680

That right there is the tauntaun appendix.

462

00:29:27,680 --> 00:29:30,680

But it takes several hours of trial and error.

463

00:29:30,680 --> 00:29:33,680

Oh, it's ripping.

464

00:29:33,680 --> 00:29:36,680

Before Dr. Frankenheidemann.

465

00:29:36,680 --> 00:29:41,680

We have such fun.

466

00:29:41,680 --> 00:29:45,680

It's on the right formula and manufacturing technique.

467

00:29:45,680 --> 00:29:48,680

That's what I'm talking about.

468

00:29:48,680 --> 00:29:56,680

This kind of experimentation is pretty much the only way you get to this sort of result.

469

00:29:56,680 --> 00:29:57,680

Tauntaun guts.

470

00:29:57,680 --> 00:30:02,680

When we fill this with some kind of goopy stuff, it's going to look totally organic.

471

00:30:02,680 --> 00:30:06,680

It's not just the looks.

472

00:30:06,680 --> 00:30:20,680

When filled, warmed and placed in the body cavity, Jamie's tauntaun intestines will have the same thermal conductive properties of internal organs.

473

00:30:20,680 --> 00:30:31,680

I have to admit that when I was 13, my fantasies about being inside the Star Wars universe, I have to tell you it never occurred to me that I would be operating on a tauntaun.

474

00:30:31,680 --> 00:30:36,680

The cavity is set up like a nice neat envelope.

475

00:30:36,680 --> 00:30:41,680

And all we need now is a stand-in Luke Skywalker, hopefully one that can freeze to death.

476

00:30:41,680 --> 00:30:42,680

Let's see.

477

00:30:42,680 --> 00:30:43,680

Ding!

478

00:30:43,680 --> 00:30:44,680

Found it!

479

00:30:44,680 --> 00:30:48,680

Remember this guy we built for the Titanic myth?

480

00:30:48,680 --> 00:30:50,680

Look at you, you handsome devil.

481

00:30:50,680 --> 00:31:00,680

He's got over a quarter mile of copper tubing veins plus a 300 watt heater that keeps his body temperature at exactly 98.6.

482

00:31:00,680 --> 00:31:09,680

All we got to do is dress him up in Luke's costume, stuff him in our finished tauntaun inside of some kind of freezer we haven't figured out how to build yet, and we get to test the myth.

483

00:31:09,680 --> 00:31:12,680

Go! Go!

484

00:31:17,680 --> 00:31:21,680

Now I remember the first time I saw Star Wars as a little kid.

485

00:31:21,680 --> 00:31:24,680

In the moment I saw that movie, my whole life was changed.

486

00:31:24,680 --> 00:31:27,680

I was seven years old when Star Wars came out in 1977.

487

00:31:27,680 --> 00:31:39,680

I waited in line outside the Man's Chinese Theater in Hollywood with my mom, and I even grew up to work on the Star Wars series as an adult at Industrial Light & Magic in the model shop along with Adam and Tori.

488

00:31:39,680 --> 00:31:44,680

I mean it was like a dream come true, and now to be here on Mythbusters testing myths from the movie?

489

00:31:44,680 --> 00:31:46,680

It's like blows my mind.

490

00:31:46,680 --> 00:31:51,680

This is my personal Han Solo costume, so yeah, you could say I'm a fan.

491

00:31:51,680 --> 00:31:54,680

The only thing that could be better is having a real lightsaber.

492

00:31:54,680 --> 00:31:56,680

Pssst! Ow!

493

00:31:59,680 --> 00:32:01,680

Meanwhile, back at the trial run.

494

00:32:01,680 --> 00:32:02,680

Stop that.

495

00:32:02,680 --> 00:32:04,680

Okay, get out of here.

496

00:32:04,680 --> 00:32:08,680

The chicken walker crusher is cracking under the strain.

497

00:32:08,680 --> 00:32:16,680

Some way short of the full 45 degrees, it's let loose now or risk a catastrophic collapse.

498

00:32:16,680 --> 00:32:20,680

Alright, this is giant log crusher.

499

00:32:20,680 --> 00:32:22,680

Let's go with the concept. Take it away, Grant.

500

00:32:22,680 --> 00:32:26,680

In three, two, one.

501

00:32:31,680 --> 00:32:33,680

Wow!

502

00:32:34,680 --> 00:32:42,680

They may not have reached the ideal swing height, but there was an encouraging amount of destruction.

503

00:32:44,680 --> 00:32:47,680

That was awesome!

504

00:32:51,680 --> 00:32:55,680

I would call that a success. The Ewok weapon seemed to work.

505

00:32:55,680 --> 00:33:00,680

However, I think if we put the armored vehicle up there...

506

00:33:00,680 --> 00:33:03,680

Ewoks are squishy when you run them over.

507

00:33:03,680 --> 00:33:06,680

We are not going to see the same type of damage.

508

00:33:06,680 --> 00:33:10,680

This thing feels indestructible.

509

00:33:10,680 --> 00:33:18,680

This big badass truck right here is our Mythbusters answer to the light armored vehicle that scouted through the Ewok forest.

510

00:33:18,680 --> 00:33:20,680

That's better.

511

00:33:21,680 --> 00:33:24,680

I'm really curious to see if the Ewoks will take this down.

512

00:33:24,680 --> 00:33:28,680

To find out, they need to seriously reconfigure the rig.

513

00:33:28,680 --> 00:33:32,680

And the first part of the solution is more steel for more strength.

514

00:33:32,680 --> 00:33:34,680

Now we are moving on to the armored vehicle.

515

00:33:34,680 --> 00:33:39,680

We're going to place that on the ground and lower the logs to the same level.

516

00:33:39,680 --> 00:33:46,680

That's going to do. It's going to give us more length on the cable, which in turn means we'll be able to lift those logs higher.

517

00:33:46,680 --> 00:33:50,680

And so when we release them, it's going to give us a lot more energy.

518

00:33:50,680 --> 00:33:52,680

Say goodbye to the armored truck.

519

00:33:52,680 --> 00:33:56,680

The length on cable should ensure they get to the requisite 45 degrees.

520

00:33:56,680 --> 00:34:00,680

But with structural stability, far from certain...

521

00:34:02,680 --> 00:34:04,680

The guys retreat to safety.

522

00:34:04,680 --> 00:34:06,680

Okay guys, go ahead and pull the logs up.

523

00:34:06,680 --> 00:34:11,680

And while the logs are winched into position, Grant will answer your burning question.

524

00:34:11,680 --> 00:34:17,680

Okay, so you're saying, now wait a minute, your vehicle's not at the same height as the ATST.

525

00:34:18,680 --> 00:34:21,680

Well, just remember what this myth is about.

526

00:34:21,680 --> 00:34:25,680

It's about two giant logs crushing an armored vehicle.

527

00:34:25,680 --> 00:34:28,680

And that can happen whether it's in the air or on the ground.

528

00:34:28,680 --> 00:34:32,680

Despite the incredible forces at play, the swing is holding.

529

00:34:32,680 --> 00:34:35,680

And with the logs in their start position...

530

00:34:35,680 --> 00:34:36,680

Alright, take it away.

531

00:34:36,680 --> 00:34:44,680

It's time to find out if the Ewoks rope and stick trick could have really crushed the steely mechanical might of the evil empire.

532

00:34:45,680 --> 00:34:48,680

This is log crusher against chicken walker.

533

00:34:48,680 --> 00:34:49,680

Actually, armored truck.

534

00:34:50,680 --> 00:34:53,680

In three, two, one...

535

00:34:55,680 --> 00:34:57,680

Oh!

536

00:34:57,680 --> 00:34:59,680

Wow, that was so cool!

537

00:34:59,680 --> 00:35:01,680

That was beautiful!

538

00:35:01,680 --> 00:35:02,680

Well, there's your answer.

539

00:35:03,680 --> 00:35:04,680

Ask...

540

00:35:05,680 --> 00:35:06,680

Star Wars!

541

00:35:07,680 --> 00:35:08,680

And answer.

542

00:35:11,680 --> 00:35:13,680

I really think we're making all those little Ewoks proud.

543

00:35:20,680 --> 00:35:23,680

So we are not testing whether or not Ewoks could build this weapon.

544

00:35:23,680 --> 00:35:24,680

We're assuming they could.

545

00:35:24,680 --> 00:35:27,680

What we're testing is whether or not it's an effective weapon.

546

00:35:27,680 --> 00:35:29,680

And we've proven that it is.

547

00:35:29,680 --> 00:35:33,680

However, you'd have to be the luckiest little Ewok to make sure that one of those chicken walkers

548

00:35:33,680 --> 00:35:37,680

was at the right height and it was at the right spot when the two logs came together.

549

00:35:37,680 --> 00:35:40,680

To me, that is a one in a million shot.

550

00:35:41,680 --> 00:35:42,680

Unlikely...

551

00:35:43,680 --> 00:35:44,680

But possible.

552

00:35:45,680 --> 00:35:46,680

That made this plausible.

553

00:35:46,680 --> 00:35:48,680

But they're not done yet.

554

00:35:48,680 --> 00:35:52,680

Now we're just looking for some gratuitous crashing and smashing.

555

00:35:52,680 --> 00:35:56,680

So, we're gonna add a stormtrooper to the cab.

556

00:35:56,680 --> 00:35:58,680

Don't worry about those Ewoks.

557

00:35:58,680 --> 00:35:59,680

You're in an armored vehicle.

558

00:35:59,680 --> 00:36:01,680

You got nothing to worry about.

559

00:36:01,680 --> 00:36:04,680

Push it back and smash it with our log pressure.

560

00:36:04,680 --> 00:36:05,680

Why?

561

00:36:05,680 --> 00:36:07,680

Just for the hell of it.

562

00:36:08,680 --> 00:36:09,680

Fire!

563

00:36:14,680 --> 00:36:16,680

Oh, that's gonna be a headache.

564

00:36:19,680 --> 00:36:22,680

Well, I guess it's a good day for the rebels on Indoor.

565

00:36:22,680 --> 00:36:23,680

Let's go home.

566

00:36:32,680 --> 00:36:43,680

You know, there wasn't a lot of really great female sci-fi characters when I was growing up except Princess Leia.

567

00:36:43,680 --> 00:36:46,680

Not only was she a princess, but she was also a warrior.

568

00:36:46,680 --> 00:36:47,680

I really like that.

569

00:36:47,680 --> 00:36:49,680

My all-time favorite is Bubba Fett.

570

00:36:49,680 --> 00:36:55,680

Because he's mysterious, he works alone, he's a bad mother, and he always gets his target.

571

00:36:56,680 --> 00:36:57,680

I can relate to that.

572

00:37:02,680 --> 00:37:06,680

Remember kids, Hoth is not a tourist destination.

573

00:37:06,680 --> 00:37:08,680

It is a hostile ice planet.

574

00:37:08,680 --> 00:37:11,680

Don't try anything you're about to see at home.

575

00:37:11,680 --> 00:37:13,680

No, we're what you call experts.

576

00:37:23,680 --> 00:37:26,680

Adam and Jamie are testing the Tauntaun sleeping bag.

577

00:37:26,680 --> 00:37:33,680

They have a Tauntaun, the intestines, and they've resurrected hypothermia testee Thermoboy.

578

00:37:33,680 --> 00:37:35,680

Look at you, you handsome devil.

579

00:37:35,680 --> 00:37:38,680

Now they head for Hoth.

580

00:37:46,680 --> 00:37:48,680

Welcome to the ice planet of Hoth.

581

00:37:49,680 --> 00:37:54,680

Okay, it's not Hoth, it's her refrigerator storage facility for food, but...

582

00:37:56,680 --> 00:38:00,680

It's perfect for us to recreate the conditions on Hoth.

583

00:38:01,680 --> 00:38:02,680

This is low budget.

584

00:38:02,680 --> 00:38:04,680

Oh, we need this little set dressing.

585

00:38:04,680 --> 00:38:07,680

And temperatures way, way below freezing.

586

00:38:07,680 --> 00:38:12,680

And for that, they're building a dry ice box inside the already icy facility.

587

00:38:12,680 --> 00:38:14,680

He's a big beast.

588

00:38:16,680 --> 00:38:19,680

I'm standing on a four-inch thick slab of insulating foam.

589

00:38:19,680 --> 00:38:25,680

On top of this, we're going to place, like, paving stones, bricks of dry ice.

590

00:38:26,680 --> 00:38:28,680

And then the Tauntaun goes on top of that.

591

00:38:28,680 --> 00:38:34,680

Now, in order to hold that cold in, we're going to box the Tauntaun in for the duration of the experiment.

592

00:38:34,680 --> 00:38:37,680

I think that worked out actually quite nicely.

593

00:38:37,680 --> 00:38:44,680

That box is going to cover over him and hold that cold, and this foam floor will keep that cold from getting away.

594

00:38:44,680 --> 00:38:50,680

Great thing is about dry ice is, if you feel a little overly warm in your winter suit, just put one of these inside.

595

00:38:50,680 --> 00:38:51,680

Regulate your own temp.

596

00:38:51,680 --> 00:38:53,680

Woo! Okay, that was a joke.

597

00:38:53,680 --> 00:38:54,680

I was kidding.

598

00:38:54,680 --> 00:38:55,680

Ow.

599

00:38:55,680 --> 00:38:59,680

So clearly we're going to a lot of trouble to make it quite cold in our freezer.

600

00:38:59,680 --> 00:39:00,680

But what's our goal?

601

00:39:00,680 --> 00:39:02,680

What is the temperature on Hoth?

602

00:39:02,680 --> 00:39:05,680

No one in the movie states the actual temperature.

603

00:39:05,680 --> 00:39:07,680

So we looked it up on Wikipedia.

604

00:39:07,680 --> 00:39:12,680

And Wikipedia told us that the temperature on Hoth is between negative 30 and negative 60 degrees Celsius.

605

00:39:12,680 --> 00:39:17,680

But that figure comes from a role-playing game released 10 years after the Star Wars films.

606

00:39:17,680 --> 00:39:23,680

Seems a little arbitrary, but for our purposes, to remain canon with the Star Wars universe,

607

00:39:23,680 --> 00:39:28,680

as long as our freezer gets between negative 30 and negative 60, we're happy.

608

00:39:28,680 --> 00:39:29,680

And we'll be cold.

609

00:39:29,680 --> 00:39:31,680

That's the outside environment.

610

00:39:31,680 --> 00:39:34,680

Now, for the inside of the insides.

611

00:39:34,680 --> 00:39:36,680

It looks like tauntaun gut blue to me.

612

00:39:36,680 --> 00:39:41,680

When dyed blue, sodium polyacrylate is a suitably gross filling.

613

00:39:41,680 --> 00:39:43,680

I've had mornings like this.

614

00:39:43,680 --> 00:39:44,680

Oh!

615

00:39:44,680 --> 00:39:46,680

For the tauntaun intestines.

616

00:39:46,680 --> 00:39:48,680

Well, the pumps work in great.

617

00:39:48,680 --> 00:39:51,680

I think this is our method for filling our guts.

618

00:39:51,680 --> 00:39:52,680

Brilliant.

619

00:39:52,680 --> 00:39:54,680

And disgusting.

620

00:39:54,680 --> 00:39:55,680

Oh!

621

00:39:55,680 --> 00:40:00,680

Man, you got it all over your feet.

622

00:40:00,680 --> 00:40:02,680

Once filled...

623

00:40:02,680 --> 00:40:05,680

Looks like he needs a little more fiber.

624

00:40:05,680 --> 00:40:10,680

They'll be warmed in a bath to 99 degrees Fahrenheit.

625

00:40:10,680 --> 00:40:15,680

The body temperature of a recently dead arctic animal.

626

00:40:15,680 --> 00:40:21,680

I'm just going to zip tie this to this and then we'll massage the guts through the intestines as we go.

627

00:40:21,680 --> 00:40:23,680

Oh yeah.

628

00:40:23,680 --> 00:40:25,680

Oh yeah.

629

00:40:25,680 --> 00:40:30,680

That's just fantastic.

630

00:40:30,680 --> 00:40:33,680

Can I make guts or what?

631

00:40:33,680 --> 00:40:38,680

Uh oh, uh oh, uh oh.

632

00:40:38,680 --> 00:40:41,680

This thing keeps farting on me.

633

00:40:41,680 --> 00:40:43,680

Tauntaun polyps.

634

00:40:43,680 --> 00:40:45,680

It's all fun and guts.

635

00:40:45,680 --> 00:40:49,680

Perfect.

636

00:40:49,680 --> 00:40:53,680

Until someone perforates a bowel.

637

00:40:53,680 --> 00:41:00,680

Well, we had everything set and beautiful last night with the guts come in this morning and there's a problem.

638

00:41:00,680 --> 00:41:05,680

The problem is that the zip ties we used to close up the ends of all of our guts

639

00:41:05,680 --> 00:41:10,680

ended up working their way through the vinyl and tearing it.

640

00:41:10,680 --> 00:41:14,680

So every single one of our guts is evacuating itself.

641

00:41:14,680 --> 00:41:16,680

That one's really bad.

642

00:41:16,680 --> 00:41:21,680

So I'm now attempting to empty them all out, mix up a bunch more stuff to go in this

643

00:41:21,680 --> 00:41:24,680

and remake them in a very, very short period of time.

644

00:41:24,680 --> 00:41:27,680

It is now of the essence.

645

00:41:27,680 --> 00:41:31,680

With the setback, it's now a race to get set up.

646

00:41:31,680 --> 00:41:38,680

First into the bath is Thermoboy, since he needs to reach body temperature before the experiment can begin.

647

00:41:38,680 --> 00:41:40,680

Excellent.

648

00:41:40,680 --> 00:41:43,680

The water's like a nice, really hot bath.

649

00:41:43,680 --> 00:41:46,680

But there's no end to the guts problem.

650

00:41:46,680 --> 00:41:49,680

There's no ends on any of these.

651

00:41:49,680 --> 00:41:52,680

The retied tubes have somehow untied themselves.

652

00:41:52,680 --> 00:41:55,680

The heat is changing things.

653

00:41:55,680 --> 00:42:02,680

It's just bizarre. The stuff seems so resilient and then you put it in water and it's like falling to pieces.

654

00:42:02,680 --> 00:42:04,680

Um...

655

00:42:04,680 --> 00:42:07,680

This has been a very frustrating morning.

656

00:42:07,680 --> 00:42:11,680

Not as frustrating as being on Hoth, but very.

657

00:42:11,680 --> 00:42:19,680

Undeterred, Jamie laboriously reties the organs while Adam plums in Thermoboy's heart pump and heater.

658

00:42:19,680 --> 00:42:23,680

When this gets to 99, we're ready to start this test.

659

00:42:23,680 --> 00:42:26,680

And as they approach body temperature, things are looking up.

660

00:42:26,680 --> 00:42:29,680

This heart here is one of my favorite parts of this experiment.

661

00:42:29,680 --> 00:42:34,680

In addition to temperature sensors in his body, in the tauntaun and in the atmosphere over there,

662

00:42:34,680 --> 00:42:39,680

this heart will be pumping blood through him and it's been calibrated to have the same metabolism as a human body.

663

00:42:39,680 --> 00:42:45,680

So if he can't keep up with the cold and starts to go sour, we'll see it right here on this temperature gauge.

664

00:42:45,680 --> 00:42:52,680

But as Thermoboy gets into costume, this cursed experiment has more heartbreak in store.

665

00:42:52,680 --> 00:42:53,680

Turn the pump off.

666

00:42:53,680 --> 00:42:56,680

A copper tube artery has burst.

667

00:42:56,680 --> 00:42:58,680

He's bleeding.

668

00:42:58,680 --> 00:43:04,680

If he bleeds to death before he freezes to death, it's not a valid experiment.

669

00:43:04,680 --> 00:43:06,680

Do you want to blow torch?

670

00:43:06,680 --> 00:43:07,680

Let's roll him.

671

00:43:07,680 --> 00:43:09,680

Dr. Heinemann goes to work.

672

00:43:09,680 --> 00:43:12,680

Can we get something to put between his teeth to bite down on?

673

00:43:12,680 --> 00:43:13,680

No, man.

674

00:43:13,680 --> 00:43:14,680

Okay.

675

00:43:14,680 --> 00:43:17,680

With no insurance to speak of...

676

00:43:18,680 --> 00:43:19,680

Nippers, please.

677

00:43:19,680 --> 00:43:22,680

Luke gets a fairly basic level of care.

678

00:43:22,680 --> 00:43:24,680

A knife. Anybody with a knife?

679

00:43:24,680 --> 00:43:32,680

Thermoboy here was a champ on the Titanic episode, but I sort of was making it up as I went when I built him.

680

00:43:32,680 --> 00:43:34,680

And he's pretty ambitious.

681

00:43:35,680 --> 00:43:36,680

Ah, f***.

682

00:43:36,680 --> 00:43:41,680

But we sprung a leak in his circulatory system and that's all she wrote.

683

00:43:41,680 --> 00:43:43,680

Don't worry, Thermoboy.

684

00:43:43,680 --> 00:43:49,680

We'll have you good as new in a minute because we can't provide him with his metabolism.

685

00:43:49,680 --> 00:43:51,680

We can't monitor his temperature.

686

00:43:51,680 --> 00:43:56,680

We don't have a valid test unless his circulatory system is working.

687

00:43:56,680 --> 00:43:59,680

It's blood and no leaks.

688

00:43:59,680 --> 00:44:07,680

Well, our day of two steps forward and one step back has culminated in effectively what is a waste of a whole day.

689

00:44:07,680 --> 00:44:08,680

You know, it's funny.

690

00:44:08,680 --> 00:44:12,680

For some reason, anytime I do a job, things start to burn.

691

00:44:12,680 --> 00:44:14,680

Hopefully we've learned from our mistakes.

692

00:44:14,680 --> 00:44:16,680

It'll go much smoother tomorrow.

693

00:44:16,680 --> 00:44:18,680

Hope springs eternal.

694

00:44:24,680 --> 00:44:26,680

With Thermoboy patched up.

695

00:44:26,680 --> 00:44:27,680

Ah, f***.

696

00:44:28,680 --> 00:44:29,680

The second pair of pants on.

697

00:44:29,680 --> 00:44:32,680

And dressed up, the troubles of yesterday.

698

00:44:32,680 --> 00:44:34,680

Ton ton delivery.

699

00:44:34,680 --> 00:44:37,680

What in the ton ton seems so far away.

700

00:44:37,680 --> 00:44:40,680

So now the next step is to put Luke in a ton ton.

701

00:44:42,680 --> 00:44:44,680

It sounds perfect.

702

00:44:44,680 --> 00:44:49,680

Put him in the sub-zero weather of Hoth and find out if Han was doing the right thing.

703

00:44:51,680 --> 00:44:55,680

Once Luke is in place, they'll add the organs they managed to salvage.

704

00:44:56,680 --> 00:45:00,680

Meanwhile, in go the bath warmed bodily fluids.

705

00:45:00,680 --> 00:45:03,680

Great big gobs of goopy grimy ton ton guts.

706

00:45:03,680 --> 00:45:04,680

Which raises a question.

707

00:45:04,680 --> 00:45:06,680

What is a ton ton anyway?

708

00:45:06,680 --> 00:45:08,680

Okay, up.

709

00:45:08,680 --> 00:45:16,680

Okay, so we've got this fictitious creature named a ton ton and it comes from the fictitious planet Hop, which we know is very cold.

710

00:45:16,680 --> 00:45:19,680

Luke is going into the ton ton.

711

00:45:19,680 --> 00:45:20,680

That actually fit.

712

00:45:20,680 --> 00:45:25,680

We've decided to construct our ton ton to be very like a polar bear.

713

00:45:25,680 --> 00:45:28,680

And I thought they smelled bad on the outside.

714

00:45:28,680 --> 00:45:32,680

The polar bear has a thick layer of fur and a thick layer of blubber.

715

00:45:32,680 --> 00:45:33,680

That's a liver.

716

00:45:33,680 --> 00:45:35,680

Here comes the spleen.

717

00:45:35,680 --> 00:45:41,680

Our ton ton has a thick layer of fur, but in lieu of blubber, it has some foam rubber.

718

00:45:41,680 --> 00:45:42,680

I know what that is.

719

00:45:42,680 --> 00:45:49,680

To maintain that model, the ton ton's core temperature will start the test about the same as a polar bear.

720

00:45:50,680 --> 00:45:53,680

This is a ton ton express.

721

00:45:53,680 --> 00:45:55,680

You're clear on your left.

722

00:45:55,680 --> 00:45:57,680

All right, you can lower them down.

723

00:45:57,680 --> 00:46:06,680

But it's far from easy with the necessity to have the ton ton's core temperature be the right number and Luke's core temperature being the right number.

724

00:46:06,680 --> 00:46:11,680

All right, I'm going to start Luke's heart and the actual hawth planet surface being the right

temperature.

725

00:46:11,680 --> 00:46:17,680

The shelter built around it probes inside of it cameras, heart blood pumping from the outside.

726

00:46:17,680 --> 00:46:27,680

This is without a doubt the most complex and sensitive experimental rig we have ever implemented on this show.

727

00:46:27,680 --> 00:46:30,680

With the ton ton laying atop his bed of dry ice.

728

00:46:30,680 --> 00:46:31,680

All right.

729

00:46:31,680 --> 00:46:33,680

He's boxed in.

730

00:46:33,680 --> 00:46:38,680

Ladies and gentlemen, night has fallen on hawth.

731

00:46:38,680 --> 00:46:45,680

The temperature plummets and all is finally ready.

732

00:46:45,680 --> 00:46:53,680

So we have hit our lower temperature limit between the several hundred pounds of dry ice and the very cold ambient temperature here in the freezer.

733

00:46:53,680 --> 00:46:57,680

We are maintaining a steady negative 40 degrees Celsius.

734

00:46:57,680 --> 00:47:04,680

Now it's true that it's not the coldest possible temperature on Hawth, but it is smack in the middle of the butter zone and we're happy with that.

735

00:47:04,680 --> 00:47:06,680

All right, sir, it's time.

736

00:47:06,680 --> 00:47:08,680

Off we go.

737

00:47:08,680 --> 00:47:11,680

The question is how long does Luke have in here?

738

00:47:11,680 --> 00:47:16,680

Well, Han says this will keep you warm until I can get a shelter built.

739

00:47:16,680 --> 00:47:20,680

All right, time zero, Luke's core 95.

740

00:47:20,680 --> 00:47:28,680

Now, average time it would take a climber under very adverse conditions to build a snow cave is between two and three hours.

741

00:47:28,680 --> 00:47:30,680

I've built a snow cave, you know.

742

00:47:30,680 --> 00:47:31,680

Yeah.

743

00:47:31,680 --> 00:47:34,680

Spent the night in one up on a mountain top.

744

00:47:35,680 --> 00:47:38,680

Given that Han is a capable fellow, he's got a lightsaber.

745

00:47:38,680 --> 00:47:44,680

We're giving him two and a half hours for Luke to survive long enough for the shelter to be built.

746

00:47:44,680 --> 00:47:47,680

With the clock running, all we're going to do now is wait.

747

00:47:47,680 --> 00:47:52,680

It's all eyes on the gauges, but one of them got a head start.

748

00:47:52,680 --> 00:47:56,680

But wait, I can hear you saying what human body temperature is 98.6?

749

00:47:56,680 --> 00:48:00,680

Why are we starting this test with Luke's body temperature at 95?

750

00:48:00,680 --> 00:48:05,680

Well, it's because we're making the assumption that he's already suffered some heat loss.

751

00:48:05,680 --> 00:48:10,680

Injured and left for dead, Luke is already mildly hypothermic.

752

00:48:10,680 --> 00:48:13,680

All right, 10 minutes in.

753

00:48:13,680 --> 00:48:16,680

Let's see, 94, he's lost a degree.

754

00:48:16,680 --> 00:48:22,680

But he has to hit 82 degrees, the critical point of no return before he dies.

755

00:48:22,680 --> 00:48:25,680

Will he make it?

756

00:48:25,680 --> 00:48:27,680

It's one hour.

757

00:48:27,680 --> 00:48:30,680

Still reading his core at 93.

758

00:48:30,680 --> 00:48:32,680

His heart is still pumping 300 watts.

759

00:48:32,680 --> 00:48:39,680

Blood trying to warm the outer extremities of his body against the cold, slowly, slowly failing.

760

00:48:39,680 --> 00:48:43,680

I remember when we started this, I thought, total BS, no way is it going to work.

761

00:48:43,680 --> 00:48:49,680

The question is, will Han get the ice cave built in time before he reaches abject failure?

762

00:48:49,680 --> 00:48:56,680

The time ticks away, and the wet and warm recently deceased, Tauntaun, appears to do exactly what

Han intended.

763

00:48:56,680 --> 00:49:01,680

Because at two and a half hours, the snow cave is built.

764

00:49:01,680 --> 00:49:04,680

Dude, two and a half hours is up. Let's go check him out.

765

00:49:04,680 --> 00:49:11,680

And amazingly, Thermoboy's human equivalent metabolism has only begun to cool down.

766

00:49:11,680 --> 00:49:13,680

What's the day to say?

767

00:49:13,680 --> 00:49:21,680

Luke went into the Tauntaun, he was mildly hypothermic at 95 degrees, and in the last two hours, he's dropped to only 92.

768

00:49:21,680 --> 00:49:27,680

On the face of it, crawling into a dead animal carcass might not seem to be the best way to stay warm.

769

00:49:27,680 --> 00:49:38,680

But the thing is that most mammals are made up of about 75% water, and water has a phenomenal ability to absorb and retain heat.

770

00:49:38,680 --> 00:49:47,680

So if you had access to the large thermal mass of a large animal and could get inside it, it might just save your life.

771

00:49:47,680 --> 00:49:52,680

This myth is plausible. However fictional, it's plausible. That's pretty cool.

772

00:49:57,680 --> 00:50:00,680

And so the journey ends.

773

00:50:01,680 --> 00:50:07,680

As Newton almost said, the force equals mythbusters times awesome.

774

00:50:11,680 --> 00:50:12,680

Tauntaun guts.

775

00:50:12,680 --> 00:50:17,680

The team pulled back the curtain, examined, explored, and experimented.

776

00:50:19,680 --> 00:50:23,680

They tested one of the greatest tall tales of all time.

777

00:50:24,680 --> 00:50:26,680

You look fantastic.

778

00:50:26,680 --> 00:50:28,680

And made it a reality.

779

00:50:31,680 --> 00:50:32,680

Tauntaun, wake up!

780

00:50:32,680 --> 00:50:34,680

Fight me, employer!

781

00:50:42,680 --> 00:50:43,680

You ready?

782

00:50:43,680 --> 00:50:44,680

I'm ready.

783

00:50:59,680 --> 00:51:01,680

It just didn't stop!

784

00:51:01,680 --> 00:51:04,680

Ramming speed! Here we go!

785

00:51:06,680 --> 00:51:07,680

Fire!

786

00:51:13,680 --> 00:51:18,680

This is what Moonshot is all about!

787

00:51:18,680 --> 00:51:21,680

Alright, we are ready to board.

788

00:51:24,680 --> 00:51:25,680

How you doing?

789

00:51:26,680 --> 00:51:29,680

Oh, it's gonna go in his pants! It's gonna go in his pants!

790

00:51:31,680 --> 00:51:32,680

That's it!

791

00:51:37,680 --> 00:51:40,680

That was the most incredible thing we've ever done.

792

00:51:42,680 --> 00:51:47,680

The End

793

00:51:54,680 --> 00:51:55,680

Your results may vary.