*“Mathematics is the door and the key to the sciences.”*

Roger Bacon was born roughly around 1214, although there is some debate surrounding this, and lived a life in pursuit of scientific truths in correlation with his study of math until his death in 1292.

As an accomplished Oxford man, born from a farm family, he traded his scythe for the sciences. After a spending many years learning Latin and studying Aristotle, Bacon came to teacher at Oxford, and eventually in Paris, and back to Oxford. Although he spent a lot of time teaching, Bacon was also devoted to his own studies and research. Bacon based a lot of his teachings on that of Aristotle and is often credited as one of the founders of the modern day scientific method. Many scholars, are actually very impressed by how similar some of Bacon’s writings and proposals are to modern day standards.

Like many scholars and visionaries of the time, throughout Bacon’s scientific journey he faced hardships with the church’s approval. Fortunately, Bacon developed a relationship with Pope Clement IV and had his support due to Bacon’s belief that science helped man understand God. In his lifetime, Bacon gained a lot of success as a teacher, but also attributed to many sciences and mathematics, notably using geometry in optics.

Bacon strongly emphasized the importance of learning math before studying other sciences. He believed math to be utilitarian for sciences and thought of math in forms of quantity.

Bacon is also credited as being among the first to see the physical importance of math and in his Opus Maius, he explored different ways to use math as a means to interpret our physical world. Including Light.

Bacon dived head first into a science career and it is described that he created and designed many experiments. Some scholars believe that he studied and practiced alchemy. Notably, in some of his works he described flying machines and motorized boats. Bacon made strides in optics while doing experiments with geometry, using mirrors and magnifying glasses.