

Science Substantive Thread Progression

PHYSICS

Physics is the forces, energy and interactions that explain how the physical world works.

Energy

EYFS / KS1	Lower KS2	Upper KS2
• Explore light and sound through everyday sensory experiences. • Develop early understanding through observing and describing physical phenomena.	• Recognise that light is needed to see, investigate reflection and explain how shadows are formed. • Explain how sounds are produced by vibrations and construct and investigate simple electrical circuits.	• Explain that light travels in straight lines and use this to explain how we see objects and how shadows are formed. • Compare how components function in series circuits and use recognised symbols when representing circuits.

End Point

Pupils understand how light, sound and electricity behave and can apply their scientific knowledge to explain observations and simple electrical circuits.

Forces & Motion

EYFS / KS1	Lower KS2	Upper KS2
• Explore how objects move through pushing, pulling, rolling, floating and sinking. • Investigate magnets and recognise that some materials are attracted to them.	• Compare how objects move on different surfaces and recognise that some forces require contact while magnetic forces can act at a distance. • Explore attraction and repulsion between magnets and identify magnetic and non-magnetic materials.	• Explain the effects of gravity, air resistance, water resistance and friction on moving objects. • Explain how mechanisms including levers, pulleys and gears can allow a smaller force to have a greater effect

End Point

Pupils understand that forces can change the movement of objects and can explain how different forces and mechanisms operate in familiar situations.

Physics Curriculum Journey

Across the primary curriculum, pupils move from exploring movement, light, sound, electricity and forces through everyday experiences to explaining the physical processes that cause them. By the end of Year 6, pupils can apply their understanding of forces, light and electricity to explain how objects and simple systems behave, providing a secure foundation for secondary Physics.