This activity gives you an opportunity to apply the statistical techniques you know in an investigation about sleep.

Information sheet

Are you

a *lark*
- eager to get up in the morning?
- ready to go?

or an *owl*
- like to stay up late?
- find it hard to get up in the morning?

Recent research has suggested that teenagers need more sleep than pre-teens. Do you think this is true?

Try this ... Carry out an investigation about sleep.

You might try to answer questions like those given below, or think of other questions of your own. Discuss your plans with your teacher and ask for advice about how much to do.

1. What time do teenagers usually go to bed during the week and at weekends? How does this compare with people in other age groups?
2. How many hours sleep do teenagers get?
3. How long does it normally take to get to sleep?
4. What effect do things like television, work, social activities, the rest of the family, and noise have on the time taken to get to sleep?
5. What time do teenagers get up during the week and at weekends? How does this compare with people in other age groups?
6. Do teenagers get enough sleep?
7. Are more teenagers owls than larks?
8. Is there any difference between the sleep needed by boys and girls?
9. When do people feel most mentally and physically alert? Does this depend on age?
10. What effect does caffeine have on sleepiness?

11 Which age groups need naps during the day?

12 Would students like school or college to start later or earlier?

Think about …

How will you obtain the data you need?

How big a sample do you need to get meaningful results?

Which statistical measures will be relevant in analysing your data?

Which statistical diagrams will display your results most clearly?

In the report you should ...

a decide and state clearly the aims of your investigation

b use a suitable sample and method to collect the data you need

c use tables, statistical diagrams and measures to summarise and display your results

d check your work

e draw conclusions and summarise your findings.

At the end of the activity

- How reliable were the data you found?
- Would any other method of displaying the data have been clearer for someone reading your report?
- Were the calculations you did the most appropriate ones?
- What conclusions did you come to?