

# **SPEEDY TIME**

**EPISODE-4**

**MICROGRAVITY SCIENCE**

**GLOVE BOX**



1  
00:00:00,266 --> 00:00:01,267  
>> TODAY WE WANTED TO

2  
00:00:01,267 --> 00:00:02,635  
TALK TO YOU ABOUT

3  
00:00:02,635 --> 00:00:04,504  
MICROGRAVITY SCIENCE GLOVEBOX.

4  
00:00:04,504 --> 00:00:05,338  
WE DO ALL KINDS OF

5  
00:00:05,338 --> 00:00:06,206  
EXPERIMENTS IN HERE.

6  
00:00:06,206 --> 00:00:06,740  
I'VE GROWN TISSUE

7  
00:00:06,740 --> 00:00:07,307  
CULTURE CELLS.

8  
00:00:07,307 --> 00:00:07,974  
I'VE LOOKED AT HOW

9  
00:00:07,974 --> 00:00:09,142  
AIR AND FLUIDS SEPARATE.

10  
00:00:09,142 --> 00:00:09,876  
I'VE GROWN SUPERCONDUCTOR

11  
00:00:09,876 --> 00:00:10,577  
CRYSTALS IN HERE,

12  
00:00:10,577 --> 00:00:11,344  
AND, WELL, THEY GOT UP TO

13  
00:00:11,344 --> 00:00:12,545

OVER 700 DEGREES FAHRENHEIT,

14

00:00:12,545 --> 00:00:13,413  
SO THIS ENVIRONMENT WAS

15

00:00:13,413 --> 00:00:14,214  
TO PROTECT US FROM

16

00:00:14,214 --> 00:00:14,814  
WHAT WAS HAPPENING

17

00:00:14,814 --> 00:00:15,882  
INSIDE THE EXPERIMENT.

18

00:00:15,882 --> 00:00:16,816  
NOW I'M GROWING CELLS,

19

00:00:16,816 --> 00:00:17,650  
AND THEY HAVE TO BE GROWN

20

00:00:17,650 --> 00:00:18,485  
IN A STERILE ENVIRONMENT.

21

00:00:18,485 --> 00:00:19,052  
SO NOW I'M PROTECTING

22

00:00:19,052 --> 00:00:20,153  
THE CELLS FROM ME

23

00:00:20,153 --> 00:00:20,887  
BY HAVING THEM INSIDE

24

00:00:20,887 --> 00:00:21,421  
THIS ENVIRONMENT.

25

00:00:21,421 --> 00:00:22,155  
SO IT'S VERY FLEXIBLE,

26

00:00:22,155 --> 00:00:22,756

AND WE CAN CHANGE OUT

27

00:00:22,756 --> 00:00:23,556

ALL THE EXPERIMENTS

28

00:00:23,556 --> 00:00:24,491

BY OPENING UP THIS BIG DOOR

29

00:00:24,491 --> 00:00:25,225

ON THE FRONT.

30

00:00:25,225 --> 00:00:25,892

THEN, ONCE WE'VE GOT

31

00:00:25,892 --> 00:00:26,559

THE EXPERIMENT SET UP INSIDE,

32

00:00:26,559 --> 00:00:27,227

YOU CAN ACCESS FROM

33

00:00:27,227 --> 00:00:27,961

THE SIDES, OR WE HAVE

34

00:00:27,961 --> 00:00:28,828

THIS LITTLE AIRLOCK DOWN HERE

35

00:00:28,828 --> 00:00:29,729

THAT IF YOU WANTED TO,

36

00:00:29,729 --> 00:00:30,296

YOU COULD ACCESS

37

00:00:30,296 --> 00:00:30,997

FROM HERE AS WELL.

38

00:00:30,997 --> 00:00:31,498

IT'S KIND OF LIKE

39

00:00:31,498 --> 00:00:32,132

A TRANSFORMER-- AT THE END

40

00:00:32,132 --> 00:00:32,766

OF THE DAY WHEN YOU'RE DONE

41

00:00:32,766 --> 00:00:33,500

WORKING WITH IT, YOU JUST

42

00:00:33,500 --> 00:00:35,201

PUSH IT BACK INTO THE RACK.

43

00:00:35,201 --> 00:00:35,535

THERE WE GO, AND IT FITS

44

00:00:35,535 --> 00:00:36,569

RIGHT IN VERY NICELY

45

00:00:36,569 --> 00:00:37,504

WITHIN THE RACK VOLUME.

46

00:00:37,504 --> 00:00:38,037

THE OTHER THING THAT

47

00:00:38,037 --> 00:00:38,705

GOES ALONG WITH THIS

48

00:00:38,705 --> 00:00:39,406

OR IS ATTACHED TO THIS

49

00:00:39,406 --> 00:00:40,006

IS A MICROSCOPE.

50

00:00:40,006 --> 00:00:40,607

WE HAVE A FANTASTIC

51  
00:00:40,607 --> 00:00:41,341  
MICROSCOPE, WITH CAPABILITY

52  
00:00:41,341 --> 00:00:42,208  
TO SEND THE VIDEOS AND

53  
00:00:42,208 --> 00:00:43,209  
PICTURES DOWN TO THE GROUND.

54  
00:00:43,209 --> 00:00:43,777  
THEN THE GROUND'S BEEN

55  
00:00:43,777 --> 00:00:44,444  
LOOKING AT THE STRUCTURES

56  
00:00:44,444 --> 00:00:45,044  
THAT ARE FORMING DIFFERENTLY

57  
00:00:45,044 --> 00:00:45,779  
HERE IN ZERO GRAVITY.

58  
00:00:45,779 --> 00:00:46,413  
THAT'S WHY THEY'RE DOING

59  
00:00:46,413 --> 00:00:46,946  
THE RESEARCH HERE,

60  
00:00:46,946 --> 00:00:47,647  
IS TO SEE WHAT NEW

61  
00:00:47,647 --> 00:00:48,481  
THEY CAN DISCOVER.

62  
00:00:48,481 --> 00:00:49,749  
SO, VERY COOL SCIENCE,