

The two gravity pulls the planet towards the star. Like a string pulling the string. The reason the planet stays there is because it is instead of moving away.



Because it is more planets travelling one or more other systems & stars which we might see a planet system & star with more stars in it.

But in fact, exactly like the string, gravity pulls on both ends:



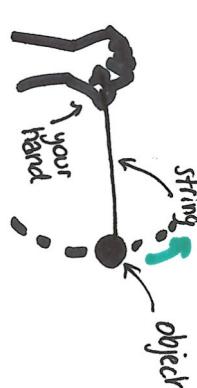
Hence, in reality, the planet and the star orbit each other:



The star, being heavier than the planet, moves less, but it still moves, and astronomers can detect that!



You will notice that you can't spin the object without moving your hand. The same is true for the star!

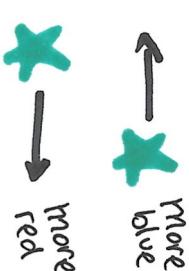


If you want a real-life analogy, try spinning an object at the end of a string:

When seen from the side, it looks like the star is moving back-and-forth, towards and away from us:

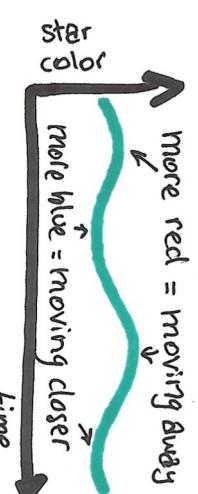


Because of something called the "Doppler effect", the star changes color depending on whether it moves away or towards us!

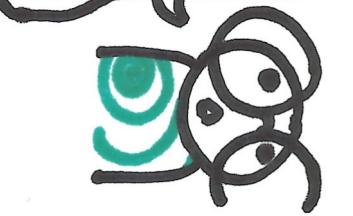


more blue

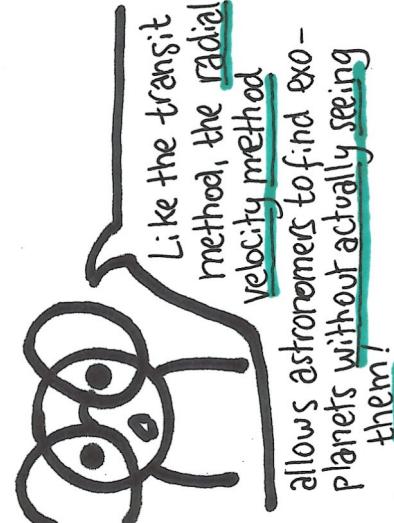
more red



Hence, if (like here) we see the color of the star become more blue, then more red, then more blue, and so on, it means the star is moving back and forth. This in turn, indicates that there is a planet.



As explained in the previous Zine, or up there, a planet outside our solar system. Because there are no planets like Earth in our solar system, it is often impossible to see them directly.



Planets outside our solar system move with the speed of light! Like the transit method, the radial velocity method allows us to find exoplanets.

Part 2 "The Radial Velocity Method"

How to FIND EXOPLANETS!



A mini SCi-ZINE by XAVIER LARREIN

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Don't forget to search for "RADIAL VELOCITY" at the planetary website www.PLANETARY.ORG to learn more, go to the website that's far reading! If you want to know more about radial velocity, check out the page by Xavier Larrein.