Answer all the questions below then check your answers.

1. Where on the periodic table are you likely to find the non-metals?

2. Complete the table below to list the common properties of non-metals

Physical property of non-metal	explanation
	Will not allow electricity to flow through it
Thermal insulator	
	Breaks easily
Low density	
	Turns from a solid to a liquid easily
dull	

3. Which non-metal elements form giant macromolecular structures? In which group of the periodic table will you find these elements?

4. If an element has a molecular structure , what does this mean?

b. If an element has a molecular structure what can you say about its melting and boiling points?

5. Which non-metal elements have small diatomic structures?

6. Which dangerous non-metal element has a small molecular tetrahedral structure made up of 4 atoms

7. Which group 5 non-metal has a diatomic structure which contains a triple covalent bonds between the atoms?

8. Which non-metal element occurs naturally as a yellow solid and its main allotrope consists of a ring structure made up of 8 atoms?

9. Which diatomic molecule has a double covalent bond holding the atoms together?

10. Which halogen is a volatile liquid at room temperature?

11 Which halogens are solid at room temperature?

Structure and bonding in the non-metals in groups 5,6 and 7

Answers

1. Where on the periodic table are you likely to find the non-metals?

   Right-hand side of the periodic table in groups 4,5,6,7,0

2. Complete the table below to list the common properties of non-metals

Physical property of non-metal	explanation
Electrical insulator	Will not allow electricity to flow through it
Thermal insulator	Will not allow heat to flow through it
brittle	Breaks easily
Low density	Low mass compared to its volume
Low melting point	Turns from a solid to a liquid easily
dull	Not shiny, will not reflect light well

3. Which non-metal elements form giant macromolecular structures? In which group of the periodic table will you find these elements? Carbon and silicon in group 4

4. If an element has a molecular structure , what does this mean?

   Molecules are small groups of atoms. The element will consist of a small molecule.

b. If an element has a molecular structure what can you say about its melting and boiling points? They will be low

5. Which non-metal elements have small diatomic structures?

   Hydrogen, nitrogen, oxygen, fluorine, chlorine, bromine and iodine

6. Which dangerous non-metal element has a small molecular tetrahedral structure made up of 4 atoms. White phosphorus

7. Which group 5 non-metal has a diatomic structure which contains a triple covalent bonds between the atoms? nitrogen

8. Which non-metal element occurs naturally as a yellow solid and its main allotrope consists of a ring structure made up of 8 atoms? sulfur

9. Which diatomic molecule has a double covalent bond holding the atoms together?

   oxygen

10. Which halogen is a volatile liquid at room temperature? bromine

11 Which halogens are solid at room temperature? Iodine and astatine