



SPACE TO GROUND

1

00:00:03,029 --> 00:00:06,599

WELCOME TO SPACE TO GROUND, YOUR WEEKLY LOOK
AT WHAT'S HAPPENING ON BOARD I-S-S.

2

00:00:06,599 --> 00:00:08,109

I'M DAN HUOT.

3

00:00:08,109 --> 00:00:12,589

SPACEX'S DRAGON CARGO CRAFT RETURNED TO EARTH
THIS WEEK COMPLETING THE COMPANY'S THIRD RESUPPLY

4

00:00:12,589 --> 00:00:13,589

MISSION.

5

00:00:13,589 --> 00:00:17,020

ON SUNDAY, IT WAS REMOVED FROM THE EARTH FACING
SIDE OF THE HARMONY NODE BY THE STATION'S

6

00:00:17,020 --> 00:00:19,329

ROBOTIC ARM AFTER BEING DOCKED FOR A MONTH.

7

00:00:19,329 --> 00:00:24,750

JUST HOURS LATER, IT SPLASHED DOWN IN THE
PACIFIC, RETURNING APPROXIMATELY 3500 POUNDS

8

00:00:24,750 --> 00:00:26,310

OF CARGO AND SCIENCE SAMPLES.

9

00:00:26,310 --> 00:00:30,450

THE NEXT TRIO TO HEAD TO THE STATION IS DOWN
IN BAIKONUR, KAZAKHSTAN IN THEIR FINAL WEEK

10

00:00:30,450 --> 00:00:31,510

OF PREPARATION.

11

00:00:31,510 --> 00:00:36,879

REID WISEMAN, MAX SURAEV AND ALEXANDER GERST
CONDUCTED THEIR FINAL SUIT FIT CHECKS AND

12

00:00:36,879 --> 00:00:41,510

TOOK PART IN CEREMONIAL ACTIVITIES, SUCH AS
RAISING THEIR RESPECTIVE COUNTRY'S FLAGS AND

13

00:00:41,510 --> 00:00:42,910

A TRADITIONAL TREE PLANTING.

14

00:00:42,910 --> 00:00:46,600

THE THREE ARE SCHEDULED TO LAUNCH ON WEDNESDAY,
MAY 28.

15

00:00:46,600 --> 00:00:50,960

COMMANDER STEVE SWANSON HAS BEEN WORKING ON
THE RESIST TUBULE EXPERIMENT THIS WEEK.

16

00:00:50,960 --> 00:00:55,879

IT'S A BIOLOGICAL SCIENCE STUDY TAKING PLACE
TO CLARIFY THE MECHANISM OF GRAVITY RESISTANCE

17

00:00:55,879 --> 00:00:56,910

IN PLANTS.

18

00:00:56,910 --> 00:01:01,399

GRAVITY RESISTANCE PLAYED AN IMPORTANT ROLE
IN THE ESTABLISHMENT OF LAND BASED PLANTS

19

00:01:01,399 --> 00:01:04,330

SOME 450 MILLION YEARS AGO.

20

00:01:04,330 --> 00:01:08,890

BETTER UNDERSTANDING THIS MECHANISM WILL BE
INSTRUMENTAL IN ENABLING EFFICIENT PLANT PRODUCTION

21

00:01:08,890 --> 00:01:13,470

IN MICROGRAVITY, A KEY CAPABILITY FOR SUSTAINING
HUMAN LIFE IN SPACE.

22

00:01:13,470 --> 00:01:17,829

THIS WEEK'S SOCIAL MEDIA QUESTION COMES FROM

THE ROCKET SCIENCE CLUB AT DUGGAN MIDDLE SCHOOL.

23

00:01:17,829 --> 00:01:20,950

THEY ASK "HOW MUCH THRUST DOES IT TAKE TO LAUNCH A SOYUZ?"

24

00:01:20,950 --> 00:01:23,439

WELL LIKE MOST ROCKETS, THE SOYUZ OPERATES IN STAGES.

25

00:01:23,439 --> 00:01:28,259

THE FIRST STAGE CONSISTS OF FOUR STRAP-ON BOOSTERS AND A CENTRAL CORE ENGINE WHICH INITIALLY

26

00:01:28,259 --> 00:01:32,390

PROVIDE OVER NINE HUNDRED THIRTY THOUSAND POUNDS OF THRUST.

27

00:01:32,390 --> 00:01:37,130

AFTER ALMOST TWO MINUTES, THE STRAP ON BOOSTERS FALL OFF AND THE CORE STAGE CONTINUES TO BURN

28

00:01:37,130 --> 00:01:41,570

PROVIDING BETWEEN ONE HUNDRED SEVENTY-EIGHT THOUSAND AND TWO HUNDRED TWENTY-TWO THOUSAND

29

00:01:41,570 --> 00:01:42,570

POUNDS.

30

00:01:42,570 --> 00:01:46,479

FINALLY, THE THIRD STAGE PROVIDES JUST UNDER SIXTY-SEVEN THOUSAND POUNDS OF THRUST.

31

00:01:46,479 --> 00:01:48,930

AND THAT'S THE SIMPLIFIED ANSWER...