

English Language Arts: Science/Technical Subjects
Reading and Writing Standards
Department: Engineering & Technology
Course: Electronics

Standard	Application of Standard	Unit	Level	Resources
<u>RST.9-10.4</u> Determine the meaning of symbols, key terms, and other domain specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9-10 texts and topics	The student will read a chapter in the Electronics text book on the topic of voltage, current, and resistance.	2	9-10	Electronics textbook "Electricity and Electronics" <i>Newman, 195</i>
<u>WHST.9-10.2f</u> Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).	The student will describe Ohm's law and the relationship between voltage, current, and resistance	2	9-10	Writing materials

Prompt:

After reading Chapter 4, "Voltage, Current, and Resistance" in the *Newman* textbook, write a unified paragraph using well-structured sentences describing Ohm's law and the relationship between voltage, current, and resistance.

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<u>RST.9-10.4</u> Determine the meaning of symbols, key terms, and other domain specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9-10 texts and topics	The student will read a chapter in the Electronics text book on the topic of electromagnetism.	9	9-10	Electronics textbook "Electricity and Electronics" <i>Newman, 195</i>
<u>WHST.9-10.2f</u> Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).	The student will describe the basic principles of electromagnetism and how they are applied in different types of electro-mechanical devices	9	9-10	Writing materials

Prompt:

After reading Chapter 13, "*Magnetic Circuits and Devices*" in the *Newman* textbook, write a unified paragraph using well-structure sentences describing the basic principles of electromagnetism and how they are applied in at least two different types of electro-mechanical devices.

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<u>RST.9-10.4</u> Determine the meaning of symbols, key terms, and other domain specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9-10 texts and topics	The student will read a chapter in the Electronics textbook on the topic of inductive resonance and passive filter circuits.	12	9-10	Electronics textbook "Electricity and Electronics" <i>Newman, 195</i>
<u>WHST.9-10.2f</u> Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).	The student will describe the fundamental principles of inductive resonance and how they are applied in the creation of passive filters.	12	9-10	Writing materials

Prompt:

After reading Chapter 21, "Passive Filters" in the *Newman* textbook, write a unified paragraph using well-structure sentences describing the basic principles of inductive resonance and how they are applied to create four basic passive filters. Include appropriate graphics to illustrate the meaning of each filter type.

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<u>RST.9-10.4</u> Determine the meaning of symbols, key terms, and other domain specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9-10 texts and topics	The student will read an article on the topic of the construction, function, and application of diodes in electronics.	14	9-10	<i>“Special Purpose Semiconductor Diodes”</i> , by Dale c. Shackelford. (Electronics Servicing & Technology, 1993)
<u>WHST.9-10.2f</u> Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).	The student will respond to five questions on the construction, function, and application of diodes in electronics	14	9-10	Writing materials

Prompt:

After reading the article *“Special Purpose Semiconductor Diodes”* by Dale C. Shackelford, respond to the following questions using well-structure sentences.

1. Describe the construction and basic function of a diode.
2. Identify each type of diode discussed in the article, sketch the schematic symbol, and describe its specific function
3. Which type of diode is used to tune AM radio receivers?
4. Which type of diode is often used as a voltage regulator?
5. What is the latest diode that operates in the 10GHz frequency range?

Name _____

Score: _____

	6	5	4	3	2	1
<u>RST.9-10.4</u> Determine the meaning of symbols, key terms, and other domain specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9-10 texts and topics	Exemplary ability to determine the meaning of domain specific words and phrases in context	Excellent ability to determine the meaning of domain specific words and phrases in context	Moderate ability to determine the meaning of domain specific words and phrases in context	Acceptable ability to determine the meaning of domain specific words and phrases in context	Limited ability to determine the meaning of domain specific words and phrases in context	Lacks ability to determine the meaning of domain specific words and phrases in context
<u>WHST.9-10.2f</u> Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).	Exemplary ability to provide concluding statements that follow and support the information presented	Excellent ability to provide concluding statements that follow and support the information presented	Moderate ability to provide concluding statements that follow and support the information presented	Acceptable ability to provide concluding statements that follow and support the information presented	Limited ability to provide concluding statements that follow and support the information presented	Lacks ability to provide concluding statements that follow and support the information presented
Percentages	100	90	80	70	60	50

Comments: