



1  
00:00:05,210 --> 00:00:02,540  
okay well what I have here is a little

2  
00:00:08,419 --> 00:00:05,220  
cup I made from an overhead transparency

3  
00:00:11,839 --> 00:00:08,429  
film that I found and I'm going to roll

4  
00:00:15,110 --> 00:00:11,849  
the video now and I've also got a bag of

5  
00:00:18,170 --> 00:00:15,120  
coffee and we can fund our coffee out

6  
00:00:20,210 --> 00:00:18,180  
from a bag but no drinking from a cup is

7  
00:00:22,250 --> 00:00:20,220  
hard to do because you can't get the cup

8  
00:00:25,550 --> 00:00:22,260  
up and get the liquid out and it's also

9  
00:00:28,580 --> 00:00:25,560  
easy to slosh so with the special shape

10  
00:00:33,560 --> 00:00:28,590  
of this cup the surface tension forces

11  
00:00:37,729 --> 00:00:33,570  
will wick the coffee up along the edge

12  
00:00:40,760 --> 00:00:37,739  
there and as you can see as I'm putting

13  
00:00:43,729 --> 00:00:40,770

some coffee there in the bay and the way

14

00:00:44,990 --> 00:00:43,739

this works is one is the cross section

15

00:00:50,600 --> 00:00:45,000

of this couple looks like an airplane

16

00:00:54,410 --> 00:00:50,610

wing and the sharp angle the narrow

17

00:00:56,450 --> 00:00:54,420

angle there will whip the coffee up and

18

00:00:59,689 --> 00:00:56,460

this is what we use when we design fuel

19

00:01:02,180 --> 00:00:59,699

tanks for rockets to reignite in a

20

00:01:03,680 --> 00:01:02,190

weightless environment the veins and the

21

00:01:07,070 --> 00:01:03,690

tanks will with the fluid into the

22

00:01:10,340 --> 00:01:07,080

suction port and if that angle is less

23

00:01:12,289 --> 00:01:10,350

than  $2 \times 90$  minus a contact wedding

24

00:01:14,719 --> 00:01:12,299

angles in the liquid will rise like that

25

00:01:17,230 --> 00:01:14,729

so knowing this for a fuel tank you can

26  
00:01:20,390 --> 00:01:17,240  
make it into a cup drink your fluid from

27  
00:01:23,480 --> 00:01:20,400  
so you could just sit there right on the

28  
00:01:25,460 --> 00:01:23,490  
edge of the cop and as you sip more

29  
00:01:29,300 --> 00:01:25,470  
fluid just keeps coming up and up and up

30  
00:01:31,609 --> 00:01:29,310  
and you can enjoy a cup of coffee in a

31  
00:01:35,359 --> 00:01:31,619  
weightless environment without having a

32  
00:01:38,600 --> 00:01:35,369  
separate from a bag and you could just

33  
00:01:42,260 --> 00:01:38,610  
keep dipping and sipping sipping clear

34  
00:01:45,920 --> 00:01:42,270  
down to the last drop in the cup of

35  
00:01:48,289 --> 00:01:45,930  
course I did and this may very well be

36  
00:01:51,380 --> 00:01:48,299  
what future space colonist end up using

37  
00:01:55,490 --> 00:01:51,390  
when they want to have a celebration and

38  
00:01:58,969 --> 00:01:55,500

do a toast they can sit there coffee and

39

00:02:00,709 --> 00:01:58,979

their tea from cups like this like we do

40

00:02:03,170 --> 00:02:00,719

down here on earth without having to

41

00:02:07,580 --> 00:02:03,180

suck them from a bag I don't want to

42

00:02:10,219 --> 00:02:07,590

take any ceramic up here or glass so I

43

00:02:11,700 --> 00:02:10,229

don we really enjoyed that that's a lot

44

00:02:14,170 --> 00:02:11,710

of fun the angle

45

00:02:16,300 --> 00:02:14,180

and these advanced and you can see I'm

46

00:02:18,310 --> 00:02:16,310

continuing to suck the coffee out or

47

00:02:20,140 --> 00:02:18,320

actually sip the coffee because we're no

48

00:02:23,710 --> 00:02:20,150

longer sucking out of a bag now we are

49

00:02:26,020 --> 00:02:23,720

we're drinking from a cup and know what

50

00:02:30,580 --> 00:02:26,030

the coffee continues to climb up an

51  
00:02:38,440 --> 00:02:30,590  
acute angle and until the whole bag is

52  
00:02:41,410 --> 00:02:38,450  
drained good to the last drop now grab

53  
00:02:43,510 --> 00:02:41,420  
red that's the end of the video I wanted

54  
00:02:45,970 --> 00:02:43,520  
to share that with you a little

55  
00:02:48,970 --> 00:02:45,980  
discovery we made by using a little