		Subject: Chemistry		у	Topic: Matter				Yea	r Group: 7			enjoy		
Elements, Atoms, Compounds & Mixtures				Changes of State							Separation Techniques				
I	Elements	A substance that only contains one type of atom. Each element has a unique chemical system. Elements are arranged in the Periodic Table.		changes of state state of matter how do the particles move? arrangement of particles can it be compressed?		wa?	solid melting boilin solid liquid			evaporation gas		Filtration residue (sand)			Chromatography paper solvent funnel front P position of
2	Atoms	The smallest part of which an element can be broken down into. Elements contain one type of atom only.				8		slide over each other		from each other			/		lask x
3	Compounds	Formed when two or more different elements chemically bond together. They have different chemical properties to the elements in the compound.					No, because there is no space No, because the particles ar			Yes, because there is space		Distillation	Distillation Evaporat thermometer water out		
4	Chemical Formulae	Tells us how many atoms of each element are in the compound in relation to each other.		can it flow? changes of state			between the particles touching their neighbours No, because the particles can't move around freezing or		ı't	between the particles Yes, because the particles can move around		salty water water in burger			beaker pure water
5	Mixtures	More than one type of element or compound that are not chemically bonded together and are easy to separate.		ineezing Condensation							_/_		isen oumer /I		
	The Periodic Table						Pure Substances				Solubility				Key Vocabulary
I	Groups	Elements in the same group have the same number of electrons in their outer shell, therefore, they have similar reactivities and chemical properties.		I	Definition		A substance that consists of one element or compound only. Melting and boiling point tests can be used to determine how pure a substance is.		1	Solution	A type of mixtur up of two parts.	e which is made	I	Groups	Columns in the periodic table.
				2	Testing Purity					Solvent	The liquid part w	which the solute	2	Periods	Rows in the periodic table.
2	Group 1: The Alkali Metals	Softer and have lower points than other meta Boiling point decreases	melting and boiling als. s going down the ing down the group. to form alkaline	3	Pure Substance Have Sharp Melting/Boiling Points	es	\$ 100 90 80		_						
		group. Reactivity increases go They react with water				(1) 70 - (2) antpued		/	3	Solute	I he part which has dissolved in solution,		3	3 Polymers Long chains of groups of atoms which are repeated many times.	
		solutions: metal + water \rightarrow metal hydroxide + hydrogen					10 10		Solutions						
3	Group 7: The	Low melting and boiling points.					0 1 2 3 4 5 time (min) Pure substance		I	Solubility		The measure of how much of a substance will dissolve.			
	naiogens	Boiling point increases Reactivity decreases d	ity. down the group. own the group.	4	Impure substan Melt/Boil Over	nces r a	100 90- 80	_	2	Soluble		Substances which do dissolve.		dissolve.	
		A more reactive halogen displaces a less reactive one than its compound.		Range of Temperatures		;	(C).) antrea 50		3	Insoluble Sincreasing solubility		Substances which do not dissolve.			
4	Group 0: The Noble Gases	Low melting and boiling points. Boiling point decreases down the group. All group 0 elements are unreactive. When electricity is passed through the gas, they emit a brightly coloured light.					ti 30 20 10		4			Can be increased	Can be increased by a) increasing the temperature b) stirring the solution.		
							0 1 2 3 4 5 time (min) Impure substance		5	Saturated Solution		One where the maximum amount of solute has dissolved in it, no more solute will be able to dissolve.			