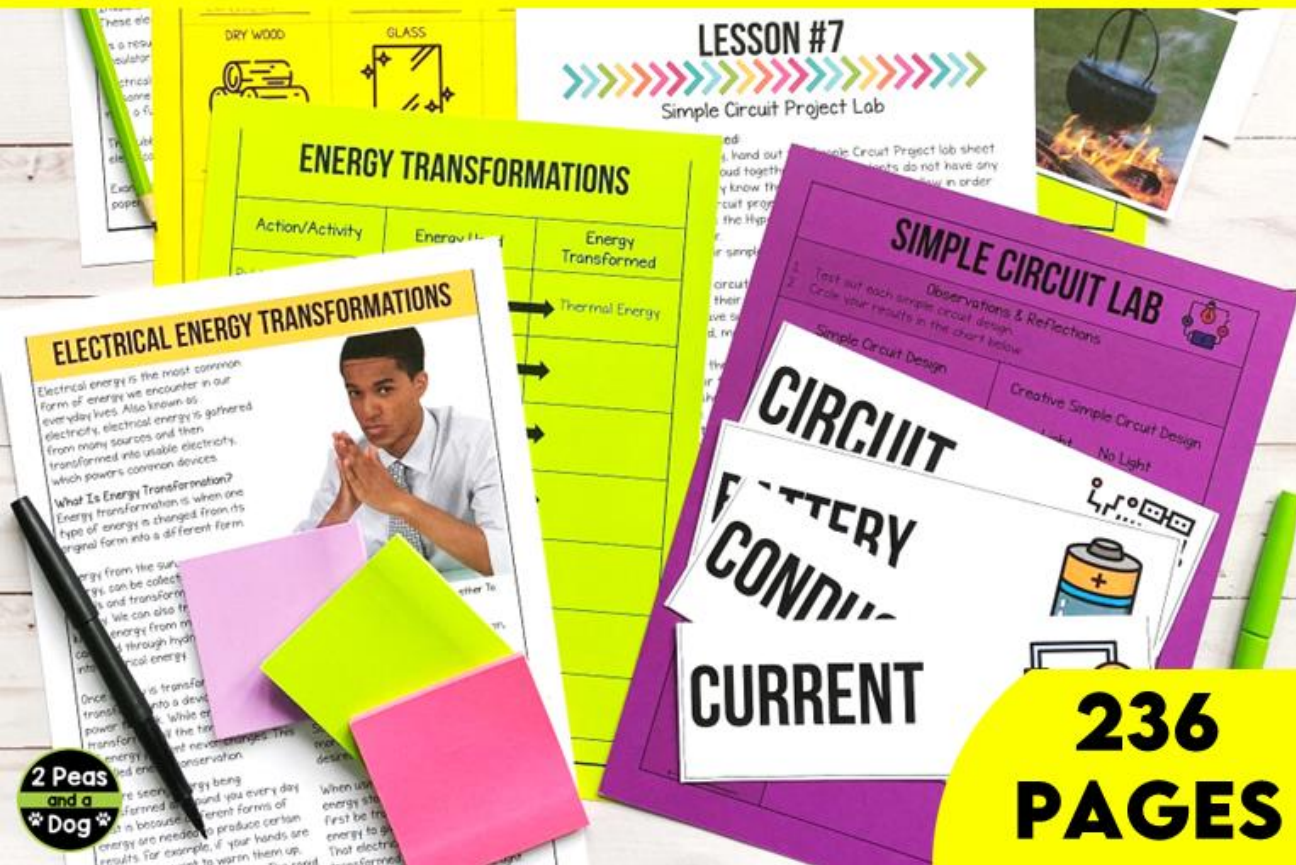


ELECTRICITY UNIT

PDF & DIGITAL FORMATS



RESOURCE INCLUDES

- ✓ Ontario Curriculum Aligned
- ✓ Detailed Lesson Plans
- ✓ Readings, Videos, Graphic Organizers, Group Work, Projects, Rubrics
- ✓ Hands-On Science Labs
- ✓ MP3 Audio Files
- ✓ Answer Keys
- ✓ Quizzes & Unit Test
- ✓ Print & Digital Formats


2 Peas and a Dog

Middle School Teaching Resources

INCLUDED LESSONS



- Introduction: Safety Rules & Unit Vocabulary
- The Difference Between Current and Static Electricity
- What is Static Electricity?
- Static Electricity - Teacher Demonstration
- Conductors and Insulators
- Energy Transformed Into Electricity
- Electrical Device Examination – Potato Battery Virtual Lab
- Electrical Energy Transformations
- Simple Circuit Project Lab
- Components of Electrical Circuits
- Series and Parallel Circuits
- Creating Series and Parallel Circuits
- Electricity Changes Over Time
- Electricity Inquiry – Sources of Electrical Energy
- Electricity-Saving Project
- Electricity Unit Test
- Sub Plans/Unit Review – Bill Nye and Magic School Bus Videos
- Electric Vehicles Non-Fiction Article
- Electricity Digital Escape Room


UNIT ORGANIZATION

ONTARIO CURRICULUM ALIGNMENT

Lesson	2007 Curriculum	2022 Curriculum
Introduction Safety Rules	2.1	A1.4
Introduction Vocabulary	2.6	A1.5
1 Current and Static Electricity	3.1	C2.2
2A Static Electricity	3.2	C2.1
2B Static Demonstration	2.3, 3.2	A1.2
3 Conductors and Insulators	3.3	C2.3
4 Energy Conversions	3.4	C2.4
5 Electrical Device Creation	2.4	A1.1, A1.2, A1.3
6 Energy Transformations	3.5	C2.5
7 Electrical Energy Transformations Device	2.5	A1.1, A1.2, A1.3

CURRICULUM ALIGNMENT

LESSON OVERVIEW



Lesson	Activity Type	Name	Suggested Time
Intro	Class Discussion	Safety Rules & Unit Vocabulary	2 Classes
	QR Code Scavenger Hunt		
#1	Whole Class Reading, Graphic Organizer and Activity	The Difference Between Current and Static Electricity	1 - 2 Classes
#2A	Whole Class Reading and Journal Entry	What is Static Electricity?	1 Class
#2B	Teacher Demonstration	Static Electricity	1 Class
#3	Whole Class Reading and Activity	Conductors and Insulators	1 Class
#4	Whole Class Reading and Activity	Energy Transformed into Electricity	1 Class

UNIT PLAN

INTRODUCTION



Unit Vocabulary

Lesson Overview:

Students will work on reviewing vocabulary for this unit.

Materials Needed:

- Reliable technology - computer, projector, Wi-Fi
- Definitions Google Slides
- Photocopy a class set or use the provided Google Slides version of the following:
 - Vocabulary sheets (QR Code or Non-QR Code option)
 - Vocabulary graphic organizer
 - Definitions (For IEP and ESL students)

Teacher Instructions:

1. Hang the vocabulary words up around the classroom or hallway using the QR code or non-QR code format.
2. Divide the class into groups of 4.
3. Have students walk around the classroom or hallway and find the vocabulary sheets. Students need to scan the QR code with their phones to uncover the mystery word. Once they have uncovered the mystery word, have them write it on the vocabulary graphic organizer.
4. Once they have found the definitions.

LESSON PLANS

WHAT'S INSIDE?



PRINCIPLES OF STATIC ELECTRICITY



Photo of Dryer Balls

If one object carries a charge and the other does not, the two objects become charged.

When you rub a balloon on your head, electrons are transferred to the balloon. The balloon gets negatively charged, while your hair becomes positively charged. If you place the balloon near your hair, it will be drawn to it because positively and negatively charged objects attract each other. In addition, static electricity is generated when clothes made of synthetic fabrics, such as polyester, brush against one another.

When these garments are removed from the dryer, they will cling together because of their charge. Dryer balls are used to prevent static electricity build up on clothes when they are in the dryer.

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Static electricity occurs in nature with lightning, which is a massive static discharge. Static electricity is generated by the friction of molecules. This creates a static electric charge that results in lightning bolts.

Safety

Only a small amount of electrons are usually transferred during a static electric discharge. However, these tiny electrical shocks can damage electronic components. Small static shocks can fry some components, rendering them unusable. Similarly, electric discharges near combustible gases can also be highly hazardous and trigger an explosion. To avoid starting a fire, it's a good idea to ground oneself to discharge any static electricity.

SCIENCE VOCABULARY WORD #1

Using a phone or a tablet, scan the QR code below to find the hidden word.



ENGAGING ACTIVITIES

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VIDEO REVIEW



Select 3 videos from the Indigenous Clean Energy project videos to watch. Then, complete the graphic organizer after watching each video.

- Conservation on the Coast
- Lubicon Solar
- Okikendawt Hydro Project
- Bow Lake Wind Project
- Beaver Lake School Solar
- Taku River Hydro Project
- Teslin Biomass Project
- T'Souke Community Solar
- Jimmie Creek Hydro Project
- China Creek Hydro
- Nuxalk Nation Housing Initiative
- Kanaka Bar Solar
- Kapuskasing Waterpower Project
- Old Crow Solar Project
- Gitchi Anirunki Hydro Project

Video Title	
Summarize what you learned from this video.	
Video Title	
Summarize what you learned from this video.	

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WHAT'S INSIDE?



SAMPLE ANSWERS

SAMPLE ANSWERS

Items That Require Electricity In A Classroom	Tasks Without Electricity										
<p>These are sample answers. Answers will vary depending on your classroom.</p> <ul style="list-style-type: none"> ▪ Chromebooks ▪ Pencil Sharpener 	<table border="1"> <tr> <td>Create Light</td> <td> <ul style="list-style-type: none"> ▪ Candles ▪ Sunlight </td> </tr> <tr> <td>Cook Dinner</td> <td> <ul style="list-style-type: none"> ▪ Fire ▪ Solar Oven </td> </tr> <tr> <td>Exercise</td> <td> <ul style="list-style-type: none"> ▪ By Hand Using A Washboard ▪ Anything that involves just the body (e.g., walking, running, swimming). </td> </tr> <tr> <td>Read an eBook</td> <td> <ul style="list-style-type: none"> ▪ Read a paper book </td> </tr> <tr> <td>Watch a Movie</td> <td> <ul style="list-style-type: none"> ▪ Watch a live play or live performance </td> </tr> </table>	Create Light	<ul style="list-style-type: none"> ▪ Candles ▪ Sunlight 	Cook Dinner	<ul style="list-style-type: none"> ▪ Fire ▪ Solar Oven 	Exercise	<ul style="list-style-type: none"> ▪ By Hand Using A Washboard ▪ Anything that involves just the body (e.g., walking, running, swimming). 	Read an eBook	<ul style="list-style-type: none"> ▪ Read a paper book 	Watch a Movie	<ul style="list-style-type: none"> ▪ Watch a live play or live performance
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Read an eBook	<ul style="list-style-type: none"> ▪ Read a paper book 										
Watch a Movie	<ul style="list-style-type: none"> ▪ Watch a live play or live performance 										

ANSWER KEYS

Electrical Circuit Diagram	Name	Explain Why It Is This
	Simple	
	Series	
	Parallel	

POTATO BATTERY LAB

NEWS REVIEW

Who/What is the article about?	
What is happening?	
Where is it happening?	

LABS & CASE STUDIES

TEACHER FEEDBACK

“This unit was great! So easy and ready to use. I needed to use a few as sub plans unexpectedly and I very easily added the slides to google classroom including MP3s and the answer key for a very easy Science lessons with no materials for the sub. The labs and activities were easy to follow and needed basic items and the videos were age-appropriate and helpful too. This was super helpful and included everything I needed. I love that the whole thing is available print and digital and with mp3s– made it so easy to differentiate.” – Ms C.

INTRODUCTION



SCIENCE SAFETY RULES



1. LISTEN
 - ✓ Pay attention to ALL the
 - ✓ Know the location of the
2. ATTIRE
 - ✓ Wear safety goggles, sur
 - ✓ Tie-up any loose items (
 - ✓ Wear closed-toe, comfo
3. READ CAREFULLY
 - ✓ Any labels of chemicals/
 - ✓ The procedure of your e
4. TOOLS
 - ✓ Handle all tools with care
 - ✓ Inform the teacher if
 - ✓ Do not taste
5. CLEAN-UP
 - ✓ Thoroughly
 - ✓ Wash hands
6. FLYING OBJECTS
 - ✓ Never point flying devices
 - ✓ Make sure any flying devi
 - ✓ Never fly objects near ov
 - ✓ Be sure to check the win

ELECTRICAL SAFETY RULES



- ✓ Make sure the power is off when fixing any electrical equipment.
- ✓ Do not put fingers or any object inside an electrical outlet.
- ✓ Never insert metal objects inside a toaster.
- ✓ Make sure hands are dry when working with electricity.
- ✓ Keep wires and power lines away from water.
- ✓ Do not touch electrical equipment if it has damaged
- ✓ Do not touch broken power lines.
- ✓ Never fly any object (e.g., kite, drone, etc.) near power lines.
- ✓ Avoid climbing power poles.
- ✓ Avoid climbing trees near power lines.
- ✓ Keep away from metal transformer boxes.
- ✓ Pay attention to electrical equipment that may have a warning sign (e.g., shock hazards).

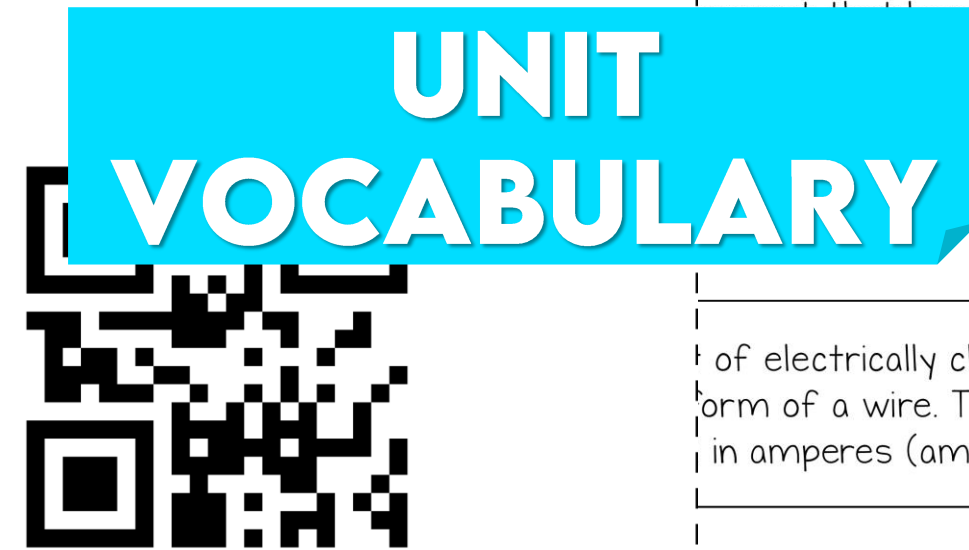
SCIENCE SAFETY

Vocabulary Word

Definition

SCIENCE VOCABULARY WORD #1

Using a phone or a tablet, scan the QR code below to find the hidden word.



chemical energy to be
ped into electricity.

network of an

of

of

of electrically charged
form of a wire. This flow
in amperes (amps).

(flow) of electrons and
one place to another.

h a negative charge of
lectricity.



LESSON 1



LESSON #1



The Differences Between Current and Static Electricity

Lesson Overview:

Students will learn about the differences between static and current electricity.

Materials Needed:

- Computer with projector
- Video #1: [Introduction to Static Electricity](#)
- Video #2: [Static and Current Electricity](#)
- Photocopy a class set or individual copies of:
 - Electricity Brainstorming
 - Differences Between Current and Static Electricity
 - Current or Static? Activity

Teacher Instructions:

1. Watch the [Introduction to Static Electricity](#) video.
2. Then have students complete the Differences Between Current and Static Electricity Activity. Have a class discussion about the differences between current and static electricity.
1. Watch the video, [Static and Current Electricity](#).
2. Then, hand out the Differences Between Current and Static Electricity article.
3. Read it out loud as a class.
4. Hand out the activity worksheet individually or in pairs.
5. Take-up the answers using a projector.

ELECTRICITY BRAINSTORMING



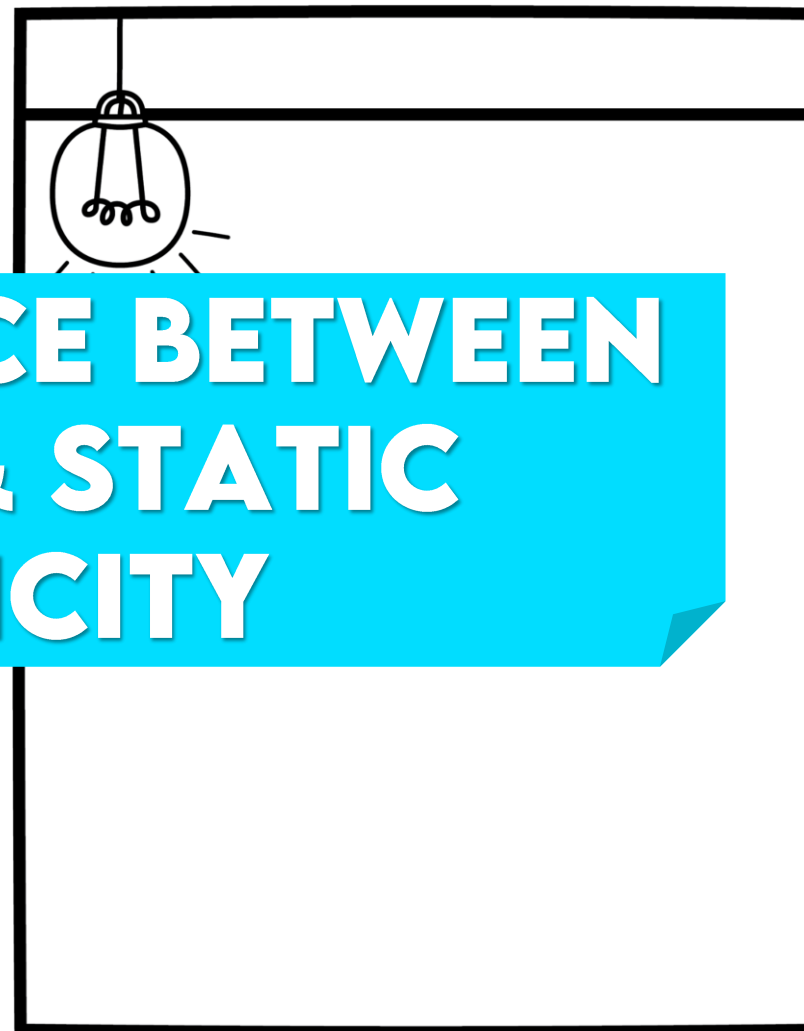
Instructions: If you did not have electricity, how would you do the tasks listed on this sheet?

Create Light	
Cook Dinner	
Wash Clothes	
Exercise	
Read an eBook	
Watch a Movie	

DIFFERENCES BETWEEN CURRENT AND STATIC ELECTRICITY

ELECTRICITY BRAINSTORMING

Instructions: Look around the room you are in. What items use electricity? Write down your ideas on this sheet.



THE DIFFERENCE BETWEEN CURRENT & STATIC ELECTRICITY

One of the essential energy sources in our world are batteries in your smartphone. Batteries power the lights in our homes and appliances. But how does electricity work?

Electricity is made of atoms themselves. We all know about atoms, which are the building blocks of matter. If you look at an atom, you will see microscopic particles.

Electrons have a negative charge. The protons have a positive charge. The neutrons have no charge. The electrons are attracted to the protons' positive charge. The electrons are attracted to the protons' positive charge. The electrons are attracted to the protons' positive charge.

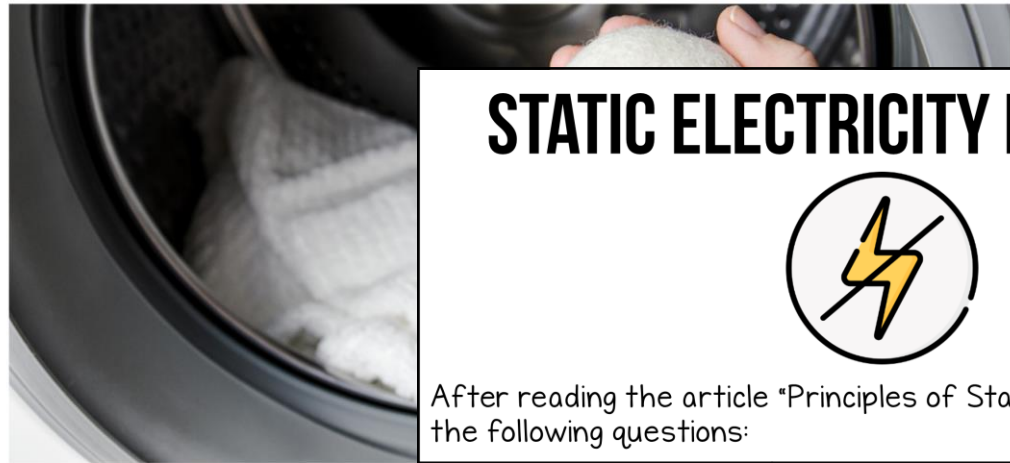
Static Electricity

Static electricity stays in a single place. When it is called static electricity, the electricity is not in motion. Static electricity is the buildup of electrical charges on an object's surface. For example, it can be felt on your skin's surface and be attracted to another object when you touch it. You can also rub two surfaces together where electrons transfer from one object to another, resulting in a static electric charge.

LESSON 2A & 2B



PRINCIPLES OF STATIC ELECTRICITY



STATIC ELECTRICITY REFLECTION



After reading the article "Principles of Static Electricity," answer the following questions:

If one object carries a charge and the other does not, the two objects become charged.

Have you ever experienced static electricity? Describe your experience.

When you take clothes out of the dryer, they may cling together. This is because of static electricity. Static electricity is a buildup of electric charge on the surface of objects. It is caused by the transfer of electrons between two objects. For example, when you rub a balloon on your hair, electrons are transferred from your hair to the balloon. This gives the balloon a negative charge and your hair a positive charge. The opposite charges attract each other, so the balloon sticks to your hair.

synthetic fabrics, such as polyester, can generate static electricity. When these fabrics are rubbed together, they can become charged. This is why you often get a static shock when you touch a metal object after walking on a carpet.

When these garments are removed from the dryer, they will cling together because of their charge. Dryer balls are used to prevent static electricity from building up on clothes when they are in the dryer.

How did it feel? Explain.

Use the article to help if you have not experienced static electricity personally.

STATIC ELECTRICITY GRAPHIC ORGANIZER

Is static electricity really static? Explain.

What causes static electricity?

Which material is better?

LESSON #2B



Demonstration

How it occurs, and be provided

– Anuradha Bhagwat
Science a Static Electricity Science

Google Slides:

TEACHER DEMONSTRATION

than once to have students describe the properties of static electricity. Use a poster sheet.

not to be tried at home. Demonstrations live in class, please be aware of safety policies.



LESSON 3 & 4



ELECTRICITY CONDUCTORS AND INSULATORS

Electrical wires can be found in various electrical gadgets, such as televisions, mobile chargers, and table lamps, among others.

If you observe the wires, you will find that they are usually made of two materials: an inner metal core and an outside covering made of rubber or plastic. Each component of the wire plays a critical purpose that cannot be overlooked.

The behaviour of various materials changes when electrical energy is applied to them. Certain materials allow electrical current to flow freely through them, while others prevent it.

These objects are classified into two types: conductors and insulators.

The conductors allow electricity to flow through them to power your lights, and other electrical appliances.

The inner metal core of a wire acts as a conductor, allowing electricity to flow through it. The outer covering functions as an insulator, protecting humans from electrical shock.

Conductors

A conductor is an object that allows electrons to move freely through it, resulting in the flow of electricity.

CONDUCTOR OR INSULATOR? ACTIVITY

Please classify the following as a CONDUCTOR or INSULATOR:

SEA WATER



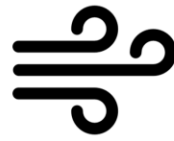
CLASSIFY:

METAL WIRE



CLASSIFY:

AIR



CLASSIFY:

HUMAN BODY



CLASSIFY:

RUBBER GLOVES



CLASSIFY:

GOLD



CLASSIFY:

PLASTIC INSULATION PART OF WIRE



CLASSIFY:

CONDUCTORS AND INSULATORS

ENERGY TO ELECTRICAL ENERGY

Millions of people everyday rely on electricity to do everything from



of Solar Panels on the Roof of a House

ELECTRICAL ENERGY MATCHING ACTIVITY



Draw a line to match the following energies to their source.

Natural Gas

Uses the movement of water to create electricity.

Coal

Hydropower

Nuclear Power

Geothermal

Wind Turbines

Solar Energy

Batteries

ENERGY TRANSFORMED INTO ELECTRICITY

Electricity is generated from the heat and steam stored deep within the Earth's crust.

Uses uranium to make electricity.

Winds turn blades in a turbine, which produces electricity.

LESSON 5 & 6



POTATO BATTERY VIRTUAL LAB

Hypothesis

Do you think the potato battery will light the bulb?

How many potatoes do you need?

POTATO BATTERY VIRTUAL LAB

POTATO BATTERY LAB ASSESSMENT

After you have viewed the potato battery video, you are going to complete the graphic organizers to demonstrate your understanding of electricity.

Level 3	Level 4
Graphic organizers are complete.	Lab report is well-written and organized.
Some elements could use more detail.	Attention to detail is demonstrated.

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POTATO BATTERY LAB ASSESSMENT

After you have viewed the potato battery video, you are going to complete the graphic organizers to demonstrate your understanding of electricity.

Criteria	Level 1	Level 2	Level 3	Level 4
Potato Battery Graphic Organizers	Graphic organizers are incomplete. Several required elements are missing.	Graphic organizers are missing key elements. Some elements are complete.	Graphic organizers are complete. Some elements could use more detail.	Lab report is well-written and organized. Attention to detail is demonstrated.

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ELECTRICAL ENERGY TRANSFORMATIONS

Electrical energy is the most common form of energy we encounter in our



ENERGY TRANSFORMATIONS

Action/Activity	Energy Used	Energy Transformed
Rubbing hands together	Kinetic Energy	Thermal Energy
Flashlight *Note: has two types of energy transformations		

ELECTRICAL ENERGY TRANSFORMATIONS

Flashlight		
Battery		

of Man Rubbing His Hands Together To

chemical energy stored in the batteries must be transformed into electrical energy to give the flashlight power. Electrical energy is then transformed again into radiant energy, which makes the bulb produce light.

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LESSON 7 & 8



SIMPLE CIRCUIT LAB

SIMPLE CIRCUIT LAB



Observations & Reflections

1. Test out each simple circuit design.
2. Circle your results in the chart below.

SIMPLE CIRCUIT PROJECT LAB

Simple Circuit Design

No Light

If you put the battery negative side up, what would happen to your circuit? Why?

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UNDERSTANDING ELECTRICAL CIRCUITS

DRAWING ELECTRICAL CIRCUITS

Using information from the video and after reading the article, draw your own example of a simple electrical circuit. Make sure you label the following: Energy Source, Conductor, Switch, Load.

COMPONENTS OF ELECTRICAL CIRCUITS

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our TV, cell

(s) often
ed is measured in
plied by the volts on the circuit.

circuit can provide. This is called
ppiances at once on the same
overloaded the circuit.

hel) will then automatically open the
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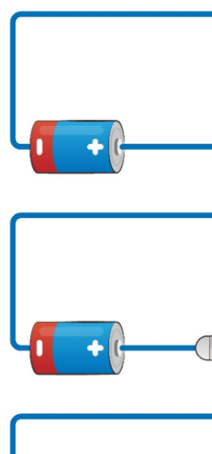
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LESSON 9 & 10



UNDERSTANDING ELECTRICAL CIRCUITS

ELECTRICAL CIRCUITS



SERIES OR PARALLEL CIRCUITS?

Using the article to help you, explain each diagram in the chart.

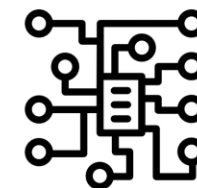
Electrical Circuit Diagram	Name	Explain Why It Is This Type Of Circuit

SERIES & PARALLEL CIRCUITS

SERIES AND PARALLEL CIRCUIT LAB

Instructions: You are going to create one series and one parallel circuit using paper, tape, a coin battery, and an LED.

SERIES AND PARALLEL CIRCUIT LAB



CREATING SERIES & PARALLEL CIRCUITS

Hypothesis

Do you think a series circuit will work better than a parallel circuit? Create a series circuit and a parallel circuit using the materials provided.

Materials: coin battery, paper, tape, LED, wire.

Procedure: Follow the instructions from your teacher. Discuss any questions.

Results: Record your observations. Did the LED light up? How did you know?

Conclusion: Write a conclusion about your experiment. What did you learn?

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LESSON 11



LESSON #11



Electricity

Lesson Overview:
Students will learn about how the invention of electricity.

- Materials Needed:**
- Computer with projector/speakers
 - Video 1 - [History of Electricity](#)
 - Video 2 - [History of Electricity in America](#)
 - [Activity 1 Google Slideshow](#)
 - Photocopy a class set or use the provided [Google Slideshow](#)
 - Changes in Electrical Use
 - Past to Present activity

- Teacher Instructions:**
1. Print the old and new technology cards from the provided [Google Slideshow](#) (that half of your class can work on, for example, for 30 students you would need 6 pairs and 1 triad). Cut out the cards and put them in zipper lock bags.
 2. Watch the videos, [History of Electricity in Homes - The Past](#) and [History of Electricity in Homes - The Present](#).
 3. Then, hand out the article and the cards to the students.
 4. After, divide the class into groups and the other will complete the cards for each group.
 5. Students can work in pairs or groups to complete the activities.
 6. Take-up answers using the cards.

PAST TO PRESENT TECHNOLOGY



ELECTRICITY CHANGES OVER TIME

CHANGES IN ELECTRICAL USE THROUGH TIME

Most of the world relies on electricity daily. We use it for lighting, communication,

Even cleaning our homes is much quicker and easier with the help of an electric vacuum. Additionally, we are able to keep food for longer with the use of electric refrigerators and freezers. This enables us to buy food in bulk and store it longer without it spoiling, saving us time and money.



PAST TO PRESENT

For each Past activity, list a Present replacement due to electricity.

Past	Present
Wood-Burning Oven	Electrical Oven
Broom/Sweeping	
Playing Board Games	
Using A Telegraph	
Ice/Snow To Keep Food Frozen	

How we communicate with others has changed so drastically with the invention of electricity. Before, we used hand-written letters or machines called telegraphs to send messages to people far away. These messages were called telegrams and were transmitted, by electricity, from one machine to the other, through a series of dots and dashes called Morse code.

With electricity and the invention of the telephone, people could speak with others in real time all over the world. This allowed people to tune into news broadcasts around the world and enjoy entertainment from their homes instead of going out to a live show. As electricity has given us more leisure time, inventions to entertain ourselves and communicate have been born. Today, the internet allows us to instantly read the news any time of day. In our spare time, we watch streaming music and/or videos, and play video games instead of playing traditional board games.

Without electricity, many of our daily work or leisure activities wouldn't be the same. In fact, most wouldn't even exist.

LESSON 12A, 12B, & 12C

SOURCES OF ELECTRICITY



NEWS REVIEW



POSITIVE AND NEGATIVES ON THE ENVIRONMENT

After reading the article, list at least one positive and negative effect on the environment for each electricity source.



Energy Source	Positive Effect(s)	Negative Effect(s)
Fossil Fuels		
Hydropower		
Wind Power		
Solar Energy		



VIDEO REVIEW



Select 3 videos from the Indigenous Clean Energy project videos to watch. Then, complete the graphic organizer after watching each video.

- Conservation on the Coast
- Lubicon Solar
- Okikendawt Hydro Project
- Bow Lake Wind Project
- Beaver Lake School Solar
- Taku River Hydro Project
- Jimmie Creek Hydro Project
- China Creek Hydro
- Nuxalk Nation Housing Initiative
- Kanaka Bar Solar
- Kapuskasing Waterpower Project
- Old Crow Solar Project
- Gitchi Animki Hydro Project

ELECTRICITY INQUIRY

learned from this video.	
Video Title -----	
Summarize what you learned from this video.	
Video Title -----	
Summarize what you learned from this video.	

Wind Power
Wind power comes from large machines called turbines that look like giant windmills and convert the energy from the wind into electricity. It is one of the cleanest sources of energy. It is also very sustainable and does not pollute the environment. No fossil fuels are needed to run the turbines and, even though they are very large, they often share space with food crops or agriculture.

However, one huge negative effect of wind power is the amount of deaths of birds and bats they cause. It is estimated that in Ontario, over 13,000 birds and 30,000 bats fly into the turbines and die each year. To help prevent this, some turbines now have sensors that will stop the blades from turning when birds are near and emit sounds through speakers to keep bats away.

LESSON 15



BILL NYE: ELECTRICITY

batteries circuit volts metals

conductor wat

amps

BILL NYE: STATIC ELECTRICITY

Complete the following True/False questions:

- Electricity is the flow of electrons. T F
- Static means constantly moving, building up a big charge. T F
- Opposite charges attract. T F
- Static cling is an example of s
- Discharged electrons go in the
- Lightning and rubbing a balloon are examples of static electricity
- Static charges build up when
- The safest place during a lightning storm is at home. T F
- Rubbing your feet on carpet and touching something is not static electricity. T F
- Static electricity always stays in one place and does not jump around. T F

MAGIC SCHOOL BUS: GETS CHARGED

Complete the following multiple choice questions:

MAGIC SCHOOL BUS: GETS CHARGED

- When the connection of the light bulb and battery is broken:
 - Electrons stand still, and stop flowing
 - Electrons keep moving, even faster
 - The sparks increase
 - The light continues to glow
- The doorbell is another example of:
 - A battery
- When fixing electrical circuits, it is very important to:
 - Turn the power off
 - Keep the power on
 - Use tin foil
 - Touch the battery



UNIT REVIEW OR SUB PLANS

LESSON 16 & 17



ELECTRIC CARS

What is an electric vehicle (EV)?

An EV is a vehicle that is powered by electricity (instead of gas). Electric vehicles run on battery power and need to be plugged in to be recharged on a regular basis.

Electric vehicles are becoming more common and they offer a way for people to drive cars without polluting the air because EVs have zero emissions.

Arguments for and against electric vehicles.

EVs don't have tailpipes, so they don't emit greenhouse gases, making them a cleaner planet friend.

They also need less maintenance because you don't have to change oil, and the brakes generally last longer on EVs. Electric vehicles are also very quiet.

In some places, it is cheaper to pay for electricity than gas. It can vary anywhere from approximately \$160-\$600 USD to charge a medium-size EV for the year.

THINKING QUESTION

Assessment	Below Expectations	Meets Expectations	Above Expectations
	✓ -	✓	✓ +

Are electric vehicles a good idea? Explain your thinking.

ELECTRIC CARS NON-FICTION ARTICLE

LESSON #17

THE STORYLINE

LOST IN THE POWER PLANT



You are on a field trip to your local power plant. It is interesting to see how electricity is created for your home. There is just one problem – you really want to visit your uncle who works at the plant. You decide to quickly check the cafeteria to see if he is on his lunch break. Unfortunately, you get lost in the maze of pipes and machinery. You locate the cafeteria, but the window is broken and you can't see back to the entrance. You are stuck in the maze of pipes and machinery. You need to find a way out of the maze to get back to the entrance.

ELECTRICITY DIGITAL ESCAPE ROOM



1. Once you and your team are ready to start, hit the timer button. You are not allowed to pause or change the time. Your teacher will tell you how much time to put on the timer.
2. Make sure you look at and read EVERYTHING in each section, including titles, images, etc.
3. Write answers in ALL CAPS with NO SPACES.
4. You are allowed ONE FREE HINT.
5. After your free hint, you are allowed two more hints, but they will cost you 3 minutes on the clock per hint!
6. Please do not Google the answers.
7. Please do not share your answers with other students.

Room

Solve this digital escape room. You have 15 minutes to complete, but every class is different.

(one)

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Students

provided

This contains an escape room section, open up the timer. Start the timer once you see the rules. Please play by the rules.

Time translation. Just hold the screen.

LESSON FORMATS



PDF

✓ Individual & Whole Unit



DIGITAL

✓ Google Slides

RESOURCE CAN BE USED IN-PERSON OR ONLINE