Appendix 6: Suggested practical investigations

The following suggestions are *additional* practical investigations that exemplify the scientific process. They can be used to supplement students' understanding of physics in addition to the practical investigations found within the main body of the content.

- Investigate the power consumption of low-voltage electrical items.
- Investigate factors affecting the generation of electric current by induction.
- Investigate how the nature of a surface affects the amount of energy radiated or absorbed.
- Investigate models to show refraction, such as toy cars travelling into a region of sand.
- Investigate the areas beyond the visible spectrum, such as those found by Herschel and Ritter, who discovered infrared and ultraviolet (UV) respectively.
- Investigate the relationship between potential difference (voltage), current and resistance.
- Investigate the relationship between force, mass and acceleration.
- Investigate the forces required to slide blocks along different surfaces, with differing amounts of friction.
- Investigate how crumple zones can be used to reduce the forces in collisions.
- Investigate forces between charges.
- Conduct experiments to show the relationship between potential difference (voltage), current and resistance, for a component whose resistance varies with a given factor, such as temperature, light intensity and pressure.
- Investigate the motion of falling.
- Investigate momentum during collisions.
- Investigate power by running up the stairs or lifting objects of different weights.
- Investigate the critical angle for Perspex®/air, glass/air or water/air boundaries.
- Investigate factors affecting the height of rebound of bouncing balls.
- Investigate the temperature and volume relationship for a gas.
- Investigate the volume and pressure relationship for a gas.
- Investigate the absorption of light by translucent materials in order to simulate the absorption of rays.

Safety is an overriding requirement for all practical work. Centres are responsible for ensuring that whenever their students complete practical work appropriate safety procedures are followed.