1
00:00:01,260 --> 00:00:05,800
For centuries, we studied the planet Jupiter with instruments like this.

2
00:00:05,940 --> 00:00:09,720
But if you're like me, and I know I am, you wanna know more.

3
00:00:09,720 --> 00:00:14,020
And in order to know more, we've gotta get a spacecraft up close.

4
00:00:14,020 --> 00:00:19,440
But Jupiter is fantastically far away, way out there! So how do we do it?

5
00:00:28,640 --> 00:00:34,260
So if you're like me, you wanna know more
about all those planets out there. So to that end

6
00:00:34,260 --> 00:00:42,059
we built the Juno spacecraft to study
the planet Jupiter. Juno was Jupiter's wife

7
00:00:42,059 --> 00:00:50,239
in Roman mythology, and we launched the Juno
spacecraft from Earth way back in 2011.

8
00:00:51,510 --> 00:00:55,269
Now, like everything else the government does, we were on a budget, so we had to use a rocket

9
00:00:55,269 --> 00:01:02,829
that already existed, so we chose the good
ol' Atlas V. We launched it from the Earth,

10
00:01:03,080 --> 00:01:14,040
way out into space, beyond the orbit of Mars.
And today, it's falling back toward the Earth,

11
00:01:14,050 --> 00:01:21,110
and we're gonna use the orbital motion of
the Earth and this flyby of the Juno spacecraft,

12
00:01:21,110 --> 00:01:27,030
to get enough energy to escape the pull of
the Earth, and more importantly, the pull of the sun.

13
00:01:27,380 --> 00:01:30,700
Like this. [ROCKET NOISE]

14
00:01:30,700 --> 00:01:33,740
But see, it's in outer space, there's no air, so there's no sound,

15
00:01:33,930 --> 00:01:34,690
so it goes like this:

16
00:01:34,980 --> 00:01:38,240
[SILENCE]

17
00:01:38,240 --> 00:01:40,840
And it's gonna fly by the Earth on October 9th.

18
00:01:42,640 --> 00:01:45,880
Now Jupiter isn't as close as these two planets on this table.

19
00:01:46,120 --> 00:01:50,060
Jupiter is way out there, fantastically far out there.

20
00:01:52,560 --> 00:01:54,780
It's that far away.

21
00:01:56,700 --> 00:02:00,600
So Juno won't arrive there until 2016.

22
00:02:01,300 --> 00:02:07,580
In 2016, it will go into orbit around Jupiter, and using its suite of sophisticated instruments, Juno will

23
00:02:07,580 --> 00:02:13,400
study this planet, will learn more about what
Jupiter's made of, and how it formed. When

24
00:02:13,400 --> 00:02:18,020
we learn that, we'll know more about where we came from, how we all got here.