



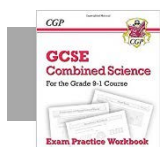
Step 1 What do I need to know?

- Describe how Ionic, Covalent and Metallic Bonds form
- Explain how to work out which type of bonding a compound will undergo
- Describe and explain the properties of molecules made from each type of bonding, using the correct scientific terminology

Step 2 How do I find out about it?

| Revision Guide Page | | Web Links |
|---------------------|-------------------|--|
| | | <p>Chemical Bonding</p> <p>Each of the sections relate to a different type of chemical bonding</p> |
| Higher | Pg.112-116 & 119 | <p>Chemical Bonding Videos</p> <p>Watch the relevant videos in the Playlist</p> |
| Foundation | Pg. 113-116 & 120 | |

Step 3 What can I do to help me learn it?



Complete the relevant questions in your CGP Science Workbook

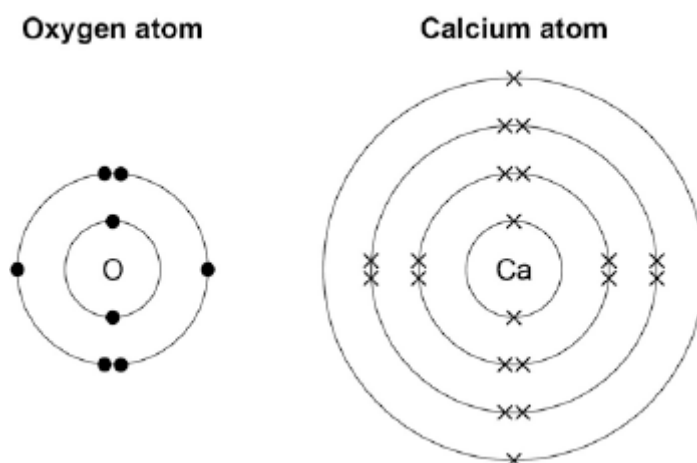
Higher

Pages : 108-115

Foundation

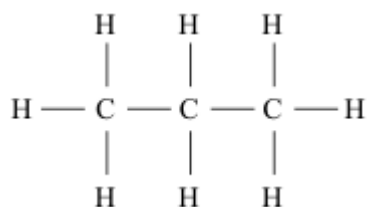
Pages : 97-101

TASK 1- The figure below shows the electronic structure of an oxygen atom and a calcium atom.

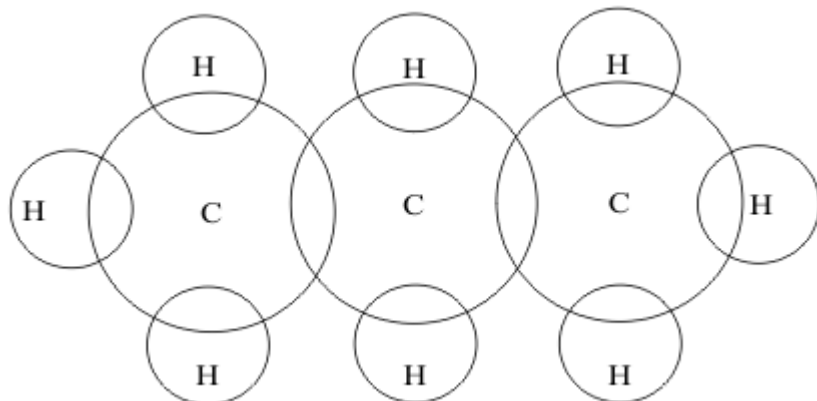


Describe how the calcium atom and the oxygen atom forms calcium oxide. You should give the charge on each ion formed.

TASK 2- The structure of propane is shown below.

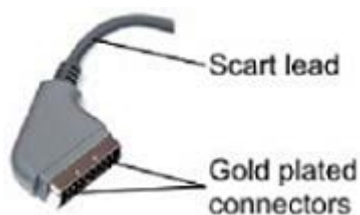


(a) Complete the diagram to show how the outer energy level (shell) electrons of hydrogen and carbon are arranged in a molecule of propane.



(b) Explain, in terms of molecules, why propane has a low boiling point.

TASK 3- High quality connectors are used to connect a satellite box to a television. The connectors should conduct electricity very well and should not corrode.



The connectors on this scart lead are coated with gold. Gold is a typical metal.

(i) Describe the structure and bonding of gold.

(3)

(ii) Why is gold a good conductor of electricity?

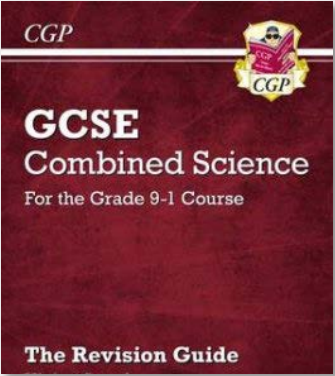


(1)



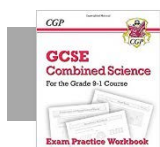
Step 1 What do I need to know?

- Describe how Ionic, Covalent and Metallic Bonds form
- Describe and explain the properties of molecules made from each type of bonding, using the correct scientific terminology
- COMPARE the different types of bonding in relation to their structures and properties

Step 2 How do I find out about it?

| Revision Guide Page | | Web Links |
|--|-------------------|--|
|  | |  Chemical Bonding Each of the sections relate to a different type of chemical bonding |
| Higher | Pg.112-116 & 119 |  Chemical Bonding Videos Watch the relevant videos in the Playlist |
| Foundation | Pg. 113-116 & 120 | |

Step 3 What can I do to help me learn it?



Complete the relevant questions in your CGP Science Workbook

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Pages : 108-115

Foundation

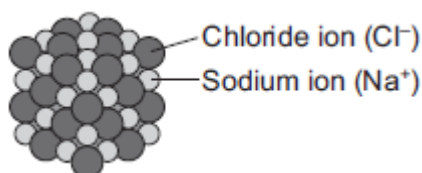
Pages : 97-101

Explain why chlorine (Cl_2) is a gas at room temperature, but sodium chloride (NaCl) is a solid at room temperature.

Chlorine



Sodium chloride



Include a description of the bonding and structure of chlorine and sodium chloride in your answer.

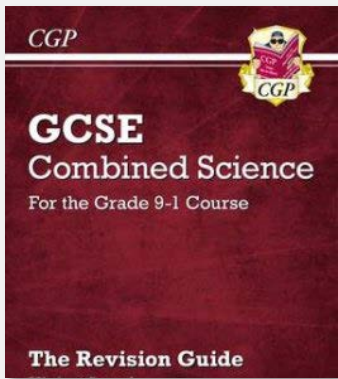


(6 Marks)



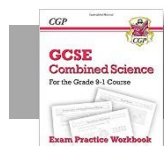
Step 1 What do I need to know?

- Describe the uses, properties and structure of Diamond
- Describe the uses, properties and structure of Graphite
- Describe the uses, properties and structure of Silicon Dioxide
- Describe the uses, properties and structure of Graphene and Fullerenes

Step 2 How do I find out about it?

| Revision Guide Page | | Web Links |
|---|-------------|--|
|  | |  Allotropes of Carbon  Graphite Graphene Diamond and Silica |
| Higher | Pg. 117-118 | |
| Foundation | Pg. 118-119 | |

Step 3 What can I do to help me learn it?



Complete the relevant questions in your
CGP Science Workbook

Higher

Pages 117-118

Foundation

Pages 103-104

TASK 1- Create an A3 poster about the Structures of carbon include;

1. A diagram of the structure each form carbon
2. List the properties of each form of carbon
3. Link the properties each form of carbon to the structure
4. Some of the uses of each form a carbon

TASK 2- Create a set of flash cards for the properties of each form of carbon.

TASK 3- Create a quiz to test your knowledge of the forms of carbon.