



St John's CE Middle School

Key Performance Indicators

Pupils who are working at age related expectations at the end of the year will have a secure knowledge of these Key Performance Indicators.

KS3 Year 7 Science

Biology

Cells
*Explain the similarities and differences between plant and animal cells and the functions of the components of a cell
*Give examples of specialised animal and plant cells, linking structure and function
*Explain which substances move into and out of cells, including diffusion
Body Systems
*Explain how the adaptations of the parts of the gas exchange system help them perform their function
*Explain how the actions of the ribcage and diaphragm lead to inhaling and exhaling
*Explain the role of the joints in the skeleton
*Explain how antagonistic pairs of muscles cause movement
Reproduction
*Label the main structures of the male and female reproductive system, and explain their functions
*Explain the sequence of fertilisation and implantation
*Describe the stages of the menstrual cycle as a timed sequence of events
Adaptions and Inheritance
*Describe how organisms are adapted to their environment
*Explain trends and draw detailed conclusions about predator-prey relationships
*Explain how characteristics are inherited through and coded for by genes
*Explain how natural selection leads to evolution and some factors that may have led to extinction

Chemistry

Particles
*Explain why there is a period of constant temperature during melting and freezing (the latent phase)
*Describe why diffusion is faster at higher temperatures, using the concept of how fast particles are moving
*Explain, using particle diagrams, what happens to gas pressure as the temperature increases
Elements, Atoms & Compounds
*Compare the properties and uses of different elements
*Differentiate elements from compounds when given names and properties
Chemical Reactions
*Convert word equations into formula equations
*State what happens to the mass of the reactants and products in chemical reactions
*Explain the difference between exothermic and endothermic reactions
Acid & Alkalis
*Explain what 'concentrated' and 'dilute' mean, in terms of the number of particles present
*Categorise substances as strong or weak acids and alkalis using pH values
*Predict the formulae for products of reactions between acids and metals, or acids and bases

Physics

Forces
*Explain which pairs of forces are acting on an object
*Explain why drag forces and friction slow things down in terms of forces
*Explain how the effect of gravity changes moving away from Earth
*Explain the difference between balanced and unbalanced forces
Sound
*Describe sound as the transfer of energy through vibrations and explain why sound cannot travel through a vacuum
*Compare and contrast waves of different loudness and frequency
*Explain how parts of the ear transfer vibrations and how your hearing can be damaged
Space
Describe the structure of the Universe in detail, in order of size and of distance away from the Earth
Explain how total eclipses are linked to phases of the Moon