



SPACE TO GROUND

1
00:00:01,040 --> 00:00:02,660
"HOUSTON, STATION ON SPACE TO GROUND."

2
00:00:03,040 --> 00:00:04,860
WELCOME TO SPACE TO
GROUND, I'M GARY JORDAN.

3
00:00:05,156 --> 00:00:06,966
THE WORLD TOOK OUT
THEIR CAMERAS THIS WEEK

4
00:00:07,036 --> 00:00:09,226
TO JOIN THEIR STATION
CREWMEMBERS AS THEY TRAVELED

5
00:00:09,226 --> 00:00:11,156
OVER ONE WORLD IN ONE ORBIT.

6
00:00:11,846 --> 00:00:15,106
ASTRONAUTS AND COSMONAUTS CAMPED
OUT FOR A FULL 90 MINUTES,

7
00:00:15,436 --> 00:00:18,126
OR ONE COMPLETE JOURNEY AROUND
THE WORLD FOR THE STATION,

8
00:00:18,336 --> 00:00:19,876
TO PHOTOGRAPH THE
EARTH FROM ABOVE.

9
00:00:20,386 --> 00:00:24,046
THE STATION PASSED OVER CITIES
LIKE HOUSTON, MONTREAL, COLOGNE,

10
00:00:24,146 --> 00:00:27,496
AND DUBAI AS WELL AS MANY
MOUNTAINS, SEAS AND DESERTS.

11
00:00:28,046 --> 00:00:30,116

ALL OVER THE WORLD,
CITIZENS OF EARTH JUMPED

12

00:00:30,116 --> 00:00:32,566
IN TO SHARE THEIR PERSPECTIVE
OF THE PLANET FROM THE GROUND

13

00:00:32,686 --> 00:00:34,796
AS STATION CREWMEMBERS
SHARED THEIRS FROM SPACE.

14

00:00:35,416 --> 00:00:37,826
A PART OF NASA'S YEAR
OF EDUCATION ON STATION,

15

00:00:38,016 --> 00:00:40,446
STUDENTS FROM CITIES WHERE
THE STATION PASSED OVERHEAD,

16

00:00:40,626 --> 00:00:42,936
AND FRANKLY AROUND THE
GLOBE, WERE INVITED

17

00:00:42,936 --> 00:00:45,456
TO SHARE THEIR PHOTOS AND
SCHOOLS WITH THE ASTRONAUTS.

18

00:00:46,286 --> 00:00:49,116
STATION CREWMEMBERS GOT TOGETHER
DURING THEIR BUSY SCHEDULES

19

00:00:49,176 --> 00:00:50,906
FOR A SPECIAL CALL
FROM THE VATICAN.

20

00:00:51,726 --> 00:00:54,966
POPE FRANCIS CONNECTED WITH
THE EXPEDITION 53 ASTRONAUTS

21

00:00:54,966 --> 00:00:57,286

AND COSMONAUTS, GIVING
THEM KIND WORDS

22

00:00:57,286 --> 00:00:59,136

AND ASKING WHAT PERSPECTIVE
THEIR TIME

23

00:00:59,136 --> 00:01:01,496

IN SPACE HAS GIVEN THEM.

24

00:01:01,626 --> 00:01:05,396

"Holy Father, this is
a complex question.

25

00:01:05,486 --> 00:01:07,936

I remain rather perplexed.

26

00:01:08,516 --> 00:01:13,976

It is a moment that is...it
is a delicate discourse,

27

00:01:14,186 --> 00:01:18,356

because I think that
our objective here is

28

00:01:18,726 --> 00:01:26,376

that of knowing our...our
being, and to fill our knowledge

29

00:01:26,376 --> 00:01:28,046

to understand what's around us.

30

00:01:28,046 --> 00:01:30,166

But on the other hand,
an interesting thing is

31

00:01:30,166 --> 00:01:34,266

that the more we know, the more
we realize how little we know."

32

00:01:35,206 --> 00:01:37,396
VALERIE ON TWITTER ASKED
WHAT METHODS ARE USED

33

00:01:37,396 --> 00:01:38,506
TO GROW PLANTS IN SPACE.

34

00:01:38,996 --> 00:01:40,706
AS YOU CAN IMAGINE
IT'S PRETTY DIFFICULT,

35

00:01:40,806 --> 00:01:42,946
CONSIDERING PLANTS DON'T
NECESSARILY GROW UP

36

00:01:42,946 --> 00:01:44,466
OR DOWN IN MICROGRAVITY.

37

00:01:45,036 --> 00:01:46,226
BUT THERE ARE A FEW MORE TRICKS

38

00:01:46,326 --> 00:01:47,766
THAT SCIENTISTS HAVE
TO THINK ABOUT.

39

00:01:48,626 --> 00:01:50,846
THE VEGGIE SYSTEM ON
STATION HAS THE ABILITY

40

00:01:50,846 --> 00:01:53,516
TO GROW SALAD-TYPE CROPS
FOR ASTRONAUTS TO EAT.

41

00:01:53,926 --> 00:01:57,376
THE SYSTEM PROVIDES LED LIGHTS
AND A NUTRIENT DELIVERY SYSTEM

42

00:01:57,416 --> 00:02:00,136
FOR PLANTS THAT GROW IN

LITTLE PODS CALLED PILLOWS.

43
00:02:00,696 --> 00:02:02,246
ASTRONAUTS HAVE ALREADY GROWN

44
00:02:02,286 --> 00:02:04,316
AND EATEN OUTREGEOUS
RED ROMAINE LETTUCE

45
00:02:04,386 --> 00:02:05,536
THAT GREW PRETTY NICELY.

46
00:02:06,246 --> 00:02:07,026
WE LEARNED THAT WE NEEDED

47
00:02:07,056 --> 00:02:09,866
TO MODIFY HOW THE PLANTS WERE
WATERED FOR FUTURE CROPS,

48
00:02:10,246 --> 00:02:13,516
SO CURRENTLY ON STATION, WE'RE
TESTING TOKYO BEKANA CABBAGE

49
00:02:13,516 --> 00:02:15,856
AND MIZUNA AS WELL AS
RED ROMAINE LETTUCE.

50
00:02:16,466 --> 00:02:19,016
SCIENTISTS ARE ALSO
MONITORING MICROBIAL LEVELS

51
00:02:19,076 --> 00:02:21,806
TO MAKE SURE THEY'LL BE SUPER
SAFE TO EAT, GIVING ASTRONAUTS

52
00:02:21,806 --> 00:02:24,806
ON STATION AND FUTURE
EXPLORERS SOME FRESH PRODUCE

53

00:02:25,026 --> 00:02:26,576
AS THEY TRAVEL THROUGH
THE COSMOS.

54

00:02:27,346 --> 00:02:29,336
KEEP SENDING US YOUR
QUESTIONS USING THE HASHTAG