Galileo Galilei

Feb 15, 1564 - Jan 8, 1642

Alexander Horn & his parents Debra Cheung & Daniel Horn

The Law of Falling Objects
1604

Galileo's Leaning Tower of Pisa experiment

Hammer and feather drop on moon

In 1971, astronaut David Scott re-created Galileo's famous experiment on the moon by dropping a hammer and a feather simultaneously.

Which object lands first?

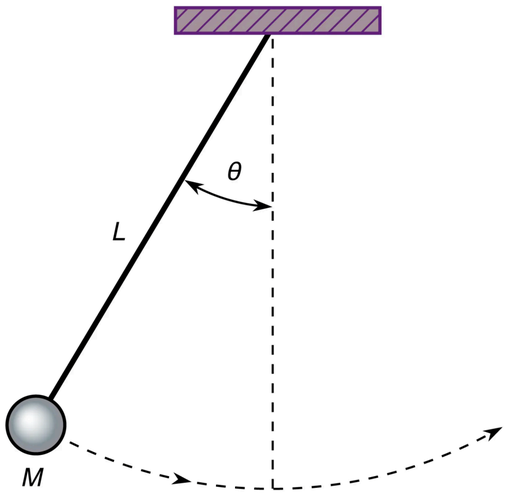
Objects of unequal weight

The Law of the Pendulum
1583

3 variables

of the simple pendulum

- the length of the chord
- the angle of displacement
- the weight of the bob



The time it takes for the pendulum to swing only depends on the chord length

Which swings faster: the longer chord or the shorter chord?

Hints: take a look at the Metronome

The Short Answer:

Here is how long it takes each of the planets in our solar system to orbit around the Sun (in Earth days):

- **Mercury**: 88 days
- **Venus**: 225 days
- **Earth**: 365 days
- **Mars**: 687 days
- **Jupiter**: 4,333 days
- **Saturn**: 10,759 days
- **Uranus**: 30,687 days
- **Neptune**: 60,190 days

The Galilean Telescope
1610

What did Galileo observe?

That's what got him in trouble!

- Craters and mountains on the Moon
- The Phases of Venus - Venus was moving around the Sun rather than the Earth
- Jupiter's moons: Io, Ganymede, Europa and Callisto - this showed that not everything in the heavens revolves around the Earth
- The stars of the Milky Way

Roman Inquisition

Galileo was condemned to spend the rest of his life locked in his house under guard.

Finally, more than 300 years later, leaders of the very Church that had punished Galileo Galilei pardoned him.

Thanks to his intuition as a brilliant physicist and by relying on different arguments, Galileo, who practically invented the experimental method, understood why only the sun could function as the centre of the world, as it was then known, that is to say, as a planetary system. The error of the theologians of the time, when they maintained the centrality of the Earth, was to think that our understanding of the physical world's structure was, in some way, imposed by the literal sense of Sacred Scripture....
— Pope John Paul II, L'Osservatore Romano N. 44 (1264) – November 4, 1992