



EARTHKAM: EARTH KNOWLEDGE ACQUIRED BY MIDDLE SCHOOL STUDENTS

1
00:00:05,749 --> 00:00:03,590
one of the many programs that nasa

2
00:00:08,790 --> 00:00:05,759
offers to be able to utilize all that

3
00:00:10,549 --> 00:00:08,800
earth imagery and especially some of the

4
00:00:12,390 --> 00:00:10,559
photography capabilities from the space

5
00:00:13,430 --> 00:00:12,400
station is earthkam which is a student

6
00:00:15,350 --> 00:00:13,440
program

7
00:00:16,630 --> 00:00:15,360
it stands for earth knowledge acquired

8
00:00:18,710 --> 00:00:16,640
by middle school students but it's

9
00:00:20,950 --> 00:00:18,720
actually open to a wide range of

10
00:00:22,550 --> 00:00:20,960
students and other users joining us to

11
00:00:24,630 --> 00:00:22,560
talk about that is

12
00:00:26,470 --> 00:00:24,640
johnson space center's kelly mccormick

13
00:00:28,550 --> 00:00:26,480

who is from our johnson space center's

14

00:00:30,550 --> 00:00:28,560

teaching and space project coordinator

15

00:00:32,389 --> 00:00:30,560

thanks for joining us kelly thanks for

16

00:00:33,830 --> 00:00:32,399

having me nicole excited to be here and

17

00:00:35,270 --> 00:00:33,840

talk about earthkam

18

00:00:37,270 --> 00:00:35,280

why don't you just tell us a little bit

19

00:00:38,790 --> 00:00:37,280

about the earthkam program

20

00:00:41,990 --> 00:00:38,800

um well you

21

00:00:44,709 --> 00:00:42,000

we're we're talking about astronauts and

22

00:00:47,670 --> 00:00:44,719

scientists and using the iss as a

23

00:00:49,990 --> 00:00:47,680

research platform and students also use

24

00:00:53,189 --> 00:00:50,000

the iss as a research platform

25

00:00:55,029 --> 00:00:53,199

earth cam allows students to program a

26
00:00:59,189 --> 00:00:55,039
camera onboard the international space

27
00:01:01,910 --> 00:00:59,199
station to take photographs of earth

28
00:01:04,549 --> 00:01:01,920
we have about four missions per year

29
00:01:06,950 --> 00:01:04,559
and the students get to take a look at

30
00:01:09,190 --> 00:01:06,960
places the um the iss will be passing

31
00:01:10,550 --> 00:01:09,200
over and then decide on specific

32
00:01:12,630 --> 00:01:10,560
locations that they'd like to take a

33
00:01:15,190 --> 00:01:12,640
photograph of

34
00:01:17,910 --> 00:01:15,200
order the photographs and then get their

35
00:01:19,910 --> 00:01:17,920
images back

36
00:01:21,670 --> 00:01:19,920
it sounds fascinating this was actually

37
00:01:23,270 --> 00:01:21,680
started by sally ride can you tell us a

38
00:01:25,350 --> 00:01:23,280

little bit about the program and how it

39

00:01:27,830 --> 00:01:25,360

originated

40

00:01:30,310 --> 00:01:27,840

um actually after seeing the the view

41

00:01:31,390 --> 00:01:30,320

from space dr sallyride was inspired and

42

00:01:33,030 --> 00:01:31,400

in

43

00:01:37,109 --> 00:01:33,040

1995

44

00:01:39,109 --> 00:01:37,119

she started the program as kidsat

45

00:01:40,710 --> 00:01:39,119

the original camera flew on three

46

00:01:43,510 --> 00:01:40,720

shuttle flights

47

00:01:46,069 --> 00:01:43,520

and then in 1998 the program was renamed

48

00:01:49,990 --> 00:01:46,079

earthcam and it became a permanent iss

49

00:01:51,749 --> 00:01:50,000

payload in 2001.

50

00:01:53,270 --> 00:01:51,759

how many students or schools have

51
00:01:55,030 --> 00:01:53,280
purchased or have participated in

52
00:01:57,270 --> 00:01:55,040
earthkam program

53
00:01:58,310 --> 00:01:57,280
well we're close to believe it or not

54
00:02:00,630 --> 00:01:58,320
about

55
00:02:01,749 --> 00:02:00,640
300 000 now since the beginning of the

56
00:02:03,590 --> 00:02:01,759
program

57
00:02:06,469 --> 00:02:03,600
during our last mission which happened

58
00:02:09,510 --> 00:02:06,479
in late january it was our largest ever

59
00:02:12,470 --> 00:02:09,520
and we had over 30 000 students in that

60
00:02:14,710 --> 00:02:12,480
one mission from 26 countries i think

61
00:02:17,510 --> 00:02:14,720
that's something i forgot to say earlier

62
00:02:19,110 --> 00:02:17,520
earth cam is an international program so

63
00:02:21,190 --> 00:02:19,120

students and teachers around the world

64

00:02:23,510 --> 00:02:21,200

can participate in earthkam

65

00:02:24,710 --> 00:02:23,520

that is fascinating um how do the

66

00:02:27,030 --> 00:02:24,720

schools and the teachers use these

67

00:02:28,630 --> 00:02:27,040

images have you heard stories of of how

68

00:02:31,110 --> 00:02:28,640

they use them either in their curriculum

69

00:02:33,190 --> 00:02:31,120

or for other kinds of kinds of projects

70

00:02:35,110 --> 00:02:33,200

we have heard some great stories and

71

00:02:38,150 --> 00:02:35,120

it's really up to the teacher and the

72

00:02:39,830 --> 00:02:38,160

students to design how they wish to use

73

00:02:42,390 --> 00:02:39,840

earthkam that's one of the great things

74

00:02:44,309 --> 00:02:42,400

about the program is they can

75

00:02:46,390 --> 00:02:44,319

use it to fit their needs we had

76

00:02:48,390 --> 00:02:46,400

students in colorado springs use it to

77

00:02:50,869 --> 00:02:48,400

study ecology

78

00:02:53,589 --> 00:02:50,879

it's a great hands-on way to teach

79

00:02:55,589 --> 00:02:53,599

students about geography when they get

80

00:02:58,390 --> 00:02:55,599

to pick their locations and

81

00:03:01,270 --> 00:02:58,400

and and view their images

82

00:03:04,390 --> 00:03:01,280

we had several students after hurricane

83

00:03:06,390 --> 00:03:04,400

katrina take photographs of new orleans

84

00:03:12,390 --> 00:03:06,400

and we've even had

85

00:03:16,390 --> 00:03:14,869

as i understand it the program is

86

00:03:18,390 --> 00:03:16,400

actually run by the university of

87

00:03:20,790 --> 00:03:18,400

california in san diego can you explain

88

00:03:22,710 --> 00:03:20,800

their role in earthkam yes that's

89

00:03:24,149 --> 00:03:22,720

actually an interesting story that even

90

00:03:26,550 --> 00:03:24,159

people that are familiar with earth

91

00:03:28,070 --> 00:03:26,560

camel a lot of them don't realize that

92

00:03:30,710 --> 00:03:28,080

aside from the students out in the

93

00:03:32,869 --> 00:03:30,720

classrooms programming the cameras

94

00:03:35,910 --> 00:03:32,879

we have students at university of

95

00:03:38,869 --> 00:03:35,920

california san diego about 25 to 30

96

00:03:41,030 --> 00:03:38,879

undergrad students per quarter and they

97

00:03:42,789 --> 00:03:41,040

run mission control and i recently had

98

00:03:44,710 --> 00:03:42,799

the opportunity to visit

99

00:03:46,229 --> 00:03:44,720

and it looks very very much like the

100

00:03:50,070 --> 00:03:46,239

mission control that you're sitting in

101
00:03:50,869 --> 00:03:50,080
only smaller and this is

102
00:03:55,110 --> 00:03:50,879
a

103
00:03:57,350 --> 00:03:55,120
run mission control they write the

104
00:03:58,710 --> 00:03:57,360
software for earth cam they maintain

105
00:04:00,390 --> 00:03:58,720
everything

106
00:04:02,949 --> 00:04:00,400
they answer all the student and teacher

107
00:04:05,110 --> 00:04:02,959
questions and it's really the missions

108
00:04:07,670 --> 00:04:05,120
are run by students at university of

109
00:04:10,149 --> 00:04:07,680
california at san diego

110
00:04:12,309 --> 00:04:10,159
and well another fascinating thing is

111
00:04:15,910 --> 00:04:12,319
many of the students go on to pursue

112
00:04:18,310 --> 00:04:15,920
stem careers because of their experience

113
00:04:20,789 --> 00:04:18,320

interning with earthkam in fact i

114

00:04:23,350 --> 00:04:20,799

believe we have two engineers here at

115

00:04:25,749 --> 00:04:23,360

the johnson space center who

116

00:04:28,629 --> 00:04:25,759

chose their path based on their

117

00:04:31,590 --> 00:04:28,639

internship at uc san diego

118

00:04:33,030 --> 00:04:31,600

wow that really is great to hear and um

119

00:04:35,510 --> 00:04:33,040

just wonderful to hear that they're so

120

00:04:36,790 --> 00:04:35,520

inspired and you know leading to working

121

00:04:39,189 --> 00:04:36,800

at nasa

122

00:04:41,030 --> 00:04:39,199

um so speaking of we want more people to

123

00:04:42,550 --> 00:04:41,040

participate in that opportunity and i

124

00:04:43,830 --> 00:04:42,560

think we have another earth cam session

125

00:04:45,990 --> 00:04:43,840

coming up correct

126
00:04:48,629 --> 00:04:46,000
yes we do it's just around the corner it

127
00:04:50,390 --> 00:04:48,639
begins april 23rd

128
00:04:52,870 --> 00:04:50,400
and for the first time ever we're

129
00:04:55,670 --> 00:04:52,880
offering a themed mission it's uh the

130
00:04:58,469 --> 00:04:55,680
theme is erosion it's called the iss

131
00:04:59,990 --> 00:04:58,479
erosion challenge and we are challenging

132
00:05:02,230 --> 00:05:00,000
students to

133
00:05:03,590 --> 00:05:02,240
learn about erosion on earth by taking

134
00:05:05,510 --> 00:05:03,600
photographs

135
00:05:08,230 --> 00:05:05,520
the top five schools

136
00:05:10,310 --> 00:05:08,240
will be invited to video conference with

137
00:05:12,950 --> 00:05:10,320
an astronaut here at the johnson space

138
00:05:15,670 --> 00:05:12,960

center to to discuss what they learned

139

00:05:19,110 --> 00:05:15,680

to share the research they conducted uh

140

00:05:21,990 --> 00:05:19,120

to share their images and just really

141

00:05:23,990 --> 00:05:22,000

chat about um what they learned and see

142

00:05:26,070 --> 00:05:24,000

the astronaut maybe the images that they

143

00:05:28,469 --> 00:05:26,080

took from space as well wow that

144

00:05:29,909 --> 00:05:28,479

challenge sounds really fascinating um

145

00:05:31,590 --> 00:05:29,919

tell us how it works what do the

146

00:05:33,350 --> 00:05:31,600

students or schools need to do to be

147

00:05:36,150 --> 00:05:33,360

part of this it's easy there's

148

00:05:38,230 --> 00:05:36,160

absolutely no cost

149

00:05:40,710 --> 00:05:38,240

registration is easy just go to the

150

00:05:42,550 --> 00:05:40,720

earthkam website which i i believe will

151
00:05:44,790 --> 00:05:42,560
be up on the screen

152
00:05:47,029 --> 00:05:44,800
and all the they need to work through

153
00:05:50,230 --> 00:05:47,039
their teachers the teachers register

154
00:05:51,350 --> 00:05:50,240
once they register they'll receive some

155
00:05:52,870 --> 00:05:51,360
codes

156
00:05:55,270 --> 00:05:52,880
and what they do is they go on and they

157
00:05:56,870 --> 00:05:55,280
select their their locations and then

158
00:05:58,550 --> 00:05:56,880
they put in their code this kind of

159
00:06:01,189 --> 00:05:58,560
serves as like a ticket

160
00:06:03,029 --> 00:06:01,199
for that request um and then they

161
00:06:04,070 --> 00:06:03,039
receive their image it really is that

162
00:06:06,230 --> 00:06:04,080
easy

163
00:06:08,710 --> 00:06:06,240

and if you haven't been to the teachers

164

00:06:10,950 --> 00:06:08,720

if you're out there and you

165

00:06:12,629 --> 00:06:10,960

participated before i encourage you to

166

00:06:14,629 --> 00:06:12,639

visit the website again it's been

167

00:06:17,029 --> 00:06:14,639

completely redesigned it's very very

168

00:06:20,309 --> 00:06:17,039

simple and it leaves the user through

169

00:06:21,749 --> 00:06:20,319

step by step very very easy to use oh

170

00:06:23,029 --> 00:06:21,759

and one other thing i want to mention

171

00:06:25,749 --> 00:06:23,039

nicole is

172

00:06:28,950 --> 00:06:25,759

it is available earth can we we invite

173

00:06:32,230 --> 00:06:28,960

scouting groups after school clubs

174

00:06:34,469 --> 00:06:32,240

it's homeschoolers it's open to anyone

175

00:06:36,070 --> 00:06:34,479

in the formal or informal education

176
00:06:37,510 --> 00:06:36,080
community

177
00:06:39,189 --> 00:06:37,520
that really is wonderful it sounds like

178
00:06:41,189 --> 00:06:39,199
a great like you said a great

179
00:06:43,270 --> 00:06:41,199
opportunity for all all sorts of groups

180
00:06:44,230 --> 00:06:43,280
and students uh to be able to take part

181
00:06:46,230 --> 00:06:44,240
in

182
00:06:47,510 --> 00:06:46,240
and this erosion challenge sounds great

183
00:06:48,870 --> 00:06:47,520
too and that's just in time for earth

184
00:06:50,390 --> 00:06:48,880
day so a lot of people are focused on

185
00:06:52,150 --> 00:06:50,400
that and can you just share with us

186
00:06:53,589 --> 00:06:52,160
again the dates for the next session and

187
00:06:56,469 --> 00:06:53,599
then the deadline

188
00:06:57,749 --> 00:06:56,479

it begins april 23rd it runs through the

189

00:07:01,110 --> 00:06:57,759

26th

190

00:07:03,749 --> 00:07:01,120

and teachers can register now or even up

191

00:07:06,790 --> 00:07:03,759

until the day the mission begins

192

00:07:09,510 --> 00:07:06,800

there is no limit for how many people

193

00:07:11,830 --> 00:07:09,520

earth can can serve so everyone's