
60
NASA

1
00:00:00,020 --> 00:00:03,040
-[Music]

2
00:00:25,180 --> 00:00:27,480
We are inquisitive. We want to understand things.

3
00:00:27,480 --> 00:00:31,220
We want to understand more about
our place in the in the galaxy

4
00:00:31,220 --> 00:00:33,560
and more about our place, really, in the universe.

5
00:00:34,020 --> 00:00:36,160
[Music]

6
00:00:47,220 --> 00:00:50,560
NASA's always been the leader in space exploration.

7
00:00:50,560 --> 00:00:53,620
In fact, NASA's been the first agency to explore

8
00:00:53,620 --> 00:00:57,140
each and every
one of the major bodies in the solar system.

9
00:00:57,660 --> 00:01:02,020
It used to be that we were completely bound
to the surface of the Earth.

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00:01:02,760 --> 00:01:06,080
Now we actually have spacecraft that have orbited Mercury and Venus.

11
00:01:06,140 --> 00:01:09,200
We've been around Jupiter and Saturn, all the way to the outer planets,

12
00:01:09,200 --> 00:01:11,240
all the way out to Pluto and beyond.

13
00:01:11,240 --> 00:01:17,420
Think about that, in 60 years, we went from just standing on the surface, underneath our atmosphere, looking u

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00:01:17,420 --> 00:01:19,540
to actually visiting these places.

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00:01:28,500 --> 00:01:30,960
You know, human exploration is not Star Trek.

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00:01:30,960 --> 00:01:33,500
It's not go where no human has gone before.

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00:01:33,500 --> 00:01:35,920
Planetary scientists actually go first.

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00:01:35,940 --> 00:01:40,280
They study the body. They study the
environment. They look at the risks.

19
00:01:40,280 --> 00:01:42,100
They look at the resources.

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00:01:42,100 --> 00:01:46,120
And then human exploration with that knowledge moves out,

21
00:01:46,120 --> 00:01:50,420
leaving low-earth orbit, going to the
moon and then on to Mars.

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00:01:51,200 --> 00:01:53,400
Obviously we want to take humans to Mars.

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00:01:53,400 --> 00:01:56,080
Obviously, we want somebody walking on that surface.

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00:01:56,080 --> 00:01:59,460
Our current missions are

helping us understand more about Mars,

25
00:01:59,460 --> 00:02:02,729
are helping us understand how to create
oxygen and helping us understand about

26
00:02:02,729 --> 00:02:07,100
the atmosphere and the wind, so that we
can actually have a living life on Mars.

27
00:02:07,940 --> 00:02:11,960
The areas that we are most interested in,
where we're putting most of our resources,

28
00:02:11,960 --> 00:02:15,580
are the areas where there is a potential for life.

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00:02:15,580 --> 00:02:18,720
So, when you think about Enceladus, which is a moon of Saturn,

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00:02:18,720 --> 00:02:21,560
and you think about Europa, which is a moon of Jupiter,

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00:02:21,560 --> 00:02:23,360
these are water worlds.

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00:02:23,360 --> 00:02:26,000
We're talking about entire oceans with ice shelves.

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00:02:26,000 --> 00:02:29,740
And ultimately
the question is, is it possible that we

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00:02:29,740 --> 00:02:34,180
could find life on those worlds that are
moons of other planets within our own solar system.

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00:02:43,420 --> 00:02:47,140
Our job is to go look and

use the tools that NASA has provided so

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00:02:47,140 --> 00:02:50,920
that we can learn-- what's out there? How does everything work?

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00:02:50,920 --> 00:02:55,379
The Sun, the Earth, the planets, the stars all of
these things are space science for us.

38
00:02:55,379 --> 00:03:00,510
Galaxies are clouds of stars, hundreds of
billions of stars, are going away from us

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00:03:00,510 --> 00:03:04,950
with a speed proportional to distance.
Well, what made that happen?

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00:03:04,950 --> 00:03:08,910
You divide the speed into the distance you get the
age of the universe.

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00:03:08,910 --> 00:03:11,020
So, that was the first time we knew that you never had an age.

42
00:03:22,260 --> 00:03:24,980
Questions like -- where do we come from? and how did we get here?

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00:03:24,980 --> 00:03:26,400
And the big one, Are we alone?

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00:03:26,400 --> 00:03:29,620
As much as we've learned about
the cosmos, there's still so much that we

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00:03:29,620 --> 00:03:33,880
don't know and that's why NASA build
telescopes to answer the big questions

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00:03:33,880 --> 00:03:35,840

that we haven't been able to answer yet.

47
00:03:36,000 --> 00:03:37,960
We can do more than we've ever done

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00:03:37,960 --> 00:03:42,290
before because of capabilities that
exist today. So, the next 60 years, I think

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00:03:42,290 --> 00:03:45,889
is just going to be an exponential
growth of our knowledge and