SATIS revisited
SUPPORTING HOW SCIENCE WORKS

Calculating risk

Activity sheet – Calculating risks

It is possible to work out the chances of accidental drowning if you know the size of the total population. The population of the UK is approximately 60 000 000.

In a typical year, about 400 people drown in the UK.

So the risk of being killed by drowning is:

$$\frac{\text{total number of people}}{\text{number of people killed}} = \frac{60\,000\,000}{400} = 150\,000$$

This means the chances of a person drowning in the UK are about 1 in 150 000.

1 Complete the table below to calculate the risks of death from different causes.

Cause of death	Number of people at risk	Number of deaths per year	Average risk of death per year
smoking	all UK smokers	114 000	1 in 140
drowning	60 000 000	425	1 in_____
home accident	60 000 000	4615	1 in_____
accidents at work	All UK workers	212	1 in 70 000
lightning strike	60 000 000	12	1 in_____
road accidents	60 000 000	3440	1 in_____

2 Draw a bar chart of the data.

3 a) Which is greater, the risk of being killed by an accident in the home or at work?
b) Which is greater, the risk of being killed by an accident in the home or on the road?

4 a) Which is greater, the chance of being killed by lightning or the chance of being killed by smoking?

b) How could the risk of being killed by lightning be reduced?

c) How could the number of people dying due to smoking be reduced?