

Space Cup



1
00:00:00,000 --> 00:00:26,600
Dramatic Music

2
00:00:26,640 --> 00:00:28,060
Now were doing this in part for fun, but

3
00:00:28,090 --> 00:00:30,160
really below all of this is engineering

4
00:00:30,200 --> 00:00:32,610
and science type of data. 80% of the

5
00:00:32,650 --> 00:00:34,370
work here is going to be science, but

6
00:00:34,410 --> 00:00:35,960
20% of this work is going to be fun for

7
00:00:35,990 --> 00:00:38,110
the astronauts, unscripted fun that they

8
00:00:38,140 --> 00:00:39,860
can use at lunch time whether they're

9
00:00:39,890 --> 00:00:41,680
drinking cocoa or peach mango

10
00:00:41,710 --> 00:00:43,680
smoothies or whatever, or espresso, ok

11
00:00:43,720 --> 00:00:44,920
those are the kinds of things that we

12
00:00:44,950 --> 00:00:46,100
expect to be fun but theres really

13
00:00:46,130 --> 00:00:47,760

science underneath all of this stuff too.

14

00:00:47,800 --> 00:00:49,600

Don Petit demonstrated an early version

15

00:00:49,640 --> 00:00:51,340

in cooperation with us. It was actually

16

00:00:51,370 --> 00:00:52,920

patented but there are new items in this

17

00:00:52,950 --> 00:00:54,510

design that make it unique so there is a

18

00:00:54,540 --> 00:00:55,840

second patent coming. They take a

19

00:00:55,880 --> 00:00:57,730

drink bag now from the dispenser, any

20

00:00:57,770 --> 00:00:59,650

drink that they wish to do and then they

21

00:00:59,690 --> 00:01:01,500

dispense it into the cup. It wicks inside

22

00:01:01,530 --> 00:01:03,400

the cup and is stable inside so it holds in

23

00:01:03,430 --> 00:01:05,630

there like as if gravity was holding it but

24

00:01:05,670 --> 00:01:07,390

it's surface tension not gravity. When

25

00:01:07,420 --> 00:01:09,420

they go to drink, they make a capillary

26

00:01:09,450 --> 00:01:10,870

connection and then they continue to

27

00:01:10,900 --> 00:01:12,880

drink normally but it's surface tension t

28

00:01:12,910 --> 00:01:14,620

that's bringing liquid to the face not

29

00:01:14,650 --> 00:01:16,250

gravity, so it's not being poured into the

30

00:01:16,290 --> 00:01:17,760

mouth, it's being drawn in by surface

31

00:01:17,790 --> 00:01:19,480

tension forces. We've since found out

32

00:01:19,510 --> 00:01:21,080

that if you make a reusable cup, you

33

00:01:21,120 --> 00:01:22,540

can save all kinds of volume in terms of

34

00:01:22,570 --> 00:01:24,070

the bags that they use in Space Station.