
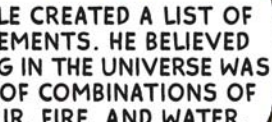



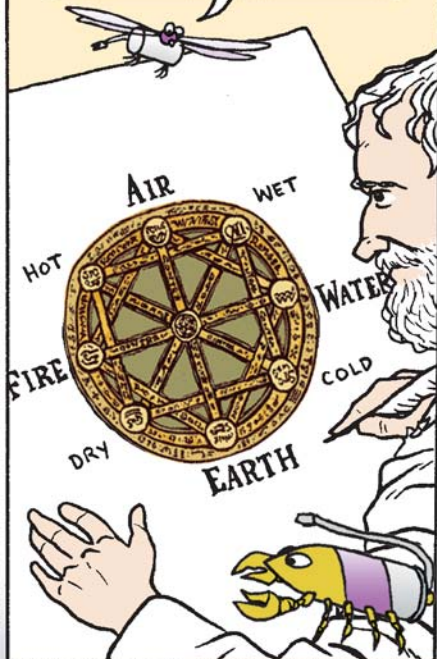
WHO IS THAT TALKING TO THOSE GUYS?




THAT'S ARISTOTLE, FAMOUS GREEK PHILOSOPHER AND SCIENTIST. HE LIVED FROM ABOUT 384 B.C. UNTIL 322 B.C. HE WAS BOTH A STUDENT AND A TEACHER AT PLATO'S ACADEMY IN ATHENS.




ARISTOTLE CREATED A LIST OF PRIME ELEMENTS. HE BELIEVED EVERYTHING IN THE UNIVERSE WAS MADE UP OF COMBINATIONS OF EARTH, AIR, FIRE, AND WATER.




SO WHAT DOES HE KNOW ABOUT ASTRONOMY?



HE BELIEVED THE UNIVERSE WAS A SPHERE. HE THOUGHT EARTH WAS THE CENTER OF THE UNIVERSE.



HE ALSO THOUGHT EARTH MOVED AND ROTATED.



WELL, HE WAS RIGHT ABOUT EARTH MOVING AND ROTATING, BUT HE SURE MISSED THE BOAT ON WHAT IS AT THE CENTER OF THE UNIVERSE!



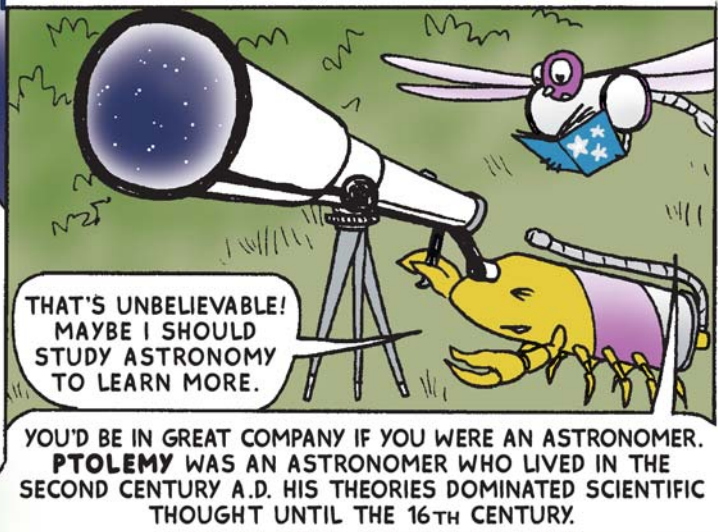
YOU HAVE TO REMEMBER THAT PEOPLE DID NOT HAVE TELESCOPES LIKE WE DO TODAY. WHAT DO YOU SEE WHEN YOU LOOK UP AT THE SKY AT NIGHT?





LOOK AT ALL THOSE STARS! HOW MANY DO YOU THINK THERE ARE UP THERE?

GOOD QUESTION, SCORPY. HUMANS HAVE STUDIED THE UNIVERSE FOR THOUSANDS OF YEARS, AND EVEN TO THIS DAY WE STILL CANNOT SAY FOR SURE HOW MANY STARS THERE ARE.



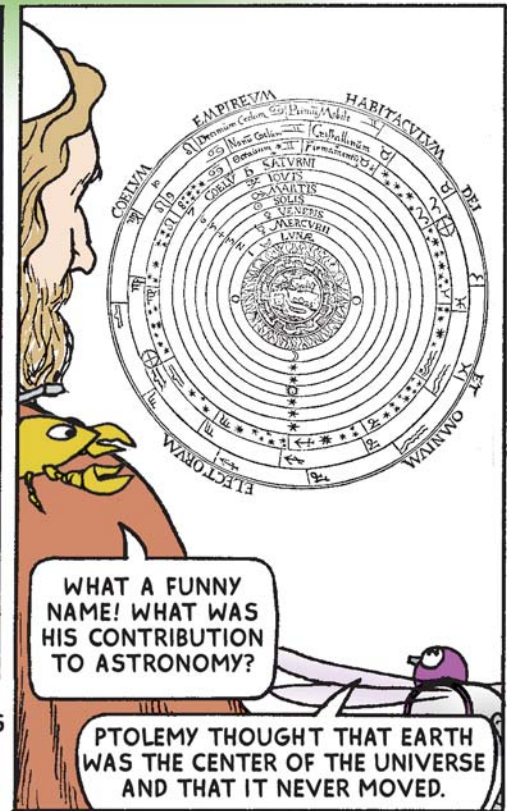
THAT'S UNBELIEVABLE! MAYBE I SHOULD STUDY ASTRONOMY TO LEARN MORE.

YOU'D BE IN GREAT COMPANY IF YOU WERE AN ASTRONOMER. **PTOLEMY** WAS AN ASTRONOMER WHO LIVED IN THE SECOND CENTURY A.D. HIS THEORIES DOMINATED SCIENTIFIC THOUGHT UNTIL THE 16TH CENTURY.



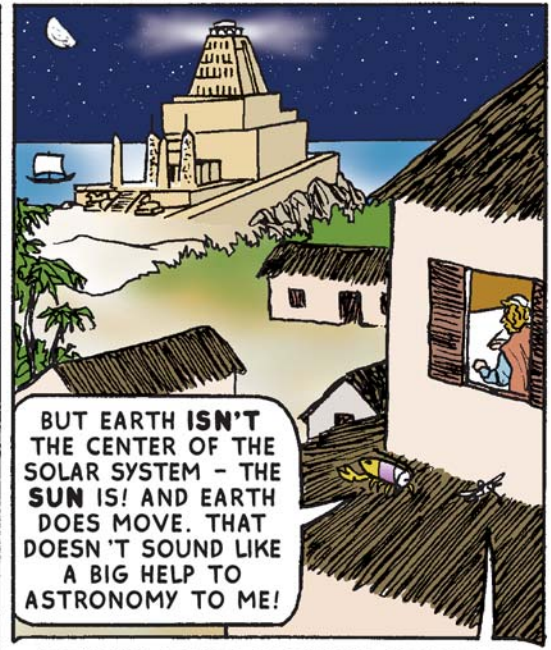
IS THAT HIM?

YES. HIS FULL NAME WAS CLAUDIUS PTOLEMAEUS. HE DID MOST OF HIS WORK IN **EGYPT**.



WHAT A FUNNY NAME! WHAT WAS HIS CONTRIBUTION TO ASTRONOMY?

PTOLEMY THOUGHT THAT EARTH WAS THE CENTER OF THE UNIVERSE AND THAT IT NEVER MOVED.

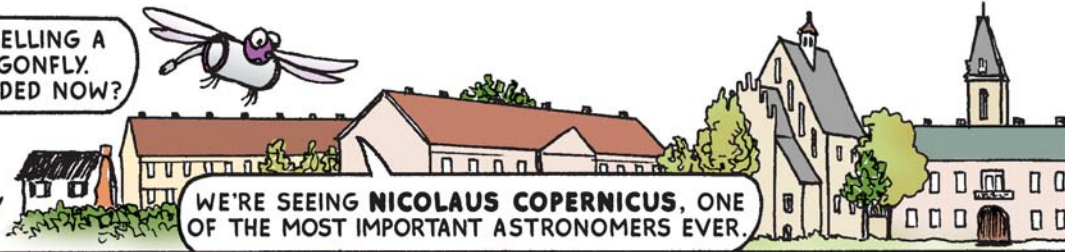
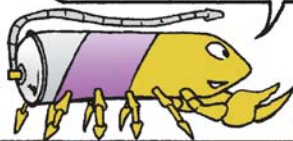


BUT EARTH **ISN'T** THE CENTER OF THE SOLAR SYSTEM - THE **SUN** IS! AND EARTH DOES MOVE. THAT DOESN'T SOUND LIKE A BIG HELP TO ASTRONOMY TO ME!

ACTUALLY, IT WAS. PTOLEMY WAS ONE OF THE FIRST TO USE **MATH** TO EXPLAIN THE MOTIONS AND POSITIONS OF THE PLANETS, SUN, AND MOON. YOU KNOW THINGS AREN'T ALWAYS WHAT THEY SEEM! WE'LL MEET ANOTHER ASTRONOMER TOMORROW.



WE'VE BEEN TRAVELLING A LONG TIME, DRAGONFLY. WHERE ARE WE HEADED NOW?



WE'RE SEEING **NICOLAUS COPERNICUS**, ONE OF THE MOST IMPORTANT ASTRONOMERS EVER.

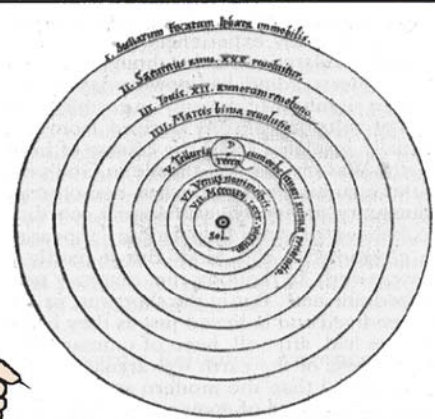
WHY DO ALL ASTRONOMERS HAVE SUCH FUNNY NAMES?!



NOW IS NOT THE TIME FOR JOKING, SCORPY. COPERNICUS WAS BORN IN POLAND IN 1473. HIS UNCLE MADE SURE HE GOT A GOOD EDUCATION IN ITALY, WHERE HE STUDIED MEDICINE AND LAW.



COPERNICUS LATER STUDIED AND TAUGHT ASTRONOMY IN ROME. HE WAS THE FIRST PERSON TO REALIZE THAT THE SUN DOES NOT MOVE AND THAT IT IS LOCATED AT THE CENTER OF OUR SYSTEM OF PLANETS.



HE WAS ALSO THE FIRST TO SAY EARTH **ROTATES** ON ITS AXIS ONCE A DAY AND **REVOLVES** AROUND THE SUN ONCE A YEAR.

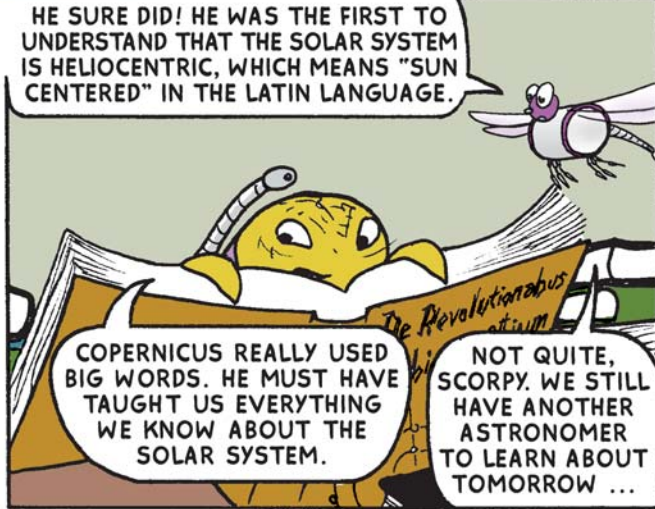
WOW - SOMEONE FINALLY GOT IT RIGHT!



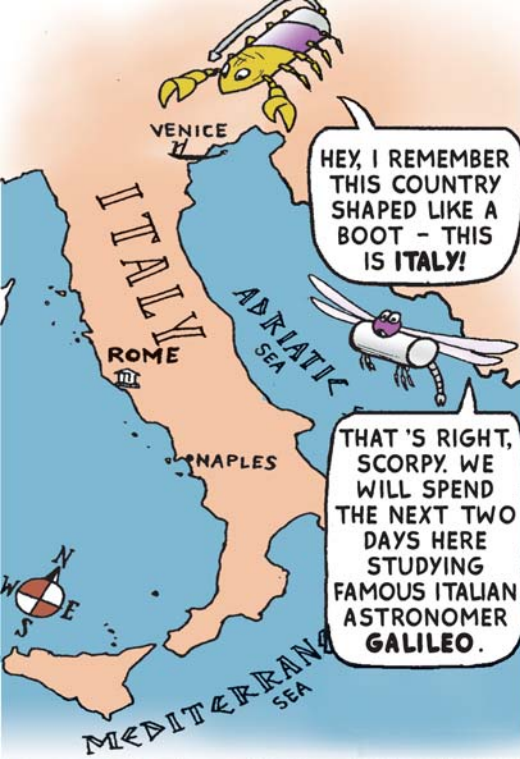
HE SURE DID! HE WAS THE FIRST TO UNDERSTAND THAT THE SOLAR SYSTEM IS HELIOCENTRIC, WHICH MEANS "SUN CENTERED" IN THE LATIN LANGUAGE.

COPERNICUS REALLY USED BIG WORDS. HE MUST HAVE TAUGHT US EVERYTHING WE KNOW ABOUT THE SOLAR SYSTEM.

NOT QUITE, SCORPY. WE STILL HAVE ANOTHER ASTRONOMER TO LEARN ABOUT TOMORROW ...

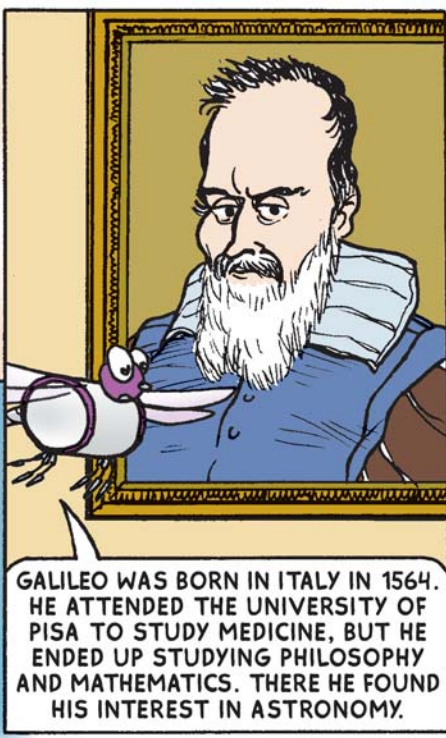




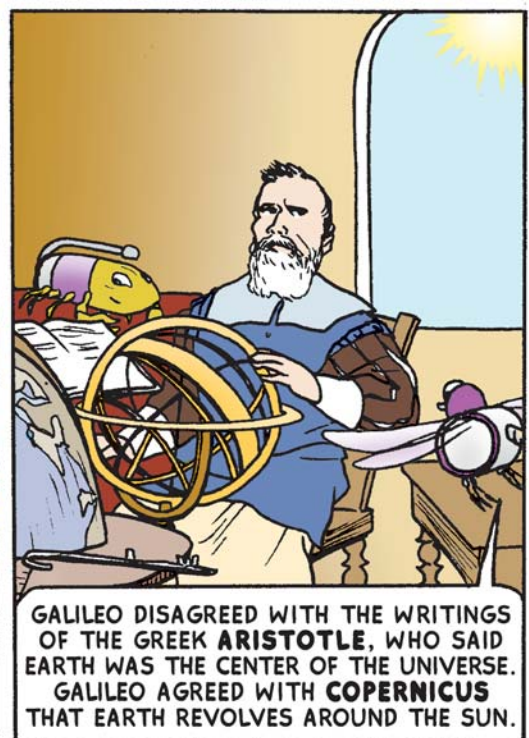


HEY, I REMEMBER THIS COUNTRY SHAPED LIKE A BOOT - THIS IS ITALY!

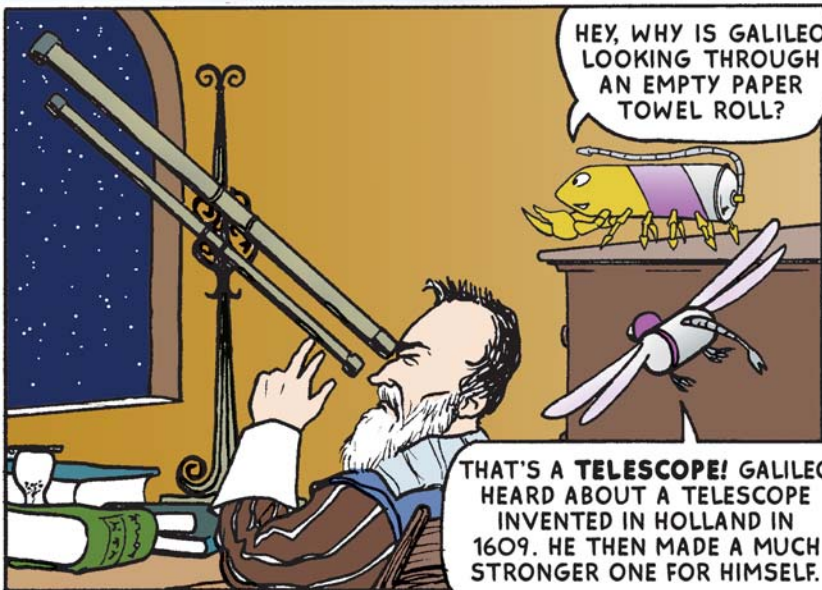
THAT'S RIGHT, SCORPY. WE WILL SPEND THE NEXT TWO DAYS HERE STUDYING FAMOUS ITALIAN ASTRONOMER GALILEO.



GALILEO WAS BORN IN ITALY IN 1564. HE ATTENDED THE UNIVERSITY OF PISA TO STUDY MEDICINE, BUT HE ENDED UP STUDYING PHILOSOPHY AND MATHEMATICS. THERE HE FOUND HIS INTEREST IN ASTRONOMY.

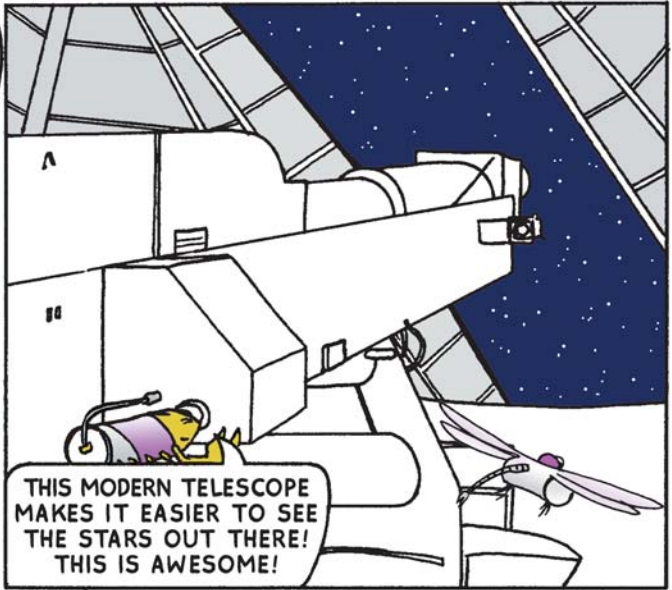


GALILEO DISAGREED WITH THE WRITINGS OF THE GREEK **ARISTOTLE**, WHO SAID EARTH WAS THE CENTER OF THE UNIVERSE. GALILEO AGREED WITH **COPERNICUS** THAT EARTH REVOLVES AROUND THE SUN.



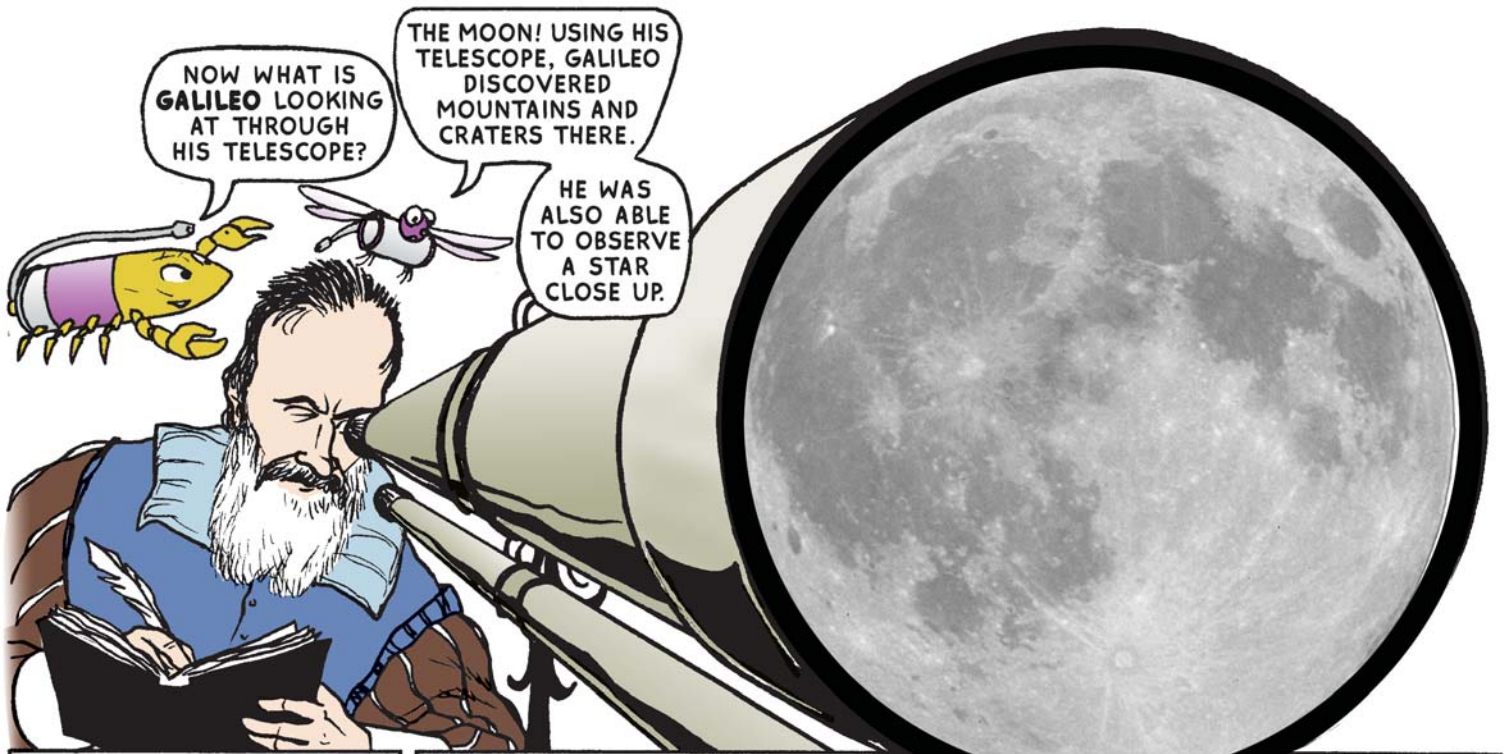
HEY, WHY IS GALILEO LOOKING THROUGH AN EMPTY PAPER TOWEL ROLL?

THAT'S A **TELESCOPE!** GALILEO HEARD ABOUT A TELESCOPE INVENTED IN HOLLAND IN 1609. HE THEN MADE A MUCH STRONGER ONE FOR HIMSELF.



THIS MODERN TELESCOPE MAKES IT EASIER TO SEE THE STARS OUT THERE! THIS IS AWESOME!



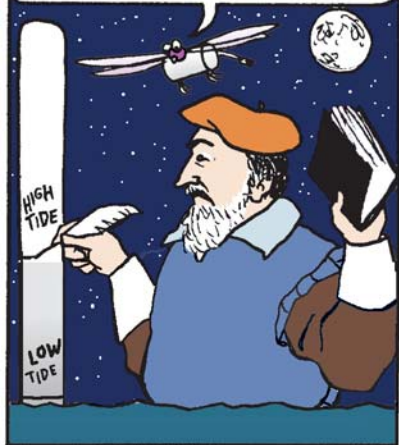


NOW WHAT IS GALILEO LOOKING AT THROUGH HIS TELESCOPE?

THE MOON! USING HIS TELESCOPE, GALILEO DISCOVERED MOUNTAINS AND CRATERS THERE.

HE WAS ALSO ABLE TO OBSERVE A STAR CLOSE UP.

GALILEO ALSO NOTICED HOW THE MOON AND THE SUN COULD CHANGE THE OCEAN TIDES. HE SAW HOW GRAVITY CAUSED THE TIDES TO RISE AND FALL.



NOT EVERYONE AGREED WITH GALILEO'S THEORIES. IN 1616 A CHURCH LEADER TOLD GALILEO HE MUST NO LONGER SAY THAT EARTH MOVES. HE WAS SENT TO ROME FOR A TRIAL ON HERESY. HE WAS SENTENCED TO LIFE IN PRISON. HIS BOOKS WERE BURNED.



HE WAS SENT TO JAIL FOR SHARING WHAT HE LEARNED? THAT'S PRETTY SAD!!



YEAH, BUT IN 1979 - MANY YEARS AFTER GALILEO'S DEATH - POPE JOHN PAUL II PARDONED HIM AND HONORED THE MANY CONTRIBUTIONS GALILEO MADE TO SCIENCE.

GALILEO WAS A TRUE STAR!!