



Space to Ground

1
00:00:02,706 --> 00:00:04,656
"HOUSTON, STATION
ON SPACE TO GROUND."

2
00:00:05,246 --> 00:00:07,126
WELCOME TO SPACE TO
GROUND, I'M GARY JORDAN.

3
00:00:07,556 --> 00:00:09,746
SOMETIMES TO REALLY
UNDERSTAND ANIMAL BEHAVIOR,

4
00:00:09,746 --> 00:00:10,906
YOU HAVE TO THINK
A LITTLE BIGGER.

5
00:00:11,286 --> 00:00:13,096
OR IN THIS CASE,
A LITTLE HIGHER.

6
00:00:14,246 --> 00:00:16,046
RUSSIAN COSMONAUTS OLEG ARTEMYEV

7
00:00:16,046 --> 00:00:19,066
AND SERGEY PROKOPYEV INSTALLED
AN EXPERIMENT CALLED ICARUS

8
00:00:19,106 --> 00:00:20,396
DURING A SPACEWALK THIS WEEK.

9
00:00:20,916 --> 00:00:23,666
ICARUS IS A COLLABORATIVE
PROJECT BETWEEN ROSCOSMOS

10
00:00:23,696 --> 00:00:25,726
AND THE GERMAN AEROSPACE
CENTER (DLR)

11
00:00:25,966 --> 00:00:28,876

TO STUDY THE MIGRATORY
PATTERNS OF SMALL ANIMALS TAGGED

12

00:00:28,876 --> 00:00:30,406
ON EARTH WITH GPS HARDWARE.

13

00:00:30,826 --> 00:00:32,426
THE EXPERIMENT MAY PROVIDE DATA

14

00:00:32,426 --> 00:00:34,336
ABOUT HOW ANIMALS
MOVE LOCATIONS,

15

00:00:34,436 --> 00:00:36,716
HOW POPULATION DENSITY
SHIFTS OVER TIME,

16

00:00:36,856 --> 00:00:38,026
AND HOW DISEASES SPREAD.

17

00:00:38,606 --> 00:00:41,836
THE COSMONAUTS ALSO DEPLOYED
FOUR SMALL TECHNOLOGY SATELLITES

18

00:00:42,066 --> 00:00:45,016
AND RETREIVED MATERIAL SCIENCE
SAMPLES DURING THE SPACEWALK.

19

00:00:46,246 --> 00:00:48,176
LIQUID BEHAVES STRANGELY
IN MICROGRAVITY.

20

00:00:48,226 --> 00:00:50,146
IT FORMS THESE BALLS
AND SEEMS TO STICK

21

00:00:50,146 --> 00:00:51,476
TO WHATEVER SURFACE IT TOUCHES.

22

00:00:52,116 --> 00:00:53,696
BUT HOW EASY CAN YOU CONTROL IT?

23
00:00:53,956 --> 00:00:56,276
AN EXPERIMENT CONDUCTED THIS
WEEK LOOKS AT JUST THAT.

24
00:00:57,176 --> 00:01:00,596
THE SURFACE TENSION CONTAINMENT
EXPERIMENT 2 TAKES THE SCIENCE

25
00:01:00,706 --> 00:01:03,216
OUT OF THE GLOVEBOX AND
WITHIN THE OPEN CABIN

26
00:01:03,216 --> 00:01:04,016
OF THE SPACE STATION.

27
00:01:04,546 --> 00:01:06,976
THE EXPERIMENT LOOKS AT
THE FORMATION AND CAPTURE

28
00:01:07,016 --> 00:01:10,526
OF MICRODROPLETS USING AIRFLOW
WHEN A PIPETTE INTERACTS

29
00:01:10,526 --> 00:01:12,866
WITH LIQUID TO SEE
JUST HOW STABLE IT IS

30
00:01:13,086 --> 00:01:14,656
AND HOW WELL IT CAN
BE CONTROLLED.

31
00:01:15,216 --> 00:01:17,486
ASSESSING THESE TECHNIQUES
CAN ALLOW MORE SCIENCE

32
00:01:17,486 --> 00:01:19,446
TO BE CONDUCTED OUTSIDE

OF A GLOVEBOX,

33

00:01:19,546 --> 00:01:21,146
MEANING MORE SCIENCE OVERALL.

34

00:01:21,856 --> 00:01:23,506
RICKY ARNOLD CONNECTED
WITH STUDENTS

35

00:01:23,506 --> 00:01:25,346
AT THE MICROSOFT
YOUTHSPARK EVENT

36

00:01:25,346 --> 00:01:27,986
THAT TOOK PLACE EARLY THIS
WEEK AT SPACE CENTER HOUSTON,

37

00:01:28,236 --> 00:01:31,076
THE OFFICIAL VISITOR CENTER OF
NASA'S JOHNSON SPACE CENTER.

38

00:01:31,926 --> 00:01:33,706
"What was the most
surprising aspect

39

00:01:33,796 --> 00:01:35,666
of executing a spacewalk?"

40

00:01:36,026 --> 00:01:38,186
"I think the most
suprising aspect

41

00:01:38,436 --> 00:01:42,046
for most people is
how long the day is.

42

00:01:42,136 --> 00:01:44,206
We're only out during
a spacewalk for six

43

00:01:44,206 --> 00:01:46,466

and a half hours, and but
that's six and a half hours

44

00:01:46,466 --> 00:01:48,646

where you only have water
to drink, there's no food

45

00:01:48,646 --> 00:01:50,856

and you're basically
the equivalent

46

00:01:50,856 --> 00:01:52,856

of jogging pretty hard in terms

47

00:01:52,856 --> 00:01:55,386

of how hard you're
working in that timeframe.

48

00:01:55,816 --> 00:01:58,016

But we are actually
in the suit closer

49

00:01:58,016 --> 00:01:59,896

to 10, 10 and a half hours."

50

00:02:00,796 --> 00:02:03,466

YOUTHSPARK WAS AN IMMERSIVE
DAYLONG CONFERENCE DESIGNED

51

00:02:03,466 --> 00:02:05,806

TO EMPOWER YOUNG PEOPLE TO
IMPROVE THEIR COMMUNITIES

52

00:02:05,806 --> 00:02:08,186

AND THE WORLD THROUGH THE
PURSUIT OF CAREERS IN SCIENCE,

53

00:02:08,456 --> 00:02:11,706

TECHNOLOGY, ENGINEERING,
ARTS AND MATHEMATICS.

54
00:02:12,806 --> 00:02:15,586
KEEP SENDING IN YOUR QUESTIONS
USING THE HASHTAG SPACETOGROUND,

55
00:02:16,076 --> 00:02:17,976
AND FOR THOSE TEACHERS GETTING
READY FOR THE SCHOOL YEAR,

56
00:02:18,086 --> 00:02:20,216
CHECK OUT THE SPACE
STATION RESEARCH EXPLORER

57
00:02:20,276 --> 00:02:21,816
FOR SOME FUN STUDENT
EXPERIMENTS,

58
00:02:22,276 --> 00:02:24,436
INCLUDING GROWING
NON-ORGANIC MATERIALS