Electrical Principles and Technologies 

Unit Review

1.0 *Electrical Energy can be transferred and stored*

[Go over the **Unit Summary: on p. 360,** as you review this unit**]**

Explain the difference between **Static Electricity** and **Current Electricity**.

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What is **Voltage**?

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Describe **safety precautions** you should be aware of when working with electricity.

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How is electrical energy produced from **chemicals**?

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Describe the difference between a '**dry cell**' and a '**wet cell**'.

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2.0 *Technologies can be used to transfer and control electrical current*

What is a **conductor**?

What is an **insulator**?

What is **resistance**?

What units are **resistance**, **voltage** and **current** measured in?

What is **Ohm's Law**?

What devices are used to measure **resistance**, **voltage** and **current**?

What is the difference between a **series circuit** and a **parallel circuit**?

3.0 *Devices and systems convert energy with varying efficiencies*

What are the four most **common forms of energy**?

How is **thermal energy** transformed into **electrical energy**?

How is **electrical energy** transformed into **mechanical energy**?

How is **power** calculated?

How is **energy** calculated?

What is **efficiency** and how is it calculated?

How can **efficiency** be improved?

4.0 *The use of electrical energy affects society and the environment*

Describe **alternative sources** of energy.

1 – **Fossil fuels** - _____

2 - _____

3 - _____

4 - _____

5 - _____

6 - _____

7 - _____

8 - _____

What is the difference between **renewable** and **non-renewable** energy sources?

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What harmful **by-products** result from electrical generation and how do they affect the environment?

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How can electrical energy be **conserved**?

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What does **sustainability** mean?

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