

ROBERT HOOKE

Robert Hooke (28 July 1635 – 3 March 1703) was an English natural philosopher, architect and polymath.

His adult life comprised three distinct periods: as a scientific inquirer lacking money; achieving great wealth and standing through his reputation for hard work and scrupulous honesty following the great fire of 1666, and eventually becoming ill and party to jealous intellectual disputes, which may have contributed to his relative historical obscurity.

He investigated the phenomenon of refraction, deducing the wave theory of light, and was the first to suggest that matter expands when heated and that air is made of small particles separated by relatively large distances. He also came near to an experimental proof that gravity follows an inverse square law, and hypothesised that such a relation governs the motions of the planets, an idea which was subsequently developed by Isaac Newton. Much of Hooke's scientific work was conducted in his capacity as curator of experiments of the Royal Society, a post he held from 1662, or as part of the household of Robert Boyle.



Modern portrait of Robert Hooke (Rita Greer 2004), based on descriptions by Aubrey and Waller; no contemporary depictions of Hooke are known to survive.

**Drawing on the document and your own knowledge, present the properties of light
OR present the way Newton explained Kepler's laws using the law of gravitation.**