1
00:00:48,399 --> 00:01:04,469
so

2
00:01:08,469 --> 00:01:06,390
this week students with interest in

3
00:01:10,230 --> 00:01:08,479
engineering science math and aviation

4
00:01:12,390 --> 00:01:10,240
came together from all over the state of

5
00:01:14,149 --> 00:01:12,400
texas for the culmination of seven

6
00:01:16,870 --> 00:01:14,159
months of hard work for the texas high

7
00:01:18,550 --> 00:01:16,880
school aerospace scholars program

8
00:01:20,630 --> 00:01:18,560
mentors from nasa and the stem

9
00:01:22,230 --> 00:01:20,640
industries guided us in our projects

10
00:01:24,390 --> 00:01:22,240
focusing on crew assignments

11
00:01:26,390 --> 00:01:24,400
laboratories and tools and space

12
00:01:28,469 --> 00:01:26,400
redesign for a thousand day mission to

13
00:01:30,789 --> 00:01:28,479

mars this week gave us hands-on

14
00:01:33,270 --> 00:01:30,799
experiences that will enable us to carry

15
00:01:39,590 --> 00:01:33,280
on the legacy of deep space exploration

16
00:01:43,429 --> 00:01:41,190
we handed know exactly what needed to be

17
00:01:47,270 --> 00:01:43,439
fixed on the coolant system we designed

18
00:01:49,270 --> 00:01:47,280
a 3d printable multi-purpose tool

19
00:01:50,550 --> 00:01:49,280
the tool was modeled off of a triangular

20
00:01:52,469 --> 00:01:50,560
three chip highlighter with three

21
00:01:54,469 --> 00:01:52,479
different tools

22
00:01:56,310 --> 00:01:54,479
the trident includes three tools

23
00:01:58,709 --> 00:01:56,320
a crowbar type tool

24
00:02:01,190 --> 00:01:58,719
a sharp ice pick tool as well as a

25
00:02:02,950 --> 00:02:01,200
cutting edge and i modeled these three

26
00:02:07,990 --> 00:02:02,960
tools on a triangular truss using google

27
00:02:12,550 --> 00:02:10,309
norm chaffey a rocket scientist that

28
00:02:15,110 --> 00:02:12,560
contributed to saturn 5

29
00:02:17,670 --> 00:02:15,120
taught us under transportation computer

30
00:02:19,510 --> 00:02:17,680
systems sensors and dynamics and

31
00:02:22,949 --> 00:02:19,520
mechanics used

32
00:02:27,030 --> 00:02:25,510
this is the side now of the

33
00:02:29,030 --> 00:02:27,040
first stage

34
00:02:30,869 --> 00:02:29,040
called the s1c

35
00:02:33,030 --> 00:02:30,879
it was built by boeing it is an

36
00:02:34,949 --> 00:02:33,040
expendable stage meaning

37
00:02:40,550 --> 00:02:34,959
we use it and then it falls back into

38
00:02:44,229 --> 00:02:42,229

so chaffey explains how they use

39
00:02:46,550 --> 00:02:44,239
pyrotechnics to change from one cycle to

40
00:02:48,550 --> 00:02:46,560
the other of the saturn v

41
00:02:50,949 --> 00:02:48,560
you explain the overall process starting

42
00:02:55,350 --> 00:02:50,959
in the launching pad to once the module

43
00:02:59,990 --> 00:02:57,509
visiting the iss mission control was an

44
00:03:02,309 --> 00:03:00,000
inspiring experience as well as an honor

45
00:03:04,149 --> 00:03:02,319
for our team this visit was eye-opening

46
00:03:08,309 --> 00:03:04,159
because it demonstrated how far we have

47
00:03:11,830 --> 00:03:10,229
i think i can speak for the entire blue

48
00:03:13,990 --> 00:03:11,840
team when i say that listening to milt

49
00:03:15,750 --> 00:03:14,000
heslin speak on apollo night was one of

50
00:03:18,869 --> 00:03:15,760
the most inspiring memories we had at

51
00:03:20,390 --> 00:03:18,879
hoss the story of apollo 12 was truly a

52
00:03:22,309 --> 00:03:20,400
testament to the importance of being

53
00:03:25,030 --> 00:03:22,319
prepared to be the generation that will

54
00:03:27,110 --> 00:03:25,040
take space exploration to the next level

55
00:03:29,190 --> 00:03:27,120
that we're going today in human space

56
00:03:30,470 --> 00:03:29,200
flight you know one of these days we may

57
00:03:32,869 --> 00:03:30,480
indeed

58
00:03:34,229 --> 00:03:32,879
have what we need to send humans to mars

59
00:03:35,670 --> 00:03:34,239
for example

60
00:03:37,110 --> 00:03:35,680
and there's a good chance that if we do

61
00:03:38,470 --> 00:03:37,120
that that you all

62
00:03:40,229 --> 00:03:38,480
your age group

63
00:03:41,990 --> 00:03:40,239

you'll be right on top of it you'll be

64
00:03:43,670 --> 00:03:42,000
doing it

65
00:03:45,350 --> 00:03:43,680
the gray team was in charge of setting

66
00:03:48,149 --> 00:03:45,360
the budget and purpose of the mars

67
00:03:51,589 --> 00:03:49,670
the red team was responsible for

68
00:03:53,750 --> 00:03:51,599
designing a method to reach mars and

69
00:03:55,830 --> 00:03:53,760
return back to earth

70
00:03:57,589 --> 00:03:55,840
the white team was delegated the task of

71
00:04:00,229 --> 00:03:57,599
deciding how the crew would survive on

72
00:04:02,149 --> 00:04:00,239
mars

73
00:04:03,830 --> 00:04:02,159
and finally the blue team set the

74
00:04:08,630 --> 00:04:03,840
mission objectives and compiled a list

75
00:04:13,190 --> 00:04:10,949
the lunch with nasa employees gave all

76
00:04:15,830 --> 00:04:13,200
of us at haas the opportunity to further

77
00:04:17,749 --> 00:04:15,840
understand life at nasa for me it

78
00:04:20,069 --> 00:04:17,759
allowed for greater illustration of

79
00:04:26,550 --> 00:04:20,079
internships and co-ops available after

80
00:04:29,830 --> 00:04:27,909
we were given the task to make a

81
00:04:31,030 --> 00:04:29,840
mindstorms rover as efficiently as

82
00:04:33,110 --> 00:04:31,040
possible to

83
00:04:34,870 --> 00:04:33,120
play in a 4x4 field and pick up rocks

84
00:04:36,710 --> 00:04:34,880
and water samples we tried to make our

85
00:04:39,270 --> 00:04:36,720
rover very efficient in design and very

86
00:04:41,030 --> 00:04:39,280
reliable in programming

87
00:04:43,270 --> 00:04:41,040
it was an incredible experience to act

88
00:04:45,270 --> 00:04:43,280

as an engineer and see our ideas and

89
00:04:46,629 --> 00:04:45,280
planning come to life through our rover

90
00:04:48,150 --> 00:04:46,639
the rover was one of my favorite

91
00:04:49,909 --> 00:04:48,160
projects and it allowed us all the

92
00:04:52,870 --> 00:04:49,919
chance to see our innovations and how

93
00:04:57,110 --> 00:04:55,590
our mentor this week dr rick shering is

94
00:04:59,749 --> 00:04:57,120
a flight surgeon

95
00:05:15,590 --> 00:04:59,759
his expertise on space health issues