STEMonstrations

EARTH OBSERVATIONS

1
00:00:03,420 --> 00:00:24,790
[Music]

2
00:00:28,790 --> 00:00:27,269
hello i'm astronaut randy bresnik

3
00:00:31,189 --> 00:00:28,800
want to know one of the best parts about

4
00:00:32,470 --> 00:00:31,199
being an astronaut up in space

5
00:00:33,910 --> 00:00:32,480
our view of the earth from the

6
00:00:36,229 --> 00:00:33,920
international space station is

7
00:00:38,709 --> 00:00:36,239
absolutely spectacular

8
00:00:40,470 --> 00:00:38,719
and viewing the earth from space is a

9
00:00:41,990 --> 00:00:40,480
big part of our job

10
00:00:43,670 --> 00:00:42,000
in addition to many other important

11
00:00:46,229 --> 00:00:43,680
functions the international space

12
00:00:48,470 --> 00:00:46,239
station serves as a global monitoring

13
00:00:50,549 --> 00:00:48,480

and diagnosis station we can conduct

14
00:00:52,790 --> 00:00:50,559
observations across the globe

15
00:00:54,950 --> 00:00:52,800
aimed at understanding and resolving

16
00:00:58,310 --> 00:00:54,960
environmental issues we face on our home

17
00:01:00,069 --> 00:00:58,320
planet let's have a look

18
00:01:01,910 --> 00:01:00,079
the space station offers a unique

19
00:01:04,549 --> 00:01:01,920
vantage point for observing the earth's

20
00:01:07,750 --> 00:01:04,559
ecosystems with hands-on and automated

21
00:01:09,750 --> 00:01:07,760
cameras and image capture equipment

22
00:01:12,149 --> 00:01:09,760
these tools enable astronauts to both

23
00:01:14,390 --> 00:01:12,159
observe and explain what they're

24
00:01:16,469 --> 00:01:14,400
witnessing in real time

25
00:01:19,030 --> 00:01:16,479
the image capture equipment on the space

26
00:01:20,230 --> 00:01:19,040
station also provides input to personnel

27
00:01:21,749 --> 00:01:20,240
back on earth

28
00:01:24,149 --> 00:01:21,759
working to program the station's

29
00:01:26,870 --> 00:01:24,159
automated earth sensing systems

30
00:01:29,190 --> 00:01:26,880
providing flexibility and an advantage

31
00:01:30,469 --> 00:01:29,200
over sensors on unmanned spacecraft and

32
00:01:32,230 --> 00:01:30,479
satellites

33
00:01:34,390 --> 00:01:32,240
scientists and researchers find this

34
00:01:36,149 --> 00:01:34,400
especially useful when unexpected

35
00:01:39,990 --> 00:01:36,159
natural events such as volcanic

36
00:01:41,670 --> 00:01:40,000
eruptions earthquakes hurricanes fires

37
00:01:43,109 --> 00:01:41,680
and other natural disasters like floods

38
00:01:45,030 --> 00:01:43,119

occur

39
00:01:47,190 --> 00:01:45,040
through existing international and

40
00:01:49,190 --> 00:01:47,200
interagency partnerships fundamental to

41
00:01:51,270 --> 00:01:49,200
the international space station

42
00:01:53,270 --> 00:01:51,280
data sharing that can benefit people

43
00:01:55,670 --> 00:01:53,280
around the world is facilitated

44
00:01:59,190 --> 00:01:55,680
promoting international collaboration on

45
00:02:00,870 --> 00:01:59,200
a range of earth observation activities

46
00:02:02,230 --> 00:02:00,880
a wide variety of earth observation

47
00:02:04,069 --> 00:02:02,240
equipment can be attached to the space

48
00:02:05,429 --> 00:02:04,079
station's exterior like i did on one of

49
00:02:06,950 --> 00:02:05,439
my spacewalks

50
00:02:09,109 --> 00:02:06,960
several instruments have already been

51
00:02:10,949 --> 00:02:09,119
installed and researchers from around

52
00:02:13,350 --> 00:02:10,959
the globe are proposing additional

53
00:02:15,750 --> 00:02:13,360
payloads to install

54
00:02:17,830 --> 00:02:15,760
and continuing to use a combination of

55
00:02:20,070 --> 00:02:17,840
crew operated and automated earth

56
00:02:21,830 --> 00:02:20,080
observation payloads the space station

57
00:02:22,869 --> 00:02:21,840
collects crucial data on the global

58
00:02:24,790 --> 00:02:22,879
climate

59
00:02:26,869 --> 00:02:24,800
environmental change and potential

60
00:02:28,630 --> 00:02:26,879
hazards to the health of humanity and

61
00:02:30,309 --> 00:02:28,640
our home planet

62
00:02:32,869 --> 00:02:30,319
the window observational research

63
00:02:34,710 --> 00:02:32,879

facility or we call it the wharf

64
00:02:36,630 --> 00:02:34,720
provides a highly stable internal

65
00:02:37,670 --> 00:02:36,640
mounting platform to hold cameras and

66
00:02:39,990 --> 00:02:37,680
sensors

67
00:02:41,830 --> 00:02:40,000
with the wharf the high quality optics

68
00:02:43,670 --> 00:02:41,840
of the nader or the bottom viewing

69
00:02:47,190 --> 00:02:43,680
window of the space station allows us to

70
00:02:48,550 --> 00:02:47,200
look straight down onto earth

71
00:02:50,630 --> 00:02:48,560
do you want to participate in some of

72
00:02:52,550 --> 00:02:50,640
our earth observation missions

73
00:02:54,150 --> 00:02:52,560
come join us check out the sally ride

74
00:02:56,790 --> 00:02:54,160
earth cam website

75
00:02:58,470 --> 00:02:56,800
go to earthcam.org and follow the

76
00:02:59,670 --> 00:02:58,480
instructions to sign up

77
00:03:02,309 --> 00:02:59,680
and have a look at some of the

78
00:03:04,710 --> 00:03:02,319
spectacular earth views from space and

79
00:03:06,390 --> 00:03:04,720
see what you can identify you can also

80
00:03:08,710 --> 00:03:06,400
try the activity in the link we provided

81
00:03:10,390 --> 00:03:08,720
in the description of this video

82
00:03:11,540 --> 00:03:10,400
thanks for joining me see you all next

83
00:03:28,630 --> 00:03:11,550
time