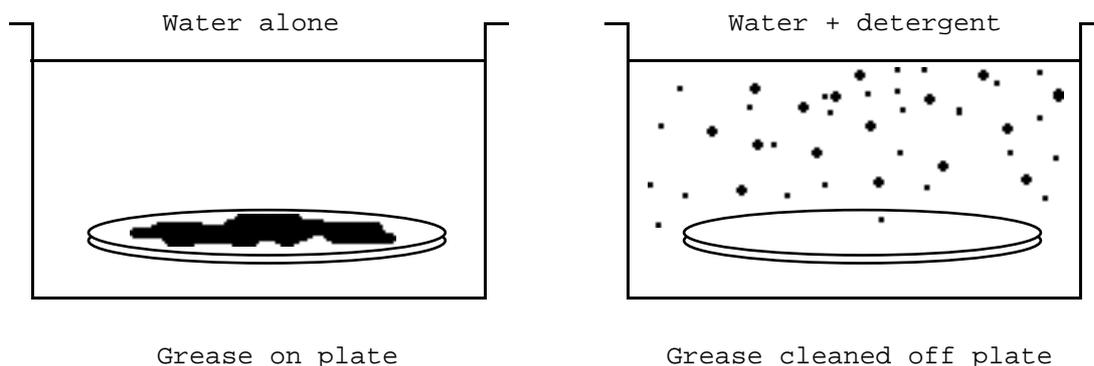


Keeping Clean

Our hair and skin get covered in natural body oils which attract dirt. Greasy marks on our clothes also contain dirt. Unfortunately this dirt/oil mixture is not soluble in water.

We cannot wash with water alone. We have to use cleaning chemicals like soap and detergent - shampoo, washing-up liquids and washing powders are all detergents. Soap and detergents are soluble in both water and grease. They break up the oil and grease into tiny droplets which can then mix with water.



Make some soap from Castor oil.

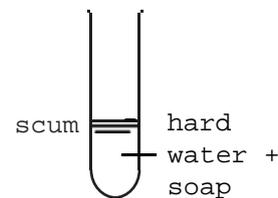
In some parts of the world the tap water contains impurities which stop soap from working properly - it forms a 'scummy' deposit on clothes instead of cleaning them. This kind of tap water is called 'Hard Water'. Detergents do not form these scums in hard water so detergents, not soap, must be used in hard water areas.

In Ardrossan we are lucky - our tap water is not 'hard'. We live in a 'Soft Water' area where soap works fine!

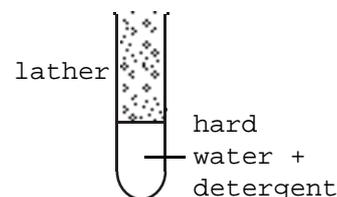


Take two test tubes of hard water.

Add a few drops of soap solution to the first test tube and shake it. A grey scum floats on top of the test tube.



Add a few drops of detergent to the second test tube and shake it. No scum forms - just a nice lather.



Dry Cleaning

Some stains (e.g. ink or Tippex) are too difficult for soap and detergent to remove. Soap or detergent can also ruin the shape of some types of clothing.

An alternative to soap and detergent in these cases is dry cleaning: the use of special solvents which can dissolve the stains.



Try removing ink stains from small pieces of cloth using alcohol solvent.