

### Pointers for teachers

These identify useful learning opportunities and illustrate potential pitfalls in the Activities. Such issues are generally advantageous as they offer excellent opportunities for discussing aspects of experimental design.

### Activity 3 - Classical Conditioning

**Independent variable:** Emotional status of stimulus – conditioned (blue) or neutral (red)

**Dependent variable:** Rating of GSR2 tone for pairs of scenarios – as higher or lower

**Controlled variables:** Duration and frequency of exposure to stimuli

If students are allowed to design their own studies around this idea, be very cautious about the nature of stimuli they use to provoke an emotional response. It is inadvisable for them to use threatening stimuli. Similarly, the activity is not suitable for use with children.

- **Pavlovian or classical conditioning** – an association is built up between an existing reflex (the unconditioned response - UCR) to a known trigger (unconditioned stimulus - UCS) and a neutral stimulus (NS). After a number of pairings the new stimulus takes on the property of the UCS to elicit the UCR and becomes a conditioned stimulus (CR).
  - In this instance both blue and red screens are initially NSs. The blue screens are then paired with a loud noise (UCS) producing a UCR of lowered GSR. Following repeated pairings the blue screen becomes a CS and produces a CR of lowered GSR. The red screen remains an NS.

- **Revision of research methods:**
  - *single participant design* – an experiment which compares the response of just one person to a manipulated variable, eg Watson & Rayner (1920).
  - *controls* – ways in which the setting or variables are controlled to minimise the influence of factors other than the independent variable on the dependent variable. The use of a baseline recording of GSR to the blue and red squares prior to conditioning provides a standard against which any change in GSR can be measured.
  
- **Debates in psychology:**
  - *use of animals in experiments* – Pavlov’s early work on learning, and much subsequent research in this field, has used animal subjects. They are exposed to stressors, food deprivation, electric shocks and other noxious stimuli. According to the proposal by Bateson (1986) ethical decisions about these costs must be justified by convincing evidence that suggests the research is both of good quality and has a high certainty of medical benefit. Gains from research into classical conditioning include an understanding of the acquisition of phobias and treatments such as aversion therapy.