

UNIT 1. ELECTRIC CURRENT.

TYPES OF ELECTRIC CIRCUITS

Exercise 1. Read, practice and learn the following words and word

Electricity – електрика
electric current – електричний струм

matter – речовина

charge – заряд

conduct – проводити струм

conductor – провідник

electron – електрон

ion – іон

neutron – нейтрон

resistance – опір

battery – батарея (аккумуляторна), акумулятор

electric appliance – електричний побутовий прилад

flashlight – ліхтарик

particle – елементарна частка

proton – протон

contain – вмішувати

stable – постійний

carbon – вуглець

diamond – алмаз

amber – янтар

flow – потік; текти

attract – притягувати

source – джерело

kick off – відштовхувати

attraction – тяжіння

lightly – щільно

measure – вимірювати

rubber – гума

potential difference – різниця потенціалів

power supply – джерело живлення

insulator – ізолятор (непровідник)

direct current – постійний струм

alternating current – змінний струм

Exercise 2. Read and translate the following text.

Text 1. Electric current

Electricity figures everywhere in our lives. Electricity lights up our

homes, cooks our food, powers our computers, television sets, and other

electronic devices. Electricity from batteries keeps our cars running and

makes our flashlights shine in the dark.

Here's something you can do to see the importance of electricity.

Take a walk through your school, house or apartment and write down all

the different appliances, devices and machines that use electricity. You'll

be amazed at how many things we use each and every day that depend

on electricity.

But what is electricity? Where does it come from? How does it

work? Before we understand that, we need to know a little bit about at-

oms and their structure.

All matter is made up of atoms, and atoms are made up of smaller

particles. The three main particles making up an atom are the proton, the

neutron and the electron.

Electrons contain a negative charge, protons a positive charge.

Neutrons are neutral – they have neither a positive nor a negative charge.

There are many different kinds of atoms, one for each type of ele-

ment. An atom is a single part that makes up an element. There are 118

different known elements that make up every thing! Some elements are

essential to life.

Each atom has a specific number of electrons, protons and neu-

trons. But no matter how many particles an atom has, the number of

electrons usually needs to be the same as the number of protons. If the

numbers are the same, the atom is called balanced, and it is very stable.

So, if an atom had six protons, it should also have six electrons.

The element with six protons and six electrons is called carbon. Carbon

is found in abundance in the sun, stars, comets, atmospheres of most

planets, and the food we eat. Coal is made of carbon; so are diamonds.

Some kinds of atoms have loosely attached electrons. An atom that

loses electrons has more protons than electrons and is positively charged.

An atom that gains electrons has more negative particles and is nega-

tively charged. A 'charged' atom is called an 'ion'.