

# Christiaan Huygens

(14 April 1629 – 8 July 1695)

**Christiaan Huygens** was a Dutch scientist. He is the founder of the wave theory of light. He studied mathematics and law at the University of Leiden, and then at the College of Orange at Breda. He was also interested in poet and music. Huygens was educated at home until turning sixteen years of age. In 1663, he was elected a member of the Royal Society.



**Scientific contributions:** Huygens focused on mathematical problems, but in 1654 he turned his attention to the telescope. On May 3<sup>rd</sup>, 1661, Huygens observed the planet mercury transit over the Sun, using a telescope. Huygens also discovered a large moon orbiting the planet Saturn, which he named Titan. Huygens visited London in 1689 and met Sir Isaac Newton and lectured on his own theory of gravitation. Huygens also focused on light and its mechanics. He brilliantly explained the double refraction shown by the mineral calcite crystal. He was the first to analyze the circular and simple harmonic motions. He designed and built improved clocks and telescopes. He discovered the true geometry of Saturn's rings.

Christiaan Huygens is best known to physicists for his discovery of Huygens-Fresnel principle. This principle states that every point on a wavefront is a source of wavelets, which spreads forward at the same speed. He died in 1695, at the age of 66. His book, *Treatise on light*, makes fascinating reading even today.

*Teachers may suggest students to make a collage of photographs of scientists in physics depicting the advancements in the subject.*