
STATION SCIENCE

1
00:00:03,009 --> 00:00:06,100
WELCOME TO SPACE TO GROUND, YOUR WEEKLY LOOK
AT WHAT'S HAPPENING ON BOARD THE INTERNATIONAL

2
00:00:06,100 --> 00:00:07,100
SPACE STATION.

3
00:00:07,100 --> 00:00:08,100
I'M JOSH BYERLY.

4
00:00:08,100 --> 00:00:11,299
THE CREW IS GETTING READY TO WELCOME A NEW
DELIVERY OF CARGO AND SCIENCE.

5
00:00:11,299 --> 00:00:14,880
ORBITAL SCIENCES' CYGNUS LAUNCHED FROM WALLOPS,
VIRIGINIA ON THURSDAY.

6
00:00:14,880 --> 00:00:17,449
THE CRAFT WILL ARRIVE AT THE STATION ON SUNDAY.

7
00:00:17,449 --> 00:00:21,440
TWENTY THREE SCHOOLS AND ALMOST NINE THOUSAND
STUDENTS ARE FLYING EXPERIMENTS ON EVERYTHING

8
00:00:21,440 --> 00:00:23,250
FROM STEM CELLS TO ANTS.

9
00:00:23,250 --> 00:00:27,320
THIS IS THE FIRST OFFICIAL CARGO FLIGHT FOR
ORBITAL SCIENCES, WITH SEVERAL MORE SCHEDULED

10
00:00:27,320 --> 00:00:28,590
FOR THIS YEAR.

11
00:00:28,590 --> 00:00:29,770
FOR MORE VISIT NASA.GOV/ORBITAL.

12

00:00:29,770 --> 00:00:45,879
IN STATION SCIENCE, THE CREW WAS BUSY THIS
WEEK DOING BIOMEDICAL RESEARCH.

13
00:00:45,879 --> 00:00:48,229
ONE ULTRASOUND EXPERIMENT IS CALLED CARDIO-OX.

14
00:00:48,229 --> 00:00:52,089
THE HOPE IS TO IDENTIFY CERTAIN MARKERS IN
THE BODY THAT COULD HELP PREDICT HEART DISEASE

15
00:00:52,089 --> 00:00:54,460
AND DETERMINE WAYS TO COMBAT IT.

16
00:00:54,460 --> 00:00:56,620
GOOD NEWS FOR THOSE OF YOU THAT LIKE TO HIT
THE GYM.

17
00:00:56,620 --> 00:00:59,709
THE STATION CREW TOOK PART IN AN EXPERIMENT
CALLED SPRINT.

18
00:00:59,709 --> 00:01:04,739
EXERCISE IS EXTREMELY IMPORTANT FOR THE CREWMEMBERS
TO HELP COMBAT THE EFFECTS OF LONG-TERM SPACEFLIGHT.

19
00:01:04,739 --> 00:01:09,650
SPRINT LOOKS AT WHETHER HIGHER INTENSITY RESISTIVE
EXERCISE DONE A FEW TIMES A WEEK IS BETTER

20
00:01:09,650 --> 00:01:12,500
THAN LOWER INTENSITY EXERCISE DONE MORE OFTEN.

21
00:01:12,500 --> 00:01:16,820
SO IF IT WORKS, THE CREW WON'T NEED TO EXERCISE
QUITE AS OFTEN, AND MAYBE WE HERE ON EARTH

22
00:01:16,820 --> 00:01:18,210
WON'T HAVE TO EITHER….

23
00:01:18,210 --> 00:01:19,220
JUST MAYBE.

24
00:01:19,220 --> 00:01:23,640
MACFANATIC56 ASKS US HOW LONG DOES IT TAKE
AN ASTRONAUT TO RECOVER BACK ON EARTH AFTER

25
00:01:23,640 --> 00:01:24,950
BEING IN THE SPACE STATION?

26
00:01:24,950 --> 00:01:29,050
WELL, EVERY CREW MEMBER IS DIFFERENT, ONCE
THEY LAND, IT TAKES A FEW HOURS FOR THEM TO

27
00:01:29,050 --> 00:01:30,660
GET THEIR EARTH LEGS BACK.

28
00:01:30,660 --> 00:01:33,940
AND THEN WHEN THEY GETHOME TO HOUSTON, THEY
SPEND SEVERAL WEEKS WORKING OUT IN THE GYM

29
00:01:33,940 --> 00:01:35,160
AND SWIMMING.

30
00:01:35,160 --> 00:01:38,890
THIS IS ASTRONAUT CHRIS CASSIDY JUST TWO DAYS
AFTER HE LANDED.

31
00:01:38,890 --> 00:01:42,430
HE SAID HE WAS BACK TO 100 PERCENT IN ABOUT
THREE WEEKS.

32
00:01:42,430 --> 00:01:45,230
THE BLACK TOM ASKED US HOW CAN YOU MEASURE
THE ALTITUDE OF THE ISS?

33
00:01:45,230 --> 00:01:47,570
IS IT GPS OR GRAVITATIONAL PULL?

34
00:01:47,570 --> 00:01:51,000
WELL, WE DO INDEED USE GPS JUST LIKE YOU DO
HERE ON EARTH.

35
00:01:51,000 --> 00:01:55,930
THE SPACE STATION HAS FOUR ANTENNAS OUTSIDE
AND TWO GPS COMPUTERS INSIDE THAT HELP US

36
00:01:55,930 --> 00:01:58,050
DETERMINE HOW HIGH IT IS FLYING.

37
00:01:58,050 --> 00:02:03,030
THERE'S A POSITION IN MISSION CONTROL CALLED
TOPO THAT MONITORS WHERE THE STATION IS FLYING

38
00:02:03,030 --> 00:02:07,970
AND ANOTHER CALLED ADCO THAT MONITORS THE
ACTUAL ORIENTATION OF THE STATION.