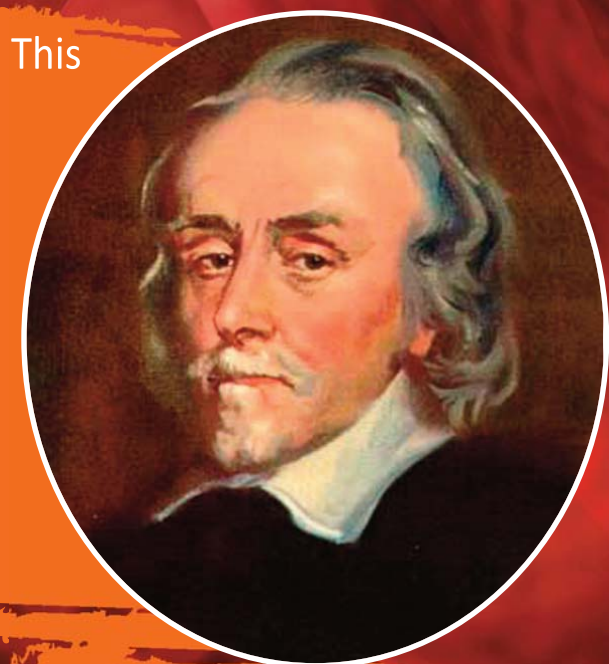


# MATHS is at the HEART ...

## ... of everything



**William Harvey** (1578-1657) is famous for his discovery of the circulation of the blood. This was a very important milestone in medical science and while he did anatomical dissections and experiments it was mathematics that gave him the evidence. Doctors at the time still followed the teachings of Galen (a 2nd century Greek physician in the Roman Empire) who thought that blood was continuously made in the body from food and used by the organs. Harvey considered the heart as a pump and measured the volume pumped at each contraction and multiplied this amount by the pulse rate. This enabled him to calculate that the body would have to manufacture over 200 litres of blood a day – obviously impossible! So using maths he was able to convince people that the blood circulates around the body pumped out by the heart through the arteries and returning through the veins.



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