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CYPRESS WOODS HIGH SCHOOL - CYPRESS, TEXAS

1
00:00:01,650 --> 00:00:04,370
>> Josh Byerly: NASA has a fairly innovative education

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00:00:04,370 --> 00:00:07,960
program that we work with high school and junior high students

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00:00:07,960 --> 00:00:09,960
with called High School Students United with NASA

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00:00:09,960 --> 00:00:12,450
to Create Hardware or HUNCH for short.

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00:00:12,450 --> 00:00:14,920
This has been ongoing for several years.

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00:00:14,920 --> 00:00:16,710
And students have worked to create hardware

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00:00:16,710 --> 00:00:20,310
for the International Space Station such as storage lockers

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00:00:20,310 --> 00:00:22,060
and things such as that.

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00:00:22,060 --> 00:00:24,300
Here recently, three students and their teacher

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00:00:24,300 --> 00:00:27,190
at Cypress Woods High School in Cypress Texas, which is just

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00:00:27,190 --> 00:00:30,390
to the northwest of us here in
Houston, got together and came

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00:00:30,390 --> 00:00:33,750
up with a test model for one
of the more important pieces

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00:00:33,750 --> 00:00:37,440
of the International Space
Station called the microgravity

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00:00:37,440 --> 00:00:40,240
sciences glovebox or
MSG as we call it.

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00:00:40,240 --> 00:00:42,930
It's basically a large -- what
looks like a big aquarium,

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00:00:42,930 --> 00:00:46,430
but it's got two holes there
you see for the crew to reach in

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00:00:46,430 --> 00:00:48,490
and wear some gloves
that are built into it.

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00:00:48,490 --> 00:00:50,250
And do some experiments inside

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00:00:50,250 --> 00:00:53,400
that that are contained
away from them.

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00:00:53,400 --> 00:00:55,050
We're going to talk now
with these three students

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00:00:55,050 --> 00:00:57,180

who are joining us live from
Cypress Woods High School.

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00:00:57,180 --> 00:00:59,690

Ben Halloway, Helmut
Brenner, and Robert Lipham,

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00:00:59,690 --> 00:01:01,180

along with their
teacher Mike Bennett.

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00:01:01,180 --> 00:01:02,620

How are you guys doing?

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00:01:02,620 --> 00:01:03,080

>> Great.

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00:01:03,080 --> 00:01:04,340

>> We're good today.

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00:01:04,340 --> 00:01:06,040

>> Josh Byerly: So let's
talk about how you came

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00:01:06,040 --> 00:01:10,650

up with this plan to build
this test object called the

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00:01:10,650 --> 00:01:12,610

microgravity sciences glovebox.

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00:01:12,610 --> 00:01:14,680

How did you guys come
up with the idea?

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00:01:14,680 --> 00:01:17,070

>> Well, we've kind of
been working with NASA.

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00:01:17,070 --> 00:01:19,730

And they came to us and
said, we need a couple more

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00:01:19,730 --> 00:01:21,110

of these to work with.

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00:01:21,110 --> 00:01:24,350

Because they had one built,
but they needed someone

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00:01:24,350 --> 00:01:26,280

that could deliver quite well,
and they wanted to work with us.

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00:01:26,280 --> 00:01:28,030

So they gave us some
preliminaries on it.

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00:01:28,030 --> 00:01:31,080

And we improved them to
fix the design to be easier

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00:01:31,080 --> 00:01:34,550

to manufacturer, to be
better for a mockup.

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00:01:34,550 --> 00:01:36,530

And we put them together,
and we delivered.

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00:01:36,530 --> 00:01:39,660

>> Josh Byerly: So I'm taking a
look at this photo that we have

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00:01:39,660 --> 00:01:40,730

of you guys have built this.

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00:01:40,730 --> 00:01:43,130

It looks pretty much just like

the one that's up on orbit.

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00:01:43,130 --> 00:01:45,360

I'm not sure that me
or anybody that I knew

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00:01:45,360 --> 00:01:47,590

in high school could have built
something [brief laughter] quite

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00:01:47,590 --> 00:01:48,110

like that.

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00:01:48,110 --> 00:01:50,410

So, you know, what kind of
classes do you guys take

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00:01:50,410 --> 00:01:53,040

where you learn to actually
build something like this?

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00:01:53,040 --> 00:01:56,200

>> Well, obviously, it
wasn't solely us three.

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00:01:56,200 --> 00:01:58,430

We had a lot of different
classes

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00:01:58,430 --> 00:02:00,310

across the board
helping us build this.

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00:02:00,310 --> 00:02:03,850

We had Precision Metals,
manufacturing classes.

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00:02:03,850 --> 00:02:05,450

We, ourselves, were

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00:02:05,450 --> 00:02:09,470
in an Advanced Engineering
class using AutoCAD, Inventor,

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00:02:09,470 --> 00:02:12,220
and whatnot to create
these pieces.

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00:02:12,220 --> 00:02:13,920
And then handing them
over to the engineers

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00:02:13,920 --> 00:02:16,230
to manufacture them.

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00:02:16,230 --> 00:02:17,310
>> Josh Byerly: So,
you know, did --

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00:02:17,310 --> 00:02:18,780
I'm assuming you got
some sort of, you know --

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00:02:18,780 --> 00:02:22,070
I guess it's fairly exciting to
build something that, you know,

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00:02:22,070 --> 00:02:24,450
the astronauts and crews can
actually use and train with.

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00:02:24,450 --> 00:02:26,780
Is it a little bit different
than building something else

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00:02:26,780 --> 00:02:28,000
that you typically
would in a class,

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00:02:28,000 --> 00:02:30,780

knowing that NASA
actually want to use this?

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00:02:30,780 --> 00:02:33,310

>> It was definitely an
interesting experiment --

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00:02:33,310 --> 00:02:36,730

like experience knowing that
NASA was going to be able

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00:02:36,730 --> 00:02:38,110

to use what we were designing.

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00:02:38,110 --> 00:02:42,240

And definitely a little bit
different than normal classwork.

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00:02:42,240 --> 00:02:44,310

It was tough work, but I really
think it was good experience

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00:02:44,310 --> 00:02:45,750

for us to all have.

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00:02:45,750 --> 00:02:47,100

>> Josh Byerly: So about
how long did it take to --

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00:02:47,100 --> 00:02:50,720

you know, from beginning to end,
to design it and to build it?

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00:02:50,720 --> 00:02:55,090

>> I would say approximately
five months.

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00:02:55,090 --> 00:02:57,750

Oh, wait. I'm getting three

months here [brief laughter].

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00:02:57,750 --> 00:02:59,630

Time blurs when you're
working on a project

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00:02:59,630 --> 00:03:00,750

like this [brief laughter].

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00:03:00,750 --> 00:03:02,160

>> Josh Byerly: So we'll say
between three and five months.

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00:03:02,160 --> 00:03:04,040

We'll just go with that.

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00:03:04,040 --> 00:03:06,450

So let's talk about the
Technology Students Association.

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00:03:06,450 --> 00:03:09,140

This is -- you know, tell us a
little bit about what that is.

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00:03:09,140 --> 00:03:10,910

And you guys are
going to the finals

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00:03:10,910 --> 00:03:13,380

of that competition, correct?

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00:03:13,380 --> 00:03:15,470

>> Not us completely.

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00:03:15,470 --> 00:03:16,260

I am, personally.

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00:03:16,260 --> 00:03:17,150

My name is Robert, by the way.

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00:03:17,150 --> 00:03:18,630

We're actually taking --

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00:03:18,630 --> 00:03:21,990

we're actually going to
nationals after state.

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00:03:21,990 --> 00:03:25,200

And the Technology Students
Association is basically our

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00:03:25,200 --> 00:03:25,650

tech club.

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00:03:25,650 --> 00:03:27,010

It's where we send projects,

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00:03:27,010 --> 00:03:29,280

where we go to onsite
competitions in things

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00:03:29,280 --> 00:03:31,870

like drafting, architecture,
welding,

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00:03:31,870 --> 00:03:34,120

building basic tech programs.

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00:03:34,120 --> 00:03:37,810

And after going to state, me and
another student are going to go

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00:03:37,810 --> 00:03:39,500

to nationals with it as well.

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00:03:39,500 --> 00:03:42,280

>> Josh Byerly: So what
grade are you guys in?

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00:03:42,280 --> 00:03:44,880

>> Me and Helmut
and Ben are seniors.

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00:03:44,880 --> 00:03:47,120

And Robert is a junior.

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00:03:47,120 --> 00:03:47,990

>> So what's next for you guys?

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00:03:47,990 --> 00:03:49,810

Have you guys decided which
college you're going to go to,

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00:03:49,810 --> 00:03:51,760

what you're going to study?

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00:03:51,760 --> 00:03:55,300

>> I've been accepted to Brigham
Young University in Utah.

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00:03:55,300 --> 00:03:57,300

>> I'll be attending
the University

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00:03:57,300 --> 00:03:58,940

of North Texas in Denton.

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00:03:58,940 --> 00:04:02,780

>> And I'm hopefully
going to apply

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00:04:02,780 --> 00:04:04,710

for A&M coming up this summer.

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00:04:04,710 --> 00:04:06,270

>> Josh Byerly: Yeah, well,
I know the school very well.

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00:04:06,270 --> 00:04:09,560

So let's talk about, you
know, as you guys do this,

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00:04:09,560 --> 00:04:12,700

does it kind of make you want
to go become astronauts or come

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00:04:12,700 --> 00:04:15,180

to work for NASA or do something
like this once you kind of get

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00:04:15,180 --> 00:04:18,100

out of school and
finish your studying?

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00:04:18,100 --> 00:04:22,230

>> Well, funnily enough, my
dad's a mechanical engineer,

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00:04:22,230 --> 00:04:23,410

and, you know, I'd
always thought

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00:04:23,410 --> 00:04:25,920

that perhaps I would,
too, become one.

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00:04:25,920 --> 00:04:27,570

But stuff comes up.

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00:04:27,570 --> 00:04:32,200

And I think I'm actually going
to go the way of finance.

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00:04:32,200 --> 00:04:35,730

But this has actually been
an invaluable experience

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00:04:35,730 --> 00:04:36,990

in terms of problem solving.

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00:04:36,990 --> 00:04:39,540

I can't tell you how many
times we had to go back

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00:04:39,540 --> 00:04:41,270

to the drawing board
and just find out what

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00:04:41,270 --> 00:04:43,150

in the world's wrong with
this thing [brief laughter].

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00:04:43,150 --> 00:04:47,320

So, you know, despite not going
into mechanical engineering,

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00:04:47,320 --> 00:04:50,740

it still definitely
helped a lot.

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00:04:50,740 --> 00:04:53,660

>> Josh Byerly: So you guys are
almost finished with school.

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00:04:53,660 --> 00:04:55,300

This competition, you're talking

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00:04:55,300 --> 00:04:56,880

about the Technology
Students Association,

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00:04:56,880 --> 00:04:58,020

the nationals you're going to,

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00:04:58,020 --> 00:05:00,140

that's taking place

this summer, correct?

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00:05:00,140 --> 00:05:03,520

>> Yeah, it's taking place
during the summer from June 28th

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00:05:03,520 --> 00:05:05,640

to July 2nd in Orlando, Florida.

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00:05:05,640 --> 00:05:07,020

And we'll be going
to do two onsite --

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00:05:07,020 --> 00:05:09,550

a drafting and architecture
contest there.

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00:05:09,550 --> 00:05:10,490

>> Josh Byerly: Well,
hopefully, you get a chance

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00:05:10,490 --> 00:05:12,390

to go visit our friends down at
the Kennedy Space Center while

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00:05:12,390 --> 00:05:13,400

you're there in the
neighborhood.

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00:05:13,400 --> 00:05:16,290

It's an interesting
place to go tour.

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00:05:16,290 --> 00:05:17,500

>> Yeah, I believe we're
going to be heading over there

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00:05:17,500 --> 00:05:20,180

as well during one time
that we're down there.

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00:05:20,180 --> 00:05:21,490

>> Josh Byerly: Yeah,
well, listen,

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00:05:21,490 --> 00:05:23,100

we're proud of the work
you guys have done.

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00:05:23,100 --> 00:05:26,080

It's always amazing
to see what you

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00:05:26,080 --> 00:05:27,660

and your fellow high school
students come up with,

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00:05:27,660 --> 00:05:30,000

especially as part of
this HUNCH Program.

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00:05:30,000 --> 00:05:33,910

We've seen quite some excellent
work come out of you guys.

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00:05:33,910 --> 00:05:36,180

And it's phenomenal, the
work that you guys have done.

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00:05:36,180 --> 00:05:37,670

So we thank you for it.