Lesson – Unit 1 Electricity and Electronics – Lesson objective – To Examine the concepts of resistance by applying ohms law
Name: _____Class_____

Unit 1 Electricity and Electronics

Starter: E Safety

E-safety

Social Networking

Activity 1 Interactive

Look at the statements below. Circle true or false.

Statements	✓	✗
Location can tell people where you live		
It is okay to share your personal information with strangers		
It is important to hide your pictures. This is so people won't know what you look like		
You should change your password every three months		
Don't add people you don't know to your social network		

A strong password has:

- 6 characters or more
- letters
- numbers
- 1 capital letter or more
- symbols (@, _, #, $, %, –, /)

Look at the passwords below.

Which ones are strong? Which ones are weak?

Passwords	Strong	Weak
Cats%run8912		
Pretty20		
Flowers		
white-Rabit75		
spiderman		

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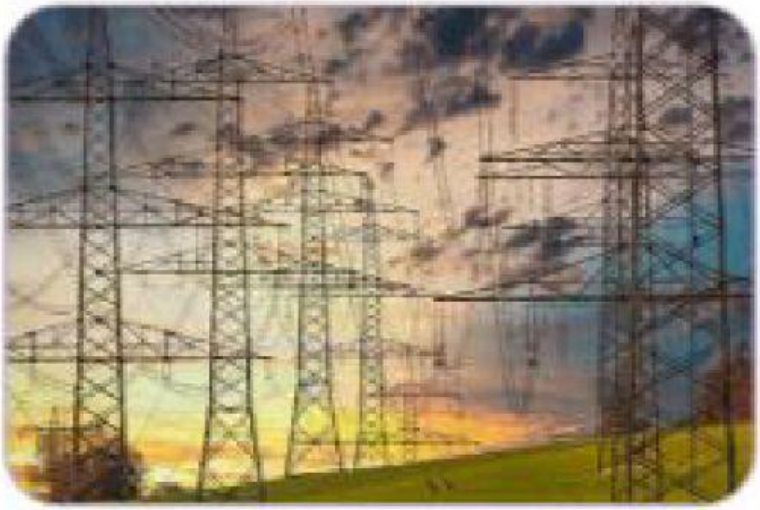
Electricity and Electronics

What is electricity?

We use electricity in our daily lives to power our electric devices. Have you ever wondered how electricity really works?



Watch the video Using Electricity: You and Electricity

Activity 2

Name: _____Class_____

How Electricity Works?

Electric current is the flow of electric charge carried by electrons. Electrons are very small particles within atoms. They carry electric energy and flow through defined paths known as electric circuits.

Watch the video Using Electricity: Moving Charges

What are electronics?



We use electronic devices every day. These devices run on electricity to do certain functions.

For example, we use a TV to watch movies and cartoons. We use a fridge to keep our food fresh and we use washing machines to wash our clothes. All of this is possible if we can give power to electronic devices using electricity.

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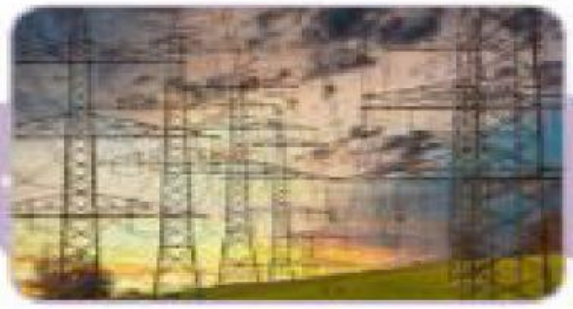

Electricity transmission lines help transfer electricity to your house.

Electronic circuits can be designed to do specific functions.

Voltage, current and resistance

It is important to understand that electric current is generated through the movement of electrons. This creates electric charge, which is used to feed and make electronic devices work. There are three main terms you need to know when dealing with electric circuits:

1. voltage - the charge difference between two points in the circuit
2. current - the rate at which electric charge flows through a certain point in the circuit
3. resistance - a material's tendency to resist (oppose) the flow of charge (current)

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Electricity and Electronics

Activity 2

- Name five things that need electricity to work.
- Can you guess how much is your electricity bill is each month?
- How can we reduce electricity consumption at home?

Name 5 things that uses electricity

1._____

2. ._____

3. ._____

4. ._____

5. ._____

Can you guess how much is your electricity bill each month?

_____

How can we reduce electricity consumption at home?

_____

_____

_____

_____