




Humans as the subject of investigation (1)

including simple measurements on the body and senses and psychological effects

See also CLEAPSS Student Safety Sheets 3, 7, 8 and 9

Source	Hazard	Comment
All investigations on pupils	 DANGER  BIOHAZARD	Pupils should never be pressurised to take part in investigations on themselves. Individual pupils may become alarmed or distressed, or be subject to unpleasant comments from others in the class, if the results for their bodies are significantly different from others. In fact, a wide spread of figures may be regarded as normal and, in any case, measurement methods used in schools may not be very accurate or reliable. Biohazards may result if body fluids are used (see <i>Sheet 3</i>).
Investigations of body mass and size, sight, colour blindness, teeth, hearing, reaction time, touch sensitivity, ear lobe attachment, eye colour, etc	 DANGER	Hazards include excessively loud sounds, bright light sources, sharp objects (touch testing), falling objects (reaction timing). Hygiene issues may arise with shared dental mirrors, etc. Individual pupils may become alarmed or distressed, or be subject to unpleasant comments from others in the class, if genetic tests raise questions about biological or adoptive parentage, although in fact blue-eyed children can occasionally arise from biological parents with brown eyes because the inheritance of eye colour is a complex issue.

Typical control measures to reduce risk

- Ensure only willing volunteers are used and re-assure them if results are exceptional or surprising.
- Be aware of any medical conditions that could affect pupils' ability to participate and/or the results.
- Use hair grips rather than pins for touch sensitivity tests.
- Avoid sounds more than 85 dB(A).
- Ensure dental mirrors etc are properly disinfected between each use (see *Student Safety Sheet 9*).
- Use non-LED torches as light sources.

Assessing the risks

- **What are the details of the activity to be undertaken? What are the hazards?**
- **What is the chance of something going wrong?**
eg, could somebody be injured by the equipment?
- **How serious would it be if something did go wrong?**
- **How can the risk(s) be controlled for this activity?**
eg, can it be done safely? Does the procedure need to be altered?

Emergency action

- **Minor cuts** Wash the wound. Get the casualty to apply a small, sterilised dressing.
- **Exposure to very loud sounds** Brief exposure to sounds of the loudness likely to be achieved in a school laboratory is unlikely to cause lasting damage. Reassure the casualty. Repeated exposure to loud music on portable media players (ipods) or at pop festivals is much more damaging,
- **Exposure to very bright lights** Although looking directly at the Sun and other very bright lights can cause permanent damage, the natural aversion response of the eyes of pupils will usually prevent this unless deliberately over-ridden. Reassure the casualty.
- **Impact injury** Rest the injured part; apply ice to reduce the bruising and pain; get attention from a first-aider.