1
00:00:00,006 --> 00:00:00,976
[MUSIC]

2
00:00:00,976 --> 00:00:10,076
[Cindy:] My name is Cindy
Koester and I work at NASA.

3
00:00:10,076 --> 00:00:13,806
I work in the space station
environmental control and life support area

4
00:00:14,206 --> 00:00:16,456
and I'm lucky enough to have
two jobs in that area.

5
00:00:16,856 --> 00:00:21,746
I get to train the astronauts that go to the
Space Station on those life support systems.

6
00:00:22,136 --> 00:00:27,246
And I also get to work in Mission Control
sitting at a console and monitoring the data

7
00:00:27,646 --> 00:00:31,006
from those life support systems that's
coming down from the space station.

8
00:00:31,006 --> 00:00:36,136
We take care of everything that we need
to keep humans alive on the Space Station.

9
00:00:36,666 --> 00:00:42,366
So that means everything from equipment
that generates the oxygen to equipment

10
00:00:42,366 --> 00:00:44,116
that scrubs out the carbon dioxide.

11
00:00:44,446 --> 00:00:50,376

You know, here on Earth we have millions
and millions of plants and trees that scrub

12
00:00:50,376 --> 00:00:54,256
out the carbon dioxide for us, but on
the space station, we don't have room

13
00:00:54,256 --> 00:00:57,176
to have all those plants and
trees, so we have to have equipment

14
00:00:57,456 --> 00:00:59,876
or hardware that does that for us.

15
00:00:59,876 --> 00:01:04,666
[Alma:] My name is Alma Stephanie
Tapia and I work at NASA.

16
00:01:04,666 --> 00:01:09,706
I'm a Materials Engineer and I know
sounds complicated, but it's really not.

17
00:01:10,376 --> 00:01:13,176
If you think about it, everything
around you is made out of something.

18
00:01:13,646 --> 00:01:17,476
So I'm the person who gets to pick what
you're going to make something out of.

19
00:01:17,476 --> 00:01:22,846
I think one of the coolest things about the work
that I do is that I get to work with my hands.

20
00:01:22,846 --> 00:01:26,546
I really get to be curious
and my job changes every day.

21
00:01:26,886 --> 00:01:31,846
One day I could be working on

the solar arrays that are used

22
00:01:31,846 --> 00:01:33,896
on the Space Station to get energy.

23
00:01:34,056 --> 00:01:37,696
The next day I'm working on gloves that
an astronaut tore when he was working.

24
00:01:38,336 --> 00:01:43,536
Then the very next day I could be working on the
protective heat shield that protects astronauts

25
00:01:43,536 --> 00:01:44,836
when they're coming back into the Earth.

26
00:01:45,446 --> 00:01:49,116
It's something that is an amazing
feeling and I never get bored.

27
00:01:51,426 --> 00:01:53,046
[Carly:] I'm Carly Watts and I work at NASA.

28
00:01:55,076 --> 00:01:58,266
I'm a space suit engineer and I
work on technology development

29
00:01:58,266 --> 00:01:59,786
for portable life support systems.

30
00:02:00,026 --> 00:02:02,706
So the portable life support systems
is the back-pack on the space suit

31
00:02:03,066 --> 00:02:05,886
that has everything you need in
it to keep the crew member alive

32
00:02:05,886 --> 00:02:06,936

when they're out on a space walk.

33
00:02:07,146 --> 00:02:11,216
In the long run, what we want to do is make a
new space suit that will keep a person alive

34
00:02:11,706 --> 00:02:16,136
out in the harsh elements in space be it
around the Space Station or hopefully someday

35
00:02:16,526 --> 00:02:21,576
on the surface of the moon or on the surface
of mars or near an asteroid or on an asteroid.

36
00:02:21,776 --> 00:02:24,446
Wherever it may be, that's
where we're trying to get to.

37
00:02:24,576 --> 00:02:26,896
We're doing things that nobody's
ever done before.

38
00:02:27,146 --> 00:02:31,466
We're developing brand new things that
have never, you know, before two years ago,

39
00:02:31,466 --> 00:02:34,886
didn't exist and we're making
them better and making them

40
00:02:34,886 --> 00:02:36,286
into something that we can actually use.

41
00:02:36,626 --> 00:02:37,586
And that's really cool.

42
00:02:38,356 --> 00:02:45,206
[Cindy:] You know the path that I took to get
from, you know, my schooling to college to NASA,

43
00:02:45,336 --> 00:02:47,776
I think really started in Middle School.

44
00:02:48,056 --> 00:02:51,166
Because that's when I started thinking
ok, what am I really interested in?

45
00:02:51,166 --> 00:02:52,916
What subjects in school do I like?

46
00:02:52,916 --> 00:02:57,586
When it came time to decide between, you know,
science or Engineering, I realized that I did

47
00:02:57,656 --> 00:03:00,826
like the science and I did
like the physiology behind it,

48
00:03:01,196 --> 00:03:04,146
but what interested me even
more than that was the why.

49
00:03:05,196 --> 00:03:12,156
So the cause and effect and the, basically
the engineering principles behind that.

50
00:03:12,156 --> 00:03:17,946
I like the problem solving, I liked
the, you know, comparing the fluid flow

51
00:03:17,946 --> 00:03:21,316
in a blood vessel to the fluid flow in a pipe.

52
00:03:21,696 --> 00:03:25,656
You know, it was a really interesting
concept for me and so I would have missed all

53
00:03:25,656 --> 00:03:27,906
that if I would have just gone science route.

54
00:03:27,906 --> 00:03:31,336
So that's why it kinda tipped
me over the edge into wanting

55
00:03:31,336 --> 00:03:33,416
to get the engineering piece with it as well.

56
00:03:34,926 --> 00:03:37,396
[Alma:] I grew up in El Paso, TX.

57
00:03:37,396 --> 00:03:43,496
My parents are from South America and we
were the first people in my family to come

58
00:03:43,496 --> 00:03:47,906
to the U.S. And so, I was just
focused on trying to learn English,

59
00:03:48,166 --> 00:03:51,586
not thinking that what I was
going to do when I grew up.

60
00:03:51,816 --> 00:03:57,906
When I went to school, I didn't think I was
as smart as the other kids because I was

61
00:03:57,976 --> 00:04:00,566
so far behind on even being able to speak.

62
00:04:00,866 --> 00:04:06,236
But then as I went through school I
realized that math, math is the language

63
00:04:06,356 --> 00:04:08,606
that is the same all over the world and even

64
00:04:08,606 --> 00:04:10,996
if I didn't speak English, I

could be really good at math.

65
00:04:11,536 --> 00:04:13,126
And then when I learned about science,

66
00:04:13,476 --> 00:04:17,896
I realized that science is the
way math explains the world.

67
00:04:18,236 --> 00:04:22,616
When I got to high school I was lucky
enough to have a teacher that pulled me

68
00:04:22,616 --> 00:04:27,026
and my twin sister aside one day, kept
us after school and told us "you know,

69
00:04:27,326 --> 00:04:31,276
you guys might wanna to go to college and you
might want to think of going into engineering".

70
00:04:31,356 --> 00:04:35,776
[Carly:] I think probably the reason I
was interested in science, technology,

71
00:04:36,796 --> 00:04:40,926
and engineering in the long run was that my
parents were kinda interested in those fields.

72
00:04:41,006 --> 00:04:42,946
So my dad is very interested in science.

73
00:04:43,016 --> 00:04:47,106
When I was little my dad would take me out in
the backyard with the binoculars and telescope

74
00:04:47,106 --> 00:04:50,896
when there were comets going over, so we, it was
always something my family was interested in.

75
00:04:50,896 --> 00:04:55,876
And then in high school, I had just
a really really great physics teacher

76
00:04:55,876 --> 00:04:57,196
that I had for two years in a row.

77
00:04:57,636 --> 00:05:02,666
And we did so many experiments where
you learned, you know, an equation

78
00:05:02,666 --> 00:05:04,906
and then you'd do something
that proved it actually worked.

79
00:05:04,906 --> 00:05:09,686
And I really liked seeing that we could
quantify the way the universe works.

80
00:05:09,686 --> 00:05:15,816
[Cindy:] I like to think that I, you know,
have a really wide variety of interests.

81
00:05:16,026 --> 00:05:19,666
You know, I was in a sorority,
I was a cheerleader...

82
00:05:19,806 --> 00:05:25,556
maybe that's not your typical NASA engineer
stereotype, but it's me and I encourage,

83
00:05:25,846 --> 00:05:28,596
you know, girls everywhere out
there to just really get involved

84
00:05:28,596 --> 00:05:30,406
in just a wide variety of activities.

85
00:05:30,516 --> 00:05:33,966

Even if you or other people don't think
they don't necessarily go together,

86
00:05:34,546 --> 00:05:35,646
do whatever makes you happy.

87
00:05:37,366 --> 00:05:41,866
[Carly:] My best advice for picking your career
path would probably be: do what you enjoy.

88
00:05:42,246 --> 00:05:45,616
So whether or not that be engineering,
whether or not that be science related,

89
00:05:45,996 --> 00:05:48,816
do what you really, you know, in your heart
feel that you're going to enjoy doing.

90
00:05:48,816 --> 00:05:53,496
[Alma:] I want you to imagine what
it would be like to be the person

91
00:05:53,766 --> 00:05:58,546
who is making the next space suit, who's
being the next astronaut who's going

92
00:05:58,546 --> 00:06:00,906
to go explore Mars or an asteroid.

93
00:06:01,496 --> 00:06:06,006
But instead of just imagining it, I
want you to actually be that person.