



In this activity you will consider the difficulties in using real data to answer questions such as 'Which is the most dangerous sport?'

You will think about which types of statistical diagrams are most appropriate for displaying data.

You will practise drawing diagrams using Excel or by hand.

### Information sheet Which sports do you think are most dangerous?

The Department of Trade & Industry collected the data for the year 2000 in the table below. It gives the age and gender of patients requiring treatment at a sample of hospitals after suffering sports injuries.

Sport	Under 15 years		15–64 years		65 years or over		Total
	Male	Female	Male	Female	Male	Female	
Athletics	34	42	255	116	6	2	455
Gymnastics	30	170	37	72	1	0	310
Ball sport with racquet/bat/stick	293	160	1932	694	74	43	3196
Ball sport without bat etc	4897	697	15 308	1073	46	27	22 048
Combat sport	192	94	652	188	2	0	1128
Shooting/archery/darts	2	2	52	10	1	0	67
Wheel/motor/cycle/roller skating	828	201	1446	178	7	1	2661
Animal sport/riding	37	289	93	575	8	2	1004
Winter sport	137	165	297	239	3	0	841
Walking/climbing/caving	9	7	60	14	1	4	95
Water sport	235	140	477	167	27	13	1059
Air sport	1	0	39	11	0	2	53
Exercise/fitness/weight lifting	13	41	213	180	1	20	468
Other	53	20	277	47	1	0	398
<b>Total</b>	<b>6761</b>	<b>2028</b>	<b>21 138</b>	<b>3564</b>	<b>178</b>	<b>114</b>	<b>33 783</b>

Source: <http://www.hassandlass.org.uk/>

### Think about...

How could the data in the table help you to decide how dangerous a sport is?

What else would you need to know?

Which types of statistical diagrams do you know how to draw?

Which types of diagram would be appropriate for displaying some of this data?

Which statistical diagrams are not appropriate?

## Try these

Consider how you can use statistical diagrams to illustrate some of the sports injuries data. For example, you could aim to show:

- the numbers of injuries sustained by different age groups and genders for one category of sport
- the proportions of total injuries suffered by participants in different categories of sports.

The diagrams could be drawn by hand or using a computer.

Discuss your ideas with your tutor, then draw the diagrams.

In each case:

- remember to give your diagram a title
- scale and label axes correctly
- provide a key if it is needed
- write a paragraph explaining the most important things shown in your diagram.

## At the end of the activity

- Compare your work with that of other students.  
Do some types of statistical diagrams show things more clearly than others?
- What were your main problems in producing diagrams?