

Sets (s): Y10 TRIPLE LP4 2019-2020

YEAR 10

SUBJECT Chemistry

Knowledge Focus: Complete any work needed on calculations, rates and limestone, solubility, water, planet earth



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

- Rates if not complete
- Limestone.
- Solubility
- Revise planet earth and water

**Key Terms to be learned this half term:**

limestone, calcium carbonate, quicklime, calcium oxide, slaked lime, calcium hydroxide, limewater, calcium hydroxide solution, thermal decomposition, thermal stability, solubility, saturated solution.

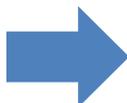
**Week 1 and 2 Learning Objectives etc:**

**Mock exams**

**Complete work on rates and carbonates if not done last half term**

**Metal carbonates lime cycle mock exams.**

- Know the trend in stabilities of metal carbonates and their thermal decomposition to produce oxides and carbon dioxide
- Describe an experiment to demonstrate that the gas given off during the thermal decomposition of carbonates is carbon dioxide. Recall that green copper(II) carbonate turns black on gentle heating and that calcium carbonate (limestone/marble) glows when heated strongly for several minutes. Understand that the more reactive the metal, the more stable the carbonate and that sodium carbonate (and so the carbonates of the more reactive Group 1 metals below it in the Periodic Table) does not decompose at the highest temperature of a Bunsen burner flame.
- Know calcium carbonate is limestone, calcium oxide is quicklime and calcium hydroxide is slaked lime.
- The lime cycle. Describe observations during the reactions involving limestone and products made from it, including the exothermic reaction of quicklime with water and the reaction of limewater with carbon dioxide.



Mock exams

**Objective**

**assessments:**

**Mock exams**

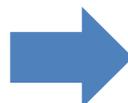
***Specified practical calcium carbonate, copper (II) carbonate and sodium carbonate.***

**Homework:**

Revise for mock exams

**Week 3 and 4 Learning Objectives etc: Uses of limestone**

- Know the uses of limestone in the production of iron and steel, in road-building, to neutralise soil acidity and to make cement
- Know that limestone is used in road building, quicklime and slaked lime are used to neutralise acidity in soil and/or water and that limestone is used in the blast furnace (iron and steel production) and in making cement but no



**Objective assessment Limestone enquiry**

**Homework:**

Lime cycle write up  
Limestone enquiry write up.

**Solubility questions**

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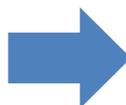
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details are needed.

- Understand and evaluate the social, economic and environmental benefits and drawbacks of limestone quarrying
- Be able to give your own opinion and argue a case for or against quarrying limestone in a particular location, based on how benefits/drawbacks affect themselves and other individuals/groups.
- If not done before - Be able to use simple methods to determine solubility and produce solubility curves
- Be able to interpret solubility curves and use data to find solubility.

**Week 5 and 6 Revise water planet earth**

- Revise topics studied

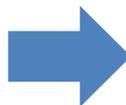


**Objective**

**Homework:  
Revision planet earth  
and water.**

**Week 7 (and week 1 LP3) Learning Objectives etc:**

- Revision of planet earth and water from y10



**Objective  
assessments:  
Question  
sheets to  
complete**

**Homework:  
Revision of planet  
earth and water.**