SmartScreen.co.uk
Dedicated online support

Now live on SmartScreen!

2000

Level 1 and Level 2 Certificate/Diploma in Access to Building Services Engineering

We are supporting ALL units in this qualification!!

SmartScreen.co.uk
Dedicated online support

Units currently live on SmartScreen

Level 1
Unit 101 Safe working practices in building services engineering
Unit 102 Understand fundamental environmental protection measures within bse
Unit 103 Understand fundamental scientific principles within building services engineering
Unit 104 Introduction to building services engineering
Unit 105 Understand and demonstrate fundamental refrigeration and air conditioning (RAC) operations
Unit 106 Understand and demonstrate fundamental electrical installation operations
Unit 107 Understand and demonstrate fundamental heating and ventilating operations
Unit 108 Understand and demonstrate fundamental plumbing operations

SmartScreen.co.uk
Dedicated online support

Units currently live on SmartScreen

Level 2

Unit 105 Understand and demonstrate fundamental refrigeration and air conditioning (RAC) operations

Unit 106 Understand and demonstrate fundamental electrical installation operations

Unit 107 Understand and demonstrate fundamental heating and ventilating operations

Unit 108 Understand and demonstrate fundamental plumbing operations

Unit 201 Understand and demonstrate safe working practices in building services engineering

Unit 202 How to apply environmental protection measures within building services engineering

Unit 203 Understand the roles, responsibilities and procedures within building services engineering

Unit 204 Understand how to apply scientific principles within mechanical services engineering

Support for the units includes

- Sample schemes of work
- Sample lesson plans
- Handouts
- Worksheets
- Interactive activities
- PowerPoint presentations

Example: Handout

Unit 103: Understand fundamental scientific principles within building services engineering

Handout 5: Electrical science - atoms and molecules

All substances known to man are composed of **molecules**.
Molecules are made up of **atoms**.
Molecules are always in a state of rapid motion but when they are densely packed together the movement is restricted and the substance formed by these molecules is **solid**.

When molecules are less tightly bound there is more free movement and the substance is known as a **liquid**.

When the molecule movement is almost unrestricted the substance can expand and contract in any direction and is known as a **gas**.

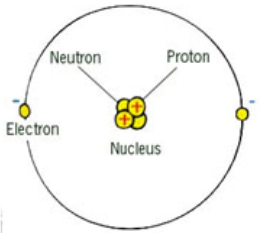
Atoms are not solid. They consist of very small particles.

At the centre of each atom is the **nucleus** which is made up from particles known as **protons**.

Protons are said to have a positive charge.

Atoms also contain particles known as **electrons**.
Electrons circle in orbit around the nucleus and are said to posses a negative charge.

All atoms possess an equal number of protons and electrons. This means that the positive and negative charges cancel each other out which leaves the atom electrically neutral.
The simplest atom is the hydrogen atom. This atom has one proton and one electron.



Example: Worksheet

Unit 106: Understand and demonstrate fundamental electrical installation operations.

Worksheet 8: State the basic maintenance requirements for electrical hand tools

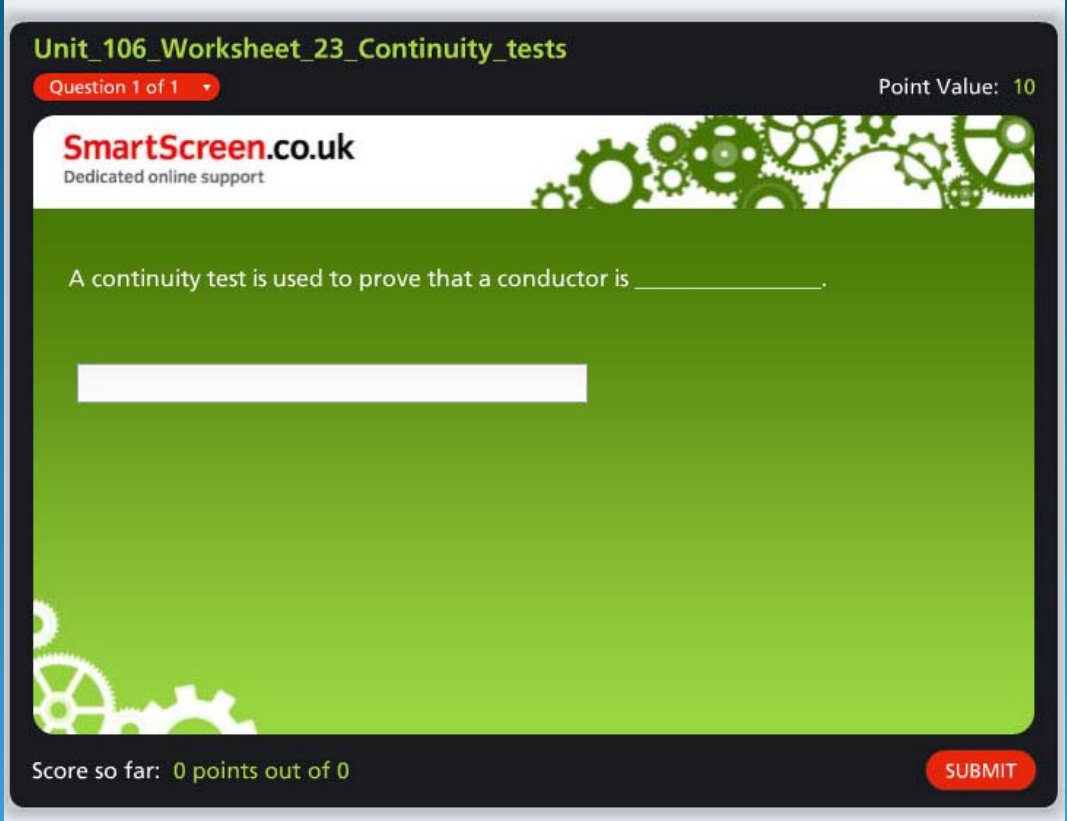
Hand tools are those which are manually operated and do not use any electrical power either from the mains or a battery.

Section A

Look at the list of tools below. Identify for each, one possible area of wear and a possible risk associated with it.

Tool	Wear	Risk
Cross head screwdriver (Pozi-drive)		
Cold chisel		
Flat head screwdriver		
300mm hacksaw		
Stocks and dies		
Hammer with wooden handle		
Bolster chisel		
Universal pliers		
Spanner		
Spirit level		
Knife		
Square		

Example: Activity



Additional support

- Tutor forum
- Recommended books and websites
- Glossary and FAQs

SmartScreen.co.uk
Dedicated online support

For more information please email:

smartscreen@cityandguilds.com