SPACE TO GROUND

1
00:00:06,470 --> 00:00:03,429
houston station on space to ground

2
00:00:08,310 --> 00:00:06,480
around and around and around it goes

3
00:00:10,310 --> 00:00:08,320
welcome to space to ground i'm dan

4
00:00:13,430 --> 00:00:10,320
hewitt the station passed another

5
00:00:14,709 --> 00:00:13,440
milestone this week with its 100 000th

6
00:00:17,109 --> 00:00:14,719
orbit

7
00:00:20,230 --> 00:00:17,119
in the 17 years since the first module

8
00:00:21,910 --> 00:00:20,240
zarya launched back in november 1998 the

9
00:00:25,429 --> 00:00:21,920
station has traveled the distance of

10
00:00:26,950 --> 00:00:25,439
over 2.6 billion miles which is almost

11
00:00:28,070 --> 00:00:26,960
the distance between the earth and

12
00:00:29,910 --> 00:00:28,080
neptune

13
00:00:32,150 --> 00:00:29,920

for another idea of the distance that's

14
00:00:33,670 --> 00:00:32,160
the equivalent of about 10 round trips

15
00:00:36,470 --> 00:00:33,680
to mars

16
00:00:39,510 --> 00:00:36,480
in that time more than 1900 experiments

17
00:00:41,910 --> 00:00:39,520
have taken place and 222 people have

18
00:00:44,069 --> 00:00:41,920
either lived there or visited

19
00:00:46,069 --> 00:00:44,079
a whole fleet of satellites shot away

20
00:00:47,830 --> 00:00:46,079
from the station this week to study the

21
00:00:50,549 --> 00:00:47,840
earth below

22
00:00:53,029 --> 00:00:50,559
17 cubesats were deployed from outside

23
00:00:55,510 --> 00:00:53,039
of the japanese kibo module for a range

24
00:00:58,150 --> 00:00:55,520
of missions among them were two from

25
00:00:59,990 --> 00:00:58,160
colleges studying earth's atmosphere and

26
00:01:02,229 --> 00:01:00,000
even the first cubesat built by

27
00:01:04,869 --> 00:01:02,239
elementary school students courtesy of

28
00:01:06,950 --> 00:01:04,879
st thomas moore cathedral school

29
00:01:09,190 --> 00:01:06,960
also deployed where nasa's node

30
00:01:11,590 --> 00:01:09,200
satellites studying space communication

31
00:01:14,070 --> 00:01:11,600
networks more planet labs dove

32
00:01:16,390 --> 00:01:14,080
satellites to image the earth and four

33
00:01:19,590 --> 00:01:16,400
lemur satellites that will track ships

34
00:01:22,230 --> 00:01:19,600
on the ocean and provide weather data

35
00:01:23,910 --> 00:01:22,240
this week hoboken catholic academy's 7th

36
00:01:25,910 --> 00:01:23,920
grade class wants to know how the

37
00:01:28,630 --> 00:01:25,920
airlock works to get in and out of the

38
00:01:31,190 --> 00:01:28,640

iss for spacewalks well class it's as

39
00:01:32,789 --> 00:01:31,200
simple as pulling air out or putting it

40
00:01:34,950 --> 00:01:32,799
back in

41
00:01:37,109 --> 00:01:34,960
when astronauts are ready to go outside

42
00:01:39,350 --> 00:01:37,119
a series of pumps suck out the air

43
00:01:41,990 --> 00:01:39,360
inside of the airlock and store it in a

44
00:01:44,069 --> 00:01:42,000
set of tanks this makes the inside of

45
00:01:46,789 --> 00:01:44,079
the air lock close to being a vacuum

46
00:01:49,350 --> 00:01:46,799
where there is no air pressure just like

47
00:01:50,870 --> 00:01:49,360
space so it's possible to open the outer

48
00:01:52,710 --> 00:01:50,880
hatch safely

49
00:01:54,950 --> 00:01:52,720
once the crew comes back in and the

50
00:01:56,870 --> 00:01:54,960
hatch is resealed the air gets pushed

51
00:01:59,109 --> 00:01:56,880
back in from those tanks bringing the

52
00:02:01,670 --> 00:01:59,119
airlock back to the same pressure as the

53
00:02:03,350 --> 00:02:01,680
rest of the station keep sending us your