

## Johannes Kepler

### *Slide 1*

*ME AND ... WILL TALK ABOUT JOHANNES KEPLER :)*

*Johannes Kepler was born on the 27th of December 1571 in Weil der Stadt in Germany. He later died on the 15th of November 1630 in Regensburg in Germany. Kepler's grave in Regensburg got destroyed 1632 by the Swedish army during the 30 year war. Kepler has an asteroid named after him which is called 1134 Kepler.*

*BytBild.*

### *Slide 2.*

*Now we will talk about what inventions he made and different discoveries he is famous for.*

*Bytbild*

### *Slide 3*

*Johannes Kepler invented the Keplerian telescope only 3 years after the first telescope which was created by Hans Lippershey and it was created only 2 years after the Galilean telescope.*

*Since Kepler lived during the time of Galileo and Hans, he heard the news about some kind of telescope being made quickly. So he instantly began to experiment with lenses and telescopes. But 1611 Kepler finally made one by himself but to be honest... It had some pros-and cons.*

*It was not the best telescope because you would see everything upside down which was not very convenient unlike the Galilean telescope where you saw everything the*

*right way. But Keplerian telescope was famous for its ability to reach much higher magnification levels than the Galilean telescope but it demanded significant increase of the BRÄNNVIDD between the lenses so some telescopes had to be very big. But this problem was solved by the Englishman namen Chester Moore Hall.*

*Since Kepler worked a lot with different type of lenses he also created the first glasses that could be used for both near and farsighted people, he is not very famous for this invention because the first pair of glasses was made by a man from Italy but his glasses could only be used for nearsighted people.*

*So Kepler helped a lot of people with this discovery or invention if you will, it could be used by a lot people who had problems with their sight unlike the first type of glasses that were created 1200 (twelve-hundred).*

#### *Slide 4*

*Kepler made some important discoveries about the movement of the planets, but his discoveries would not have been possible if he he did not use the data from Tycho Brahe. Kepler and Brahe worked together but Brahe died after one year. Kepler also stole all the information from brahe after his death and that is why he is accused poisoning Brahe and that is how he was able to complete the all the work the Brahe started.*

*So what kepler did was that he discovered that all the planet orbits and elliptical which means that they are oval shaped*

*and not round. He also found out that the planet sweeps over the same amount area during the same amount of time. He was able to make these discoveries with the help of Brahe's information. But kepler actually found out the 3rd law by himself. The 3rd law is about how fast the planets move depending on their location in their orbit. For example if a planet is far away from the sun it will cover a big area in a short distance but if it is further away it will cover the same amount if area with the same amount of time but it the planet has to travel a much longer distance. So basically the planets move faster if they are further aways from the sun than if they were closer.*

### *Slide 5*

*Kepler had a lot of different jobs, he worked as a mathematician, physicist and as an astronomer, he also studied to become a priest but that did never happen.*

*He followed Tycho Brahe's footsteps and became an Imperial mathematician in Prague. But before this happen he was forced to go to a priest seminary in Maulbronn, his parents thought that he would become a priest but he did not like it so stopped studying to become a priest. He became a math professor in the city named Graz. It was actually here he first started to work as an astronomer as well.*

*Due to religious problems in Graz, Kepler was forced to leave the city in 1599 and was appointed the following year by Tycho Brahe to assist in his astronomical work in Prague. When Tycho Brahe died in 1601, Kepler followed up his work and finished it, and later he lived and taught out to*

*students for a couple of years in Linz. In 1619 he wrote Harmonia Mundi, in which he described, the relationship between the orbits of the planet and the length of their paths. So as you hear, kepler was a busy man that spent a lot of his time on trying to understand the world.*

*That is all for us and thank you for listening!*