



ON THE PHONE

**Diane Bowen**  
BRUNSWICK, MAINE

1  
00:00:05,510 --> 00:00:03,590  
this is mission control houston coming

2  
00:00:08,710 --> 00:00:05,520  
up at the end of the month from january

3  
00:00:10,390 --> 00:00:08,720  
29th through february 1st

4  
00:00:12,230 --> 00:00:10,400  
nasa and its partners are going to be

5  
00:00:14,470 --> 00:00:12,240  
running another session of what's called

6  
00:00:17,510 --> 00:00:14,480  
the earth cam mission this is a chance

7  
00:00:19,269 --> 00:00:17,520  
for students around the world to program

8  
00:00:20,870 --> 00:00:19,279  
a camera and a laptop onboard the

9  
00:00:23,189 --> 00:00:20,880  
international space station to point it

10  
00:00:24,630 --> 00:00:23,199  
down at the earth and to take pictures

11  
00:00:25,830 --> 00:00:24,640  
of different things around the planet

12  
00:00:27,750 --> 00:00:25,840  
these students are basically running

13  
00:00:29,349 --> 00:00:27,760

their own experiment onboard the

14

00:00:31,429 --> 00:00:29,359

international space station we are

15

00:00:33,510 --> 00:00:31,439

fortunate enough now to be joined by one

16

00:00:35,510 --> 00:00:33,520

of the teachers who has worked with that

17

00:00:37,350 --> 00:00:35,520

experiment we're joined by diane bowen

18

00:00:38,229 --> 00:00:37,360

from brunswick maine diane how are you

19

00:00:42,790 --> 00:00:38,239

doing

20

00:00:44,190 --> 00:00:42,800

going well now let's see you first of

21

00:00:46,630 --> 00:00:44,200

all let me ask you this you were an

22

00:00:48,310 --> 00:00:46,640

astrobiology teacher but that was to

23

00:00:49,270 --> 00:00:48,320

eighth graders correct

24

00:00:51,189 --> 00:00:49,280

correct

25

00:00:53,110 --> 00:00:51,199

i don't remember taking astrobiology

26  
00:00:55,189 --> 00:00:53,120  
when i was in junior high so talk a

27  
00:00:56,869 --> 00:00:55,199  
little bit about how you

28  
00:00:58,950 --> 00:00:56,879  
started that because i know that you you

29  
00:01:00,869 --> 00:00:58,960  
pitched that program to

30  
00:01:02,310 --> 00:01:00,879  
the powers that be there in brunswick

31  
00:01:03,990 --> 00:01:02,320  
maine and sort of started a pilot

32  
00:01:07,590 --> 00:01:04,000  
program correct

33  
00:01:08,469 --> 00:01:07,600  
yes actually it was uh partially nasa

34  
00:01:12,870 --> 00:01:08,479  
um

35  
00:01:13,910 --> 00:01:12,880  
martin that

36  
00:01:15,910 --> 00:01:13,920  
funded

37  
00:01:17,830 --> 00:01:15,920  
the pilot program and i was lucky enough

38  
00:01:19,190 --> 00:01:17,840

to be one of the 10 in the state of

39

00:01:21,030 --> 00:01:19,200

maine

40

00:01:23,030 --> 00:01:21,040

so how did you get involved with

41

00:01:24,710 --> 00:01:23,040

earthkam this experiment goes back to i

42

00:01:27,270 --> 00:01:24,720

think the mid-90s 1995 and it was

43

00:01:29,270 --> 00:01:27,280

started by sally ride

44

00:01:31,749 --> 00:01:29,280

obviously the first american female in

45

00:01:33,590 --> 00:01:31,759

space and uh somebody that had a long

46

00:01:34,550 --> 00:01:33,600

history with nasa so how did you find

47

00:01:35,990 --> 00:01:34,560

out about it and how did you get

48

00:01:37,910 --> 00:01:36,000

involved

49

00:01:40,550 --> 00:01:37,920

well i was actually asked to start the

50

00:01:41,990 --> 00:01:40,560

program by um

51

00:01:43,190 --> 00:01:42,000

bob gabries

52

00:01:45,030 --> 00:01:43,200

of

53

00:01:47,670 --> 00:01:45,040

goddard space flight center

54

00:01:48,789 --> 00:01:47,680

and i had previously done a project

55

00:01:50,149 --> 00:01:48,799

called

56

00:01:52,550 --> 00:01:50,159

moon link

57

00:01:53,510 --> 00:01:52,560

and he said i'd love for you to try it

58

00:01:57,429 --> 00:01:53,520

so

59

00:02:00,870 --> 00:01:57,439

um started it in 1996

60

00:02:03,990 --> 00:02:00,880

and full force in 1997

61

00:02:06,310 --> 00:02:04,000

and it's a fantastic program

62

00:02:08,150 --> 00:02:06,320

so i'm assuming you did both the space

63

00:02:09,990 --> 00:02:08,160

shuttle version of this and also the

64

00:02:11,029 --> 00:02:10,000

space station version correct

65

00:02:13,110 --> 00:02:11,039

correct

66

00:02:14,949 --> 00:02:13,120

so you taught for what 30 years you just

67

00:02:16,070 --> 00:02:14,959

retired here recently correct

68

00:02:18,630 --> 00:02:16,080

i did

69

00:02:20,949 --> 00:02:18,640

so are you missing teaching yet

70

00:02:23,270 --> 00:02:20,959

well i'm kind of keeping my hand in it

71

00:02:26,070 --> 00:02:23,280

i'm doing earth cam obviously i did

72

00:02:28,229 --> 00:02:26,080

mooncam as well

73

00:02:30,390 --> 00:02:28,239

and we're working right now on a grant

74

00:02:32,390 --> 00:02:30,400

with astrobiology and scientific

75

00:02:34,150 --> 00:02:32,400

ballooning

76

00:02:35,110 --> 00:02:34,160

sure so talk a bit about you know

77

00:02:36,630 --> 00:02:35,120

whenever you're sitting there with your

78

00:02:39,190 --> 00:02:36,640

students and you're teaching them how to

79

00:02:40,630 --> 00:02:39,200

how did you guys pick targets and you

80

00:02:42,710 --> 00:02:40,640

know how did you what was the process

81

00:02:45,910 --> 00:02:42,720

for that with your with your students

82

00:02:48,070 --> 00:02:45,920

oh gosh we sent out forms to teachers

83

00:02:51,589 --> 00:02:48,080

and community members

84

00:02:54,150 --> 00:02:51,599

and uh for latitude longitude of course

85

00:02:56,070 --> 00:02:54,160

we can't always get it but when we do

86

00:02:58,149 --> 00:02:56,080

it's phenomenal

87

00:03:00,630 --> 00:02:58,159

but for the most part

88

00:03:03,270 --> 00:03:00,640

it's we concentrate having lived in

89

00:03:06,070 --> 00:03:03,280

california on the san andreas fault

90

00:03:08,229 --> 00:03:06,080

we've also looked at

91

00:03:10,710 --> 00:03:08,239

the results of faulting

92

00:03:14,229 --> 00:03:10,720

earthquakes

93

00:03:18,550 --> 00:03:16,550

we got one of the palm islands one time

94

00:03:21,190 --> 00:03:18,560

we also got a picture of

95

00:03:23,990 --> 00:03:21,200

uh new orleans uh right after

96

00:03:25,670 --> 00:03:24,000

katrina which was

97

00:03:27,910 --> 00:03:25,680

very sad but you could see the breaks in

98

00:03:30,550 --> 00:03:27,920

the levy and

99

00:03:32,149 --> 00:03:30,560

yeah it's got to be a way i would i

100

00:03:34,229 --> 00:03:32,159

would assume to to sort of teach your

101  
00:03:36,470 --> 00:03:34,239  
kids about you know real world impacts

102  
00:03:38,470 --> 00:03:36,480  
of of earth and how both natural and

103  
00:03:40,470 --> 00:03:38,480  
man-made phenomena you know affect our

104  
00:03:42,149 --> 00:03:40,480  
planet especially seeing it from 250

105  
00:03:44,149 --> 00:03:42,159  
miles up in space right

106  
00:03:46,149 --> 00:03:44,159  
exactly exactly

107  
00:03:48,390 --> 00:03:46,159  
um it's i mean it's just a phenomenal

108  
00:03:50,229 --> 00:03:48,400  
program it includes

109  
00:03:51,509 --> 00:03:50,239  
everything not only stem

110  
00:03:53,990 --> 00:03:51,519  
uh but also

111  
00:03:54,949 --> 00:03:54,000  
uh geography communications working on a

112  
00:03:56,949 --> 00:03:54,959  
team

113  
00:03:59,190 --> 00:03:56,959

um etc

114

00:04:01,270 --> 00:03:59,200

you know as a as a teacher how important

115

00:04:02,949 --> 00:04:01,280

is it to for you to have something like

116

00:04:04,229 --> 00:04:02,959

this where you can actually

117

00:04:05,589 --> 00:04:04,239

you know it's not it's it's more than

118

00:04:07,030 --> 00:04:05,599

just a textbook it's something you can

119

00:04:07,750 --> 00:04:07,040

actually show your students it's real

120

00:04:08,869 --> 00:04:07,760

that

121

00:04:10,550 --> 00:04:08,879

you know they're actually controlling

122

00:04:12,550 --> 00:04:10,560

something on board you know this huge

123

00:04:15,670 --> 00:04:12,560

orbiting laboratory and actually doing

124

00:04:17,110 --> 00:04:15,680

real science uh that's that's my motto

125

00:04:17,990 --> 00:04:17,120

is make it real

126  
00:04:19,509 --> 00:04:18,000  
um

127  
00:04:21,030 --> 00:04:19,519  
you know otherwise kids sit in the

128  
00:04:22,950 --> 00:04:21,040  
classroom and say

129  
00:04:25,030 --> 00:04:22,960  
why do i need this stuff

130  
00:04:25,909 --> 00:04:25,040  
you know why do i have to learn this

131  
00:04:27,990 --> 00:04:25,919  
and

132  
00:04:30,710 --> 00:04:28,000  
the students in earthkam don't ask those

133  
00:04:31,510 --> 00:04:30,720  
questions because they work in real time

134  
00:04:32,710 --> 00:04:31,520  
with

135  
00:04:34,230 --> 00:04:32,720  
astronauts

136  
00:04:35,830 --> 00:04:34,240  
and

137  
00:04:37,510 --> 00:04:35,840  
other scientists

138  
00:04:39,270 --> 00:04:37,520

which is very cool

139

00:04:41,350 --> 00:04:39,280

and what would you tell other teachers

140

00:04:42,790 --> 00:04:41,360

because you know i think whenever

141

00:04:43,990 --> 00:04:42,800

teachers think oh my gosh i could

142

00:04:45,749 --> 00:04:44,000

actually

143

00:04:47,350 --> 00:04:45,759

you know control or get my students to

144

00:04:49,909 --> 00:04:47,360

control an experiment on board the space

145

00:04:51,749 --> 00:04:49,919

station that's got to be sort of a you

146

00:04:52,950 --> 00:04:51,759

know a hard process to go through it's

147

00:04:54,550 --> 00:04:52,960

got to be difficult what would you tell

148

00:04:55,430 --> 00:04:54,560

them because it's really fairly easy

149

00:04:58,790 --> 00:04:55,440

right

150

00:05:01,830 --> 00:04:58,800

it is and and number one it's free

151  
00:05:03,029 --> 00:05:01,840  
number two that there's great support

152  
00:05:05,270 --> 00:05:03,039  
um

153  
00:05:07,270 --> 00:05:05,280  
and also it's it's

154  
00:05:10,310 --> 00:05:07,280  
one of those things that i mean i had a

155  
00:05:12,870 --> 00:05:10,320  
group a long time ago that actually

156  
00:05:15,749 --> 00:05:12,880  
spent the night in our library

157  
00:05:17,029 --> 00:05:15,759  
and you'd hear them be kids

158  
00:05:18,390 --> 00:05:17,039  
for a while and then all of a sudden

159  
00:05:20,390 --> 00:05:18,400  
they disappear

160  
00:05:22,230 --> 00:05:20,400  
and you go into the computer lab and

161  
00:05:24,790 --> 00:05:22,240  
there were all the students

162  
00:05:27,110 --> 00:05:24,800  
sitting there silently with just the

163  
00:05:29,670 --> 00:05:27,120

light of the computer

164

00:05:31,270 --> 00:05:29,680

amazing amazing

165

00:05:32,150 --> 00:05:31,280

also teaches you that things can go

166

00:05:33,909 --> 00:05:32,160

wrong

167

00:05:35,430 --> 00:05:33,919

yeah

168

00:05:37,110 --> 00:05:35,440

we had an instance where we had people

169

00:05:39,830 --> 00:05:37,120

from all over the country

170

00:05:41,350 --> 00:05:39,840

that came to spend the night and we got

171

00:05:44,070 --> 00:05:41,360

the word that

172

00:05:45,110 --> 00:05:44,080

the astronauts had gone to sleep

173

00:05:46,230 --> 00:05:45,120

and

174

00:05:48,629 --> 00:05:46,240

what do we do

175

00:05:51,029 --> 00:05:48,639

and the kids of course begged us to

176

00:05:53,189 --> 00:05:51,039

stay in the cafeteria

177

00:05:55,670 --> 00:05:53,199

in the the library

178

00:05:57,590 --> 00:05:55,680

and we said well the only deal is you

179

00:05:59,270 --> 00:05:57,600

have to go on your sleep cycle

180

00:06:01,510 --> 00:05:59,280

and they did and we had to wake them up

181

00:06:05,029 --> 00:06:01,520

the next morning yeah when the teachers

182

00:06:09,189 --> 00:06:07,350

well i think we we all learn to deal

183

00:06:10,710 --> 00:06:09,199

with unplanned events whenever it comes

184

00:06:12,710 --> 00:06:10,720

to spaceflight you know

185

00:06:14,550 --> 00:06:12,720

i guess we do

186

00:06:17,110 --> 00:06:14,560

so um whenever you got you you were

187

00:06:19,510 --> 00:06:17,120

involved in this for uh quite a long

188

00:06:21,029 --> 00:06:19,520

time what you know what what images that

189

00:06:22,150 --> 00:06:21,039

you took with your students stand out

190

00:06:24,150 --> 00:06:22,160

the most which ones do you remember i

191

00:06:25,430 --> 00:06:24,160

know you mentioned uh new orleans and

192

00:06:26,710 --> 00:06:25,440

the san andreas fault and things like

193

00:06:28,710 --> 00:06:26,720

that are there any others that come to

194

00:06:31,670 --> 00:06:28,720

mind

195

00:06:34,950 --> 00:06:31,680

oh there are lots um i've met i actually

196

00:06:36,870 --> 00:06:34,960

go to johnson space center to present at

197

00:06:39,270 --> 00:06:36,880

the space exploration educators

198

00:06:41,749 --> 00:06:39,280

conference and i've run in i'm taking my

199

00:06:44,309 --> 00:06:41,759

earth cam photos with me and i've run

200

00:06:46,550 --> 00:06:44,319

into people from all over the world that

201  
00:06:48,950 --> 00:06:46,560  
say oh my gosh that's my town

202  
00:06:50,309 --> 00:06:48,960  
and i love handing those out to to

203  
00:06:51,430 --> 00:06:50,319  
teachers and

204  
00:06:54,469 --> 00:06:51,440  
and um

205  
00:06:55,830 --> 00:06:54,479  
but i've uh that one when we did the uh

206  
00:06:57,430 --> 00:06:55,840  
tsunami

207  
00:07:00,070 --> 00:06:57,440  
had a photo of

208  
00:07:02,550 --> 00:07:00,080  
of the um

209  
00:07:05,029 --> 00:07:02,560  
the indonesian one right

210  
00:07:06,070 --> 00:07:05,039  
we've gotten

211  
00:07:07,909 --> 00:07:06,080  
cities

212  
00:07:10,230 --> 00:07:07,919  
we've gotten

213  
00:07:11,589 --> 00:07:10,240

san francisco and the san andreas fault

214

00:07:15,430 --> 00:07:11,599

that one was

215

00:07:21,189 --> 00:07:18,309

oh out of the thousands

216

00:07:24,070 --> 00:07:21,199

it's it's just amazing

217

00:07:25,830 --> 00:07:24,080

i would say the katrina one was probably

218

00:07:27,909 --> 00:07:25,840

the most

219

00:07:29,430 --> 00:07:27,919

unbelievably

220

00:07:31,029 --> 00:07:29,440

um

221

00:07:33,029 --> 00:07:31,039

awesome but sad

222

00:07:34,790 --> 00:07:33,039

yeah so whenever you encourage other

223

00:07:35,830 --> 00:07:34,800

teachers to participate this is you

224

00:07:37,350 --> 00:07:35,840

would say that this is appropriate for

225

00:07:39,589 --> 00:07:37,360

both middle school high school whoever

226

00:07:40,790 --> 00:07:39,599

wants to participate right

227

00:07:42,390 --> 00:07:40,800

yes

228

00:07:44,390 --> 00:07:42,400

all the way from elementary actually to

229

00:07:48,070 --> 00:07:44,400

high school and i've had students even

230

00:07:49,670 --> 00:07:48,080

follow it through college as well

231

00:07:51,110 --> 00:07:49,680

which is kind of cool it's a it's a

232

00:07:52,869 --> 00:07:51,120

powerful thing to see

233

00:07:54,550 --> 00:07:52,879

images of where you live from from up in

234

00:07:56,230 --> 00:07:54,560

space it's a it's an unusual vantage

235

00:07:58,710 --> 00:07:56,240

point you know vantage point for people

236

00:07:59,990 --> 00:07:58,720

to see that and i think it's uh i think

237

00:08:01,589 --> 00:08:00,000

it makes it more powerful whenever the

238

00:08:02,790 --> 00:08:01,599

students are controlling this experiment

239

00:08:03,670 --> 00:08:02,800

themselves

240

00:08:05,510 --> 00:08:03,680

right

241

00:08:07,189 --> 00:08:05,520

and for the kids to see what a fragile

242

00:08:09,909 --> 00:08:07,199

planet where

243

00:08:12,710 --> 00:08:09,919

we're dealing with and that we live on

244

00:08:14,469 --> 00:08:12,720

and that we've got to take care of yeah

245

00:08:17,029 --> 00:08:14,479

well there's two information sessions

246

00:08:19,830 --> 00:08:17,039

for teachers uh that can participate the

247

00:08:22,230 --> 00:08:19,840

first one is going to be on january 2nd

248

00:08:24,710 --> 00:08:22,240

at 9 30 a.m central time the second one

249

00:08:27,029 --> 00:08:24,720

is the next day january 23rd

250

00:08:29,110 --> 00:08:27,039

at 6 p.m central time and all teachers

251  
00:08:30,309 --> 00:08:29,120  
have to do is uh send an email to that

252  
00:08:34,750 --> 00:08:30,319  
web address you're seeing there on the

253  
00:08:40,550 --> 00:08:37,029  
earthcam.ucsd.edu so again it's webinar

254  
00:08:44,389 --> 00:08:42,870  
and again the actual earth cam session

255  
00:08:47,110 --> 00:08:44,399  
is going to take place january 29th

256  
00:08:49,350 --> 00:08:47,120  
through february 1st so diane uh it's

257  
00:08:51,030 --> 00:08:49,360  
been an honor to talk to you

258  
00:08:52,790 --> 00:08:51,040  
especially after teaching for 30 years

259  
00:08:54,470 --> 00:08:52,800  
which is just an amazing

260  
00:08:56,630 --> 00:08:54,480  
accomplishment but congratulations to

261  
00:08:58,790 --> 00:08:56,640  
you and again we want to thank you for

262  
00:09:00,790 --> 00:08:58,800  
joining us today here on nasa television

263  
00:09:03,430 --> 00:09:00,800

well i thank nasa for such a wonderful

264

00:09:04,870 --> 00:09:03,440

program to inspire kids