## Activity description

In this activity students are shown how to measure their pulse rate. They then investigate the effect that other things like exercise and relaxation have on it. In each investigation they are asked to design a suitable data collection sheet, use a spreadsheet or table to display results, compare the data (using appropriate measures of location and spread and an appropriate statistical diagram), draw conclusions, and summarise their findings.

### Health & Safety note

Carry out your own risk assessment and take suitable precautions before starting this activity. Check that your students are able to participate in exercise. Do not rely on what is said here.

### Suitability and time

Level 2; 2–3 hours

### Resources and equipment

Information sheet, Worksheet

Optional: slideshow

### Equipment

Stopwatches, calculators or computers, graph paper or spreadsheet

### Key mathematical language

Sample, data collection sheet, measures of location and spread, statistical diagram

## Notes on the activity

*Check the web-links below before use.*

The information sheet gives a method for finding pulse rate.
Further information can be found at
http://www.nhs.uk/chq/Pages/2024.aspx?CategoryID=52&SubCategoryID=147

The information sheet refers to relaxation techniques.
Further information can be found at

http://www.nhs.uk/Livewell/Stressmanagement/Pages/Relaxation.aspx

http://www.umm.edu/altmed/articles/relaxation-techniques-000359.htm

The worksheet suggests three possible investigations, with opportunities for students to compare heart rate before and after exercise, and when using relaxation techniques.

## During the activity

Students could work individually or in pairs to measure their own heart rate in different conditions. You may decide to ask them to choose one of the three given investigations to complete as a whole group activity.

## Points for discussion

Discuss whether the sample students have used is sufficient for them to draw conclusions. Discuss the advantages and disadvantages of the different statistical methods and diagrams used. Include reasons why it is advisable to check that the results make sense.

## Extensions

More able students may want to decide on their own investigation – three other possible investigations are suggested at the end of the worksheet.