



HATCH EXIT

TO NODE 2

TO JEM

Mike Evans
Drafting Designer
Technology

Huntsville Center
NASA HUNCH
Team
For Technology



1
00:00:01,300 --> 00:00:02,535
>> Let's take this
opportunity to head

2
00:00:02,535 --> 00:00:04,103
out to Marshall Spaceflight
Center in Huntsville,

3
00:00:04,103 --> 00:00:06,906
Alabama where Lori Megs [assumed
spelling] is standing by.

4
00:00:06,906 --> 00:00:08,274
Lori, you're going to talk to us

5
00:00:08,274 --> 00:00:10,776
about a great education tool
there that helps both students

6
00:00:10,776 --> 00:00:13,546
and the space station program.

7
00:00:13,546 --> 00:00:15,915
>> That is right, Nicole,
flight controllers here

8
00:00:15,915 --> 00:00:18,517
in the payload operations
integration center go

9
00:00:18,517 --> 00:00:21,987
through months, even years
of training and certification

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00:00:21,987 --> 00:00:25,024
and all of that begins right
here where I'm standing.

11
00:00:25,024 --> 00:00:28,527

And the room behind me is called the lab training complex

12

00:00:28,527 --> 00:00:31,397

and it is a mockup of the U.S. laboratory

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00:00:31,397 --> 00:00:33,365

but that's not the most interesting thing about it.

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00:00:33,365 --> 00:00:35,734

The most interesting thing is that it was mostly built

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00:00:35,734 --> 00:00:37,136

by high school students;

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00:00:37,136 --> 00:00:39,772

it's part of a program called High School Students United

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00:00:39,772 --> 00:00:43,242

With NASA to Create Hardware or HUNCH

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00:00:43,242 --> 00:00:44,877

and joining me now is Bob Zeke [assumed spelling].

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00:00:44,877 --> 00:00:47,313

You were the cofounder of HUNCH

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00:00:47,313 --> 00:00:49,515

and tell us how all this got started and what it's all about.

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00:00:49,515 --> 00:00:52,084

>> Well, you know, HUNCH the acronym, high schools united

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00:00:52,084 --> 00:00:55,187
with NASA to create hardware
and was started back in 2003

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00:00:55,187 --> 00:00:57,990
so we're in our 10th year
anniversary this year.

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00:00:57,990 --> 00:00:59,959
So it started on the basis

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00:00:59,959 --> 00:01:01,760
of we didn't have
any training hardware

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00:01:01,760 --> 00:01:03,596
to train our astronaut
crew in Houston

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00:01:03,596 --> 00:01:05,464
or our flight controllers
upstairs.

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00:01:05,464 --> 00:01:07,833
So we came up with the notion
of going to the high schools

29

00:01:07,833 --> 00:01:09,635
and getting them to
build training hardware

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00:01:09,635 --> 00:01:12,371
that we use every day
in our operations.

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00:01:12,371 --> 00:01:13,439
>> The unique thing --

32

00:01:13,439 --> 00:01:15,407

let's look at some
of the hardware here.

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00:01:15,407 --> 00:01:17,610

>> Well, what we've got, we
have quite a few different

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00:01:17,610 --> 00:01:18,544

curriculum we support.

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00:01:18,544 --> 00:01:21,080

We have computer electronics;

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00:01:21,080 --> 00:01:24,416

basically these are utility
outlet panels, power bricks.

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00:01:24,416 --> 00:01:28,320

This is a test model here
we use to do lot of --

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00:01:28,320 --> 00:01:31,457

just different checkouts for,
you know, software control

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00:01:31,457 --> 00:01:32,791

and things of that nature.

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00:01:32,791 --> 00:01:35,628

We have rapid prototyping
through a CAD drafting class,

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00:01:35,628 --> 00:01:37,329

3D rapid [inaudible] print.

42

00:01:37,329 --> 00:01:40,099

Machine shop, we have
lots of machine parts here

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00:01:40,099 --> 00:01:43,269

that the kids do C
and C machining on.

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00:01:43,269 --> 00:01:44,837

>> I bet they get
excited about this too,

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00:01:44,837 --> 00:01:46,972

tell us how many schools
are involved in this.

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00:01:46,972 --> 00:01:50,743

>> We have 53 schools
across the nation,

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00:01:50,743 --> 00:01:53,479

18 different states
we represent.

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00:01:53,479 --> 00:01:55,447

[Inaudible] include Alabama,
Tennessee, Mississippi,

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00:01:55,447 --> 00:01:59,185

Louisiana, Texas, the Midwest,
a few on the East Coast

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00:01:59,185 --> 00:02:02,221

and just sprinkled, you know,
throughout the continent.

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00:02:02,221 --> 00:02:04,290

>> And I mentioned you're the
cofounder, you and someone

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00:02:04,290 --> 00:02:06,759

at Johnson's Space Center
actually came up with this idea.

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00:02:06,759 --> 00:02:09,662

>> In 2003, myself and a guy
named Stacy Hale [assumed

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00:02:09,662 --> 00:02:12,131

spelling] out of Houston,
he's basically the guy

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00:02:12,131 --> 00:02:14,900

that controls the money and
he's made it happen and we have

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00:02:14,900 --> 00:02:16,635

to give him a big
round of applause

57

00:02:16,635 --> 00:02:18,604

for supporting us in that venue.

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00:02:18,604 --> 00:02:19,438

So.

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00:02:19,438 --> 00:02:20,206

>> Touched a lot of students.

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00:02:20,206 --> 00:02:21,307

What else do we have here?

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00:02:21,307 --> 00:02:24,410

>> I talked about sewing
is our biggest one;

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00:02:24,410 --> 00:02:26,011

the schools in Houston
do a lot of sewing.

63

00:02:26,011 --> 00:02:28,314

>> I don't do any sewing
so that's impressive to me.

64

00:02:28,314 --> 00:02:32,618

>> Cargo transfer bags are quite valuable in space

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00:02:32,618 --> 00:02:35,588

and we have 200 of those flying now that this high school built

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00:02:35,588 --> 00:02:37,756

for a European space agency and they're flying them

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00:02:37,756 --> 00:02:39,558

in their space projects.

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00:02:39,558 --> 00:02:42,995

>> So it's not just training, this is actual flight hardware.

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00:02:42,995 --> 00:02:44,263

>> Flight hardware there, that is correct

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00:02:44,263 --> 00:02:45,631

and then we have welding.

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00:02:45,631 --> 00:02:49,902

Welding supports a lot of our framework you see behind us,

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00:02:49,902 --> 00:02:52,972

it's amazing what the students can do to get that erected

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00:02:52,972 --> 00:02:57,343

for us and delivered and set up and pretty much to scale.

74

00:02:57,343 --> 00:02:58,978

>> Now how is this used,
this room behind us;

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00:02:58,978 --> 00:03:01,113

how is it used once you have
all that hardware in there?

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00:03:01,113 --> 00:03:02,748

>> We have flight
controls upstairs.

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00:03:02,748 --> 00:03:05,317

We give them that
third dimension of --

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00:03:05,317 --> 00:03:07,820

coming out and touching,
feeling, you know,

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00:03:07,820 --> 00:03:10,055

pushing the hardware,
pushing connectors

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00:03:10,055 --> 00:03:12,925

and disconnecting switches
and things of that nature

81

00:03:12,925 --> 00:03:15,127

and it just gives them
a hands-on opportunity

82

00:03:15,127 --> 00:03:17,396

to see what they're really
working with in space.

83

00:03:17,396 --> 00:03:20,065

>> And someone who's really had
his hands on this is Mike Evans

84

00:03:20,065 --> 00:03:22,701
and Mike, come on in here,
you are a drafting teacher

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00:03:22,701 --> 00:03:25,404
at the Huntsville Center for
Technology and your students --

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00:03:25,404 --> 00:03:26,305
you're actually holding
something

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00:03:26,305 --> 00:03:27,840
that they built for this place.

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00:03:27,840 --> 00:03:29,208
>> Absolutely.

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00:03:29,208 --> 00:03:31,210
We were one of the original
schools that started with Bob

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00:03:31,210 --> 00:03:35,614
in 2003 and what this program
allows the students to do,

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00:03:35,614 --> 00:03:38,183
it allows us to get them
out of the textbook and work

92

00:03:38,183 --> 00:03:40,085
on the [inaudible]
activities and, you know,

93

00:03:40,085 --> 00:03:44,957
the engineering skillsets that
they need to be successful later

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00:03:44,957 --> 00:03:48,694
in life so that's one of the

great things about this program.

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00:03:48,694 --> 00:03:51,030

You know, it's a resume;

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00:03:51,030 --> 00:03:53,999

it's a portfolio builder
for these students.

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00:03:53,999 --> 00:03:55,634

>> What do the students say
when you come in and say okay,

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00:03:55,634 --> 00:03:57,903

we're building some for
the space station program?

99

00:03:57,903 --> 00:03:59,805

>> Well, it's unbelievable
to those guys, you know,

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00:03:59,805 --> 00:04:02,641

it's exciting, it
generates a lot of interest

101

00:04:02,641 --> 00:04:05,744

and it's almost a carrot on the
end of a string too because,

102

00:04:05,744 --> 00:04:08,113

you know, in my program,
it pretty much applies

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00:04:08,113 --> 00:04:10,015

to the more advanced students,
the second year students,

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00:04:10,015 --> 00:04:13,385

so it gives -- coming in as a
junior, as a beginning student,

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00:04:13,385 --> 00:04:16,655

it gives them something to work toward and look forward to.

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00:04:16,655 --> 00:04:18,457

>> Tell us about this part you're holding here.

107

00:04:18,457 --> 00:04:20,959

>> Well, this is an example of a stem project,

108

00:04:20,959 --> 00:04:22,795

it's just an assembly part that's used

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00:04:22,795 --> 00:04:24,396

for the [inaudible] system in the some

110

00:04:24,396 --> 00:04:28,534

of the payloads back here and what it requires is a lot

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00:04:28,534 --> 00:04:31,003

of engineering skillsets, it allows them to work with Bob

112

00:04:31,003 --> 00:04:34,773

and other engineers on designing and 3D modeling these things.

113

00:04:34,773 --> 00:04:37,109

Most of all, these parts that you see on the table were some

114

00:04:37,109 --> 00:04:39,845

of that we originally designed for Bob so anything

115

00:04:39,845 --> 00:04:41,980
that we can create
three dimensionally,

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00:04:41,980 --> 00:04:43,549
we can create a rapid prototype

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00:04:43,549 --> 00:04:47,052
through our 3D rapid prototyping
machine there at the school.

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00:04:47,052 --> 00:04:49,154
So what that allows
the students to do,

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00:04:49,154 --> 00:04:51,156
it actually allows
the students to work

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00:04:51,156 --> 00:04:53,292
with something from
start to finish.

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00:04:53,292 --> 00:04:55,427
You know, and the great
thing about that is

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00:04:55,427 --> 00:04:58,230
that it allows them to see
their mistakes and learn

123

00:04:58,230 --> 00:05:00,199
and build from those mistakes.

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00:05:00,199 --> 00:05:04,136
>> Starting a new school
year next week, any big plans

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00:05:04,136 --> 00:05:05,938
for the space station
program this time?

126
00:05:05,938 --> 00:05:07,573
>> Well, just whatever
comes across the table.

127
00:05:07,573 --> 00:05:10,342
We're always excited to get that
work in for the students and,

128
00:05:10,342 --> 00:05:12,611
again, it gets them out of the
textbook and that's something

129
00:05:12,611 --> 00:05:14,346
that in a normal
high school setting,

130
00:05:14,346 --> 00:05:16,248
they just do not
get to experience.

131
00:05:16,248 --> 00:05:18,350
>> All right, Mike, thank
you very much and, Bob,

132
00:05:18,350 --> 00:05:21,487
I know you're proud because
actually the guy standing back

133
00:05:21,487 --> 00:05:22,921
there working here, right?

134
00:05:22,921 --> 00:05:24,790
He started in HUNCH, right?

135
00:05:24,790 --> 00:05:26,158
>> He is a HUNCH graduate.

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00:05:26,158 --> 00:05:28,427

He's been with us for
seven years now working

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00:05:28,427 --> 00:05:29,495

on his college degree.

138

00:05:29,495 --> 00:05:31,163

He's just one semester
away so he's going

139

00:05:31,163 --> 00:05:34,099

to be a fresh hire in for us.

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00:05:34,099 --> 00:05:35,567

>> I know that makes you
proud and [inaudible],

141

00:05:35,567 --> 00:05:40,239

how can schools get involved and
be a part of the HUNCH program?

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00:05:40,239 --> 00:05:42,574

>> We have a website,
nasahunch.com.

143

00:05:42,574 --> 00:05:45,377

We also have fliers
at local schools.

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00:05:45,377 --> 00:05:47,880

The interest is available

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00:05:47,880 --> 00:05:49,615

to all the different
schools that want to apply.

146

00:05:49,615 --> 00:05:51,350

There is an application
form online

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00:05:51,350 --> 00:05:55,754
and we review those once year
and then if you're, you know,

148

00:05:55,754 --> 00:05:57,389
a candidate, we'll come
to your school, visit,

149

00:05:57,389 --> 00:05:59,291
make sure we got the
right stuff in place

150

00:05:59,291 --> 00:06:00,692
and try to get you on board.

151

00:06:00,692 --> 00:06:03,595
>> I am going to go practice on
my sewing skills or something

152

00:06:03,595 --> 00:06:05,197
like that, Bob, to
help you guys out.

153

00:06:05,197 --> 00:06:07,900
Thank you so much, a great
program, the HUNCH program.

154

00:06:07,900 --> 00:06:10,402
And let's take a live look
inside the payload operations

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00:06:10,402 --> 00:06:13,972
integration center, working
today, Jay Nichols, is the pod

156

00:06:13,972 --> 00:06:19,011
and he's being assisted by TJ

Kramer, the dual TJ Kramer,

157

00:06:19,011 --> 00:06:21,480

he's an astronaut and a
payload operations director

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00:06:21,480 --> 00:06:24,616

and actually Jay is actually
in the middle of that training.

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00:06:24,616 --> 00:06:25,717

And if you see some of the folks

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00:06:25,717 --> 00:06:28,220

in there wearing the
nice Hawaiian shirts,