

GALILEO GALILEI

and the solar system

Galileo was born in Pisa, Italy in 1564. His father had asked him to learn about medicine and become a doctor but Galileo said that he enjoyed the sciences more. He became a great experimenter and studied how and why things moved. This is the science of physics.

One of his experiments was from the top of the Leaning Tower of Pisa. He dropped two cannon balls—a heavy one and a lighter one. The watching crowd thought that the heavy one would hit the ground first. To everyone's surprise they landed at the same time! (In a vacuum, a space with no air, even a feather and a lump of lead will fall at the same speed.) In 1609 he was thrilled to hear about the telescope which had just been invented in Holland. He immediately made a better one for himself. He used it to look up at the night sky. For the first time he saw that the Moon had mountains and craters and at certain times the Sun was blemished with spots. Looking at the Sun damaged his eyes. With his telescope he realized that the planets were much nearer to the Earth than the stars and also that the planet Jupiter had several moons circling around it. This proved that not everything circled the Earth! One hundred years earlier, Copernicus had claimed that the Earth and all the planets moved round the Sun. "Well," thought Galileo, "Copernicus was right after all."

The Church was displeased with Galileo's ideas and forced him into silence as they believed that the Earth was the centre of the whole universe. Some of Galileo's enemies even refused to look through his telescope. They thought it was bewitched. Galileo felt so strongly about his findings that he daringly published a book telling everyone about them. Galileo was forced to go before the Church Court where he was threatened with torture. They said that he could go free only if he publicly admitted that his ideas were wrong. Knowing that



other scientists had been put to death for their new ideas he wearily gave in. His studies did not end, however. He continued writing even though his work could not be published.

By 1638 he had become totally blind but still his work carried on. As a last gesture against the Church he arranged that one of his manuscripts should be smuggled to France to be printed.