

# Technical English

## Worksheet N°10

**Course:** 5<sup>th</sup> Year

**Student:**

**Teacher:** Andrea Villasboas

**Contents:** Conductors, Semiconductors and Insulators.

- 1) Read the text. Place the words from the box and write the translation of the text. (Leer el texto. Ubicar correctamente las palabras del recuadro y escribir la traducción del texto)

AIR-CONDUCTORS-RESISTANCE-INSULATOR-REDUCE-FLOW-ELECTRONS-FEW-

Electricity consists of a (1) \_\_\_\_\_ of free electrons along a conductor. To produce this **current flow**, a generator is placed at the end of the conductor in order to move the (2) \_\_\_\_\_.

### **Conductors**

Electricity needs a material which allows a current to **pass through** easily, which offers little (3) \_\_\_\_\_ to the flow and is full of free electrons. This material is called a conductor and can be in the form of a bar, tube or sheet. The most commonly used (4) \_\_\_\_\_ are wires, available in many sizes and **thicknesses**. They are **coated** with insulating materials such as plastic.

### **Semiconductors**

Semiconductors such as silicon and germanium are used in transistors and their conductivity is **halfway** in between a conductor and an (5) \_\_\_\_\_. Small quantities of other substances, called **impurities**, are introduced in the material to (6) \_\_\_\_\_ the conductivity.

### **Insulators**

A material which contains very (7) \_\_\_\_\_ electrons is called an **insulator**. Glass, rubber, dry wood and (8) \_\_\_\_\_ resist the flow of electric charge, and as such they are good insulating materials.

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- 2) Read the text again and decide if the following statements are TRUE or FALSE, then correct the false ones. (Leer el texto nuevamente y decider si las oraciones son verdaderas o falsas, luego corregir las falsas)
- a) A flow of electrons moving inside a conductor creates an electric current.....
  - b) A generator is used to move the charges.....
  - c) Electrons can easily pass through any material.....
  - d) Any material is a good conductor.....
  - e) Conductors are coated with insulators.....
  - f) The presence of free electrons affects the conductivity of materials.....
  - g) Impurities are introduced to increase conductivity.....
  - h) Insulating materials resist the flow of electrons.....