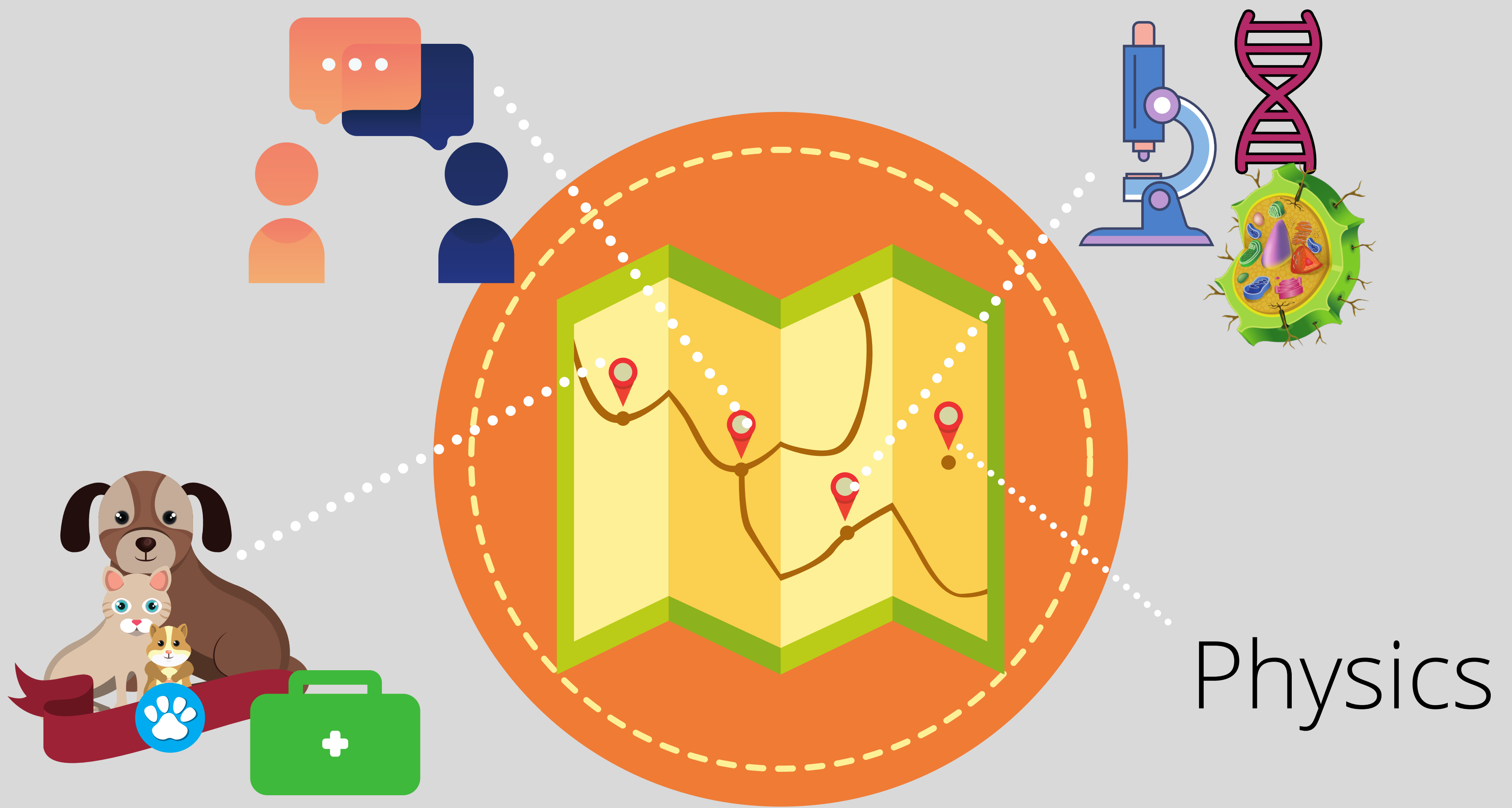
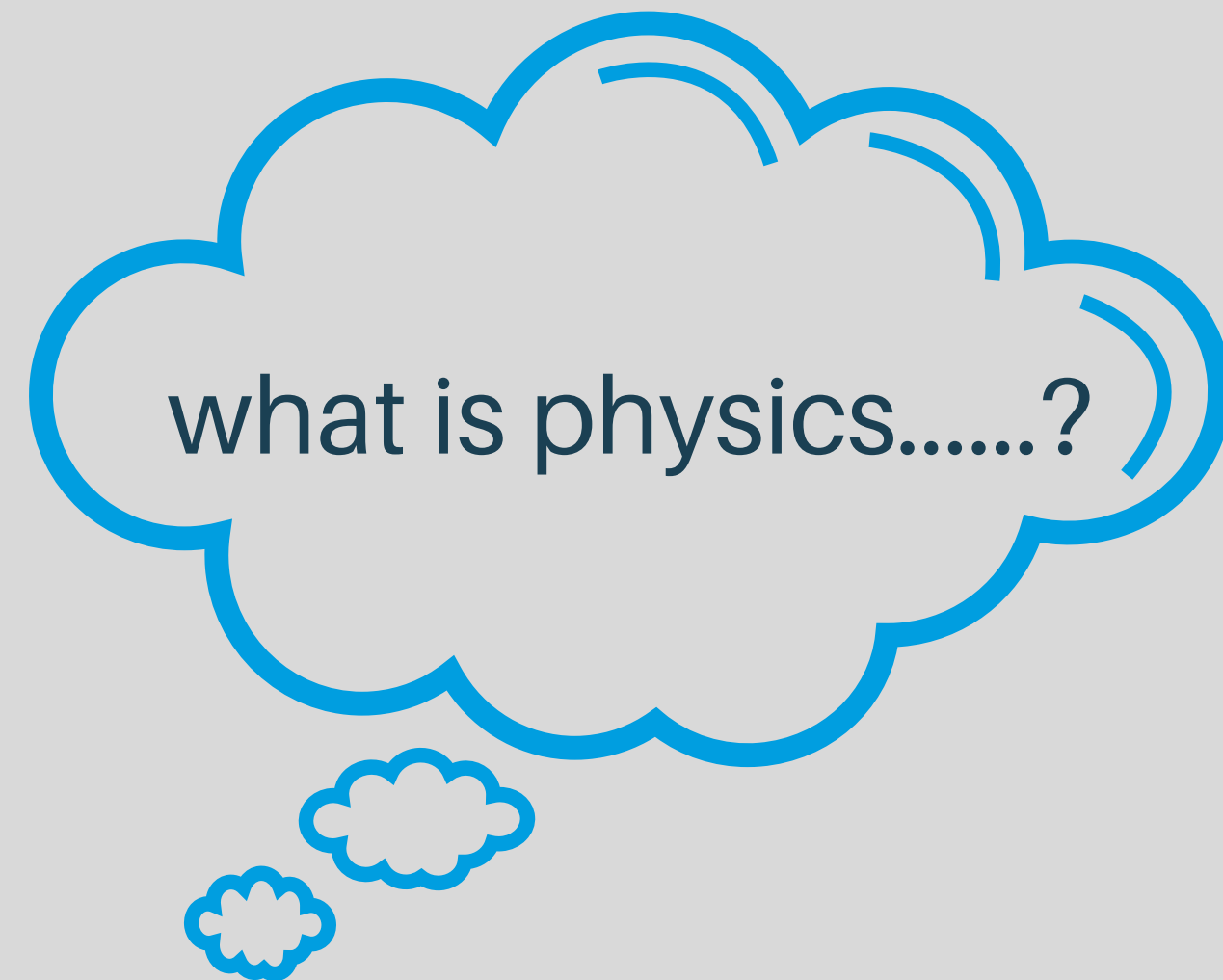


The Why and The Why Not of Physics!

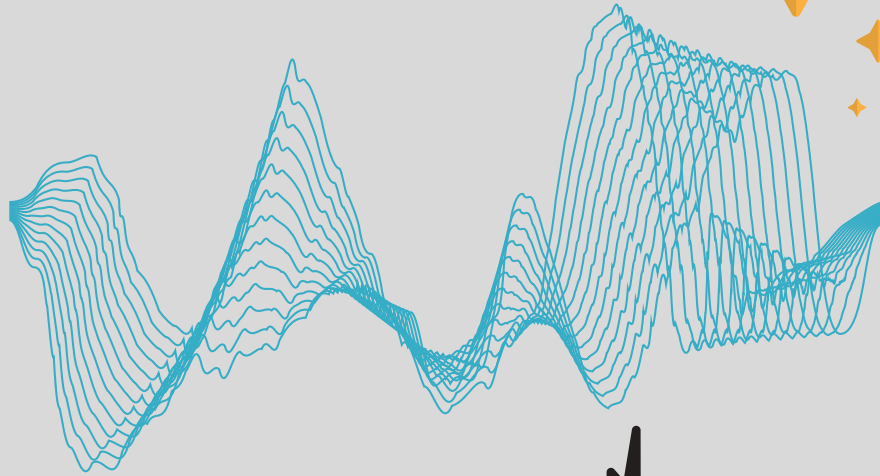
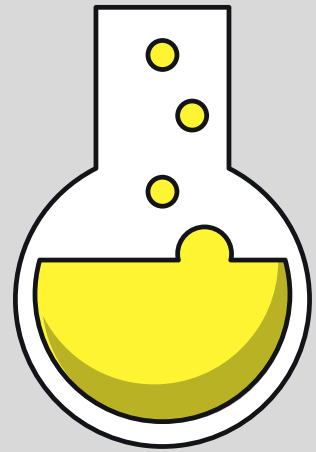
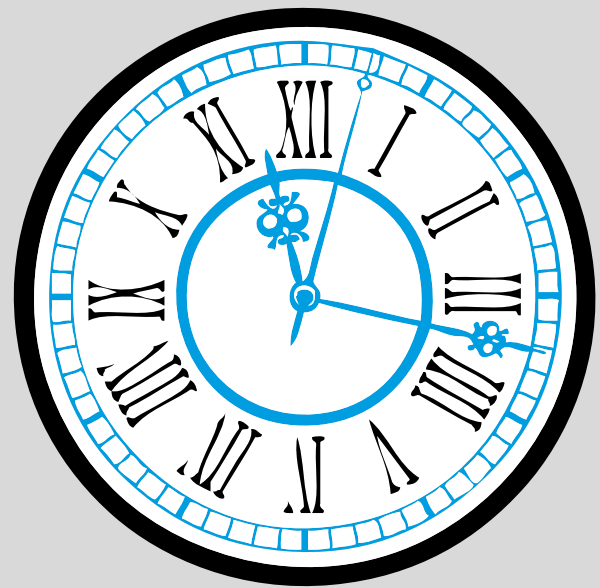
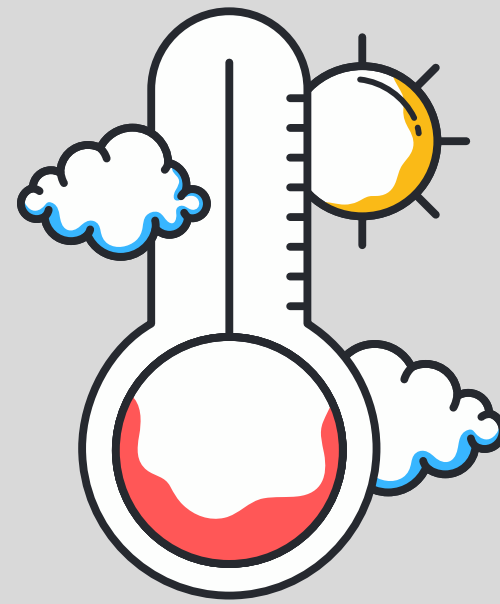
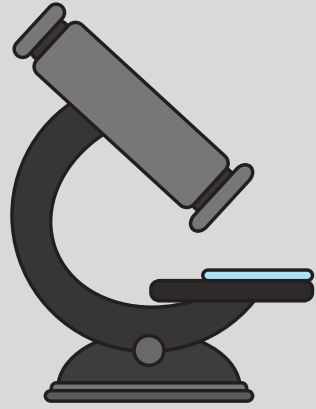
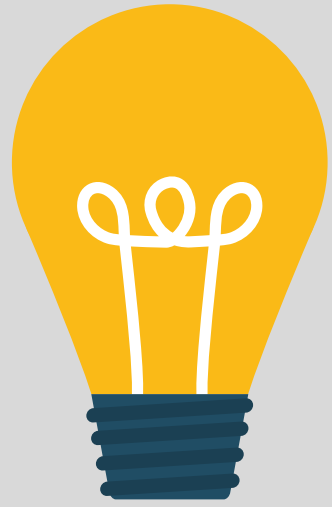
Dr. Sharon Shannon

UCD/SFI Shared Learning Day Programme December 2019

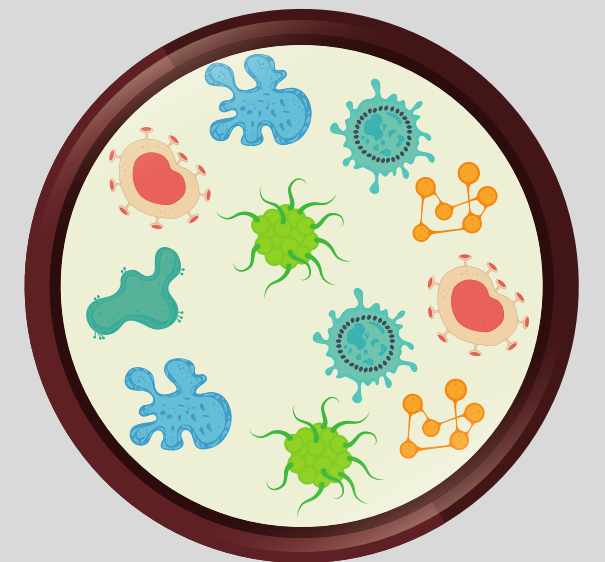
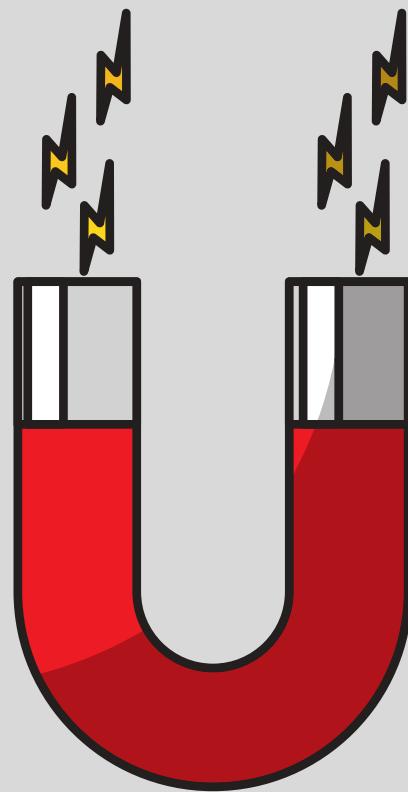
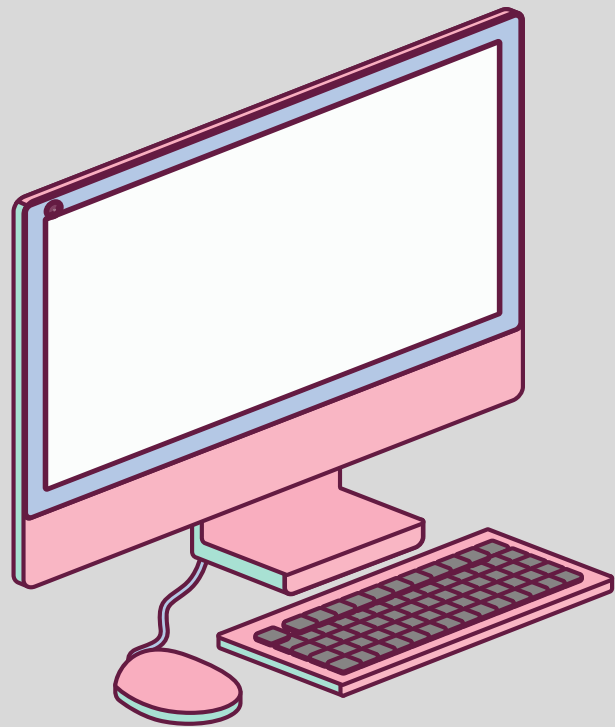
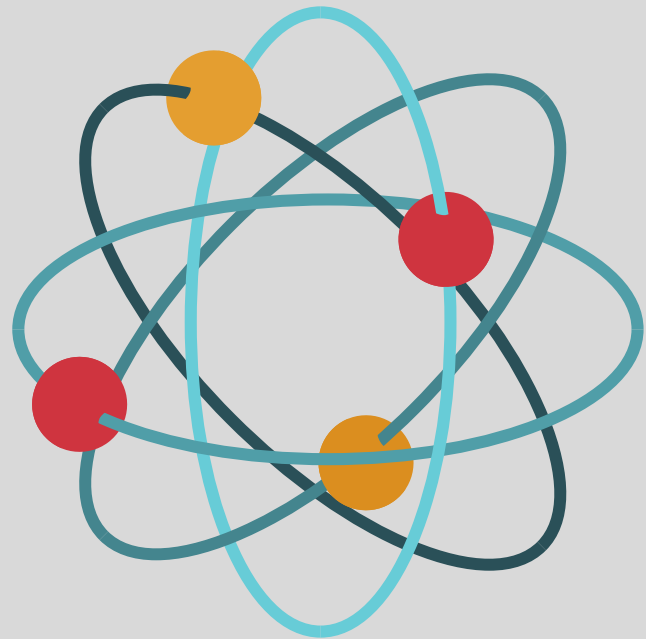
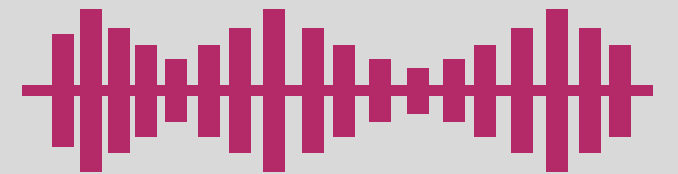




what is physics.....?



$$E=mc^2$$









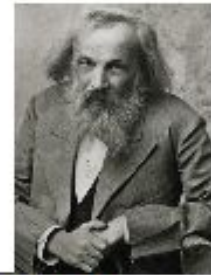
History of the Atom

By Matt Rosa



Democritus

-He proposed that all matter, including space and time, was made up of small units named atoms. He did no experiments and had little evidence, but his idea was kept on by Lucretius



Mendeleev

-Created the periodic table of elements which organizes elements according to their similarities. His Period Law states that "physical and chemical of the elements are periodic functions of their atomic numbers."



Henri Becquerel

-Discovered radioactivity, which earned him a Nobel Prize. Also discovered that rays emitted from uranium caused gases to ionize.



Ernest Rutherford

-Used the gold foil experiment to discover the modern model of an atom. He concluded that all positive charges were centralized, while negative electrons orbited the nucleus.



Niels Bohr

-Explained that outer orbits in an atom could hold more electrons than the inner orbits. By knowing this, one can determine the atom's chemical properties. He also gave birth to the idea that electrons emit light by jumping orbits.



Heisenberg

-Thought of the Uncertainty Principle. This principle states that one can never know the exact location and energy of an electron simultaneously.

460BC	1803	1869	1885	1896	1897	1907	1910	1913	1925	1932
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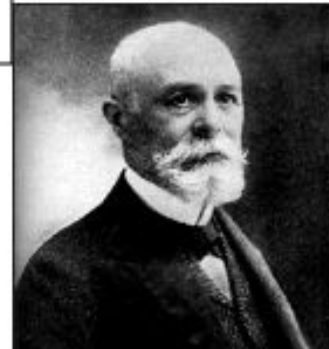
Dalton

-Agreed that all matter was created by atoms, which he believed were indestructible. He also stated that compounds are created by combining two atoms, and that all atoms of given elements are identical in their mass and properties.



Eugene Goldstein

-Discovered positive particles. He noted that the particles had a charge equal and opposite to the electron.



J.J. Thomson

-Discovered the electron. He experimented by testing and studying the nature of electric discharge in a high vacuum cathode-ray tube.



Millikan

-Used an oil drop experiment to determine the charge of a single electron.



Frederick Soddy

-Came up with the concept of isotopes. Explain with Ernest Rutherford that radiation is due to transmutation of elements.

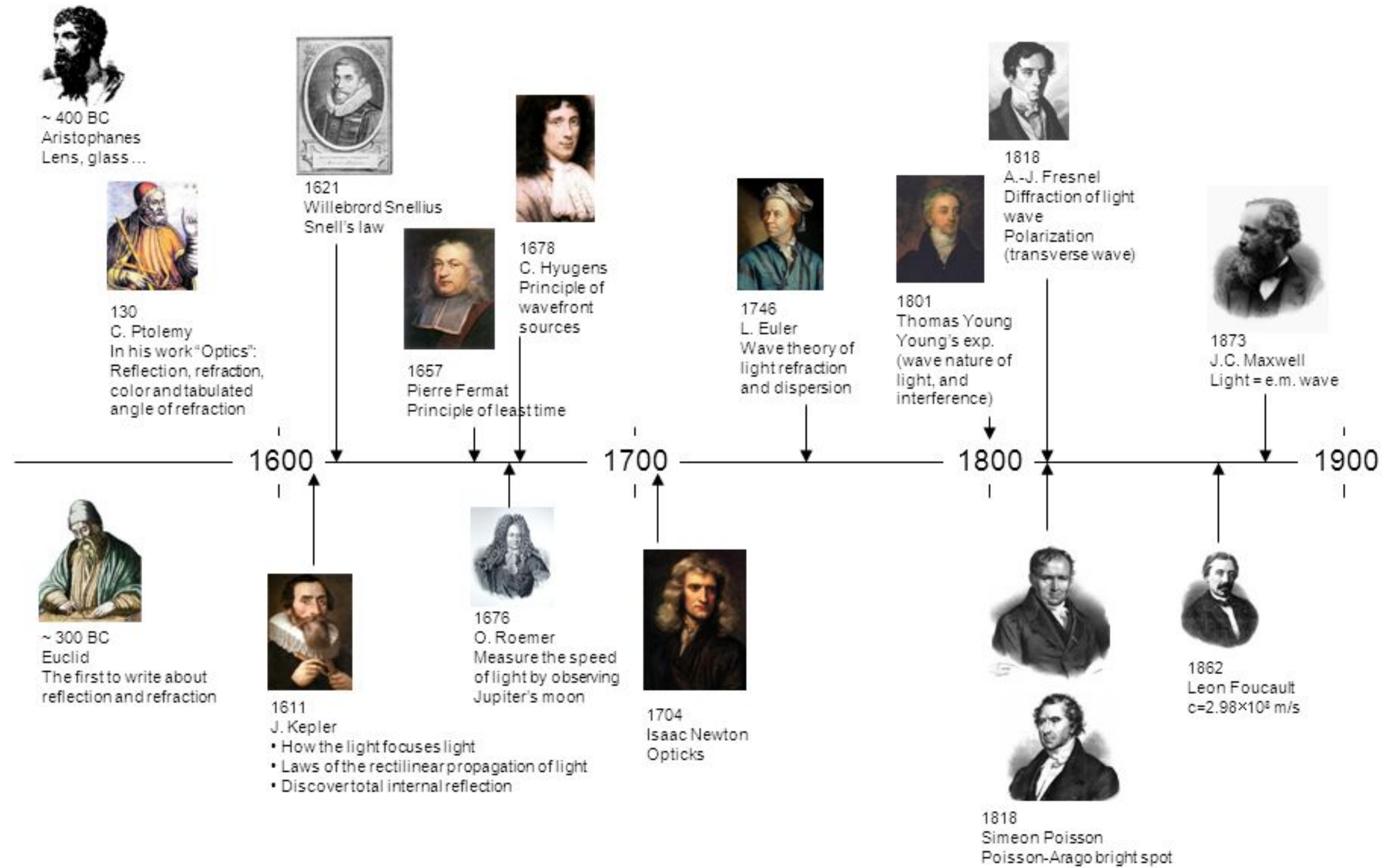


Chadwick

-Discovered the neutron. The neutron helps balance out protons in the nucleus of an atom.



Timeline of Optics

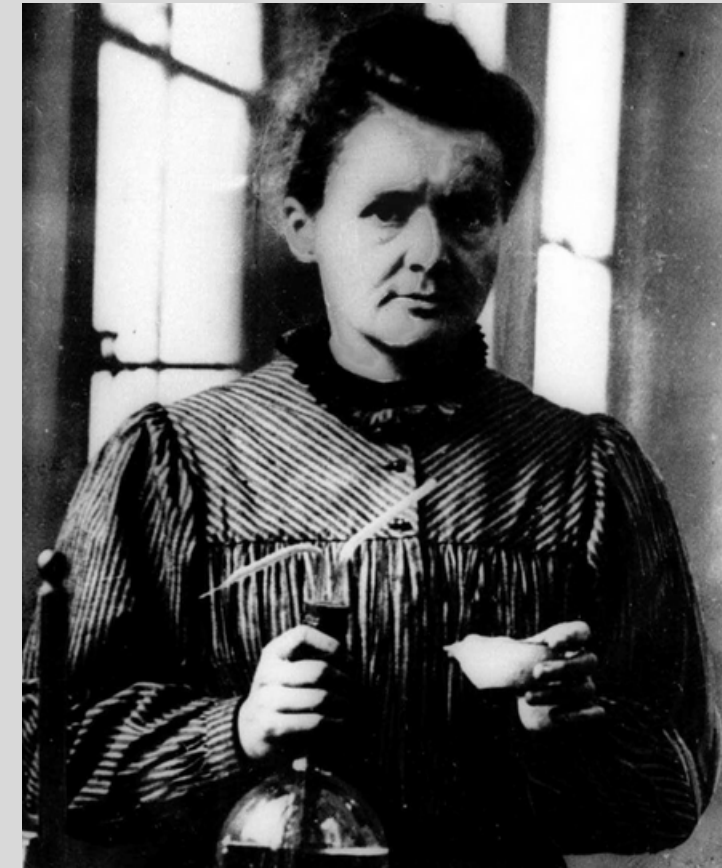




Hypatia c351



Sophie Germain 1776



Marie Curie 1867



Emmy Noether 1882



Maria Goeppert 1906



Chien Shiung Wu 1912



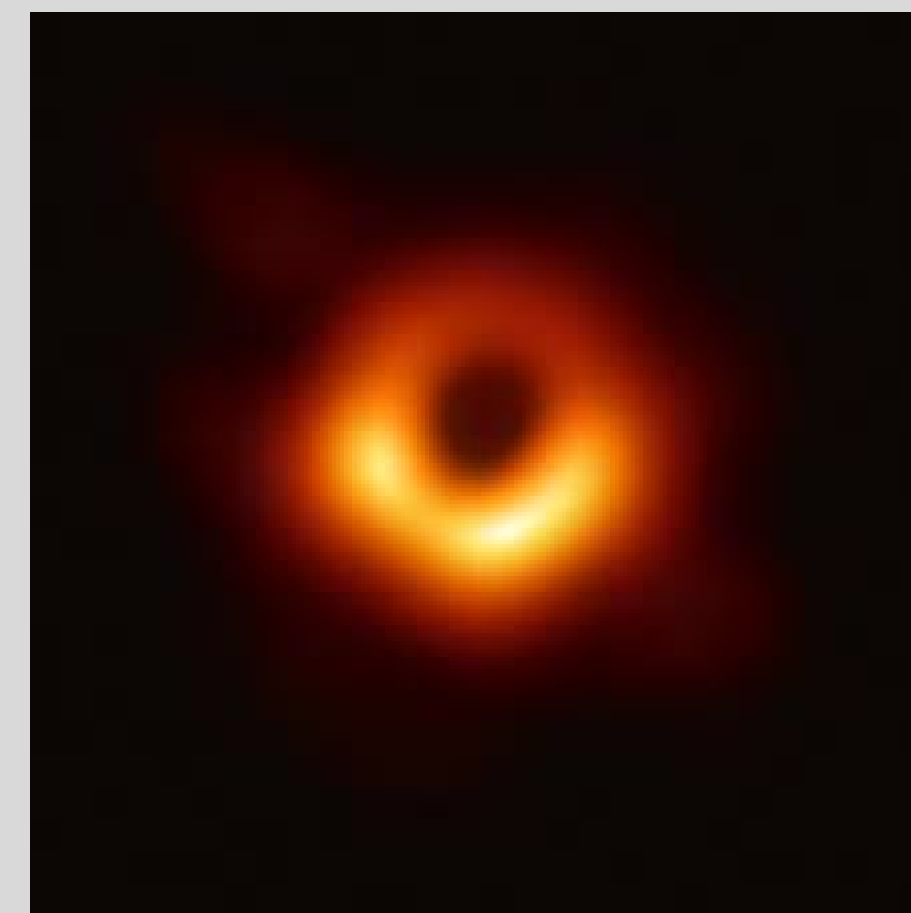
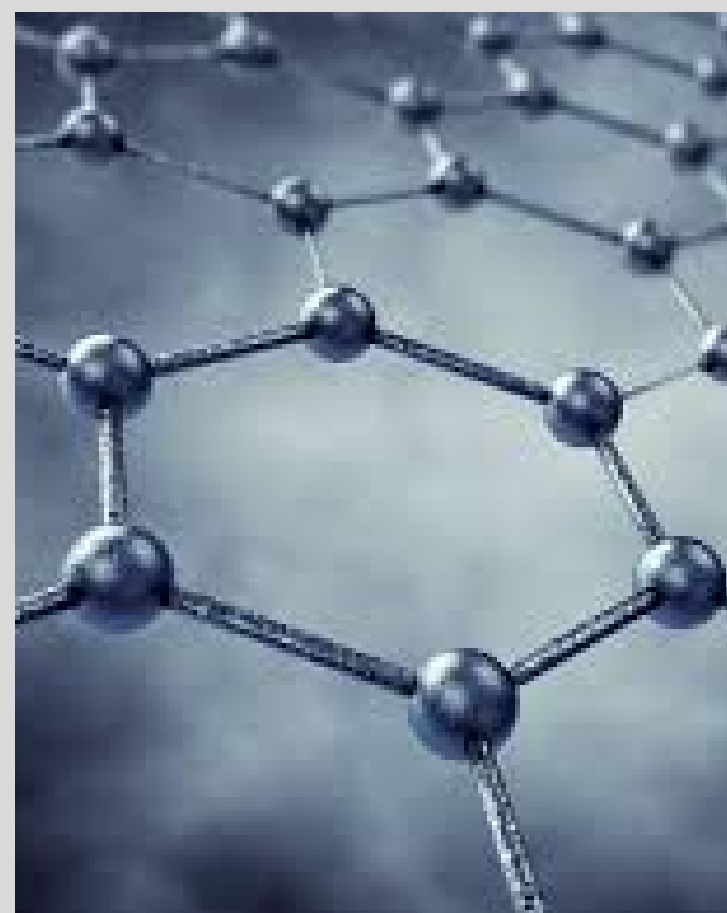
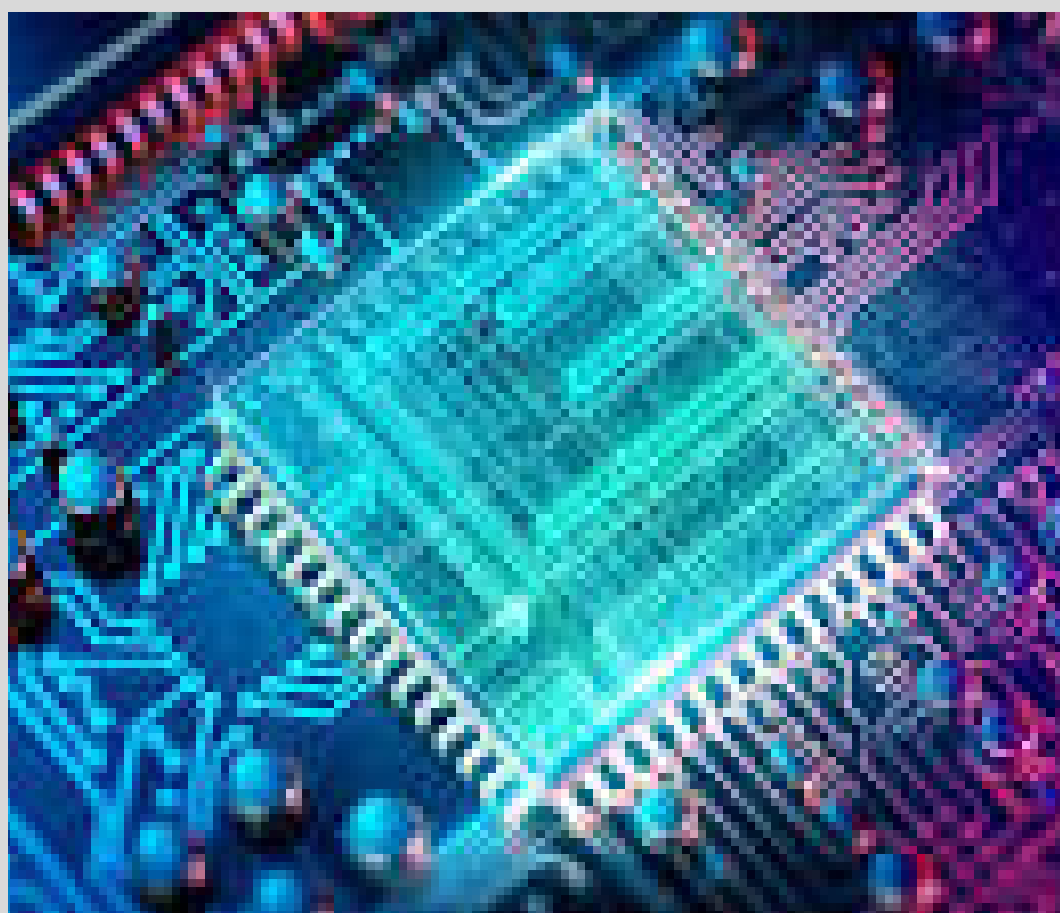
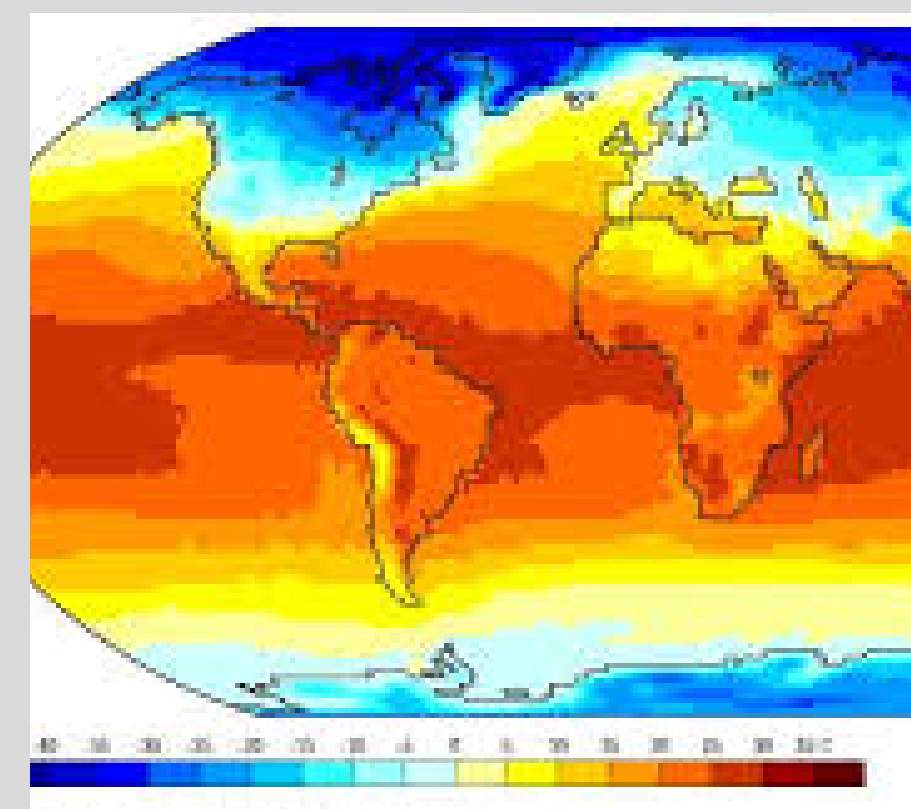
Rosalind Franklin 1920



Vera Rubin 1928



Prof Dame Jocelyn Bell Burnell



Computational Research
Analyst
Scientist
Physics
Strategic Particle
Physicist
Video Forensic
Low Protection
War Aid
Researcher
Teacher
Nanotechnology
Econophysicist
Radiological
Meteorologist
Failure



Rayleigh Scattering

Thermodynamics

Light

Reflection

Potential Energy

Electromagnetism

Sound

Biophysics

Electricity

Molecular Structure

Geophysics

