



Spaceto**Ground**

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

2
00:00:05,026 --> 00:00:07,576
WELCOME TO SPACE TO
GROUND, I'M LEAH CHESHIER.

3
00:00:07,936 --> 00:00:10,326
A SPACECRAFT CARRYING
NEW SCIENCE EXPERIMENTS,

4
00:00:10,436 --> 00:00:12,526
CREW SUPPLIES AND
HARDWARE IS ON ITS WAY

5
00:00:12,526 --> 00:00:14,206
TO THE INTERNATIONAL
SPACE STATION.

6
00:00:14,436 --> 00:00:18,616
THE SPACEX FALCON 9 ROCKET LIT
UP THE SKY AS IT BLASTED OFF

7
00:00:18,676 --> 00:00:20,026
FOR A THREE-DAY EARTH ORBIT,

8
00:00:20,316 --> 00:00:23,326
MARKING SPACEX'S 15TH
COMMERCIAL RESUPPLY MISSION.

9
00:00:23,926 --> 00:00:25,606
THE SPACEX DRAGON
WILL RENDEZVOUS

10
00:00:25,606 --> 00:00:28,236
WITH THE SPACE STATION
ON MONDAY, JULY 2,

11

00:00:28,516 --> 00:00:31,356
WHEN NASA ASTRONAUT RICKY
ARNOLD WILL USE THE CANADARM2

12
00:00:31,426 --> 00:00:33,806
TO GRAPPLE THE SPACECRAFT
IN PREPARATION

13
00:00:33,806 --> 00:00:35,856
FOR REMOTE INSTALLATION
BY THE GROUND CREW.

14
00:00:35,856 --> 00:00:39,766
THE DRAGON SPACECRAFT, LOADED
WITH NEARLY 6,000 POUNDS

15
00:00:39,766 --> 00:00:43,266
OF SUPPLIES AND EXPERIMENTS,
WILL REMAIN AT THE SPACE STATION

16
00:00:43,266 --> 00:00:45,976
FOR 32 DAYS BEFORE UNDOCKING
AND RETURNING TO EARTH,

17
00:00:46,376 --> 00:00:49,046
BRINGING COMPLETED EXPERIMENTS
ALONG FOR FURTHER ANALYSIS.

18
00:00:49,046 --> 00:00:53,296
THANKS TO THE UPCOMING
ARRIVAL OF THE SPACEX DRAGON,

19
00:00:53,556 --> 00:00:55,506
THE CREW IS GOING TO
BE VERY BUSY WORKING

20
00:00:55,506 --> 00:00:57,426
ON THE NEW SCIENCE
EXPERIMENTS IT BRINGS.

21

00:00:58,456 --> 00:01:00,726
ONE OF THESE EXPERIMENTS
IS THE ECOSTRESS DEVICE,

22
00:01:01,066 --> 00:01:02,826
WHICH WILL MANAGE THE
TEMPERATURE OF PLANTS

23
00:01:02,826 --> 00:01:05,256
TO HELP US BETTER UNDERSTAND
HOW MUCH WATER THEY NEED

24
00:01:05,256 --> 00:01:06,586
AND HOW THEY RESPOND TO STRESS.

25
00:01:07,136 --> 00:01:10,066
THIS IS CRITICAL AS WE PREPARE
FOR LONG DURATION SPACE MISSIONS

26
00:01:10,066 --> 00:01:12,286
TO THE MOON OR MARS,
AS ASTRONAUTS WILL NEED

27
00:01:12,286 --> 00:01:14,046
TO GROW THEIR OWN FOOD
ABOARD THE SPACECRAFT.

28
00:01:14,686 --> 00:01:17,496
HOWEVER, EXPERIMENTS LIKE
ECOSTRESS HAVE APPLICATIONS

29
00:01:17,496 --> 00:01:18,726
TO LIFE ON THE GROUND, TOO.

30
00:01:19,116 --> 00:01:21,616
ECOSYSTEM PRODUCTIVITY IS
THREATENED BY WATER STRESS,

31
00:01:21,956 --> 00:01:24,236
WHICH ECOSTRESS CAN

HELP DETECT AND ANALYZE.

32

00:01:24,736 --> 00:01:27,276

THIS MAY HELP INFORM
FUTURE AGRICULTURAL PLANS

33

00:01:27,276 --> 00:01:29,156

AND WATER RESOURCE
MANAGEMENT ON EARTH.

34

00:01:30,266 --> 00:01:33,196

THIS WEEK'S QUESTION COMES
FROM MONIKA, WHO WANTS TO KNOW

35

00:01:33,196 --> 00:01:35,816

IF ASTRONAUTS EXPERIENCE
VERTIGO WHILE IN ORBIT.

36

00:01:36,776 --> 00:01:38,556

UPON THEIR ARRIVAL
TO THE SPACE STATION,

37

00:01:38,646 --> 00:01:40,736

SOME ASTRONAUTS DO
EXPERIENCE "SPACE SICKNESS,"

38

00:01:41,116 --> 00:01:42,866

WHICH INCLUDES SYMPTOMS
LIKE VERTIGO,

39

00:01:42,916 --> 00:01:44,216

MILD HEADACHES AND NAUSEA.

40

00:01:44,936 --> 00:01:47,526

SPACE SICKNESS OCCURS AS
THE BODY TRIES TO ACCLIMATE

41

00:01:47,526 --> 00:01:48,756

TO A MICROGRAVITY ENVIRONMENT.

42

00:01:49,386 --> 00:01:51,116

SENSORS IN THE INNER
EAR, WHICH ARE PART

43

00:01:51,116 --> 00:01:52,846

OF THE BODY'S VESTIBULAR SYSTEM,

44

00:01:53,026 --> 00:01:54,736

CAN SENSE THE PULL
OF GRAVITY ON EARTH.

45

00:01:55,126 --> 00:01:58,296

IN SPACE, HOWEVER, THE BODY MUST
ADJUST TO THE LACK OF GRAVITY.

46

00:01:58,576 --> 00:01:59,806

THERE IS NO UP OR DOWN!

47

00:02:00,186 --> 00:02:02,216

THIS CONFUSES THE
BRAIN, BUT FORTUNATELY,

48

00:02:02,326 --> 00:02:04,276

MOST ASTRONAUTS ADAPT
RATHER QUICKLY.

49

00:02:05,566 --> 00:02:08,666

KEEP SENDING IN YOUR QUESTIONS
USING THE HASHTAG SPACETOGROUND.

50

00:02:08,940 --> 00:02:10,080

WE'LL SEE YOU NEXT WEEK.