Electricity

Q1 A fan is plugged into an extension cord. The extension cord is plugged into a wall outlet. How does the extension cord help the fan work?

- ○ The extension cord makes the fan more powerful.
- ○ The extension cord makes the fan easier to operate.
- ○ The extension cord transfers sound energy to the fan.
- ○ The extension cord transfers electric currents from the outlet to the fan.

Q2 A flow of electrical charges is known as _____.

- ○ resistance
- ○ electrical current
- ○ static electricity
- ○ voltage

Q3 An electric fence used to contain cattle works by transmitting energy through a conductor creating an electric _____.

LIVEWORKSHEETS

Q4 In an electric circuit, a battery can act as a ___.

- voltage source
- conductor
- insulator
- resistor

Q5 A conductor is a

- a material that increases the number of charged particles
- material that increases the amount of electricity
- material through which electricity flows easily
- material that stops the flow of energy

Q6 You are asked to design a product that will change electrical energy to heat energy. Choose the item you would research while developing your product.

- Hair dryer
- Alarm clock
- Ceiling fan
- Cell phone

LIVEWORKSHEETS

Q7 Amy touched a machine called a Van de Graaf generator. When she touched the generator all of her hair on the top of her head stood up. When she removed her hand from the generator, her hair fell back to its normal state. What conclusion can you draw from Amy touching the generator?

- Charged particles are being pulled from the air.
- Charged particles are being pulled from the floor.
- Charged particles are being destroyed.
- Charged particles are being moved from one object to another.

Q8 A switch in a circuit _____.



- acts as an insulator
- absorbs electricity
- allows or stops the flow of electricity
- keeps the flow of electricity at a safe level

Q9 An object in an electrical circuit that resists the flow of energy is called _____.

- a magnet
- a compass
- a voltage
- a resistor

LIVEWORKSHEETS

Heat

A farmer needed to keep his baby chicks warm. He placed a light in their cage. Which sentence best explains the farmer's thinking of placing a light in the cage?

- The farmer thought the light would transfer thermal energy to the chicks' cage.
- The farmer thought that the chicks would be healthier if they were not in the dark.
- The farmer thought that the chicks would eat more to stay warm if they can see their food.
- The farmer thought that the light would encourage the chicks to huddle together to keep themselves warm.

Q11 Fill in the blanks using the available answer choices.

A _____ transfers heat easily.

Q12 You are watching fireworks on the fourth of July. When the fireworks are set off, they give off three forms of energy. Which three forms of energy are given off?

- light, sound, electrical
- light, sound, heat
- sound, electrical, mechanical
- heat, mechanical, electrical

Q13 It is very hot outside and you walk barefoot on hot pavement. Predict what will happen in this scenario.

- The transfer of heat energy from the pavement will cause your feet to feel hot.
- The transfer of light energy from the pavement will cause your feet to feel hot.
- The transfer of light energy from the pavement will cause your feet to feel cold.
- The transfer of heat energy from the pavement will cause your feet to feel cold.

LIVEWORKSHEETS

Q14 In the image below, what evidence can you gather to prove that energy is being transferred?



- The smoke shows that the grill is transferring heat energy to cook the food.
- The smoke shows that the grill is transferring sound energy to cook the food.
- The smoke shows that the grill is transferring electrical energy to cook the food.
- The smoke shows that the grill is transferring mechanical energy to cook the food.

LIVEWORKSHEETS