

Salts

Use the information in the boxes to help you answer the questions. You should answer in full sentences.

Some metal hydroxides can dissolve in water to make alkaline solutions. For example, sodium hydroxide dissolves in water to make sodium hydroxide solutions, which have pH values bigger than 7. Salts are made when sodium hydroxide solution, or other alkaline hydroxide solutions, reacts with acids. The word equation for this sort of reaction is:



1. What do metal hydroxides make when they dissolve in water?
2. Give an example of an alkaline hydroxide solution.
3. How are salts made?
4. Write down the word equation for neutralisation of an acid by an alkaline hydroxide solution.

Different acids make different salts. For example, hydrochloric acid makes chlorides, nitric acid makes nitrates, and sulphuric acid makes sulphates.

5. Match the **heads** to the correct **tails**, and **write out** the correct sentences:

heads 	 tails
chlorides come from ●	● sulphuric acid
nitrates come from ●	● hydrochloric acid
sulphates come from ●	● nitric acid

6. Match the **heads** to the correct **tails**, and write out the correct sentences:

The first part of a salt's name comes from the metal in the alkali, and the second part of a salt's name comes from the acid used. So, sodium hydroxide and hydrochloric acid make sodium chloride.

heads 	 tails
sodium hydroxide and hydrochloric acid ●	● make calcium nitrate
calcium hydroxide and nitric acid ●	● make potassium sulphate
potassium hydroxide and sulphuric acid ●	● make sodium chloride

Ammonia dissolves in water to make an alkaline solution. Ammonium chloride is a salt made by reacting ammonia solution with hydrochloric acid.

7. What salt can be made by reacting ammonia solution with nitric acid?
8. Copy, and complete, this table to show the names of salts made by reacting different acids and alkalis (or bases) together. Some boxes have been done to help you get started.

	hydrochloric acid	nitric acid	sulphuric acid
sodium hydroxide	sodium chloride		
potassium hydroxide			
ammonia	ammonium chloride		
calcium hydroxide			
copper oxide			copper sulphate