



Sadiq Public School

Do the right, fear no man

Subject: Physics

Class: C-3

Date: 16/11/24

Lesson: Practical Electricity

A. Inquiry:

- ⦿ State the hazards of using electricity.
- ⦿ State the meaning of the terms live, neutral and earth.

B. Information:

Insulating materials become worn with time and use. Bending and twisting of electrical cables may cause the electrical insulation to crack and break, thus exposing the conducting wires inside.

Exposed live wire can cause severe electric shock to the user when touched, leading to serious injuries or even death.

Overheating of cables:

Overheating of cables occurs when an unusually large current flows through the conducting wires. A thin wire had a higher resistance compared to a thick wire. Therefore it will produce more thermal heat that will damage the insulation and may cause a fire.



Figure: Connecting too many devices may results in excessive current flowing through the cables, thus causing overheating.

Damp conditions:

For example, if a hair dryer with the main power switched on happened to fall into a bathtub while a person is bathing, the person may get electrocuted.

The water provides a conducting path for a large current to flow.

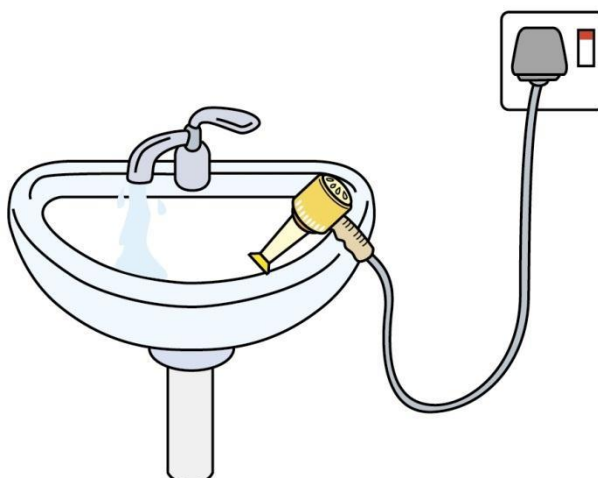


Figure: leaving a hair dryer on a wet sink can be very dangerous

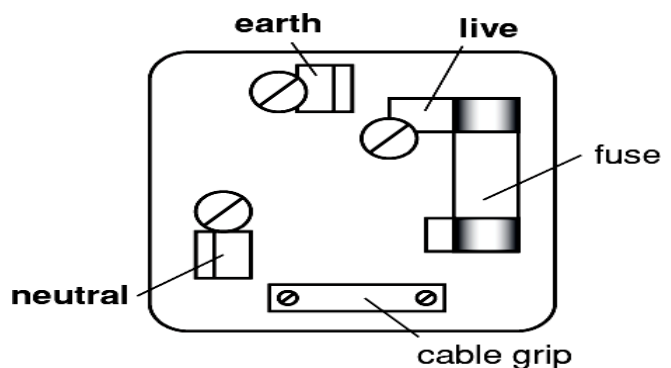
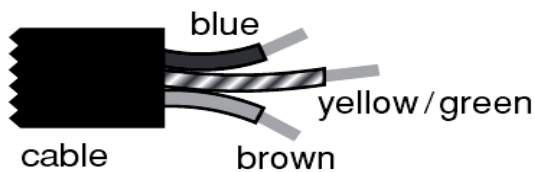
Wiring mains plugs:

Colour codes for the wires from the

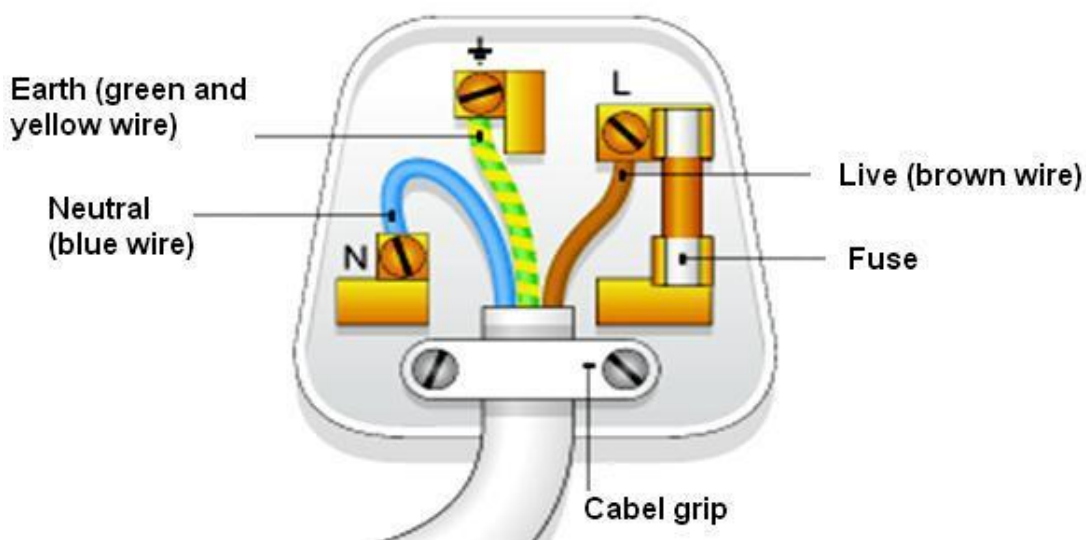
mains: *LIVE (BROWN/RED)*

NEUTRAL (BLUE)

EARTH (YELLOW/GREEN)



The correct wiring of mains plug shown below:-



Connect the brown wire into live terminal, blue wire into neutral terminal and yellow/green wire into earth terminal and tighten the terminal screws. After that put the cable grip and put the cover back on.

Live wire: A wire connected to a source of voltage,

Neutral wire: A wire which completes the circuit, although current passes through the wire it remains zero potential.

Earth wire: It is a safety wire which connects the metal body of the electrical appliance to the earth.

C. Synthesizing/ absorbing the information:

Write answer of following questions on your notebook.

State the danger caused by the following conditions:

- (a) Damaged insulation
- (b) Overheating of cable
- (c) Using electrical devices in damp conditions.

D. Practicing: Read the textbook about Practical electricity and write answer of following questions on note book:

Q # 01: What is the purpose of the earth wire? Where must it be connected?

Q # 02: Define live, neutral, earth wire?

Feedback: Dear students please ask questions regarding this topic from your concerned teacher via email as mentioned below and you will be replied ASAP.

Class	Teachers' Names	Teachers' Abbreviations	Teachers' Email Addresses	Instructions
C3GA	Malik Irshad	MMI	Irshad_MMI_sadiq@protonmail.com	C3GA students will send their home assignments to their subject teacher (MMI) for checking and getting
C3GB	Mehboob Alam	MA	Mahboobalam_MA_sadiq@protonmail.com	C3GB students will send their home assignments to their subject teacher (MA) for checking and getting feedback.
C3B	M. Waqas Akhtar	WA	Waqas_wa_Sadiq@protonmail.com	C3B students will send their home assignments to their subject teacher (WA) for checking and getting feedback.
C3C	M. Waqas Akhtar	WA	Waqas_wa_Sadiq@protonmail.com	C3C students will send their home assignments to their subject teacher (WA) for checking and getting feedback.
C3D	M.Asif Ch.	MAC	MAsifCh_MAC_Sadiq@protonmail.com	C3D students will send their home assignments to their subject teacher (MAC) for checking and getting feedback.