

A satellite is being deployed from the International Space Station (ISS) by a robotic arm. The satellite is cylindrical with a silver and white finish and has two large, dark, rectangular solar panels extended from its top. The ISS's solar panel arrays are visible in the background, extending across the right side of the frame. The Earth's blue and white clouds are visible in the background.

**SCIENCE LAUNCHING  
ON NORTHROP GRUMMAN CRS-16  
MISSION TO THE SPACE STATION**

1  
00:00:00,000 --> 00:00:03,106  
WHY ARE WE SENDING SLIME MOLDS

2  
00:00:03,106 --> 00:00:04,562  
REGOLITH SIMULANT

3  
00:00:04,562 --> 00:00:06,122  
NEW SCIENCE HARDWARE

4  
00:00:06,122 --> 00:00:08,921  
AND MUSCLE CELLS TO THE SPACE STATION?

5  
00:00:08,921 --> 00:00:13,448  
THE INTERNATIONAL SPACE STATION  
IS A LAB LIKE NO OTHER.

6  
00:00:13,448 --> 00:00:18,359  
A NORTHROP GRUMMAN CYGNUS WILL SOON  
DELIVER DOZENS OF NEW EXPERIMENTS.

7  
00:00:18,359 --> 00:00:23,888  
LET'S TAKE A LOOK AT WHAT'S ON BOARD  
NORTHROP GRUMMAN'S 16TH CARGO MISSION.

8  
00:00:23,888 --> 00:00:25,767  
REDWIRE REGOLITH PRINT

9  
00:00:25,767 --> 00:00:30,000  
SCIENTISTS WILL TEST 3D PRINTING IN SPACE USING  
MATERIAL SIMULATING LUNAR AND MARTIAN SOIL.

10  
00:00:30,000 --> 00:00:34,520  
THIS PROCESS COULD EVENTUALLY BE USED TO  
CONSTRUCT HABITATS ON OTHER PLANETS.

11  
00:00:34,520 --> 00:00:36,263  
CARDINAL MUSCLE

12

00:00:36,263 --> 00:00:40,226

RESEARCHERS WILL TEST THERAPEUTIC DRUGS MEANT TO DIMINISH MUSCLE LOSS

13

00:00:40,226 --> 00:00:44,192

USING MUSCLE CELLS CULTURED IN MICROGRAVITY.

14

00:00:44,192 --> 00:00:46,468

KENTUCKY RE-ENTRY PROBE EXPERIMENT (KREPE)

15

00:00:46,468 --> 00:00:50,034

CAPSULES WILL DEPLOY WHEN CYGNUS RE-ENTERS THE ATMOSPHERE

16

00:00:50,034 --> 00:00:54,464

AND TRANSMIT DATA TO TEST AN AFFORDABLE THERMAL PROTECTION SYSTEM.

17

00:00:54,464 --> 00:00:57,394

FOUR BED CO2 SCRUBBER

18

00:00:57,394 --> 00:01:00,374

THIS STUDY DEMONSTRATES A SPACECRAFT CARBON DIOXIDE REMOVAL TECHNOLOGY.

19

00:01:00,374 --> 00:01:04,450

THE SCRUBBER INCLUDES MECHANICAL UPGRADES AND AN IMPROVED ABSORBANT.

20

00:01:04,450 --> 00:01:06,282

FLOW BOILING AND CONDENSATION EXPERIMENT (FBCE)

21

00:01:06,282 --> 00:01:09,680

A NEW FACILITY WILL ENABLE EXPERIMENTS THAT COULD SUPPORT IMPROVEMENTS

22

00:01:09,680 --> 00:01:14,527

TO MANY THERMAL CONTROL SYSTEMS IN MICROGRAVITY.

23

00:01:14,527 --> 00:01:15,681

BLOB

24

00:01:15,681 --> 00:01:20,976

FRENCH STUDENTS WILL REPLICATE STUDIES CONDUCTED IN ORBIT TO SEE HOW SLIME MOLDS' E

25

00:01:20,976 --> 00:01:25,009

THE STUDENTS WILL COMPARE THE MOLD SPEED, SHAPE, AND GROWTH.