



TALK ABOUT ALCOHOL

SCIENCE/
ENVIRONMENTAL
STUDIES
WORKSHEET 7

HOW MUCH ALCOHOL IS IN A DRINK?

The alcohol content of drinks can vary enormously. It depends on the type, size and strength of the drink.

Units are the official measurement of alcohol in the UK. A 'unit' is equivalent to 8 grams of pure alcohol. But the alcohol volume in products varies a lot. It's not as simple as one drink = one unit. Some strong beers contain nearly 3 units per pint rather than the 2 units found in ordinary strength lager. The measures may vary too (a 'double' vodka will have double the units), while a large glass of wine (175ml) can be over 2 units.

There is a formula which can be used to work out how much alcohol is in a drink. You need to know how strong the drink is (alcohol volume %) and how big the glass or bottle is (ml). You can work out how many grams of alcohol are in a drink using this calculation (*ABV = alcohol by volume).

$$\frac{8 \times \text{volume of glass/bottle (ml)} \times \text{ABV* (\%)}}{1000}$$

If you know the number of grams of alcohol, you can also work out the number of units in the drink. (There are 8g of pure alcohol in one UK unit.)



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ACTIVITY ONE

1. Fill in the empty columns in a table similar to the one shown. Use the formula to work out the number of grams of alcohol in each of the drinks listed. Then calculate the number of units.
2. Plot a bar chart of your results.
3. What conclusions can you draw?

Drink	Volume of glass/ bottle (ml)	ABV (%)	Grams of alcohol	Units (give to nearest 0.5 unit)
Beer, lager or cider	330ml bottle	5		
Beer, lager or cider	440ml can	5		
Beer, lager or cider	500ml can	9		
Cider	1 litre bottle (100ml)	9		
Wine	125ml glass	12		
Wine	175ml glass	12		
Wine	Half bottle (375ml)	12		
Spirits	25ml measure	40		
Spirits	35ml measure	40		
Sherry or port	50ml measure	20		

(You may also like to try the drinks 'unit calculator' at <http://www.drinkaware.co.uk>)