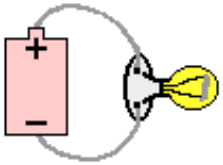
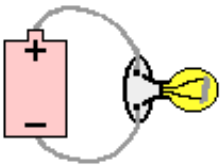
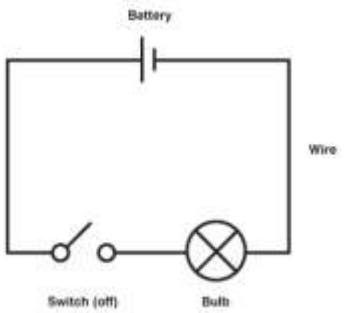
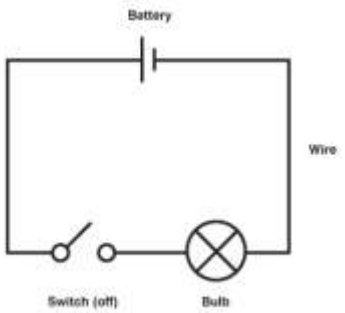
Chapit 6: Elektrisite ak Mayetis	**Unit 6: Electricity and Magnetism**
Ide Kle:	**Key Ideas:**
6.1 Obsève, dekri, epi fè rechèch sou prèv ki montre gen transfè enèji nan sikui elektrik.	6.1 Observe, describe, and investigate the evidence of energy transfer in electrical circuits.
6.2 Konstwi /fè dyagram yon sikui elektrik	6.2 Construct and diagram an electrical circuit
6.3 Idantifye kondiktè ak izolan yo nan yon sikui elektrik.	6.3 Identify conductors and insulators in an electrical circuit.
6.4 Konpare pwopriyete elektrik ak pwopriyete mayetik diferan materyo.	6.4 Compare the electrical and magnetic properties of different materials.
6.5 Fè rechèch sou pwopriyete leman.	6.5 Investigate properties of magnets.
6.6 Fè rechèch sou entèraksyon elektrisite ak mayetis lè ou ap fè yon elektwoeman.	6.6 Explore the interaction of electricity and magnetism to create an electromagnet.
6.7 Dekri kouman elektrisite ka itil oswa li ka danjere pou moun (sekirite).	6.7 Describe how electricity can be helpful or harmful to people (safety).
Rezime chapit la	**Unit Overview**
Elektrisite kapab enteresan epi li kapab amizan tou. Li kapab fè cheve ou kanpe rèd sou tèt ou (elektrisite estatik). Elektrisite sa a amizan, men li pa itil. Moun kapab kontwole pi gwo kantite elektrisite pou yo rann li itil. Kantite elektrisite sa a ka danjere si nou pa itilize li avèk prekosyon.	Electricity can be exciting and fun. It can make your hair stand on end (static electricity). This electricity is fun, but not useful. People can control larger amounts of electricity to make it useful. These amounts of electricity can be dangerous if not used safely.

Chapit 6: Elektrisite ak Mayetis	**Unit 6: Electricity and Magnetism**
Kesyon esansyèl: Ki pwopriyete elektrisite ak mayetis genyen?	**Essential Question:** What are the properties of electricity and magnetism?
Ide Kle: 6.1: Obsève, dekri, epi fè rechèch sou prèv ki montre gen transfè enèjj nan sikui elektrik.	**Key Idea 6.1:** Observe, describe, and investigate the evidence of energy transfer in electrical circuits.
Tèm syantifik: 1. elektwon 2. chaj elektrik 3. kouran elektrik 4. sikui fèmen 5. Sikui ouvri 6. switch	**Scientific Terms:** 1. electron 2. electric charge 3. electric current 4. closed circuit 5. open circuit 6. switch
Enfòmasyon: **Elektwon** ka sikile san pwoblèm nan tout kò matyè. Sikilasyon elektwon--oswa sikilasyon yon **cha**j **elektrik**-se sa ki fè **kouran elektrik**. Moun kapab kontwole kouran elektrik e yo ka fè elektrisite fonksyone nan avantaj yo. Kouran elektrik sikile sèlman lè li ka swiv yon chemen ki kontinye san rete. Yo rele sa yon **sikui fèmen.** Sikui ki nan desen an gen two pati. Toutabò, pil la pouse elektwon yo sou yon chemen, an dezyèmman, anpoul la limen lè kouran pase nan li, twazyèmman, yon fil konekte pil la nan anpoul la. Yon lòt fil konekte anpoul la nan pil la.  Ki sa k ap rive si ou retire youn nan fil yo nan sikui ki nan desen an? Ou ta koupe chemen kouran elektrik la tap swiv la. Ou louvri sikui a. Kòm se nan yon sikui fèmen sèlman kouran ka sikile, anpoul la pa p limen. Yon **switch** se yon aparèy ki swa ouvè oubyen fèmen yon sikui. Lè ou limen yon lanp, ou fèmen sikui a. Ou pèmèt de kondiktè kontre konsa kouran an ka sikile. Anpoul lanp la klere. Lè ou etenn yon lanp, ou louvri sikui a. Lè sikui a ouvè, kouran pa ka sikile anpoul la pa klere.	**Content:** **Electron**s can flow smoothly through matter. Flowing electrons—or a flow of an **electric charge**—make **electric current**. People can control an electric current to make electricity work for them.  Electric current flows only when it can follow a closed path called a **closed circuit**. The circuit in the picture has three parts. First, the battery pushes electrons through the path. Second, the bulb lights up when current passes through it. Third, a wire connects the battery to the bulb. A wire also connects the bulb back to the battery. What would happen if you took away one of the wires of the circuit in the picture? You would break the path that the electric current follows. You open the circuit. Because current can flow only through a closed circuit, the bulb would not light up. A **switch** is a device that opens or closes a circuit. When you switch on a lamp, you close the circuit. You allow two conductors to touch so that the current can flow. The bulb in the lamp glows. When you switch off a lamp, you open the circuit. When the circuit is open, the current cannot flow, the bulb doesn't glow.



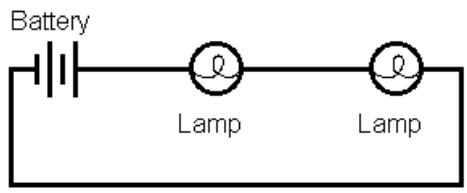
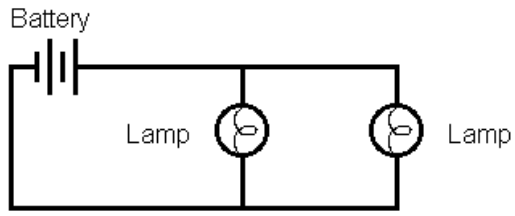
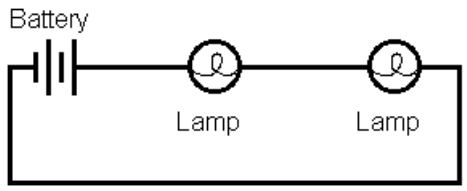
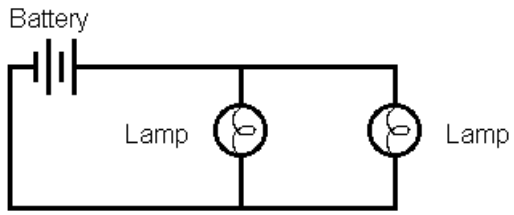
Revizyon:

1. Kisa ki pase lè yon chofè peze klaksòn ki nan volan yon machin pou li klaksonnen?
2. Dekri kouman kouran sikile nan yon chofaj elektrik lè ou limen l.
3. Kisa yon switch konekte ansanm?



Review:

1. What happens when a driver presses on the steering wheel to honk the horn of a car?
2. Describe the flow of current through an electric heater when the heater is switched on.
3. What does a switch bring together?

Chapit 6: Elektrisite ak Mayetis	**Unit 6: Electricity and Magnetism**
Kesyon esansyèl: Ki pwopriyete elektrisite ak mayetis genyen?	**Essential Question:** What are the properties of electricity and magnetism?
Ide Kle 6:2 Konstwi / fè dyagram yon sikui elektrik	**Key Idea 6.2:** Construct and diagram an electrical circuit
Tèm syantifik: 1.sikui an seri 2. sikui an paralèl 3. chemen	**Scientific Terms:** 1. series circuit 2. parallel circuit 3. path
Enfòmasyon: Tout sikui elektrik yo pa dispoze menm jan. Ou ka fè de kalite sikui ak anpoul yo—**sikui an seri** ak **sikui an paralèl.** Nan yon sikui an seri, anpoul yo sou menm **chemen** an. Yon senp egzanp sikui an seri fèt ak de anpoul, yon pil ak fil. Kouran an soti nan pil la, li pase nan premye anpoul la, ansuit nan dezyèm anpoul la epi li retounen nan pil la. Si ou retire oswa etenn youn nan anpoul yo, sikui a ap ouvè, kouran an pap rive nan lòt pati sikui a. Gade ki sa k tap rive si tout limyè ak aparèy lakay ou te fè pati yon sikui an seri. Sikui a tap ouvè sof si ou ta gen tout limyè ak tout aparèy yo limen. Pa gen yonn nan limyè yo ak aparèy yo ki ta travay. SERIES  PARALLEL  Yon **sikui an paralèl** gen plis pase yon chemen	**Content:** Electrical circuits are not all laid out in the same way. Light bulbs can be a part of two kinds of circuits—**series circuits** and **parallel circuits**. In a series circuit, the bulbs are in the same **path**. A simple example has two bulbs, one battery, and wires. The current flows in a path from the battery, through the first bulb, through the second bulb, and back to the battery. If you remove or turn off either bulb, the circuit opens. Current cannot reach the other parts of the circuit. Think about what would happen if all the lights and appliances in your home were parts of a series circuit. Unless you had all the lights and appliances on, the circuit would be open. None of the lights and appliances would work. SERIES  PARALLEL  A **parallel circuit** has more than one path for the

pou kouran elektrik la suiv. Si yon bagay anpeche chaj yo sikile sou yon chemen, yo ka pran yon lòt chemen. Nan chema sikui an paralèl la, ou ka wè de chemen sikilè. Kouran an ka pase nan toude anpoul yo epi li ka limen toude. Si yonn nan anpoul yo pa la oswa li gate, kouran an ka toujou sikile nan lòt anpoul la. Si ou elimine yon chemen, sa pa anpeche kouran an sikile. Lè yon pati nan yon sikui an paralèl pa mache, lòt pati sikui a kontinye fonksyone. Kouran elektrik la toujou gen yon chemen kote li ka sikile.	electric current to follow. If something stops charges from moving along one path, they can take another. In the picture of a parallel circuit, you can see two circular paths. The current can travel through both bulbs and light them both. If one bulb is missing or damaged, however, the current can still travel through the other bulb. Breaking one path doesn't stop the current. When one part of a parallel circuit fails, the other parts of the circuit continue to work. The electric current still has a path along which it can travel.
Revizyon: 1. Kouman yon sikui paralèl diferan de yon sikui an seri? 2. Sipoze ou vle dekore yon sal pou yon fèt. Ou gen entansyon achte gilann limyè. Ki kalite sikui ki ta pi bon pou ou achte? Pou ki sa? 3. Itilize diferan tèm sa yo pou ou fè chema yon sikui an seri: fil, switch, anpoul, pil	**Review:** 1. How is a parallel circuit different from a series circuit? 2. Suppose you want to decorate a room for a party. You plan to buy strings of lights. Which type of circuit would it be better to get? Why? 3. Use the following terms to draw a series circuit: wire, switch, bulb, battery

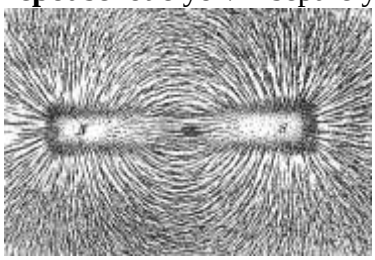
Chapit 6: Elektrisite ak Mayetis	**Unit 6: Electricity and Magnetism**
Kesyon Esansyèl: Ki pwopriyete elektrisite ak mayetis genyen?	**Essential Question:** What are the properties of electricity and magnetism?
Ide Kle 6.3: Idantifye kondiktè ak izolan nan yon sikui elektrik.	**Key Idea 6.3:** Identify conductors and insulators in an electrical circuit.
Tèm syantifik: 1.kondiktè 2. izolan 3. rezistans 4. sipè-kondiktè	**Scientific Terms:** 1. conductor 2. insulator 3. resistance 4. superconductor
Enfòmasyon: Kouran elektrik sikile alèz nan sèten materyo. Materyo sa yo se **kondiktè**. Anpil metal se kondiktè, espesyalman kuiv. Kouran elektrik pa sikile alèz nan sèten lòt materyo. Materyèl sa yo se **izolan**. Lè, kawotchou, vit ak plastik se izolan. Gade yon fil elektrik. Metal ki andedan kòd la se kondiktè elektrisite. Li Mennen--kouran nan yon aparèy. Izolan an kawotchou ki vlope metal la anpeche kouran an pase kote li pa dwe ale. Rezistans mezire kouman elektrisite sikile nan yon materyo. Bon izolan yo gen gwo rezistans. Bon kondiktè yo pa gen gwo rezistans. **Sipè-kondiktè** yo pa gen rezistans ditou. Anpil nan aparèy nou itilize chak jou travay byen e yo pa prezante danje akòz de jan izolan yo ak kondiktè yo travay ansanm. Si ou gade anba yon anpoul, ou wè yon ti pwent an metal ki mennen kouran an soti nan sòkèt la ale nan anpoul la. Jis anwo pwent la, ou wè yon pati ki nwa. Pati sa a se yon izolan. Li pa pèmèt kouran soti nan pwent metal la pou l rive nan filyè kote anpoul la vise a.	**Content:** Electric current passes easily through some materials. These materials are **conductors**. Many metals are good conductors, especially copper. Electric current does not pass easily through other materials. These materials are **insulators**. Air, rubber, glass, and plastic are insulators. Take a look at an electric cord. The metal wire inside conducts—or carries—the current into an appliance. The rubber insulator on the outside keeps the current from flowing where it should not go. Resistance measures how well electricity flows through a material. Good insulators have high resistance. Good conductors have low resistance. **Superconductor**s have no resistance at all. Many everyday things do their jobs safely and well because of the way insulators and conductors work together. If you look at the bottom of a light bulb, you will see the small metal tip that conducts the current from the socket into the bulb. Just above the tip, you will see a black band. This band is an insulator. It does not allow the current to flow from the metal tip to the metal screw threads above it.
Revizyon: 1 . Ki sa ki pase lè kouran rive nan yon kondiktè? Ki sa ki pase lè li rive nan yon	**Review:** 1.What happens when a current reaches a conductor? What happens when it reaches an

izolan? 2. Ki diferans ki genyen ant izolan ak kondiktè? Pou ki sa tou de enpòtan?	insulator? 2. How are insulators and conductors different? Why are both important?

Chapit 6: Elektrisite at Mayetis	**Unit 6: Electricity and Magnetism**

Kesyon Esansyèl: Ki pwopriyete elektrisite ak mayetis genyen?	**Essential Question:** What are the properties of electricity and magnetism?
Ide Kle: 6.4: Konpare pwopriyete elektrik ak pwopriyete mayetik diferan materyo.	**Key Idea 6.4:** Compare the electrical and magnetic properties of different materials.
Tèm syantifik: 1.pwopriyete 2. atire 3. leman 4. fè 5. kuiv	**Scientific Terms:** 1. property 2. attract 3. magnet 4. iron 5. copper
Enfòmasyon: Se materyo ki fè yon bagay ki lakòz kèk nan **pwopriyete** bagay sa a genyen. Nou konn wè yon bouchon lyèj, se nan yon pyebwa li soti, li flote sou dlo, men yon klou ki fèt ak **fè** ap koule. Lòt pwopriyete yon klou fè genyen, yon leman attire l, men se pa tout metal ki gen pwopriyete mayetik sa a. Yon leman pap attire ni yon peni an **kuiv** ni yon mòso papye aliminyòm **Leman atire** bagay ki fèt an metal e ki gen fè nan yo. Anpil bagay ki an metal fèt ak asye, ki gen fè ladann. Leman pa attire kuiv ak aliminyòm. Men, kuiv gen yon pwopriyete li pa gen an komen ak aliminyòn. Kuiv se yon bon kondiktè elektrisite. Aliminyòn se pa yon bon kondiktè elektrisite. Se pou rezon sa a yo itilize kuiv nan aparèy elektrik yo ak nan enstalasyon elektrik andedan kay. Kondiktivite (kèlkeswa degre a) se yon lòt pwopriyete matyè.	**Content:** The materials that an object is made up of determine some of its **properties**. We know that a cork, which comes from a tree, will float in water, but a metal **iron** nail will sink. Another property of an iron nail is its attraction to a magnet, but not all metals have this magnetic property. Neither a **copper** penny nor a piece of aluminum foil will be **attract**ed to a **magnet**. Metal objects with iron in them are attracted to a magnet. Many metal objects are made of steel, which has iron in it. Both copper and aluminum cannot be attracted to a magnet. However, copper has a property that is does not share with aluminum. Copper is a good conductor of electricity. Aluminum is a poor conductor of electricity. That is why copper is used in the wiring in electrical appliances and in the wires in your home. Good or poor conductivity is another property of matter.
Revizyon: 1. Ki jan ou ka kontwole si yon bagay gen pwopriyete mayetis? 2. Si yon leman atire yon klips, ki sa k dwe gen nan klips la? 3. Èske tout metal gen menm pwòpriyete? Bay yon egzanp pou ou esplike repons ou an.	**Review:** 1. How can you test for the property of magnetism? 2. If a paper clip can be attracted to a magnet, what must be in this paper clip? 3. Are the properties of all metals the same? Give an example of your answer.

Chapit 6: Elektrisite ak Mayetis	**Unit 6: Electricity and Magnetism**
Kesyon Esansyèl: Ki pwopriyete elektrisite ak mayetis genyen?	**Essential Question:** What are the properties of electricity and magnetism?
Ide Kle: 6.5: Fè rechèch sou pwopriyete leman.	**Key Idea 6.5:** Investigate properties of magnets
Tèm Syantifik: 1.leman 2. atire 3. baryè 4. chan mayetik 5. repouse	**Scientific Terms:** 1. magnet 2. attract 3. barrier 4. magnetic field 5. repel
Enfòmasyon: Yon **leman** se yon bagay ki **atire** fè ak kèk lòt (pa tout) metal. Leman attire asye paske asye gen fè ladann. Lè ou mete yon bagay ki gen fè oswa asye ladan l toupre yon leman, bagay la deplase pou l al nan direksyon leman an. Tout leman atire fè, men tout leman pa sanble. Gen leman ki gen fòm yon ba, gen lòt leman ki gen fòm U. Leman yo kole sou pòt frijidè yo gen fòm plat epi yo mens. Distans afekte fòs atraksyon yon leman. Yon bagay toupiti ki an asye e ki toupre yon leman ap deplase nan direksyon leman an. Men, si menm bagay sa a lwen, li pa p deplase nan direksyon leman an. Gen lòt fòs ki depase fòs yon leman. Leman pou pòt frijidè yo kole byen nan pòt, men ou ka rale yo fasilman. **Baryè** ka redui fòs yon leman. Yon leman pou pòt frijidè ka kenbe youn oubyen de fèy papye sou pòt la, men si ou mete twop fèy papye anba li, leman an ap tonbe. Leman ka fè kèk lòt bagay vin mayetik. Pa egzanp, si ou fwote yon zegwi plizyè fwa nan menm direksyon an sou yon leman, zegwi a ap vin gen ase fòs mayetik pou li ranmase lòt zegwi. **Chan mayetik** yon leman se espas ki toutotou leman an, kote ou ka santi fòs li oswa mayetis li. Si ou simen poud fè sou yon leman, poud la pran fòm yon liy koube, paske chan mayetik la gen	**Content:** A **magnet** is an object that **attract**s iron and a few (not all) other metals. Magnets attract steel because it contains iron. When you bring an iron object or a steel object close to a magnet, the object moves toward the magnet. All magnets attract iron, but they may not look alike. Some magnets are shaped like bars. Others are U-shaped. Some magnets that stick to refrigerator doors are thin, flat shapes. Distance affects the strength of a magnet's attraction. A small steel object that is close to a magnet moves toward it. However, if the same object is farther away, it will not move toward the magnet. Other forces can overcome the force of a magnet. Refrigerator magnets stick well to the door, but you can easily pull them off. **Barrier**s can interfere with a magnet's pull, too. A refrigerator magnet may hold one or two sheets of paper to the door, but if you put too many sheets under it, the magnet will fall. Magnets can make some other objects magnetic. For example, if you rub a needle over a magnet several times in the same direction, the needle will become magnetic enough to pick up other needles. The **magnetic field** of a magnet is the space around the magnet where its force, or magnetism, can be felt. If you sprinkle iron filings on a

plis fòs nan bout oswa nan pòl leman an. Si yon leman pandye yon jan ki pèmèt li deplase, yonn nan pòl yo ap pwente nan direksyon nò. Se paske latè li menm se yon gwo leman. Leman gen de pòl, yon pòl nò ak yon pòl sid. Si ou mete de leman kòtakòt, pòl opoze yo gen atirans youn pou lòt e yo vin kole ansanm; pòl ki menm yo, youn **repouse** lòt e yo vin separe youn ak lòt. 	magnet, the filings line up in a pattern of curved lines. The filings make the pattern because the magnetic field is strongest near the ends, or poles, of the magnet. If a magnet is hung so that it can move freely, one pole will point north. That is because Earth itself is a large magnet. Magnets have two poles, a north pole and a south pole. If you placed two magnets side by side, you would see that opposite poles attract, or come together, and like poles **repel**, or move apart from, each other.
Revizyon: 1. Si ou itilize yon leman pou ranmase kèk zepeng an asye, ki kote sou leman an ou atann ou pou plis zepeng kole? Pou ki sa? 2. Eksplike pou ki sa gen bagay an metal leman pa atire. 3. Ki relasyon ki genyen ant distans ak mayetis?	**Review:** 1. If you use a magnet to pick up steel pins, where on the magnet would you expect the most pins to stick? Why? 2. Explain why some metal objects are not attracted to the magnet. 3. What is the relationship between the distance and magnetism?

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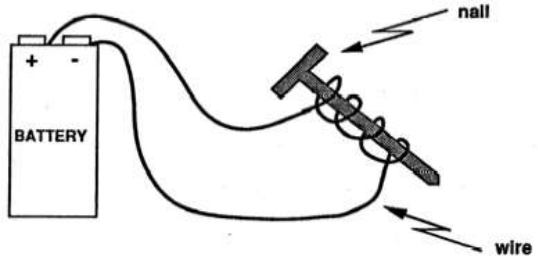
Kesyon esansyèl: Ki pwopriyete elektrisite ak mayetis genyen?	**Essential Question:** What are the properties of electricity and magnetism?
Ide Kle 6.6: Fè rechèch sou entèraksyon elektrisite ak mayetis lè ou ap fè yon elektwoeman.	**Key Idea 6.6:** Explore the interaction of electricity and magnetism to create an electromagnet.
Tèm syantifik: 1.elektwoeman	**Scientific Terms:** 1. electromagnet
Enfòmasyon: Kouran k ap sikile nan yon fil elektrik lakòz gen yon chan mayetik toutotou fil la. Si ou ranje fil la an fòm yon espiral, chan mayetik la vin pi fò. Kouran elektrik ki pase nan fil ki an fòm espiral kreye yon **elektwoeman**. Si yo koupe kouran elektrik, elektwoeman vin pa mayetik ankò, lè sa a, yo etenn elektwoeman an.  Jeneralman yon elektwoeman gen yon moso fè nan mitan li. Lè kouran pase nan fil la, fil la ak fè a vin mayetik. Chan mayetik fè a mete ansanm ak chan mayetik fil elektrik la, elektwoeman an vin pi fò. Nou kapab fè elektwoeman ki pisan anpil ak plisyè bobin fil elektrik epi yon kouran ki fò. Nan yon depo feray, elektwoeman sa yo leve plizyè tòn feray ak asye.	**Content:** An electric current moving through a wire causes a magnetic field around the wire. If the wire is shaped into loops, the magnetic field gets stronger. An electric current running through a loop of wire makes an **electromagnet**. If the electric current is shut off, the electromagnet is no longer magnetic. The electromagnet is turned off. An electromagnet usually has a piece of iron in its center. When current runs through the wire, the wire and the iron become magnetic. The magnetic field of the iron is added to the magnetic field of the wire. The electromagnet becomes stronger. With many coils of wire and a strong current, electromagnets can be made very strong. In junkyards, such electromagnets lift many tons of scrap iron and steel.
Revizyon: 1. Ki jan ou ka fè yon elektwoeman? 2. Pou ki sa yon elektwoeman pa yon leman pèmanan?	**Review:** 1. How can you make an electromagnet? 2. Why is an electromagnet not a permanent magnet?

Chapit 6: Elektrisite ak Mayetis	**Unit 6: Electricity and Magnetism**
Kesyon Esansyèl: Ki pwopriyete elektrisite ak mayetis genyen?	**Essential Question:** What are the properties of electricity and magnetism?
Ide Kle 6.7 Dekri kouman elektrisite ka itil oswa danjere pou moun (sekirite)	**Key Idea 6.7:** Describe how electricity can be helpful or harmful to people (safety).
Tèm syantifik: 1. (vin) kondiktè 2. izolasyon 3. kouran elektrik	**Scientific Terms:** 1. conduct 2. insulation 3. electric current
Enfòmasyon: Elektrisite se enèji elektrik. Ou ka chanje elektrisite pou li bay enèji limyè ak enèji tèmik. Elektrisite ka danjere si ou pa itilize l byen. Lè yon moun pran kouran sa ka lakòz brili, chòk ak lanmò. Yon règ sekirite ki enpòtan pou ou suiv, pa janm manyen anyen ki gen kouran ladan l lè kò ou mouye. Dlo sou po w ka vin **kondiktè** elektrisite. Li kapab lakòz ou pan kouran. Pa itilize lanp elektrik ak lòt aparèy si fil aparèy sa yo ize oswa yo koupe, oubyen si **izolan** ki vlope fil yo abime. **Kouran elektrik** kapab fasilman rantre nan kò ou. Kouran kapab lakòz yon difé tou. Moun dwe fè atansyon pou yo pa ploge anpil lanp ak aparèy nan menm priz la. Lè twòp kouran elektrik ap sikile nan yon priz, sa ka fè fil nan mi yo vin cho epi yo pran difé. Men, pifò kay gen yon kalite switch ki anpeche twòp kouran sikile nan yon sikui. Switch sa a—yon fizib oswa disjonktè —ouvè sikui a lè gen twòp kouran ka p sikile, konsa li rete sikilasyon elektrisite a. Kouran elektrik pa ka sikile nan yon sikui ki ouvri.	**Content:** Electricity is electric energy. Electricity can be changed into light energy and heat energy. Electricity is dangerous if it is not used correctly. It can cause burns, shock, and death if it travels through a person's body. An important safety rule to follow is never touch anything electrical while you are wet. Water on your skin can **conduct** electricity. It can lead the electricity into your body. Do not use electric lamps and appliances that have cords with worn, cut, or broken **insulation** around the wires. The **electric current** could easily travel to your body. The current also could start a fire. People also need to be careful not to plug too many lamps and appliances into the same outlet. Too much electric current flowing through the outlet might make the wires in the wall hot enough to start a fire. However, most homes have a kind of switch that stops too much current from flowing through a circuit. This switch—a fuse or circuit breaker—opens the circuit when too much current flows through it, stopping the flow of electricity. Electric current cannot flow through the open circuit.
Revizyon: 1. Bay de prekosyon ou ka pran pou ou pa pran kouran. 2. Poukisa li danjere pou fè yon fil elektrik pase anba yon tapi?	**Review:** 1. What are two ways you can keep electric current from getting into your body? 2. Why is it unsafe to run electric cords under a rug?

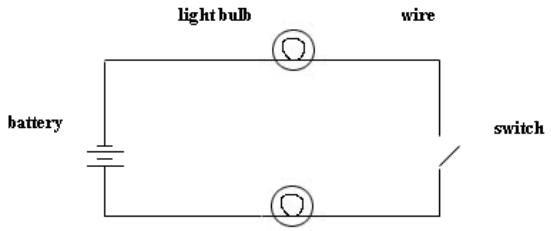
Repons:

6.1

1. Lè ou peze bouton yon klakson, sikui an vin fèmen e sa pèmèt chaj yo fè yon ale vini ant batri a ak klakson lan. Lè kouran an pase nan klaksòn lan, sa lakòz klaksòn lan sonnnen.
2. Lè ou limen yon chofaj elektrik kouran an pase nan yon sikui konplè, li fè yon ale vini ant priz la ak chofaj la.
3. Yon switch kapab fè koneksyon ant kondiktè yo.

6.2

1. Yon sikui an paralèl gen plis pase yon chemen pou kouran an suiv. Si yon chemen ouvri oswa li koupe, kouran an ka pran yon lòt chemen. Nan yon sikui an seri, kouran an gen yon sèl chemen li ka suiv.
2. Yon sikui an parallel pi bon paske si yon chemen koupe, ou ka sèvi ak yon lòt chemen. Yon sikui an seri bon paske li rann li pi fasil pou limen ak etenn aparèy yo.
3. (egzanp yon dyagram, ou ka mete yon switch nenpòt ki kote.)



6.3

1. Kouran elektrik sikile nan yon kondiktè. Lè kouran an rive sou yon bon izolan li sispann sikile.
2. Izolan rete pasaj kouran. Yo enpòtan pou sekirite. Kondiktè pèmèt elektrisite sikile.

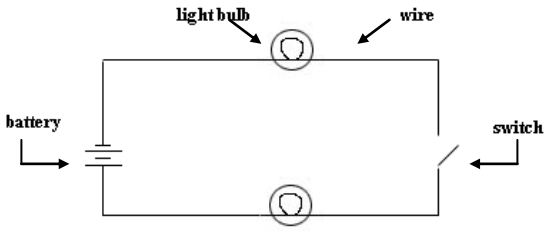
Answer Key:

6.1

1. Pushing on the horn control completes a circuit and lets charges flow from the battery through the horn and back again. The current flowing through the horn makes it sound.
2. When the heater is switched on, current can travel along a complete circuit, from the power source through the heater and back again.
3. A switch can bring conductors together.

6.2

1. A parallel circuit has more than one path that the current can follow. If one path is open or damaged, electricity can flow along the other path. A series circuit has only one path that current can follow.
2. A parallel circuit is better, because if one path isn't working, another path will work. A series circuit is better because it is easy to switch all parts on and off.
3. (a sample diagram, switch can be placed anywhere)



6.3

1. An electric current flows through a conductor. When the current reaches a good insulator, it stops.
2. Insulators stop the flow of current. They are important for safety. Conductors let electricity flow.

6.4 1. Itiliize yon leman pou wè si li rale bagay sou li. 2. Fòk yon klips gen fè ladan l paske fè gen pwopriyete mayetik. 3. Metal diferan nan koulè, nan kapasite elektrik ak kapasite mayetik yo. Pa egzanp, fè gen ni kapasite elektrik ni kapasite mayetik. Men, kuiv se yon metal ki bon kondiktè elektrisite, men yon leman pa attire l. **6.5** 1. Ap gen plis limay fè nan bout oswa nan pòl leman an, paske se la leman an gen plis fòs. 2. Bagay an metal sa yo pa gen fè nan yo. 3. Fòs mayetik diminye lè distans ant yon bagay ak yon leman ogmante, **6.6** 1. Kouran k ap sikile nan yon fil elektrik lakòz gen yon chan mayetik toutotou fil la. Ou kapab fè yon elektwoeman lè ou bay fil elektrik la yon fòm espiral epi pèmèt kouran sikile ladan l. Si ou vlope fil ki an fòm espiral la nan mitan yon fè, ni fè a ni fil la vin mayetik paske elekstisite sikile nan fil la. Konsa ou vin gen yon elektwoeman ki pi fò. 2. Yon elektwoeman se pa yon leman pèmanan paske li gen yon fòs mayetik sèlman lè kouran elektrik pase ladan l. Si ou koupe kouran elektrik elektwoeman an ap etenn. **6.7** 1. Pa janmè manyen anyen ki gen kouran ladan l lè kò ou mouye. Pa itilize aparèy elektrik si fil yo ize oswa izolan ki vlope	**6.4** 1. Use a magnet to see if the item is attracted to it. 2. The paper clip must with iron in it, because iron has magnetic property. 3. No, metals differ in color, electrical and magnetic ability, etc. For example, iron has electrical and magnetic ability. However, copper is a kind of metal that good in conducting electricity but will not be attracted to a magnet. **6.5** 1. The most pins will be on the ends or poles of the magnet, because that is where the magnet is the strongest. 2. These metal objects do not have iron in them. 3. The force of magnetism on objects decreases as the distance increases. **6.6** 1. An electric current moving through a wire creates a magnetic field around the wire. You can make an electromagnet by shaping the wire into loops and allowing the current to flow through it. If you wrap the loops of wire around an iron core, both the iron and the loops of wire become magnetic as electricity flows through the wire, creating a much stronger electromagnet. 2. The electromagnet is not a permanent magnet because it has a magnetic force only when an electric current moves through the wire. If the electric current is shut off, the electromagnet is turned off. **6.7** 1. Never touch anything electrical while you are wet. Do not use electric any appliances that have cords with worn, cut,

fil la abime. 2. Li danjere pou fè fil elektrik pase anba yon tapi paske nou pap ka remake si fil la ize, si li koupe oswa si izolan ki vlope fil la abime. Kouran elektrik la ka sikile rive sou ou fasil. Kouran an ka lakòz dife tou.	or broken insulation around the wires. 2. It is unsafe to run electric cords under a rug because we would not notice if there is any cords with worn, cut, or broken insulation around the wires. The electric current could easily travel to your body. The current could also start a fire.