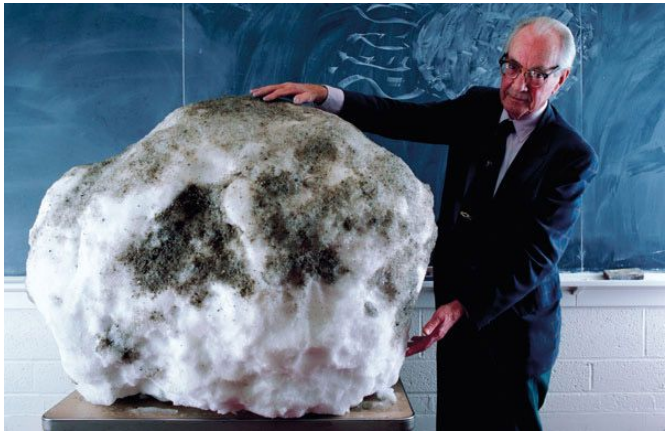
Thursday 5th November



Fred Whipple was born on this day in 1906 on a farm in Iowa, USA. He dreamed of becoming a professional tennis player as a child, but he contracted Polio which left him with one leg shorter than the other. He studied Maths at University, but grew bored and switched to Astronomy for his PhD which he had minored in during his Maths degree. He worked on orbital calculations of planets and comets for his doctorate.

During World War two Fred invented a method for cutting Aluminium foil into pieces that would confuse enemy radar (called 'chaff'). In 1946 he invented a shield for spacecraft to protect them from fast moving tiny particles. It was a series of layers that break the particle into smaller parts dispersing the energy and breaking up the particle before it reaches critical parts of the spacecraft. This is called a 'Whipple Shield' which is still used in spacecraft today.

Whipple is most famous for solving the puzzle of why comets didn't always arrive when astronomers' predicted. In 1950, he proposed that comets were a mixture of ice and dust; the '**dirty snowball**' model. He said that as a comet approached the sun, some of the ice would vaporise and the escaping gas would give the comet a push similar to a rocket taking off. This push explained their unexpected orbits. Fred was 79 when the Giotto probe visited Halley's Comet in 1986 and proved his 'dirty snowball' theory. The Giotto probe was protected by a Whipple Shield.

- Fred was also infamous for his science ties! Which teachers at your school have the best ties?
- How do you think Fred felt when his 'dirty snowball' theory was proved 36 years after his initial idea?

Thursday 5th November

Fred Whipple was born this day 1906 on a farm in Iowa, USA. He contracted polio as a child, which left him with one leg shorter than the other and little chance of being a professional tennis player.

He studied Maths at University and switched to Astronomy for his PhD. During WWII Fred invented a way to confuse enemy radar by producing ‘chaff’. In 1946 he invented a shield for spacecraft to protect them from fast moving tiny particles called a ‘Whipple Shield, it's still used today.

He is most famous for his ‘**dirty snowball**’ theory of the structure of comets. Which explained their unusual and unpredictable orbits.



Fred was 79 when a probe visited Halley’s Comet in 1986 and proved his ‘dirty snowball’ theory. The probe was protected by a Whipple Shield.

- How do you think Fred felt when his ‘dirty snowball’ theory was proved 36 years after his initial idea?