Sets (s): Y10 Double LP4 2019-2020

YEAR 10

SUBJECT Chemistry

Knowledge Focus: Equations, rates, group 1, group 7, group 0, solubility.

Ysgol Uwchradd Prestatyn High School

This half term : Skills, Knowledge and Understanding to be developed:

- Rate of reaction
- Groups in the periodic table
- Solubility
- Revise water and planet earth

Key Terms to be learned this half term:

Rates, successful collisions, catalyst, solubility, saturated solution. Group, alkali metals, halogens, noble gases.

HT displacement,activation energy.

Week 1 and 2 Learning Objectives etc: **MOCK exams** • Know what is meant by rate. Understand how to measure rate using– gas collection, loss of mass and precipitation (including using data-logging apparatus Specified practical - Acid and thiosulfate (temperature). Carry out practicals from rate of reaction booklet and be able to complete the match up exercise. Explain why the rate of reaction changes.	SA Mock exams	**Objective assessments:** Mock exams	**Homework:** **Mock revision**
Week 3 and 4 Learning Objectives etc: **Measuring rates** **Practical** Specified practical booklet - Gas collection (concentration) Explain why the rate of reaction changes.Understand that reactant particles must collide to react and that the more collisions in a given time, the faster the reaction/higher the rate. Explain the effect of changing concentration, temperature and surface area/particle size on the collision rate. **Higher tier know that a minimum energy is needed for 'successful collisions' where products are formed.** Catalysts increase the rate of a reaction and are chemically unchanged and that they work by lowering the energy required for a collision to be successfulknow that different catalysts are needed for different reactions.		**Objective assessment** Comprehension rates of reaction summary.	**Homework:** Reaction rate and concentration. Reaction rate and temperature. How fast?
Week 5 and 6 Group 1, 7,0 chemistry Similarities and differences of group 1,7 physical and chemical properties. Explain that electrons are lost or gained and ions form. **HT explain the trend in reactivity in terms of how easily electrons are lost or gained.** Describe reactions with oxygen/ air, halogens and water. Descibe reactions of the halogens with alkali metals and with iron. Be able to write equationsd for the reactions. **HT Displacement reactions to show differences in reactivity of chlorine, bromine and iodine.** **Know that group 0 are unreactive.** Give the uses of chlorine iodine helium neon and argon.		**Objective assessments:** Be able to outline the test for hydrogen gas	**Homework:** HW reactions of group 1,7,0 and electronic structure Revision App
Week 7 (and week 1 LP5) Learning Objectives etc: **Solubility** Methods of determining solubility and preparing and interpreting solubility curves Interpret solubility curves on graphs. Revision of water and planet earth topics.		**Objective assessments:** Complete practical and questions on solubility curves.	**Homework:** Solubility questions