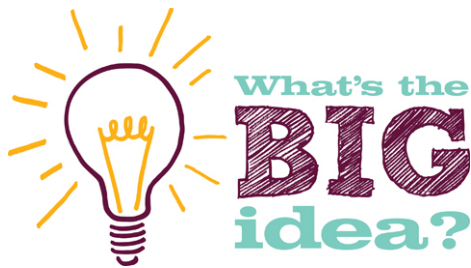


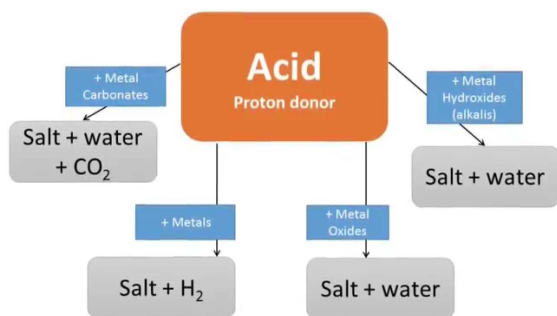
You need to know the content of this sheet. 100%

100% Sheet Acids & Salts



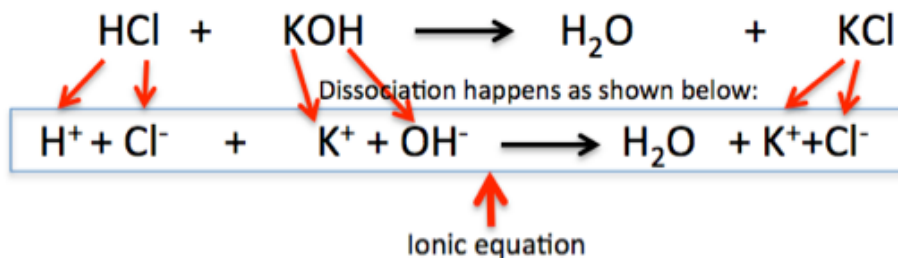
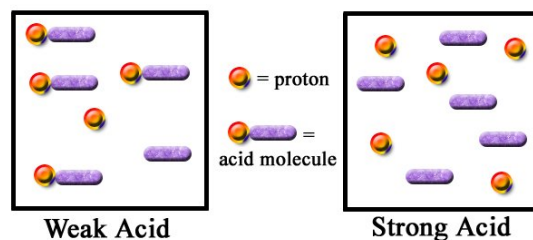
Chemical reactions

involve rearrangement of atoms in substances to form new substances.



HIGHER

Acid strength is all about the dissociation of the H^+ ion from the rest of the acid. The more it dissociates, the stronger the acid



The ions separate when dissolved and can swap places to make new compounds. Water is ALWAYS made because ALL acids have H^+ ions and all Alkalis have OH^- ions which combine to make H_2O

Ionization That Occurs in a Neutralization Reaction

You must be able to describe how to make an insoluble salt and a soluble salt and explain why each step of the process is necessary

STEP 1
two solutions of soluble substance are mixed together in a beaker

white precipitate of the insoluble salt is formed

STEP 2
the precipitate is filtered off

filter funnel, filter paper, precipitate, filtrate

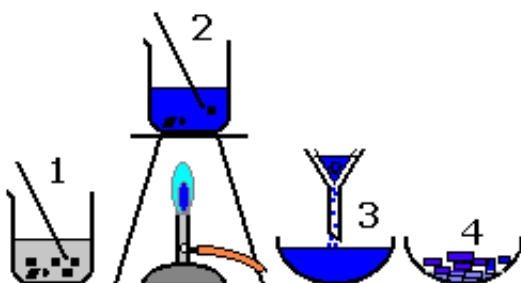
STEP 3
the filtered precipitate is washed several times with deionised (pure) water

the purified insoluble salt

STEP 4
the insoluble salt is carefully scraped off the filter paper into a dish and dried in an oven

THE PREPARATION OF AN INSOLUBLE SALT
(c) doc brown
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Acid	Salt
Hydrochloric	...Chloride
Sulphuric	...Sulphide
Nitric	...Nitrate

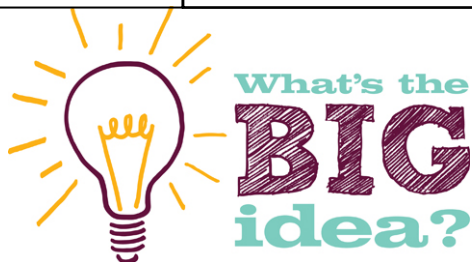


Making a SOLUBLE salt

- 1) Add excess metal carbonate to the acid (to make sure all the acid is used up)
- 2) Heat the mixture to improve solubility and add more metal carbonate until no more dissolves (this is a saturated solution)
- 3) Filter the mixture to remove unreacted excess metal carbonate
- 4) Evaporate the mixture to remove water and form salt crystals
- 5) Allow to dry in a windowsill or drying oven

You need to
apply your
knowledge

100% Sheet Acids & Salts



Chemical reactions

involve rearrangement of atoms in
substances to form new substances.

Outline a safe plan the student could use
to make pure, dry, crystals of the soluble
salt copper sulfate from the insoluble
metal oxide and dilute acid.

Ethanoic acid is a weak acid.

Universal Indicator can be used to show that
hydrochloric acid is a stronger acid than ethanoic
acid of the same concentration.

Explain how

(a) Complete the name of an alkali that could
react with phosphoric acid to make sodium
hydrogen phosphate.

_____ hydroxide

(1)

(b) What is the name given to a reaction in which
an acid reacts with an alkali to make a salt?

(1)

(c) How would the pH change when alkali is
added to the phosphoric acid solution?

(1)

(d) What ions are present when any acid is
dissolved in water?

(1)

(e) What ions are present when any alkali is
dissolved in water?

(1)

(f) Write a chemical equation for the reaction
which takes place between the ions you have
named in (e) and (f).

(1)

Write the simplest ionic equation which
represents a neutralisation reaction.