



Spaceto**Ground**

1
00:00:02,706 --> 00:00:07,126
WELCOME TO SPACE TO
GROUND, I'M GARY JORDAN.

2
00:00:07,426 --> 00:00:10,006
THIS WEEK, A VEHICLE
FILLED WITH TONS OF TRASH

3
00:00:10,066 --> 00:00:11,896
AND A FEW SATELLITES
SAID FAREWELL

4
00:00:11,896 --> 00:00:13,966
AFTER 52 DAYS ABOARD
THE STATION.

5
00:00:14,506 --> 00:00:17,616
THE NORTHROP GRUMMAN CYGNUS WAS
RELEASED EARLY SUNDAY MORNING

6
00:00:17,706 --> 00:00:20,306
FILLED WITH OVER
6600 POUNDS OF TRASH.

7
00:00:20,916 --> 00:00:23,056
AFTER TRAVELING SAFELY
AWAY FROM STATION,

8
00:00:23,496 --> 00:00:25,016
NORTHROP GRUMMAN
FLIGHT CONTROLLERS TOOK

9
00:00:25,016 --> 00:00:28,826
OVER TO FLY CYGNUS A NUMBER OF
MILES AWAY TO DEPLOY A SERIES

10
00:00:28,826 --> 00:00:32,176
OF SIX SATELLITES WITH THE
NANORACKS CUBESAT DEPLOYER.

11
00:00:32,176 --> 00:00:36,136
CYGNUS IS STATIONED TO
REMAIN IN ORBIT UNTIL JULY 30

12
00:00:36,136 --> 00:00:38,826
WHEN IT WILL FIRE ITS
ENGINES FOR THE LAST TIME

13
00:00:38,826 --> 00:00:40,996
TO BEGIN ITS FIERY
DEMISE IN THE ATMOSPHERE

14
00:00:40,996 --> 00:00:42,836
ABOVE THE PACIFIC OCEAN.

15
00:00:42,836 --> 00:00:44,236
FOR THE CREW IT WAS
RIGHT BACK TO WORK,

16
00:00:44,236 --> 00:00:46,056
AND NOTHING IS MORE CONCRETE

17
00:00:46,056 --> 00:00:47,776
IN AN ASTRONAUTS
SCHEDULE THAN SCIENCE.

18
00:00:48,206 --> 00:00:51,546
THE CREW MIXED THE CONTENTS FOR
THE MICROGRAVITY INVESTIGATION

19
00:00:51,586 --> 00:00:53,836
OF CEMENT SOLIDIFICATION,
OR MICS.

20
00:00:54,656 --> 00:00:57,266
MICS AIMS TO USE THE UNIQUE
ENVIRONMENT OF THE SPACE STATION

21
00:00:57,266 --> 00:01:00,266

TO UNDERSTAND THIS COMPLEX
PROCESS, INCLUDING HOW

22

00:01:00,266 --> 00:01:03,766
TO DESCRIBE HYDRATION REACTION
AND MICROSTRUCTURE FORMATION

23

00:01:03,766 --> 00:01:06,486
IN CEMENT PASTES THAT
COULD BE APPLIED FOR USE

24

00:01:06,546 --> 00:01:08,186
IN SPACE AND ON EARTH.

25

00:01:08,606 --> 00:01:11,386
THIS WEEK'S QUESTION COMES
FROM T-POSE WHO WANTED

26

00:01:11,386 --> 00:01:13,326
TO KNOW HOW KEEP
FOOD FRESH IN SPACE.

27

00:01:14,166 --> 00:01:15,436
THERE ARE A FEW METHODS THEY USE

28

00:01:15,436 --> 00:01:16,776
ON THE INTERNATIONAL
SPACE STATION,

29

00:01:17,156 --> 00:01:19,926
AND THEY KEEP FOOD FRESH
FOR QUITE SOME TIME.

30

00:01:20,776 --> 00:01:23,036
SPACE STATION FOOD
USUALLY COMES IN TWO WAYS.

31

00:01:23,726 --> 00:01:25,226
ONE IS THERMOSTABILIZED,

32

00:01:25,226 --> 00:01:26,986

WHICH COMES IN THOSE
GREYISH GREEN PACKAGES

33

00:01:27,186 --> 00:01:28,776

THAT YOU MAY RECOGNIZE
FROM THE MILITARY.

34

00:01:28,846 --> 00:01:31,746

THESE CAN BE EATEN RIGHT
OUT OF THE PACKAGE OR WARMED

35

00:01:31,746 --> 00:01:32,856

UP FOR A NICE HOT MEAL.

36

00:01:33,586 --> 00:01:35,966

THE OTHER IS FREEZE DRIED,
WHERE THE WATER IS SUCKED

37

00:01:36,056 --> 00:01:38,256

OUT BEFORE LAUNCH AND
NEEDS TO BE ADDED BACK

38

00:01:38,256 --> 00:01:39,826

INTO THE PACKAGING
BEFORE CONSUMPTION.

39

00:01:40,636 --> 00:01:43,276

THESE METHODS KEEP THE FOOD
SHELF-STABLE FOR A FEW YEARS

40

00:01:43,796 --> 00:01:46,796

AND REDUCE THE WEIGHT SO YOU CAN
LAUNCH A LOT OF MEALS AT ONCE.

41

00:01:47,866 --> 00:01:50,096

KEEP SENDING IN YOUR QUESTIONS
USING THE HASHTAG SPACETOGROUND,

42

00:01:50,096 --> 00:01:52,166

AND IF YOU'RE A MIDDLE
SCHOOL TEACHER,

43

00:01:52,316 --> 00:01:54,386

BE SURE TO TELL YOUR
STUDENTS TO REQUEST IMAGES

44

00:01:54,446 --> 00:01:56,846

OF SPECIFIC LOCATIONS
ON EARTH AS PART