

YEAR 10 CHEMISTRY REVISION CHECKLIST. Summer Examination.

As you begin your revision, complete this honestly to help you see where your priorities should lie for your revision. The target is eventually to get all your ticks in the left hand column. Remember **this is not a definitive list** – use all your notes for revision.

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ATOMIC STRUCTURE		
Describe the structure of an atom as a central nucleus containing protons and neutrons surrounded by orbiting electrons in shells		
State the relative charges and relative masses of protons, neutrons and electrons		
Define atomic number as the number of protons in the nucleus of an atom		
Define mass number as the total number of protons and neutrons in an atom		
Know that an ion is an atom that has lost or gained electrons		
write and draw the electronic structure of atoms and ion		
deduce the number of protons, neutrons and electron present in an atom or ion and to determine the charge on an ion or determine the number of subatomic particles given the charge		
Understand that the atom as a whole has no electrical charge because the number of protons in equal to the number of electrons		
Define isotopes as atoms of an element with the same atomic number but a different mass number, indicating a different number of neutrons		
BONDING		
Define the terms cation and anion		
Use dot and cross diagrams to show how ions are formed and how ionic bonding takes place in simple ionic compounds		
Understand that ionic bonding involves attraction between oppositely charged ions, that ionic bonds are strong and that substantial energy is required to break ionic bonds		
Recognise that ionic bonding is typical of metal compounds		
Describe the properties of ionic compounds		
Describe a single covalent bond as a shared pair of electrons		
Show using dot and cross diagrams how covalent bonding occurs in H_2 , Cl_2 , HCl , H_2O , CH_4		

Recognise covalent bonding as typical of non-metallic elements and compounds		
Understand that diatomic means that there are two atoms covalently bonded in the molecule		
Understand that covalent bonds are strong and a lot of energy is required to break covalent bonds		
Describe the properties of covalent substances		
Understand that metallic bonding results from the attraction between the positive ions in a regular lattice and the delocalised electrons		
Describe the properties of metals		
FORMULA AND EQUATIONS		
Name simple chemical substances from their formula - eg K_2SO_4 is potassium sulfate		
Identify elements which make up a chemical compound		
Be able to calculate the total number of atoms in a particle of a compound		
write formulas of elements and simple compounds using chemical symbols and numbers		
construct word equations for reactions		
Understand the terms reactants and products		
ACID AND ALKALIS		
Name some common and laboratory acids and alkalis		
Understand hazards associated with using acids and alkalis		
Know that all acids contain hydrogen ions and all alkalis contain hydroxide ions		
Know general properties of acids and alkalis		
Know how indicators work and be able to interpret data from experiments using litmus and universal indicator to identify substances as acids, alkalis (weak and strong) or neutral		
Understand that when acids react, salts are formed.		
Be able to give observations for the reactions of acids with metals, bases, alkalis and carbonates		
Be able to name the salts formed in acid reactions (using the name of the acid and substance it is reacting with)		
Know that when acids and alkalis react together, this is known as neutralisation		

Know some everyday uses of neutralisation		
Know the test for hydrogen gas is that a lit splint gives a squeaky pop		
Know the test for carbon dioxide gas is that it will turn limewater from colourless to milky		
CHEMICAL REACTIONS		
Recall the signs of a chemical change during a reaction		
Understand the terms exothermic and endothermic and explain what happens to the temperature during exothermic and endothermic reactions		