Science Home Instruction- Electricity

*I have included an instruction page for each week for the instructor which includes some good ideas.

***Your child needs to complete a weather map each day for April. I have included a calendar.

Week of April 6th "Where does lightning come from?"

Day 1 pg. 159

Day 2 pg. 160

Day 3 pg. 161

Day 4 pg. 162

Day 5 pg. 163

Week of April 13th (Spring Break *Optional*)"Why do electrical cords have metal plugs?"

Day 1 pg. 165

Day 2 pg. 166

Day 3 pg. 167

Day 4 pg. 168

Day 5 pg. 169

Week of April 20th "How does flipping a switch light up a light bulb?"

Day 1 pg. 171

Day 2 pg. 172

Day 3 pg. 173

Day 4 pg. 174

Day 5 pg. 175

Week of April 27th "How does a battery make electricity?"

Day 1 pg. 177

Day 2 pg. 178

Day 3 pg. 179

Day 4 pg. 180

Day 5 pg. 181 and Unit Review pgs. 182-183 Optional Activity- pg. 184 and 185 (hands-on)

If you have any questions about this packet, you can send me a message on Remind or email me at Sheila.meadows@db.k12.oh.us

*Sign up for Remind and I will send a "Mystery Doug" link to you each week with optional lessons.

remind

Sign up for important updates from Mrs. Meadows.

Get information for **Dawson-bryant Elementary School** right on your phone—not on handouts.

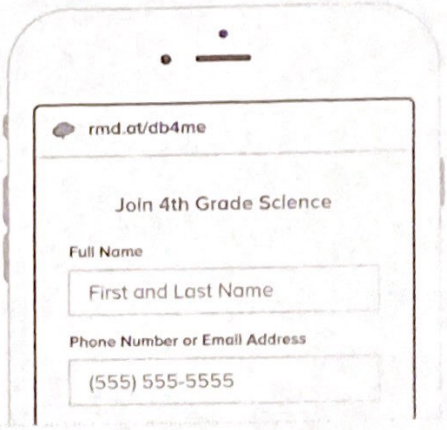
Pick a way to receive messages for **4th Grade Science**:

(A) **If you have a smartphone, get push notifications.**

On your iPhone or Android phone, open your web browser and go to the following link:

rmd.at/db4me

Follow the instructions to sign up for Remind. You'll be prompted to download the mobile app.

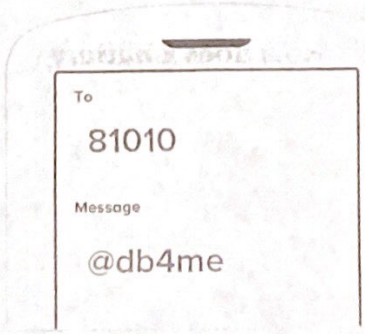


(B) **If you don't have a smartphone, get text notifications.**

Text the message @db4me to the number 81010.

If you're having trouble with 81010, try texting @db4me to (614) 335-7795.

** Standard text message rates apply.*



Don't have a mobile phone? Go to rmd.at/db4me on a desktop computer to sign up for email notifications.

April 2020

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5 **Try to record weather at the same time each day	6 ____degrees F Sky-_____ Precipitation_____	7 ____degrees F Sky-_____ Precipitation_____	8 ____degrees F Sky-_____ Precipitation_____	9 ____degrees F Sky-_____ Precipitation_____	10 ____degrees F Sky-_____ Precipitation_____	11
12 Temperature in degrees Fahrenheit	13 ____degrees F Sky-_____ Precipitation_____	14 ____degrees F Sky-_____ Precipitation_____	15 ____degrees F Sky-_____ Precipitation_____	16 ____degrees F Sky-_____ Precipitation_____	17 ____degrees F Sky-_____ Precipitation_____	18
19 Sky- describe if clear, cloudy, gray clouds(rain), black clouds(storm)	20 ____degrees F Sky-_____ Precipitation_____	21 ____degrees F Sky-_____ Precipitation_____	22 ____degrees F Sky-_____ Precipitation_____	23 ____degrees F Sky-_____ Precipitation_____	24 ____degrees F Sky-_____ Precipitation_____	25 *Learn about cumulus, cirrus, cumulo-nimbus, stratus clouds
26 Precipitation- rain, snow, sleet, hail	27 ____degrees F Sky-_____ Precipitation_____	28 ____degrees F Sky-_____ Precipitation_____	29 ____degrees F Sky-_____ Precipitation_____	30 ____degrees F Sky-_____ Precipitation_____		

Electricity can exist as static electricity or travel as a current through a conductor.

Key Concepts

Static Electricity, Electric Current, and Circuits

National Standard

Electricity in circuits can produce light, heat, sound, and magnetic effects. Electrical circuits require a complete loop through which an electrical current can pass.

By third grade, students usually have a basic understanding of electricity, but they may not see it as a form of energy. In this unit, students will learn the difference between static electricity and electric current, and will also explore the following concepts:

- electricity is a form of energy that can be converted to other forms of energy;
- electricity can be observed as static electricity or as an electric current;
- batteries can create electric energy; and
- electric circuits and switches help control the flow of electricity.

Teacher Background

Electricity is a form of energy that can be converted into other forms of energy, such as light, heat, or mechanical energy. Electricity is observed in two states, either as static electricity or as an electric current.

Static electricity results from the buildup of electrons. Atoms gaining electrons gain a negative charge, and when these electrons discharge, it creates a spark. The spark can be as small as the shock you get when you touch a metal doorknob or as powerful as a bolt of lightning.

Electric current is the form of electricity that powers the appliances and devices we use. Electric current flows in a circuit, which must have a source of power, a conductor, and something to use the electricity. When a switch is added to a circuit, the switch can allow or stop the flow of electric current through the circuit.

Most electric current is generated in power stations, but portable devices such as cellular phones and flashlights require batteries. Batteries use chemical reactions to create electric current, which flows when the battery is integrated into a circuit.

For specific background information on each week's concepts, refer to the notes on pp. 158, 164, 170, and 176.

Daily Science

Big Idea 6

Electricity can exist as static electricity or travel as a current through a conductor.

Week 1

Where does lightning come from?

This week, students learn that lightning is a dramatic example of static electricity caused by atoms in storm clouds gaining and losing electrons. Atoms that gain electrons gain a negative charge, which then discharges in a spark of electricity that we see as lightning. The shock you sometimes get when you touch metal is also an example of static electricity. The strength of the shock is actually quite strong, but since it is so brief, it is only annoying, not dangerous.

Day One
Vocabulary: *electricity*

Distribute page 159 and introduce the vocabulary word. Have volunteers read the introduction aloud. Then have students complete activity A. Invite volunteers to share their responses. Then have students complete activity B independently. For activity C, pair students or complete the activity as a group, if needed. Review the answers together.

Day Two
Vocabulary: *atom, electron, proton*

Distribute page 160, introduce the vocabulary, and have volunteers read the introduction aloud. Use the diagram on the page to point out how protons and electrons are often represented by plus and minus signs. Then have students complete the activities independently. Review the answers together.

Day Three
Vocabulary: *charge, static electricity*

Distribute page 161 and introduce the vocabulary. Then have volunteers read the introduction aloud. Confirm students' understanding of how something gains or loses a charge before having them complete the activities. Review the answers together.

Day Four

Activate prior knowledge by asking students if they have ever gotten a shock when they touched something metal. Distribute page 162 and have volunteers read the introduction aloud. Then have students complete the activities. Invite volunteers to share their responses to activity B.

Day Five

Tell students they will review everything they have learned about lightning and static electricity. Have them complete page 163. Go over the answers together.

Name _____

Daily Science
Big Idea 6
WEEK 1

Day 1

Weekly Question

Where does lightning come from?

When you think of **electricity**, you might picture a lamp lighting up or a television turning on. But electricity isn't just in your home. If you have ever seen lightning flash across the sky, you have seen electricity in nature.

Lightning is a giant spark of energy. It can happen inside clouds or between clouds. It can also happen between a cloud and the ground. Lightning is a very powerful form of energy.

Vocabulary

electricity
a type of energy

A. Name three things that use electricity in your home.

1. _____ 2. _____ 3. _____

B. Write **true** or **false**.

1. Lightning can happen only between a cloud and the ground. _____
2. Electricity is a form of energy. _____
3. Lightning is not as powerful as light from a lamp. _____

C. Every second, there are about 100 lightning flashes on Earth! Eighty of these occur between clouds. Twenty occur between clouds and the ground. Use this information to answer the questions.

1. How many flashes occur in three seconds? _____
2. Every second, how many more flashes occur between clouds than between clouds and the ground? _____

Name _____

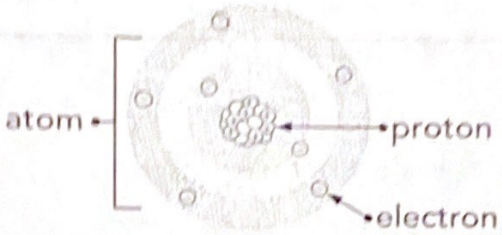
Day 2

Weekly Question

Where does lightning come from?

Daily Science Big Idea 6 WEEK 1

Electricity comes from **atoms.** Atoms are so small that you can't see them. And they are made up of even tinier parts called **protons** and **electrons.** Protons and electrons pull on each other. Sometimes the electrons will move from one atom to another.



Vocabulary

atom
the smallest whole piece of matter

electron
a part of an atom that is the opposite of a proton

proton
a part of an atom that is the opposite of an electron

A. Use vocabulary words to complete the sentences.

1. _____ have protons and electrons.
2. Electrons pull on _____.
3. Sometimes _____ from one atom will jump to another atom.

B. Check the box next to the words that complete each sentence.

1. Protons are found _____ atoms.

   ❒ in the middle of ❒ spinning around ❒ next to

2. Electrons are _____ atoms.

   ❒ bigger than ❒ smaller than ❒ the same size as

Name _____

Daily Science
Big Idea 6
WEEK 1

Day 3

Weekly Question

Where does lightning come from?

Lightning occurs when the atoms in water droplets, dust, and bits of ice inside storm clouds pass electrons between each other. Atoms that pick up extra electrons gain a negative **charge**. Atoms that lose electrons gain a positive charge. The atoms pull on one another. When the pull grows strong enough, many electrons jump between the atoms all at once. This causes a giant spark of **static electricity**. We see lightning!

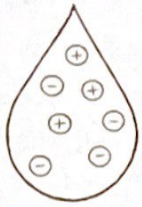
Vocabulary

charge
the state of having more or fewer electrons

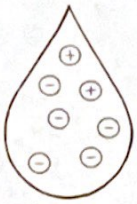
static electricity
a form of energy that comes from the pull between protons and electrons

A. Look at each water droplet. Count the number of protons and electrons in it. Then check the box next to **positive** or **negative** to tell what kind of charge the droplet has.

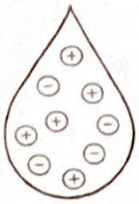
❒ positive
❒ negative



❒ positive
❒ negative



❒ positive
❒ negative



❒ positive
❒ negative

B. Write **true** or **false**.

1. Atoms trade protons when they are close together. _____
2. An atom with a negative charge has more protons than electrons. _____
3. Static electricity forms when many electrons jump between atoms all at once. _____
4. Water, dust, and ice are made up of atoms. _____

Name _____

Daily Science

Big Idea 6

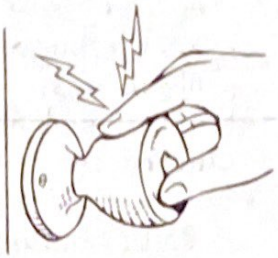
WEEK 1

Day 4

Weekly Question

Where does lightning come from?

All static electricity comes from the buildup of electrons in one place. But it doesn't always produce giant bolts of lightning. Have you ever touched a doorknob and received a shock? When you walk across carpet or sit on a couch or chair, you pick up electrons. You build up a negative charge! Then when you touch a doorknob, the electrons jump from your hand to the knob. This creates a shock and a spark, just like a tiny lightning bolt.



A. Answer each question.

1. What kind of electricity gives you a shock when you touch a metal doorknob? _____

2. What part of an atom do you pick up from walking across carpet? _____

B. Draw a picture that shows how electrons travel from the carpet, through your body, and to a doorknob, producing a spark. Then write a caption below the picture to explain it.

Name _____

Daily Science
Big Idea 6
WEEK 1

Day 5

Weekly Question

Where does lightning come from?

A. Use the words in the box to complete the paragraph.

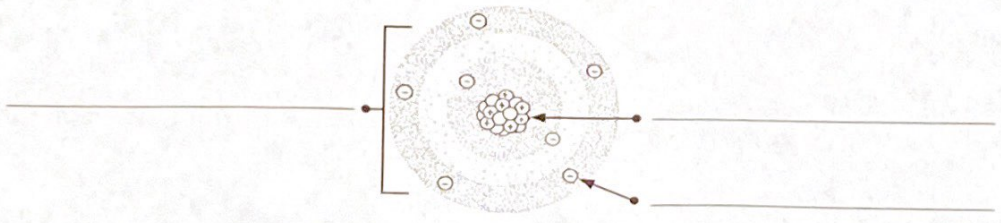
charge	protons	electrons	static

Sari's class is studying electricity. Today she learned that lightning is an example of _____ electricity, which occurs when parts of an atom called _____ and _____ pull on each other. These parts have an opposite _____.

B. Write **true** or **false**.

1. Thunder and lightning make atoms. _____
2. Atoms have protons and electrons. _____
3. Lightning is a giant spark of static electricity. _____

C. Label the diagram below. Write **atom**, **electron**, and **proton**.



Daily Science

Big Idea 6

Electricity can exist as static electricity or travel as a current through a conductor.

Week 2

Why do electrical cords have metal plugs?

This week, students learn the differences between static electricity and electric current, as well as the role that conductors and insulators play in how electricity travels. Unlike static electricity, an electric current is not a single discharge; it is always flowing. The metal plug of a power cord is a conductor that is connected to other metal wires wrapped in the plastic or rubber coating. The coating insulates the wires, so as electricity flows through them, it is impeded by the surrounding insulators. This week's lesson offers several opportunities to talk about safety issues, such as not sticking objects other than plugs into electrical outlets and keeping away from downed power lines.

Day One

Vocabulary: *appliance, current*

Distribute page 165. Introduce the vocabulary by asking students to think of some appliances they have seen or used and then think of things that move in a current. (water, air) Then have volunteers read the introduction aloud. Have students complete the activities, and then review the answers together.

Day Two

Vocabulary: *conductor*

Distribute page 166 and introduce the vocabulary word. Have volunteers read the introduction aloud. Then direct students to complete the activities independently. Invite volunteers to read their completed sentences for activity B aloud.

Day Three

Vocabulary: *insulator*

Materials: electrical wire

Distribute page 167 and introduce the vocabulary word. Show students the wire and explain that the metal part is a conductor and that the rubber coating is an insulator. Ask students to predict what might happen if the wire didn't have the rubber coating around it. (You might get shocked if it was used to conduct electricity.) Have volunteers read the introduction aloud. Then have students complete the activities. Invite volunteers to share their responses and explain their thinking for activity B.

Day Four

Distribute page 168 and have volunteers read the introduction aloud. Have a volunteer read the labels below the picture and explain what the arrows show. (how electricity travels) Then direct students to complete the activities. Invite students to share their responses and explain their thinking for activity B.

Day Five

Tell students they will review what they have learned about conductors and insulators. Have them complete page 169. Go over the answers together.

Name _____

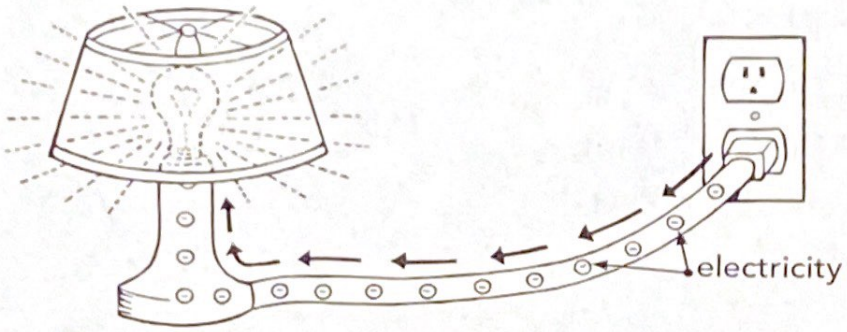
Daily Science
Big Idea 6
WEEK 2

Day 1

Weekly Question

Why do electrical cords have metal plugs?

Remember that a lightning bolt is a giant spark in the sky. It is an example of static electricity. Another kind of electricity makes things such as lamps, televisions, and other **appliances** work. This kind of electricity flows in a **current**, similar to how the water in a river flows. The electric current in your home is always flowing. It doesn't just end with a spark, the way static electricity does.



Vocabulary

appliance
a machine that uses electricity

current
the flow of something

A. List four appliances in your house that use current electricity.

1. _____ 3. _____

2. _____ 4. _____

B. Complete each sentence. Write **electric current** or **static electricity**.

1. _____ is the continuing flow of electricity.
2. A lightning bolt is an example of _____.
3. Appliances need an _____ to work.
4. _____ ends in a spark of energy.

Name _____

Daily Science
Big Idea 6
WEEK 2

Day 2

Weekly Question

Why do electrical cords have metal plugs?

Remember that electricity is the flow of electrons. Some materials allow electrons to flow through them easily. These materials are known as **conductors**. Metals such as copper, gold, and silver are good conductors. They allow electrons to flow through them easily. That's why electrical wires and plugs are made from metal.

Vocabulary

conductor
a material that allows electricity to flow through it

A. Write **true** or **false**.

1. Electricity flows easily through everything. _____
2. Metals are good conductors. _____
3. Electrical wires are made from electrons. _____
4. Electrons pass easily through copper. _____

B. Use the words in the box to complete the sentences.

copper	plug	conducts

1. The lamp had a cord with a metal _____ at the end.
2. James used _____ wire to make a conductor.
3. A metal pole _____ electricity better than a wooden one.

Name _____

Daily Science
Big Idea 6
WEEK 2

Day 3

Weekly Question

Why do electrical cords have metal plugs?

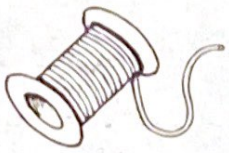
When an electrical appliance is switched on, electricity flows into the plug of the appliance's cord. Then it flows through the cord's wires to make the appliance work.

So why don't we get a shock from touching the cord? The electrical wires are wrapped in rubber, which is an **insulator**. Insulators are materials that do not let electrons flow through them easily. Rubber, plastic, wood, and glass are good insulators.

Vocabulary

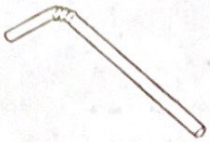
insulator
a material that does not allow electricity to flow through it

A. Look at the items below. Write whether each one is a **conductor** or an **insulator**.



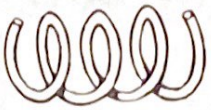
copper wire _____

rubber ball _____



plastic straw _____

glass bowl _____



steel spring _____

B. People who work on power lines always wear thick gloves and boots with thick soles. Why do you think that is? Explain how the gloves and boots protect the workers.

_____

Name _____

Daily Science Big Idea 6 WEEK 2

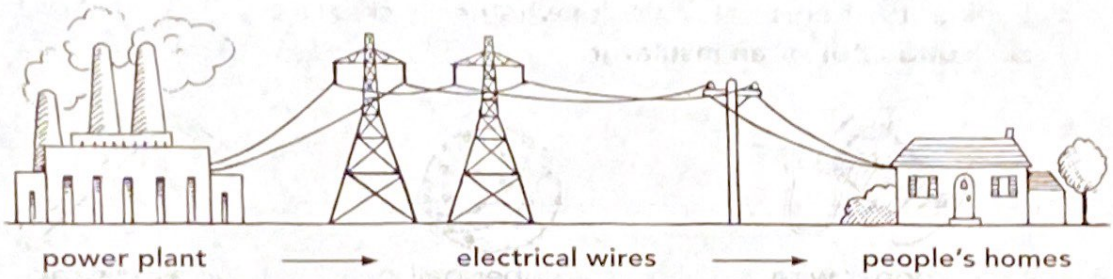
Day 4

Weekly Question

Why do electrical cords have metal plugs?

The electricity in your home comes from power stations in the city or town where you live. It travels through giant wires that are buried underground or attached to poles high above the ground. The wires are made of metal.

Sometimes, during storms or accidents, these wires will fall to the ground. If you ever see a fallen power line, stay far away from it! Your body is a good conductor, so electricity from the wires could flow through you and injure you.



A. Write true or false.

1. Electrical wires that are not covered can be dangerous. _____
2. Power stations use giant wires to conduct electricity. _____
3. Your house makes its own electricity. _____

B. Ocean water is a better conductor than fresh water is. Your skin isn't the best conductor, but your blood, which contains water and salt, is better. What do you think the "secret ingredient" is that makes ocean water and blood good conductors?

_____

Name _____

Daily Science
Big Idea 6
WEEK 2

Day 5

Weekly Question

Why do electrical cords have metal plugs?

A. Use the words in the box to complete the paragraph.

appliance	insulator	current	conductor

Every day, you probably use an _____ that gets electricity from a plug in the wall. The plug is attached to a wire _____, which has an electric _____ flowing through it. The wire is coated with an _____ that keeps you from getting a shock.

B. Write **true** or **false**.

1. A conductor allows an electric current to flow. _____
2. Rubber is a better conductor than copper is. _____
3. A cord that is missing some rubber is dangerous. _____

C. Describe each item below. Write **conductor** or **insulator**.

1. copper wire _____
2. plastic sheet _____
3. rubber cord _____
4. metal tool _____

Daily Science

Big Idea 6

Electricity can exist as static electricity or travel as a current through a conductor.

Week 3

How does flipping a switch light up a light bulb?

This week, students will learn about circuits, switches, and how light bulbs convert electrical energy into light and heat. Electric current requires a circuit to flow, and all circuits must be closed loops. The light switch on the wall completes or breaks the circuit, depending on whether the switch is on or off. When electricity makes contact with a light bulb, another switch is activated, and the bulb converts the electricity into light and sometimes into heat as well.

Day One

Vocabulary: *circuit, outlet*

Distribute page 171 and introduce the vocabulary. Develop *outlet* by explaining how the word can be used in relation to other things besides electricity. For example, ask: **What is a good outlet when you think something is funny?** (laughter) Invite volunteers to think of other good examples of outlets for different things. Then have volunteers read the introduction aloud. Have students complete the activities. Invite volunteers to share their responses and explain their thinking for activity B.

Day Two

Vocabulary: *source*

Distribute page 172 and introduce the vocabulary word. Have volunteers read the introduction aloud. Then have students complete the activities independently. Invite volunteers to share their responses and explain their thinking for activity B.

Day Three

Vocabulary: *switch*

Distribute page 173 and introduce the vocabulary word. Have volunteers read the introduction aloud, and then invite students to name other kinds of switches. Have students complete the activities. Invite volunteers to share their answers and explain their thinking for activity B.

Day Four

Materials: different kinds of bulbs (optional)

Distribute page 174 and have volunteers read the introduction aloud. If you brought bulbs, show them to students. Have students complete activity A independently. For activity B, if you have the bulbs, consider letting students compare and contrast the different kinds of bulbs based on information in the paragraph and their own observations. Go over the answers together.

Day Five

Tell students they will review what they learned about circuits and switches. Have them complete page 175. Go over the answers together.

Name _____

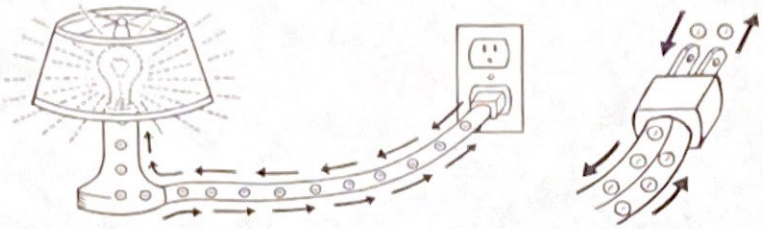
Daily Science
Big Idea 6
WEEK 3

Day 1

Weekly Question

How does flipping a switch light up a light bulb?

You know that electricity needs a conductor to flow. It must also have a path. This path is called a **circuit**. A circuit is a loop. Electricity won't flow unless the loop is complete. This means that when you plug a lamp into an outlet in the wall, you complete the circuit. Electricity flows to the lamp and then back to the **outlet**.



Vocabulary

circuit
a loop or path along which an electrical current flows

outlet
a place in the wall where you can plug in devices that use electricity

A. Circle the word or words that complete each sentence.

1. The path that electricity flows in is a _____.

   cord circuit conductor

2. For electricity to flow, a circuit must be _____.

   complete in the wall near a lamp

3. When electricity flows in a circuit, it flows in _____.

   one direction two directions

B. Which one is more like a circuit, a race track or a maze? Explain your answer.

_____

Name _____

Day 2

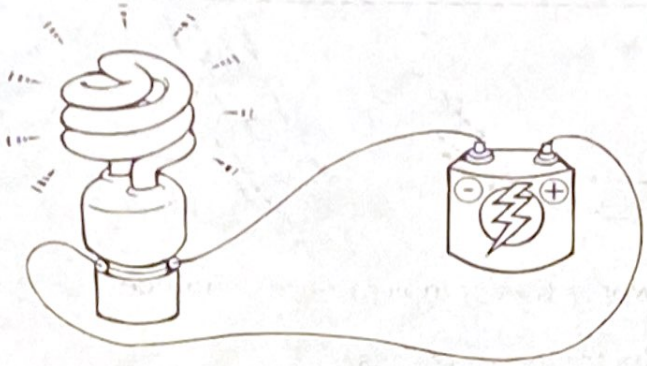
Weekly Question

How does flipping a switch light up a light bulb?

Daily Science Big Idea 6

WEEK 3

All circuits have a source, a conductor, and a device that uses the electricity. Look at the circuit below. The wires are conductors that allow the electric current to flow from the battery, which is the **source**, to the bulb. When the circuit is complete, the bulb lights up.



Vocabulary

source
a thing that produces electricity

A. Write **true** or **false**.

1. If Lisa removes one of the wires, the bulb will still shine. _____
2. If Gary replaces the battery, the bulb will still shine. _____
3. If Sarah replaces the bulb with an electric clock, the circuit will still be complete. _____

B. If power stations send electric current to your house, are they using circuits? Explain your answer.

_____

_____

Name _____

Daily Science
Big Idea 6
WEEK 3

Day 3

Weekly Question

How does flipping a switch light up a light bulb?

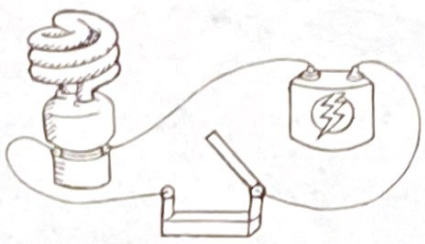
Many circuits don't need an electric current flowing through them all the time. To save electricity, they have a **switch**. The switch turns the supply of electricity on and off. When you flip a switch on, you complete the circuit that allows electric current to flow. When you flip the switch off, you break the circuit. The electric current stops flowing.

Switches come in many different forms. The on/off button on a computer and the knob on an electric stove are switches, just like the light switch on a wall.

Vocabulary

switch
a part of an electrical circuit that stops electricity or allows it to flow

A. Check the box next to the circuit that is turned on. Circle the switch.



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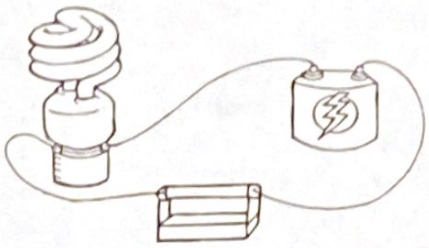


❑

B. Answer the questions.

1. Some electrical devices, such as smoke detectors and refrigerators, don't have a switch. Why might that be?

_____

2. When you pause a video game instead of turning it off, are you breaking a circuit? Explain your answer.

_____

Name _____

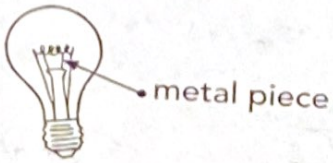
Daily Science
Big Idea 6
WEEK 3

Day 4

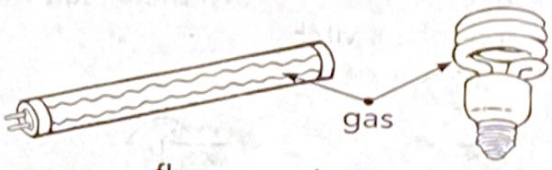
Weekly Question _____

How does flipping a switch light up a light bulb?

You know that when an electrical current flows into a light bulb, it lights up. But where does the light come from? Electrical energy can be turned into other types of energy, including light and heat. When electric current reaches a tiny piece of metal inside some light bulbs, the metal gets very hot. It starts to glow and produce light. Other bulbs have a special gas inside of them. When electricity reaches the gas, the gas changes the electrical energy into light.



incandescent bulb



fluorescent bulbs

A. Use the words in the box to complete the paragraph.

light bulb	heat	electricity	light

In 1800, Humphry Davy discovered how to use _____ to create light. Then, in 1879, Thomas Edison invented the first _____. It had a tiny piece of metal that turned electricity into _____ and _____.

B. Compare and contrast an incandescent bulb with a fluorescent bulb. Name one way they are alike and one way they are different.

_____

Name _____

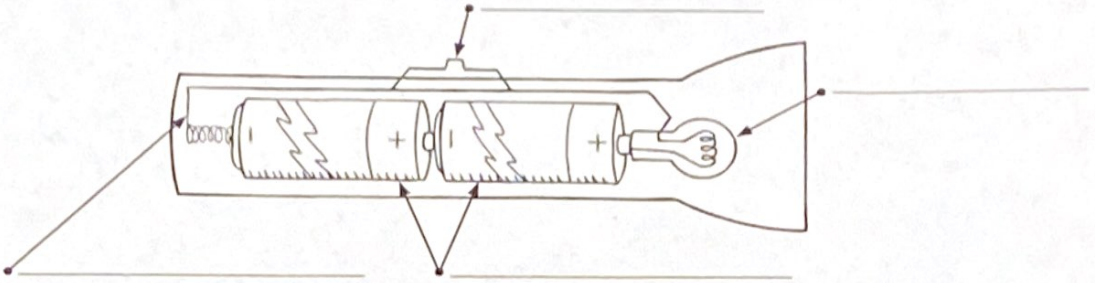
Daily Science
Big Idea 6
WEEK 3

Day 5

Weekly Question

How does flipping a switch light up a light bulb?

A. Look at the diagram. Label the **source**, **conductor**, **switch**, and **bulb**. Then write a caption to explain what the diagram shows. Use the word **circuit** in your caption.



_____

_____

_____

B. Number the steps below in the correct order to show how a lamp in your home lights up.

____ The light bulb lights up.

____ Gas or a tiny strip of metal inside the bulb changes electrical energy into light.

____ The power station creates the electricity.

____ Flipping a switch in your home completes the circuit to send electricity from the wires to the light bulb.

____ Wires carry electricity from the power station to your home.

Daily Science

Big Idea 6

Week 4

How does a battery make electricity?

Electricity can exist as static electricity or travel as a current through a conductor.

This week, students will learn about batteries. Batteries convert chemical energy into electrical energy. When a battery is connected to a circuit, chemicals inside the battery react to release electrons, which flow through the rod inside the battery and through the circuit. After a while, many batteries are incapable of producing more chemical reactions to release electrons. But some batteries can be recharged, and they are capable of producing electricity many more times.

Day One

Vocabulary: *battery*

Materials: batteries of various sizes (optional)

Activate prior knowledge by asking students to describe what batteries are and what they do. If you have them, show students the batteries you brought. Distribute page 177 and introduce the vocabulary word. Have volunteers read the introduction aloud. Then have students complete activities A and B independently. For the oral activity, consider pairing students or completing the activity as a group.

Day Two

Distribute page 178 and have volunteers read the introduction aloud. Activate prior knowledge by reviewing what happens when an atom gains electrons. (It builds up a negative charge.) Point out the diagram of the battery and explain that the negative side of a battery is where the electrons build up. Explain that a battery produces an electric current, not static electricity, but scientists use the same terms, *positive* and *negative*, to talk about electricity. Direct students to complete the activities.

Day Three

Materials: flashlight with batteries

Distribute page 179 and have volunteers read the introduction aloud. If you have it, show students the flashlight. Demonstrate putting the batteries in the flashlight incorrectly and ask students to surmise why the flashlight doesn't work. (The circuit isn't correct and the electric current cannot flow.) Then have students complete the activities. Invite volunteers to share their responses and explain their thinking for activity B.

Day Four

Vocabulary: *recharge*

Distribute page 180 and introduce the vocabulary word. Develop *recharge* by explaining that the prefix *re-* means to do something again. Have volunteers read the introduction aloud. Then have students complete the activities. Invite volunteers to share their responses and explain their thinking for activity B.

Day Five

Tell students they will review what they have learned about batteries. Have them complete page 181. Go over the answers together.

Name _____

Daily Science
Big Idea 6
WEEK 4

Day 1

Weekly Question

How does a battery make electricity?

A **battery** makes an electric current, just as a power station does. Batteries come in many shapes and sizes. Some batteries, such as those found in watches or hearing aids, are very small. Other batteries are very large. The world's largest battery is in Fairbanks, Alaska. It is the size of a football field!

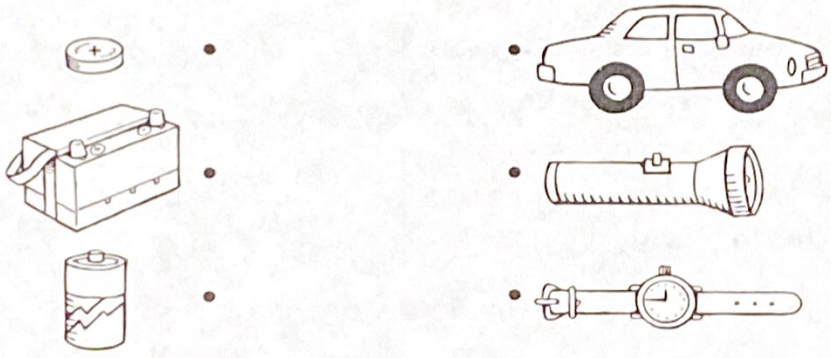
Vocabulary

battery
a device that uses chemicals to make an electric current

A. Write **true** or **false**.

1. A battery makes an electric current. _____
2. Batteries come in only one size. _____
3. Large batteries make static electricity. _____

B. Look at the different batteries. Think about their sizes and shapes to help you match the batteries with the things they go in.



Talk

A smoke detector gets electricity from the wires in your home, but it also has a battery. Why is that? Discuss it with a partner.