



EXPLORE FLIGHT

1
00:00:00,699 --> 00:00:02,068
[Music]

2
00:00:03,469 --> 00:00:05,738
>> My younger son, we actually
came into this room years ago

3
00:00:05,738 --> 00:00:07,339
and he was probably four.

4
00:00:07,339 --> 00:00:10,009
And I put on my helmet on
him, and put my harness

5
00:00:10,009 --> 00:00:11,877
and it's dragging on the floor.

6
00:00:11,877 --> 00:00:14,613
And he looks at me and goes,
"Look daddy, I'm a test pilot."

7
00:00:14,613 --> 00:00:16,916
>> Put this side in first.

8
00:00:18,784 --> 00:00:21,987
>> I'm Nils Larson, I'm
the chief Test Pilot here

9
00:00:21,987 --> 00:00:23,522
at NASA Armstrong.

10
00:00:23,522 --> 00:00:25,591
[Music]

11
00:00:27,059 --> 00:00:30,629
It really came when I
was probably a junior

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00:00:30,629 --> 00:00:32,665
in high school maybe
a sophomore.

13
00:00:32,665 --> 00:00:34,667
And one of my teachers
handed me a book,

14
00:00:34,667 --> 00:00:36,302
and the book was
The Right Stuff.

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00:00:36,302 --> 00:00:39,505
I knew I kind of wanted to be
an engineer or a scientist.

16
00:00:39,505 --> 00:00:41,340
And I read that and I went,
wow, this would be cool,

17
00:00:41,340 --> 00:00:43,309
you can be both an
engineer/scientist.

18
00:00:43,309 --> 00:00:47,179
And you could be a pilot,
best of both worlds,

19
00:00:47,179 --> 00:00:48,280
how cool would this be?

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00:00:48,280 --> 00:00:52,084
>> Roll in three,
two, one, mark.

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00:00:52,084 --> 00:00:53,486
>> Copy mark.

22
00:00:53,486 --> 00:00:56,655
>> The test pilot answer is my

favorite is whatever I'm flying

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00:00:56,655 --> 00:00:58,324

today, so I just
got out of the F18,

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00:00:58,324 --> 00:01:00,726

and so that's my
favorite right now.

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00:01:02,261 --> 00:01:03,562

>> Well, the role
of the test pilot is

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00:01:03,562 --> 00:01:05,898

to pull it all together
in the air.

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00:01:05,898 --> 00:01:08,601

Our mission here, our
objectives are testing science

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00:01:08,601 --> 00:01:11,370

and technology through
flight in flight.

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00:01:11,370 --> 00:01:14,039

>> Uh, let's see, flight
objectives basically,

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00:01:14,039 --> 00:01:15,341

the biggest thing is to try

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00:01:15,341 --> 00:01:19,145

and get this instrumentation
worked out, and you know,

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00:01:19,145 --> 00:01:21,847

be able to compare it to
the airplane, and to obtain,

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00:01:21,847 --> 00:01:24,183
record it on my chest.

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00:01:24,183 --> 00:01:26,852
Mission security,
mission rules, go, no go,

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00:01:26,852 --> 00:01:30,022
we talked about the 40,000 flip
probably the biggest point.

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00:01:30,022 --> 00:01:33,492
So, we can go to 39,999 feet.

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00:01:33,492 --> 00:01:34,426
Let's see.

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00:01:34,426 --> 00:01:35,528
>> Keep me on my toes.

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00:01:35,528 --> 00:01:36,495
>> Yeah, exactly.

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00:01:36,495 --> 00:01:37,062
>> Okay.

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00:01:37,062 --> 00:01:38,297
>> Sure.

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00:01:40,166 --> 00:01:41,901
>> You got your helmet?

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00:01:41,901 --> 00:01:43,202
>> Yeah.

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00:01:43,202 --> 00:01:44,503
>> Okay, I'm going to give

you the rundown real quick,

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00:01:44,503 --> 00:01:45,638
and then we can go up there
and do what we got to do.

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00:01:45,638 --> 00:01:48,007
>> Well, what we do is,
our initial concern is

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00:01:48,007 --> 00:01:49,375
to give the pilot a safe

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00:01:49,375 --> 00:01:51,310
and reliable aircraft
for his mission.

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00:01:51,310 --> 00:01:55,080
Once we achieve that, then our
next concern becomes the science

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00:01:55,080 --> 00:01:56,782
and the research
folks that are going

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00:01:56,782 --> 00:01:58,784
to be associated
with the airplane.

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00:01:58,784 --> 00:02:01,654
So, if they have attached an
experiment, or they're looking

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00:02:01,654 --> 00:02:04,390
for specific data, we work
with them to make sure

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00:02:04,390 --> 00:02:07,193
that they're equipment is
working the way it should be,

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00:02:07,193 --> 00:02:10,062

and that it gives them the
data that they're looking for.

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00:02:10,062 --> 00:02:12,565

>> You know, for us
here, we work a lot more

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00:02:12,565 --> 00:02:14,733

with a project we're
doing, you know,

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00:02:14,733 --> 00:02:17,102

sometimes we call it weird
things with airplanes.

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00:02:17,102 --> 00:02:19,939

So, rarely are we going
from point A to point B,

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00:02:19,939 --> 00:02:22,141

or if we are going point A
to point B, we're going up

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00:02:22,141 --> 00:02:23,943

and down, and up and down,
and up and down the whole time

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00:02:23,943 --> 00:02:25,444

when we're going there.

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00:02:25,444 --> 00:02:28,047

And our job is to try and
get the people the data.

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00:02:28,047 --> 00:02:33,686

>> Santa to the speed break,
see how much effect on pits.

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00:02:33,686 --> 00:02:35,487

>> Whoa! That was a good one.

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00:02:35,487 --> 00:02:37,890

>> You look, and you
know, you still --

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00:02:37,890 --> 00:02:40,859

even though you're sitting
in the same desk, you know,

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00:02:40,859 --> 00:02:43,362

Neil Armstrong worked here,
we named the place after him.

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00:02:43,362 --> 00:02:45,664

You know, my desk used
to be right where he sat.

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00:02:45,664 --> 00:02:49,768

You know, Joe Walker, you know,
I sit where his desk used to be,

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00:02:49,768 --> 00:02:51,270

that's where I sit now.

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00:02:51,270 --> 00:02:53,272

And you still don't
feel like you're worthy

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00:02:53,272 --> 00:02:54,039

to be sitting where they were.

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00:02:54,039 --> 00:02:56,542

[Inaudible]

75

00:02:56,542 --> 00:03:00,546

[Hissing Sound, Music]

76

00:03:02,114 --> 00:03:04,149

>> I'll say one thing,
these pilots are

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00:03:04,149 --> 00:03:06,085

about the best test pilots
probably in the world.

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00:03:06,085 --> 00:03:09,989

They're very busy,
they're either flying all

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00:03:09,989 --> 00:03:15,261

across the world in sims,
meetings, tech briefs.

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00:03:15,261 --> 00:03:18,130

They make things happen at NASA

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00:03:18,130 --> 00:03:20,332

and for the United
States and the world.

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00:03:20,332 --> 00:03:24,203

They're the first people flying
maybe a wing that was modified

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00:03:24,203 --> 00:03:26,505

or some modification
to an aircraft.

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00:03:26,505 --> 00:03:30,576

[Jet Engines Revving,
Hissing Sound]

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00:03:32,077 --> 00:03:33,345

>> We're not done with flight.

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00:03:33,345 --> 00:03:35,214

There's a lot of research
yet to be done in flight.

87

00:03:35,214 --> 00:03:37,916

There's a lot of gains yet
to be accomplished in flight.

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00:03:37,916 --> 00:03:41,487

And to get our job done we need
test pilots like Nils Larson,

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00:03:41,487 --> 00:03:43,489

like the people he
works with and trains.

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00:03:43,489 --> 00:03:46,358

>> Still a little bit of side
to side motion, I'm unstable,

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00:03:46,358 --> 00:03:47,626

but I'm pumping forward.

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00:03:47,626 --> 00:03:49,328

>> It's early morning and
I'm watching the sun rise

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00:03:49,328 --> 00:03:50,663

over the lake bed.

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00:03:50,663 --> 00:03:53,499

It's a beautiful sunrise,
and it suddenly occurs to me,

95

00:03:53,499 --> 00:03:55,734

oh, my God, I made it.

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00:03:55,734 --> 00:03:59,405

You know, I'm doing what it was
that I decided when I was 16

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00:03:59,405 --> 00:04:00,839

that I wanted to go do.

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00:04:00,839 --> 00:04:04,777

I always tell people that it's
worth it, because it wasn't

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00:04:04,777 --> 00:04:08,914

like I was just nosing the
book, you know for 17 years.

100

00:04:08,914 --> 00:04:12,985

I had a lot of fun in those 17
years getting up to that flight.

101

00:04:12,985 --> 00:04:15,921

And then, I've had a lot more
flights like that since, so,

102

00:04:15,921 --> 00:04:17,489

you know, it's totally
been worth it.