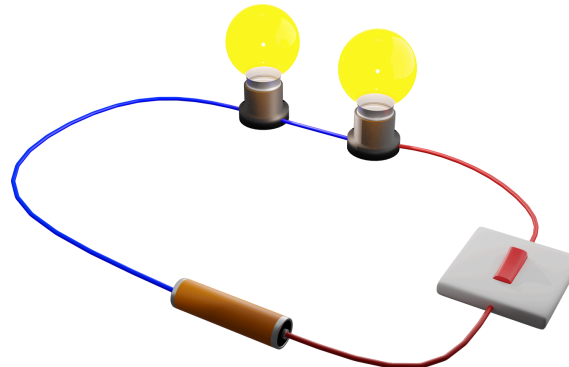
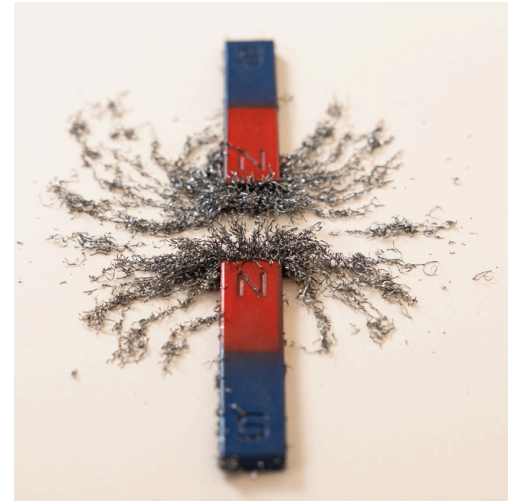


Electricity and Magnetism Unit

- **Covers: Static Electricity, Electric Current, Circuits, and Ohm's Law, Magnets, Magnetic Fields, and Electromagnetism**
- **Lesson & Engaging Activities**
- **Daily Teaching Schedule**



Magnets, Magnetic Fields, and Electromagnetism Unit

Unit - Electricity and Magnetism

- 6 Lessons & 10 Activities

Static Electricity

- Atom review
- Charged Objects
- Laws of electric charges
- Electrostatic Series
- Sparks and Lightning
- Charging by Friction, Contact, and Induction

Electric Current, Circuits, and Ohm's Law

- Overview of current and static electricity
- Types of circuits
- Coulombs
- Series and Parallel Circuits
- Measuring Current and Voltage
- Determining Current and Voltage
- Resistance, Loads, Conductors, and Superconductors
- Ohm's Law

Magnets, Magnetic Fields, and Electromagnetism

- Magnet Fields
- Law of Magnetic Poles
- Permanent vs. Temporary Magnets
- Earth's Magnetic Field
- Oersted's Principle
- The Right-Hand Rule
- Magnetism and Electricity
- Solenoids
- Electromagnetism and Electromagnetic Induction
- Faraday's and Lenz's Laws
- Conventional Current and Electron Flow



Lessons Include Teacher and Student Versions - Videos Embedded in Lessons

Resistance

- Resistance
- Loads
- Insulators
- Conductors
- Superconductors
- Ohm's Law
- Power
- Calculating Total Resistance



This digital presentation includes both Google and Office resources and is [Google Classroom Ready](#)

Solving Circuits: Series and Parallel

- Circuit Types and Symbols Review
- Measuring Current
- Measuring Voltage
- Circuits Review
- Switches
- Practice



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Google Access

Thank you for your purchase. Clicking the link button below will automatically create a copy of the Google resources and place them into your Google Drive. You'll find the folder inside the "Shared with me" section on the left side of your Drive.

Important: Before you click, make sure you're signed in to the Google account you'd like the resources placed into. If the resources are added to the wrong account, simply sign out and then into the correct one and repeat the process.

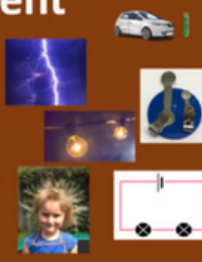
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TW/F

Google Classroom Ready
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Electricity and Current

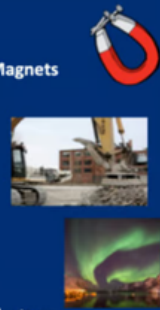
- What Electricity Is
- Atoms and Electrons
- Static Electricity
- Current Electricity
- Drawing Circuit Diagrams
- Parts of an Electric Circuit
- The Cell
- Open vs. Closed Circuits
- Electric Current
- Circuit Types
 - Series and Parallel
- Coulombs



Google Slides and PowerPoint Versions Included
[Google Classroom Ready](#)

Magnetic Fields

- Magnet Fields
- Law of Magnetic Poles
- Permanent vs. Temporary Magnets
- Earth's Magnetic Field
- Oersted's Principle
- The Right-Hand Rule
- Magnetism and Electricity
- Solenoids
- Electromagnetism and Electromagnetic Induction
- Faraday's and Lenz's Laws
- Conventional Current and Electron Flow



Resistance

- Some substances resist the flow of electrons better than others
- These are called resistors or insulators
- Light bulb filaments are very good resistors
- They slow down the electrons that pass through them which allows them to remove more energy from the electrons, making them glow



Videos embedded directly into the slides. One-click access

Electrostatic Charging and Applications

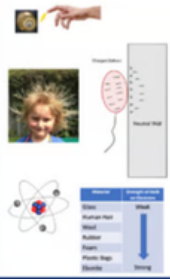
- Static Electricity Review
- Charging Through Friction and Contact
- Static Shocks
- Grounding
- Electrostatic Applications
- Lightning and Lightning Rods
- Tesla Coils



This digital presentation includes both Google and Office resources and is [Google Classroom Ready](#)

Static Electricity

- Parts of an Atom
- Neutral Objects
- Charged Objects
- Friction
- Law of Electric Charges
- Static and Hair
- The Electrostatic Series
- Sparks and Lightning



This digital presentation includes both Google and Office resources and is [Google Classroom Ready](#)

Lightning

- Storm clouds form when humid, warm air rises to meet a colder air mass
- As these air masses churn together, lightning can be created
- Lightning strikes when negative charges at the bottom of a cloud are attracted to positive charges on the ground



Student and Teacher versions of the presentations

Engaging Activities

Static Electricity Lab Station Activity



7 Lab Station Activities to get your kids out of their seats and engaged in their learning

Device-Based Scavenger Hunt Static Electricity



Includes

- 5 Unique Locations
- Online form submission
- Answer Key

Works on all smartphones, tablets, Chromebooks and laptops

- 100% Digital
- Simulations
- Quizzes
- Videos
- Games
- Word Scramble and more



Static Electricity - Electrostatics Word Search and Scramble

THREE Activities in One!

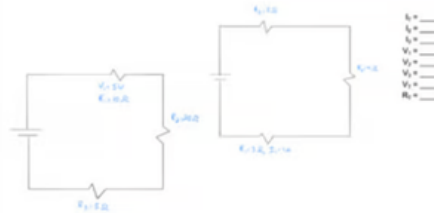
1. Basic 25-Term Word Search
2. Scrambled Words Word Search
3. Word Scramble and Define Activity



TWF



Solving Electrical Circuits With Resistance

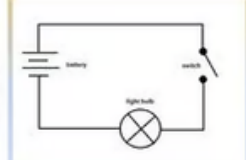


This digital presentation includes both Google and

Story Prompt



Mystery Circuit Challenge



A challenging inquiry activity for your electricity collection

Current and Circuit Diagrams Lab Station Activity



7 Lab Station Activities to get your kids out of their seats and engaged in their learning

Magnetic Fields Lab Station Activity



7 Lab Station Activities to get your kids out of their seats and engaged in their learning

Magnets and Electromagnets - Scientific Reading Comprehension Article



Improve your students **Scientific Literacy** and **Analysis Skills**, use as an **Emergency Substitute Plan** or create **Applicability** in your classroom

Electricity and Magnetism Word Search and Scramble

THREE Activities in One!

1. Basic 25-Term Word Search
2. Scrambled Words Word Search
3. Word Scramble and Define Activity



TWF



Daily Teaching Schedule

UNIT Electricity and Magnetism 21 – 22 DAYS TOTAL

Static Electricity – 7-8 days			
Number of Day(s)	Course Content	Teaching Resources	NGSS
2	- Atom review - Charged Objects - Laws of electric charges - Electrostatic Series - Sparks and Lightning	Static Electricity: Electrostatics - Lesson	HS-PS1-1 HS-PS1-3 HS-PS2-4 HS-PS2-5 HS-PS3-2 HS-PS3-5
1-2	- Static electricity review - Charging by Friction - Charging by Contact - Charging by Induction	Static Electricity: Electrostatic Charging and Applications Lesson	
1	Hands-on review activity	Static Electricity - Lab Station Activity	
1	Hands-on review activity	Static Electricity - Digital Scavenger Hunt	
1	Review activity	Science Story Prompt - Tyrone Johnson and the Phenomenon of Static Electricity	
1	Review activity	Static Electricity - Electrostatics Word Search and Scramble Activity	
Assessments	There are multiple assessments included throughout this unit portion.		

Magnets, Magnetic Fields, and Electromagnetism – 5 days

Number of Day(s)	Course Content	Teaching Resources	NGSS
2	- Magnet Fields - Law of Magnetic Poles - Permanent vs. Temporary Magnets - Earth's Magnetic Field - Oersted's Principle - The Right-Hand Rule - Magnetism and Electricity - Solenoids - Electromagnetism and Electromagnetic Induction - Faraday's and Lenz's Laws - Conventional Current and Electron Flow	Magnetic Fields - Magnets, Electromagnets, and Their Applications - Lesson	HS-PS2-4 HS-PS2-5 HS-PS3-2 HS-PS3-5 HS-ESS1-5
1	Hands-on review activity	Magnetic Fields - Lab Station Activity	
1	Review activity	Magnets and Electromagnets - A Science Reading Resource	
1	Review activity	Electricity and Magnetism Word Search and Scramble Activity	
Assessments	There are multiple assessments included throughout this unit portion. UNIT TEST		

Electric Current, Circuits, and Ohm's Law – 8 days

Number of Day(s)	Course Content	Teaching Resources	
1	- How /where it's used - Review of the atom - Overview of current and static electricity - Types of circuits - Coulombs	Electricity and Current - Lesson	
2	- Series Circuits - Parallel Circuits - Measuring Current - Measuring Voltage - Determining Current and Voltage using circuit diagrams	Solving Circuit Diagrams - Lesson Includes Two worksheets with answers	HS-ETS1-3
1	Review activity	Solving Electrical Circuits with Resistance - Questions and Video Walkthrough	
1	Hands-on review activity	Current Electricity and Circuit Diagrams - Lab Station Activity	
1	Review activity	Mystery Circuit Challenge	
2	- Resistance - Loads - Conductors - Superconductors - Ohm's Law	Electrical Resistance and Ohm's Law - Lesson Includes worksheet with answers	
Assessments	There are multiple assessments included throughout this unit portion.		

Who's It For?

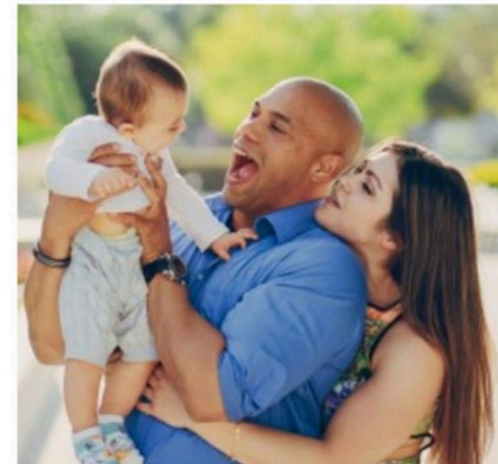
- **High School Physical Science Teachers**
- **Teachers using NGSS**
- **Teachers who want to increase their student's engagement and retention**
- **Teachers not looking to reinvent the wheel**

Save yourself the **STRESS AND TIME**



TWF

Spend your time WISELY



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