mystery science

Grades K-5
Mini-Lesson: “Is Pluto a planet?”

VIDEO TRANSCRIPT

VIDEO 1

[Video Call]

- Hi, Doug!
- Hi, Nayeli!
- I have a question for you. Is Pluto a planet?
- Ooh, that's an interesting question.

When I was growing up, we always learned that there were nine planets in our solar system. With tiny little Pluto being the smallest and farthest away, way, way out at the far end of our solar system. But then the scientists who study space and planets, the people called astronomers, started saying that they thought Pluto should be removed from the list of planets. That means kids in school would no longer learn the nine planets; instead, they'd learn the eight planets.

Lots of people were confused by this decision, even upset about it. Especially adults who grew up learning about Pluto. How could scientists want to remove Pluto from the list of planets? Scientists definitely had some reasons for doing this. I'll say more about that near the end of this video. But before you consider any of that, it might be interesting for you to know why people seem to care so much about tiny Pluto.

The thing to realize about Pluto is that Pluto was one of the most mysterious and most difficult planets for us to learn anything about—starting all the way back when it was first discovered in the year 1930. You see, all the other planets, through a telescope, you can actually see what they look like. Not Pluto. Pluto is so tiny, so far away, that through a telescope it just looks like this—the smallest little dot of light.

Because we can barely see Pluto, we immediately had all these questions about it. What does Pluto look like up close? Does it have rings like some of the other planets? Does it have any moons? At the time, nobody knew. We could guess that being so far from the Sun, Pluto must be extremely cold, maybe the coldest place in the solar system. And from watching it through a telescope, we also knew that Pluto moves really slowly in its pathway around the Sun. For Pluto to complete just one trip around the Sun takes 248 years. That means if you lived on Pluto, your birthday would only happen once every 248 years. But beyond that, we didn't know a whole lot more about this tiny planet.

I can remember when I was growing up in the 1990s, scientists had developed the most powerful telescope in the world, the Hubble Space Telescope, and they pointed it at Pluto. This was what they saw. It was exciting to finally get some clue about what Pluto might look like. You can notice—are those maybe some dark and light markings here and there? But let's be honest, this picture doesn't look much better than a blurry picture of a disco ball.

But all of this changed in the year 2006. That's when scientists at NASA launched the New Horizons spacecraft. It was carrying a remote control camera that would be the first-ever to

travel all the way to Pluto. To get there, the spacecraft had to fly at speeds of nearly 36,000 miles an hour. And it had to go that fast for almost 10 years nonstop.

But finally, in the summer of 2015, it arrived at Pluto. That was the moment when we finally got to see the first-ever close-up pictures of this mysterious little world. We found out that Pluto's surface is covered with dark markings, craters, and mountains, along with big smooth areas of light orange-colored ice. One of these smooth areas quickly became nicknamed “The Heart.” Some people even had fun imagining the Disney character, Pluto, in its outline.

So now, hopefully, you have a sense of why some people are upset about the idea of Pluto being removed from the list of planets. Pluto feels like a part of our family of planets. Should we consider it a planet or not?

Before I say anything more, why do you think some scientists are saying Pluto shouldn't be considered a planet?

VIDEO 2

The short answer is Pluto is a planet. It's just what's called a minor planet, one of the many smaller rocky objects in our solar system. It may not be a major planet like Jupiter or Earth or Saturn, but that doesn't mean we can't talk about Pluto or be interested in it. Now, if you're wondering, why don't we consider Pluto one of the major planets? There's a great story I can tell you about that, but it's a story for another day. I'm working on a video about that right now and I'll be sure to share it on mysterydoug.com when it's ready!

That's all for this week's question. Thanks, Nayeli, for asking it!