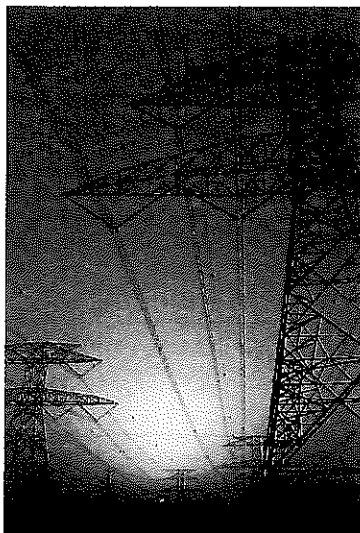


Name: \_\_\_\_\_ Date: \_\_\_\_\_

## WRITING SCIENCE

### LOOK



### THINK

Think about the properties of metal. Metal is malleable, ductile, and it is conductive, both thermally and electrically.

Metal is an important substance to modern humans. It exhibits many desirable properties that helps us to manipulate and shape our lives. Metal has the ability to be drawn into cables or wires without breaking. Metal can be pressed into shapes and also very thin sheets. Metals can even be used to conduct heat and electricity where needed. The unique bond between their atoms is what provides metals the ability to exhibit these properties. Sometimes, the valence electron arrangement of metallic bonds is referred to as a sea of electrons, meaning that the valence electrons are not bound to their respective metal ions. These electrons are said to have free-motion throughout the metallic compound. The movement of these valence electrons accounts for the conductivity of metals.

### WRITE

Analyze the sea of electron theory by describing how electricity is conducted through a wire. Specifically discuss electrical conduction in relation to the arrangement of the valence electrons in the metals.

#### Be sure to –

- Address the prompt, provide support, and conclude your thoughts.
- Write legibly and concisely.