# PLTW Gateway Standards Connection Magic of Electrons



# **Connections to Standards in PLTW Gateway**

PLTW curriculum is designed to empower students to thrive in an evolving world. As a part of the design process when developing and updating our curriculum, we focus on connections to a variety of standards. PLTW Magic of Electrons connects to standards in the following:

# **Table of Contents**

Page 2
Page 9
Page 14
Page 24
Page 32
Page 40
Page 42
Page 46

#### Reading

Key Ideas and Details

#### CCSS.ELA-LITERACY.CCRA.R.1

Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.

🗆 A.1	✓ A.2	✓ A.3	✓ A.4	✓ A.5		
☑ B.1	✓ B.2	🗆 B.3				
✓ 1.1	☑ 1.2	✓ 1.3	✓ 1.4	✓ 1.5	□ 1.6	□ 1.7
✓ 2.1	☑ 2.2	✓ 2.3	☑ 2.4	✓ 2.5	✓ 2.6	
✓ 3.1	✓ 3.2	□ 3.3	□ 3.4			

#### CCSS.ELA-LITERACY.CCRA.R.2

Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.

□ A.1	□ A.2	🗆 A.3	□ A.4	🗆 A.5		
✓ B.1	✓ B.2	🗆 B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	□ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	□ 3.4			

## CCSS.ELA-LITERACY.CCRA.R.10

Read and comprehend complex literary and informational texts independently and proficiently.

□ A.1 □ A.2 □ A.3 □ A.4 □ A.5 □ B.1 □ B.2 □ B.3 ✓ 1.1 ✓ 1.2 ✓ 1.3 ✓ 1.4 ✓ 1.5 ☑ 1.6 □ 1.7 ✓ 2.2 2.4 2.5 ✓ 2.6 ✓ 2.1 ✓ 2.3 ✓ 3.1 ✓ 3.2 □ 3.3 □ 3.4

### Writing

Text Types and Purposes

#### CCSS.ELA-LITERACY.CCRA.W.2

Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.

🗆 A.1	✓ A.2	✓ A.3	✓ A.4	🗹 A.5		
☑ B.1	✓ B.2	☑ B.3				
☑ 1.1	✓ 1.2	✓ 1.3	☑ 1.4	☑ 1.5	✓ 1.6	☑ 1.7
✓ 2.1	✓ 2.2	✓ 2.3	☑ 2.4	✓ 2.5	✓ 2.6	
✓ 3.1	☑ 3.2	□ 3.3	□ 3.4			

#### CCSS.ELA-LITERACY.CCRA.W.4

Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

□ A.1	✓ A.2	✓ A.3	☑ A.4	✓ A.5		
✓ B.1	✓ B.2	☑ B.3				
✓ 1.1	✓ 1.2	✓ 1.3	✓ 1.4	✓ 1.5	✓ 1.6	✓ 1.7
✓ 2.1	☑ 2.2	✓ 2.3	✓ 2.4	✓ 2.5	✓ 2.6	
✓ 3.1	✓ 3.2	□ 3.3	□ 3.4			

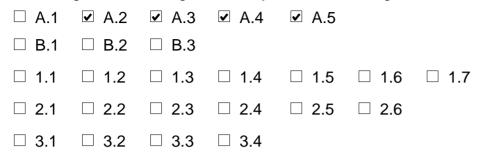
## CCSS.ELA-LITERACY.CCRA.W.5

Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.

🗆 A.1	✓ A.2	✓ A.3	☑ A.4	✓ A.5		
□ B.1	□ B.2	✓ B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	□ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	□ 3.4			

# CCSS.ELA-LITERACY.CCRA.W.7

Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.



# CCSS.ELA-LITERACY.CCRA.W.8

Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.

🗆 A.1	✓ A.2	✓ A.3	☑ A.4	✓ A.5		
□ B.1	□ B.2	□ B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	□ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	□ 3.4			

# CCSS.ELA-LITERACY.CCRA.W.9

Draw evidence from literary or informational texts to support analysis, reflection, and research.

🗆 A.1	✓ A.2	✓ A.3	✓ A.4	🗹 A.5		
☑ B.1	✓ B.2	✓ B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	□ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	□ 3.4			

## **Speaking and Listening**

Comprehension and Collaboration

#### CCSS.ELA-LITERACY.CCRA.SL.1

Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.

🗆 A.1	□ A.2	🗆 A.3	🗆 A.4	🗆 A.5		
□ B.1	□ B.2	☑ B.3				
✓ 1.1	☑ 1.2	✓ 1.3	✓ 1.4	✓ 1.5	✓ 1.6	✓ 1.7
✓ 2.1	☑ 2.2	✓ 2.3	☑ 2.4	✓ 2.5	✓ 2.6	
✓ 3.1	☑ 3.2	☑ 3.3	☑ 3.4			

#### CCSS.ELA-LITERACY.CCRA.SL.2

Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.

□ A.1	✓ A.2	✓ A.3	☑ A.4	☑ A.5		
✓ B.1	✓ B.2	☑ B.3				
✓ 1.1	✓ 1.2	✓ 1.3	✓ 1.4	✓ 1.5	✓ 1.6	✓ 1.7
✓ 2.1	☑ 2.2	✓ 2.3	☑ 2.4	✓ 2.5	✓ 2.6	
✓ 3.1	✓ 3.2	□ 3.3	□ 3.4			

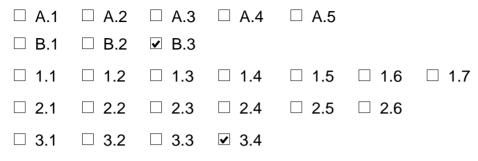
## CCSS.ELA-LITERACY.CCRA.SL.4

Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.

□ A.1	✓ A.2	✓ A.3	✓ A.4	☑ A.5		
□ B.1	□ B.2	✓ B.3				
☑ 1.1	☑ 1.2	✓ 1.3	✓ 1.4	✓ 1.5	✓ 1.6	✓ 1.7
□ 2.1	✓ 2.2	✓ 2.3	☑ 2.4	✓ 2.5	✓ 2.6	
<b>⊻</b> 3.1	✓ 3.2	☑ 3.3	☑ 3.4			

# CCSS.ELA-LITERACY.CCRA.SL.5

Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.



# CCSS.ELA-LITERACY.CCRA.SL.6

Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate.

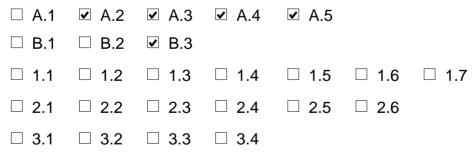
□ A.1	✓ A.2	✓ A.3	☑ A.4	✓ A.5		
□ B.1	□ B.2	☑ B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	✓ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	☑ 3.4			

#### Language

Conventions of Standard English

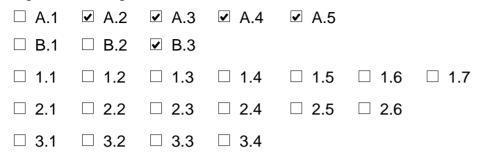
CCSS.ELA-LITERACY.CCRA.L.1

Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.



## CCSS.ELA-LITERACY.CCRA.L.2

Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.



#### CCSS.ELA-LITERACY.CCRA.L.4

Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and specialized reference materials, as appropriate.

□ A.1	□ A.2	🗆 A.3	□ A.4	🗆 A.5		
✓ B.1	✓ B.2	🗆 B.3				
✓ 1.1	☑ 1.2	✓ 1.3	✓ 1.4	✓ 1.5	✓ 1.6	✓ 1.7
✓ 2.1	☑ 2.2	✓ 2.3	☑ 2.4	✓ 2.5	✓ 2.6	
✓ 3.1	✓ 3.2	□ 3.3	□ 3.4			

# CCSS.ELA-LITERACY.CCRA.L.5

Demonstrate understanding of word relationships and nuances in word meanings.

□ A.3 □ A.4 □ A.5 □ A.1 □ A.2 ✓ B.1 ✓ B.2 □ B.3 ✓ 1.1 ✓ 1.2 ✓ 1.3 ✓ 1.4 ✓ 1.5 ☑ 1.6 ☑ 1.7 ✓ 2.1 ✓ 2.2 ✓ 2.3 2.4 2.5 2.6 ✓ 3.1 ✓ 3.2 □ 3.3 □ 3.4

# CCSS.ELA-LITERACY.CCRA.L.6

Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression.

🗆 A.1	✓ A.2	✓ A.3	✓ A.4	🗹 A.5		
✓ B.1	✓ B.2	✓ B.3				
☑ 1.1	☑ 1.2	✓ 1.3	✓ 1.4	✓ 1.5	✓ 1.6	☑ 1.7
☑ 2.1	✓ 2.2	✓ 2.3	☑ 2.4	☑ 2.5	✓ 2.6	
✓ 3.1	✓ 3.2	☑ 3.3	☑ 3.4			

© Copyright 2010 National Governors Association Center for Best Practices and Council of Chief State School Officers. All rights reserved.

# **Reading Science/Technical**

Key Ideas and Details

CCSS.ELA-LITERACY.RST.6-8.1

Cite specific textual evidence to support analysis of science and technical texts.

□ A.1	□ A.2	✓ A.3	□ A.4	✓ A.5		
□ B.1	□ B.2	□ B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	□ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	□ 3.4			

# CCSS.ELA-LITERACY.RST.6-8.2

Determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions.

□ A.1	✓ A.2	✓ A.3	☑ A.4	☑ A.5		
✓ B.1	✓ B.2	□ B.3				
☑ 1.1	☑ 1.2	✓ 1.3	✓ 1.4	✓ 1.5	□ 1.6	□ 1.7
✓ 2.1	☑ 2.2	✓ 2.3	☑ 2.4	✓ 2.5	✓ 2.6	
✓ 3.1	☑ 3.2	□ 3.3	□ 3.4			

# CCSS.ELA-LITERACY.RST.6-8.3

Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.

□ A.1	□ A.2	🗆 A.3	□ A.4	🗆 A.5		
□ B.1	□ B.2	□ B.3				
☑ 1.1	☑ 1.2	✓ 1.3	☑ 1.4	✓ 1.5	✓ 1.6	□ 1.7
☑ 2.1	☑ 2.2	✓ 2.3	☑ 2.4	✓ 2.5	✓ 2.6	
✓ 3.1	✓ 3.2	□ 3.3	□ 3.4			

Craft and Structure

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 6–8 texts and topics.

A.2 □ A.3 □ A.1 🗆 A.4 □ A.5 B.2 B.1 □ B.3 ✓ 1.2 ✓ 1.3 ✓ 1.4 ✓ 1.1  $\checkmark$  1.5  $\checkmark$  1.6  $\Box$  1.7 ✓ 2.5 ✓ 2.6 2.1 ✓ 2.2 ✓ 2.3 2.4 ☑ 3.1 ☑ 3.2 □ 3.3 3.4

Integration of Knowledge and Ideas

# CCSS.ELA-LITERACY.RST.6-8.8

Distinguish among facts, reasoned judgment based on research findings, and speculation in a text.

🗆 A.1	🗆 A.2	🗆 A.3	□ A.4	🗆 A.5		
☑ B.1	□ B.2	□ B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	□ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	□ 3.4			

Range of Reading and Level of Text Complexity

# CCSS.ELA-LITERACY.RST.6-8.10

By the end of grade 8, read and comprehend science/technical texts in the grades 6–8 text complexity band independently and proficiently.

□ A.1	□ A.2	🗆 A.3	🗆 A.4	🗆 A.5		
□ B.1	□ B.2	🗆 B.3				
☑ 1.1	☑ 1.2	✓ 1.3	☑ 1.4	✓ 1.5	□ 1.6	□ 1.7
☑ 2.1	☑ 2.2	✓ 2.3	☑ 2.4	✓ 2.5	✓ 2.6	
✓ 3.1	✓ 3.2	☑ 3.3	☑ 3.4			

# Writing in Hisotry/social Studies, Science, and Technical Subjects

Text Types and Purposes

## CCSS.ELA-LITERACY.WHST.6-8.2

Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes.

□ A.1	□ A.2	🗆 A.3	□ A.4	🗆 A.5		
□ B.1	□ B.2	✓ B.3				
✓ 1.1	☑ 1.2	✓ 1.3	✓ 1.4	✓ 1.5	✓ 1.6	✓ 1.7
✓ 2.1	✓ 2.2	✓ 2.3	✓ 2.4	✓ 2.5	✓ 2.6	
□ 3.1	□ 3.2	□ 3.3	☑ 3.4			

# CCSS.ELA-LITERACY.WHST.6-8.2.a

Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information into broader categories as appropriate to achieving purpose; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension.

□ A.1	□ A.2	🗆 A.3	🗆 A.4	🗆 A.5		
□ B.1	□ B.2	✓ B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	□ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	□ 3.4			

## CCSS.ELA-LITERACY.WHST.6-8.2.b

Develop the topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information and examples.

□ A.1	✓ A.2	✓ A.3	☑ A.4	☑ A.5		
☑ B.1	□ B.2	🗆 B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	□ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	□ 3.4			

CCSS.ELA-LITERACY.WHST.6-8.2.d

Use precise language and domain-specific vocabulary to inform about or explain the topic.

□ A.1	✓ A.2	✓ A.3	✓ A.4	✓ A.5		
☑ B.1	✓ B.2	✓ B.3				
☑ 1.1	☑ 1.2	✓ 1.3	☑ 1.4	✓ 1.5	✓ 1.6	☑ 1.7
✓ 2.1	✓ 2.2	✓ 2.3	☑ 2.4	✓ 2.5	✓ 2.6	
✓ 3.1	✓ 3.2	□ 3.3	☑ 3.4			

Production and Distribution of Writing

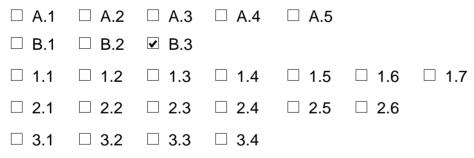
# CCSS.ELA-LITERACY.WHST.6-8.4

Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

□ A.1	✓ A.2	✓ A.3	☑ A.4	✓ A.5		
☑ B.1	✓ B.2	☑ B.3				
☑ 1.1	☑ 1.2	✓ 1.3	☑ 1.4	✓ 1.5	✓ 1.6	✓ 1.7
✓ 2.1	☑ 2.2	✓ 2.3	☑ 2.4	✓ 2.5	✓ 2.6	
✓ 3.1	☑ 3.2	□ 3.3	□ 3.4			

# CCSS.ELA-LITERACY.WHST.6-8.5

With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on how well purpose and audience have been addressed.



Research to Build and Present Knowledge

# CCSS.ELA-LITERACY.WHST.6-8.7

Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.

□ A.1	✓ A.2	✓ A.3	✓ A.4	✓ A.5		
□ B.1	□ B.2	🗆 B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	□ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	□ 3.4			

# CCSS.ELA-LITERACY.WHST.6-8.8

Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.

□ A.1	✓ A.2	✓ A.3	✓ A.4	🗹 A.5		
□ B.1	□ B.2	□ B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	□ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	□ 3.4			

# CCSS.ELA-LITERACY.WHST.6-8.9

Draw evidence from informational texts to support analysis, reflection, and research.

□ A.1	✓ A.2	✓ A.3	☑ A.4	☑ A.5		
☑ B.1	✓ B.2	□ B.3				
☑ 1.1	☑ 1.2	✓ 1.3	✓ 1.4	✓ 1.5	□ 1.6	□ 1.7
☑ 2.1	☑ 2.2	✓ 2.3	☑ 2.4	✓ 2.5	✓ 2.6	
✓ 3.1	✓ 3.2	□ 3.3	□ 3.4			

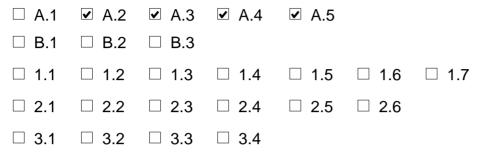
© Copyright 2010 National Governors Association Center for Best Practices and Council of Chief State School Officers. All rights reserved.

#### **Reading Literature**

Key Ideas and Details

#### CCSS.ELA-LITERACY.RL.6.1

Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

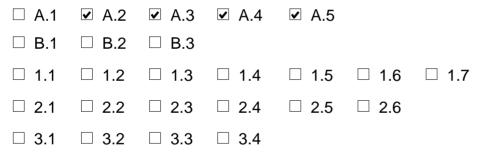


## **Reading Informational**

Key Ideas and Details

## CCSS.ELA-LITERACY.RI.6.1

Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.



## CCSS.ELA-LITERACY.RI.6.2

Determine a central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.

□ A.1	□ A.2	🗆 A.3	□ A.4	🗆 A.5		
✓ B.1	✓ B.2	🗆 B.3				
☑ 1.1	☑ 1.2	✓ 1.3	✓ 1.4	✓ 1.5	□ 1.6	□ 1.7
☑ 2.1	✓ 2.2	✓ 2.3	☑ 2.4	✓ 2.5	✓ 2.6	
<b>⊻</b> 3.1	☑ 3.2	□ 3.3	□ 3.4			

Craft and Structure

```
CCSS.ELA-LITERACY.RI.6.4
```

Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings.

□ A.1	✓ A.2	✓ A.3	☑ A.4	🗹 A.5		
✓ B.1	✓ B.2	□ B.3				
✓ 1.1	☑ 1.2	✓ 1.3	✓ 1.4	✓ 1.5	□ 1.6	□ 1.7
✓ 2.1	☑ 2.2	✓ 2.3	☑ 2.4	✓ 2.5	✓ 2.6	
✓ 3.1	✓ 3.2	□ 3.3	□ 3.4			

Integration of Knowledge and Ideas

## CCSS.ELA-LITERACY.RI.6.7

Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.

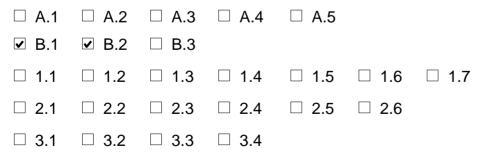
□ A.1	✓ A.2	✓ A.3	✓ A.4	🗹 A.5		
✓ B.1	✓ B.2	□ B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	□ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	□ 3.4			

# Writing

Text Types and Purposes

```
CCSS.ELA-LITERACY.W.6.1.c
```

Use words, phrases, and clauses to clarify the relationships among claim(s) and reasons.



#### CCSS.ELA-LITERACY.W.6.2

Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.

□ A.1	✓ A.2	✓ A.3	✓ A.4	☑ A.5		
✓ B.1	✓ B.2	□ B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	✓ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	□ 3.4			

#### CCSS.ELA-LITERACY.W.6.2.b

Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples.

□ A.1	✓ A.2	✓ A.3	☑ A.4	✓ A.5		
☑ B.1	✓ B.2	□ B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	✓ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	□ 3.4			

#### CCSS.ELA-LITERACY.W.6.2.d

Use precise language and domain-specific vocabulary to inform about or explain the topic.

🗆 A.1	✓ A.2	✓ A.3	✓ A.4	✓ A.5		
✓ B.1	✓ B.2	✓ B.3				
☑ 1.1	☑ 1.2	✓ 1.3	✓ 1.4	✓ 1.5	□ 1.6	□ 1.7
☑ 2.1	✓ 2.2	✓ 2.3	☑ 2.4	✓ 2.5	✓ 2.6	
✓ 3.1	☑ 3.2	□ 3.3	☑ 3.4			

#### CCSS.ELA-LITERACY.W.6.3.d

Use precise words and phrases, relevant descriptive details, and sensory language to convey experiences and events.

🗆 A.1	✓ A.2	✓ A.3	☑ A.4	✓ A.5		
✓ B.1	✓ B.2	✓ B.3				
☑ 1.1	☑ 1.2	✓ 1.3	✓ 1.4	✓ 1.5	□ 1.6	□ 1.7
☑ 2.1	✓ 2.2	✓ 2.3	✓ 2.4	✓ 2.5	✓ 2.6	
✓ 3.1	✓ 3.2	□ 3.3	☑ 3.4			

Production and Distribution of Writing

# CCSS.ELA-LITERACY.W.6.4

Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3.)

□ A.1	✓ A.2	✓ A.3	☑ A.4	✓ A.5		
✓ B.1	✓ B.2	✓ B.3				
☑ 1.1	✓ 1.2	✓ 1.3	✓ 1.4	✓ 1.5	□ 1.6	□ 1.7
☑ 2.1	✓ 2.2	✓ 2.3	☑ 2.4	✓ 2.5	✓ 2.6	
<b>⊻</b> 3.1	□ 3.2	□ 3.3	□ 3.4			

# CCSS.ELA-LITERACY.W.6.5

With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.

□ A.1	□ A.2	🗆 A.3	□ A.4	🗆 A.5		
□ B.1	□ B.2	✓ B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	□ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	□ 3.4			

Research to Build and Present Knowledge

## CCSS.ELA-LITERACY.W.6.7

Conduct short research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate.



© 2022 Project Lead The Way, Inc. Magic of Electrons Standards Connection Page 17 of 52

### CCSS.ELA-LITERACY.W.6.8

Gather relevant information from multiple print and digital sources; assess the credibility of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and providing basic bibliographic information for sources.

🗆 A.1	✓ A.2	✓ A.3	✓ A.4	✓ A.5		
☑ B.1	✓ B.2	🗆 B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	□ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	□ 3.4			

#### CCSS.ELA-LITERACY.W.6.9

Draw evidence from literary or informational texts to support analysis, reflection, and research.

🗆 A.1	✓ A.2	✓ A.3	✓ A.4	🗹 A.5		
□ B.1	□ B.2	🗆 B.3				
☑ 1.1	☑ 1.2	✓ 1.3	✓ 1.4	✓ 1.5	□ 1.6	□ 1.7
✓ 2.1	✓ 2.2	✓ 2.3	✓ 2.4	✓ 2.5	✓ 2.6	
✓ 3.1	☑ 3.2	□ 3.3	□ 3.4			

#### Speaking and Listening

Comprehension and Collaboration

CCSS.ELA-LITERACY.SL.6.1

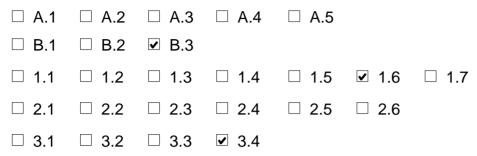
Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly.

□ A.1	□ A.2	🗆 A.3	□ A.4	🗆 A.5		
□ B.1	□ B.2	✓ B.3				
✓ 1.1	✓ 1.2	✓ 1.3	✓ 1.4	✓ 1.5	✓ 1.6	✓ 1.7
✓ 2.1	✓ 2.2	✓ 2.3	☑ 2.4	✓ 2.5	✓ 2.6	
✓ 3.1	✓ 3.2	☑ 3.3	☑ 3.4			

© 2022 Project Lead The Way, Inc. Magic of Electrons Standards Connection Page 18 of 52

#### CCSS.ELA-LITERACY.SL.6.1.a

Come to discussions prepared, having read or studied required material; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion.



#### CCSS.ELA-LITERACY.SL.6.1.b

Follow rules for collegial discussions, set specific goals and deadlines, and define individual roles as needed.

□ A.1	□ A.2	□ A.3	□ A.4	□ A.5		
□ B.1	□ B.2	✓ B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	✓ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	☑ 3.4			

## CCSS.ELA-LITERACY.SL.6.1.c

Pose and respond to specific questions with elaboration and detail by making comments that contribute to the topic, text, or issue under discussion.

A.1 ✓ A.2 ✓ A.3 ✓ A.4 ✓ A.5 B.1 B.2 ✓ B.3 ✓ 1.2 ✓ 1.4 1.7 ✓ 1.1 ✓ 1.3 ✓ 1.5 ✓ 1.6 2.1 2.2 2.3 2.4 2.5 2.6 ☑ 3.1 ✓ 3.2 ✓ 3.3 ☑ 3.4

## CCSS.ELA-LITERACY.SL.6.1.d

Review the key ideas expressed and demonstrate understanding of multiple perspectives through reflection and paraphrasing.

□ A.1	□ A.2	□ A.3	□ A.4	🗆 A.5		
✓ B.1	✓ B.2	✓ B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	□ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	□ 3.4			

#### CCSS.ELA-LITERACY.SL.6.2

Interpret information presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how it contributes to a topic, text, or issue under study.

□ A.1	✓ A.2	✓ A.3	☑ A.4	✓ A.5		
✓ B.1	✓ B.2	□ B.3				
☑ 1.1	☑ 1.2	✓ 1.3	✓ 1.4	✓ 1.5	✓ 1.6	☑ 1.7
✓ 2.1	☑ 2.2	✓ 2.3	✓ 2.4	✓ 2.5	✓ 2.6	
✓ 3.1	☑ 3.2	□ 3.3	□ 3.4			

Presentation of Knowledge and Ideas

## CCSS.ELA-LITERACY.SL.6.4

Present claims and findings, sequencing ideas logically and using pertinent descriptions, facts, and details to accentuate main ideas or themes; use appropriate eye contact, adequate volume, and clear pronunciation.

□ A.1	✓ A.2	✓ A.3	✓ A.4	✓ A.5		
□ B.1	□ B.2	✓ B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	□ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	□ 3.4			

### CCSS.ELA-LITERACY.SL.6.5

Include multimedia components (e.g., graphics, images, music, sound) and visual displays in presentations to clarify information.

□ A.2	🗆 A.3	□ A.4	🗆 A.5		
□ B.2	✓ B.3				
□ 1.2	□ 1.3	□ 1.4	□ 1.5	□ 1.6	□ 1.7
□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.2	□ 3.3	✓ 3.4			
	<ul><li>B.2</li><li>1.2</li><li>2.2</li></ul>	□ B.2 ☑ B.3 □ 1.2 □ 1.3 □ 2.2 □ 2.3	□ B.2 ☑ B.3 □ 1.2 □ 1.3 □ 1.4	$\Box 1.2 \Box 1.3 \Box 1.4 \Box 1.5 \\\Box 2.2 \Box 2.3 \Box 2.4 \Box 2.5$	□ B.2 ✓ B.3   □ 1.2 □ 1.3 □ 1.4 □ 1.5 □ 1.6   □ 2.2 □ 2.3 □ 2.4 □ 2.5 □ 2.6

#### CCSS.ELA-LITERACY.SL.6.6

Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate.

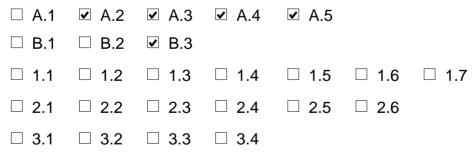
□ A.1	✓ A.2	✓ A.3	☑ A.4	☑ A.5		
□ B.1	□ B.2	☑ B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	✓ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	☑ 3.4			

#### Language

Conventions of Standard English

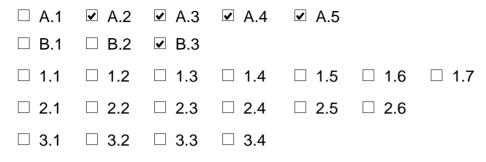
#### CCSS.ELA-LITERACY.L.6.1

Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.



#### CCSS.ELA-LITERACY.L.6.2

Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.



Knowledge of Language

CCSS.ELA-LITERACY.L.6.3

Use knowledge of language and its conventions when writing, speaking, reading, or listening.

□ A.1	✓ A.2	✓ A.3	☑ A.4	✓ A.5		
□ B.1	□ B.2	☑ B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	□ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	□ 3.4			

Vocabulary Acquisition and Use

## CCSS.ELA-LITERACY.L.6.4

Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 6 reading and content, choosing flexibly from a range of strategies.

□ A.1	🗆 A.2	🗆 A.3	□ A.4	🗆 A.5		
✓ B.1	✓ B.2	🗆 B.3				
✓ 1.1	☑ 1.2	✓ 1.3	☑ 1.4	☑ 1.5	□ 1.6	□ 1.7
☑ 2.1	✓ 2.2	✓ 2.3	☑ 2.4	✓ 2.5	✓ 2.6	
✓ 3.1	✓ 3.2	□ 3.3	□ 3.4			

## CCSS.ELA-LITERACY.L.6.6

Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.

🗆 A.1	✓ A.2	✓ A.3	✓ A.4	✓ A.5		
✓ B.1	✓ B.2	✓ B.3				
☑ 1.1	☑ 1.2	✓ 1.3	☑ 1.4	✓ 1.5	✓ 1.6	✓ 1.7
☑ 2.1	✓ 2.2	✓ 2.3	☑ 2.4	✓ 2.5	✓ 2.6	
✓ 3.1	✓ 3.2	☑ 3.3	☑ 3.4			

© Copyright 2010 National Governors Association Center for Best Practices and Council of Chief State School Officers. All rights reserved.

### **Reading Literature**

Key Ideas and Details

#### CCSS.ELA-LITERACY.RL.7.1

Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

□ A.1	□ A.2	□ A.3	□ A.4	🗆 A.5		
□ B.1	□ B.2	□ B.3				
☑ 1.1	☑ 1.2	✓ 1.3	✓ 1.4	✓ 1.5	□ 1.6	□ 1.7
☑ 2.1	☑ 2.2	✓ 2.3	☑ 2.4	✓ 2.5	✓ 2.6	
<b>⊻</b> 3.1	✓ 3.2	□ 3.3	□ 3.4			

## Writing

Text Types and Purposes

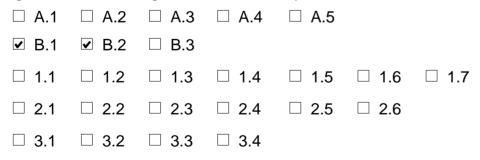
#### CCSS.ELA-LITERACY.W.7.1.b

Support claim(s) with logical reasoning and relevant evidence, using accurate, credible sources and demonstrating an understanding of the topic or text.

🗆 A.1	□ A.2	□ A.3	□ A.4	🗆 A.5		
□ B.1	✓ B.2	□ B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	□ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	□ 3.4			

## CCSS.ELA-LITERACY.W.7.2

Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.



#### CCSS.ELA-LITERACY.W.7.2.d

Use precise language and domain-specific vocabulary to inform about or explain the topic.

□ A.1	✓ A.2	✓ A.3	✓ A.4	🗹 A.5		
☑ B.1	✓ B.2	✓ B.3				
☑ 1.1	☑ 1.2	✓ 1.3	✓ 1.4	✓ 1.5	✓ 1.6	☑ 1.7
✓ 2.1	✓ 2.2	✓ 2.3	✓ 2.4	✓ 2.5	✓ 2.6	
✓ 3.1	✓ 3.2	☑ 3.3	☑ 3.4			

### CCSS.ELA-LITERACY.W.7.3.d

Use precise words and phrases, relevant descriptive details, and sensory language to capture the action and convey experiences and events.

□ A.1	✓ A.2	✓ A.3	☑ A.4	✓ A.5		
✓ B.1	✓ B.2	✓ B.3				
☑ 1.1	☑ 1.2	✓ 1.3	✓ 1.4	✓ 1.5	✓ 1.6	☑ 1.7
☑ 2.1	✓ 2.2	✓ 2.3	☑ 2.4	✓ 2.5	✓ 2.6	
✓ 3.1	✓ 3.2	□ 3.3	☑ 3.4			

Production and Distribution of Writing

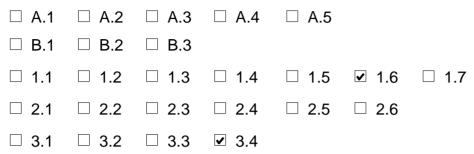
#### CCSS.ELA-LITERACY.W.7.4

Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 7.w.1–3)

□ A.1	□ A.2	🗆 A.3	□ A.4	🗆 A.5		
☑ B.1	✓ B.2	□ B.3				
☑ 1.1	✓ 1.2	✓ 1.3	✓ 1.4	✓ 1.5	✓ 1.6	✓ 1.7
✓ 2.1	✓ 2.2	✓ 2.3	☑ 2.4	✓ 2.5	✓ 2.6	
✓ 3.1	☑ 3.2	□ 3.3	□ 3.4			

### CCSS.ELA-LITERACY.W.7.5

With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on how well purpose and audience have been addressed.



Research to Build and Present Knowledge

#### CCSS.ELA-LITERACY.W.7.8

Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.

🗆 A.1	✓ A.2	✓ A.3	✓ A.4	🗹 A.5		
✓ B.1	✓ B.2	□ B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	□ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	□ 3.4			

## **Speaking and Listening**

Comprehension and Collaboration

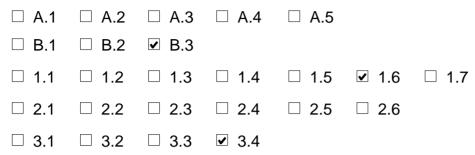
#### CCSS.ELA-LITERACY.SL.7.1

Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 7 topics, texts, and issues, building on others' ideas and expressing their own clearly.

🗆 A.1	□ A.2	🗆 A.3	🗆 A.4	🗆 A.5		
□ B.1	□ B.2	□ B.3				
☑ 1.1	☑ 1.2	✓ 1.3	☑ 1.4	✓ 1.5	✓ 1.6	☑ 1.7
☑ 2.1	☑ 2.2	✓ 2.3	☑ 2.4	✓ 2.5	✓ 2.6	
✓ 3.1	✓ 3.2	☑ 3.3	✓ 3.4			

#### CCSS.ELA-LITERACY.SL.7.1.a

Come to discussions prepared, having read or researched material under study; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion.



#### CCSS.ELA-LITERACY.SL.7.1.b

Follow rules for collegial discussions, track progress toward specific goals and deadlines, and define individual roles as needed.

□ A.1	□ A.2	□ A.3	□ A.4	□ A.5		
□ B.1	□ B.2	✓ B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	✓ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	☑ 3.4			

## CCSS.ELA-LITERACY.SL.7.1.c

Pose questions that elicit elaboration and respond to others' questions and comments with relevant observations and ideas that bring the discussion back on topic as needed.

□ A 1 A.2 A.3 A.4 A.5 □ B.1 □ B.2 ✓ B.3 1.2 1.3 □ 1.1 □ 1.4 □ 1.5 ✓ 1.6 1.7 2.1 2.2 2.3 2.4 2.5 2.6 □ 3.1 □ 3.2 □ 3.3 ☑ 3.4

### CCSS.ELA-LITERACY.SL.7.1.d

Acknowledge new information expressed by others and, when warranted, modify their own views.

🗆 A.1	□ A.2	🗆 A.3	□ A.4	🗆 A.5		
□ B.1	□ B.2	✓ B.3				
✓ 1.1	☑ 1.2	✓ 1.3	☑ 1.4	✓ 1.5	✓ 1.6	✓ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	☑ 3.4			

## CCSS.ELA-LITERACY.SL.7.2

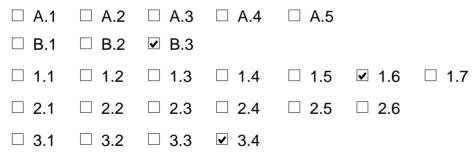
Analyze the main ideas and supporting details presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how the ideas clarify a topic, text, or issue under study.

□ A.1	🗆 A.2	□ A.3	□ A.4	🗆 A.5		
✓ B.1	✓ B.2	□ B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	□ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	□ 3.4			

Presentation of Knowledge and Ideas

#### CCSS.ELA-LITERACY.SL.7.5

Include multimedia components and visual displays in presentations to clarify claims and findings and emphasize salient points.



#### CCSS.ELA-LITERACY.SL.7.6

Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate.

□ A.1	□ A.2	🗆 A.3	□ A.4	🗆 A.5		
□ B.1	□ B.2	✓ B.3				
☑ 1.1	✓ 1.2	✓ 1.3	☑ 1.4	✓ 1.5	✓ 1.6	✓ 1.7
☑ 2.1	☑ 2.2	✓ 2.3	☑ 2.4	✓ 2.5	✓ 2.6	
✓ 3.1	✓ 3.2	☑ 3.3	☑ 3.4			

#### Language

Conventions of Standard English

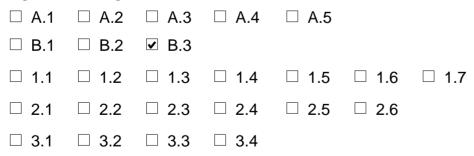
#### CCSS.ELA-LITERACY.L.7.1

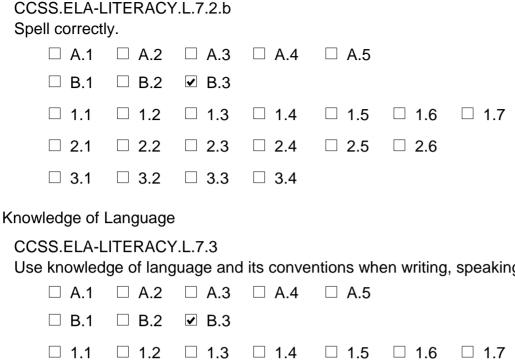
Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

□ A.1	□ A.2	🗆 A.3	□ A.4	🗆 A.5		
□ B.1	□ B.2	✓ B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	□ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	□ 3.4			

## CCSS.ELA-LITERACY.L.7.2

Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.



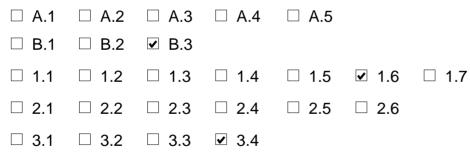


Use knowledge of language and its conventions when writing, speaking, reading, or listening.

🗆 A.1	🗆 A.2	🗆 A.3	□ A.4	🗆 A.5		
□ B.1	□ B.2	☑ B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	□ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	□ 3.4			

#### CCSS.ELA-LITERACY.L.7.3.a

Choose language that expresses ideas precisely and concisely, recognizing and eliminating wordiness and redundancy.



Vocabulary Acquisition and Use

# CCSS.ELA-LITERACY.L.7.4

Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 7 reading and content, choosing flexibly from a range of strategies.

A.2 □ A.3 🗆 A.4 □ A.5 □ A.1 ✓ B.2 ✓ B.1 □ B.3 ✓ 1.2 ✓ 1.3 ✓ 1.4 ☑ 1.5 ☑ 1.6 ☑ 1.7 ✓ 1.1 ✓ 2.5 ✓ 2.6 2.1 ✓ 2.2 ✓ 2.3 2.4 ✓ 3.1 ✓ 3.2 3.3 3.4

# CCSS.ELA-LITERACY.L.7.6

Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.

□ A.1	✓ A.2	✓ A.3	☑ A.4	☑ A.5		
✓ B.1	✓ B.2	✓ B.3				
☑ 1.1	✓ 1.2	✓ 1.3	✓ 1.4	✓ 1.5	✓ 1.6	✓ 1.7
✓ 2.1	☑ 2.2	✓ 2.3	☑ 2.4	✓ 2.5	✓ 2.6	
✓ 3.1	✓ 3.2	□ 3.3	□ 3.4			

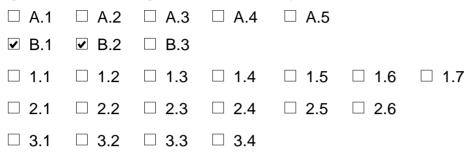
© Copyright 2010 National Governors Association Center for Best Practices and Council of Chief State School Officers. All rights reserved.

# Writing

Text Types and Purposes

#### CCSS.ELA-LITERACY.W.8.2

Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.



#### CCSS.ELA-LITERACY.W.8.2.b

Develop the topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information and examples.

□ A.1	□ A.2	□ A.3	□ A.4	🗆 A.5		
☑ B.1	✓ B.2	□ B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	□ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	□ 3.4			

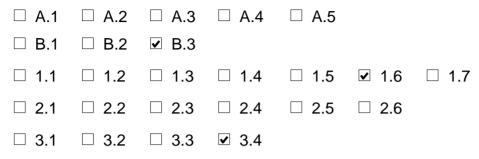
## CCSS.ELA-LITERACY.W.8.2.d

Use precise language and domain-specific vocabulary to inform about or explain the topic.

□ A.1	✓ A.2	✓ A.3	✓ A.4	✓ A.5		
✓ B.1	✓ B.2	🗆 B.3				
☑ 1.1	☑ 1.2	✓ 1.3	✓ 1.4	✓ 1.5	✓ 1.6	☑ 1.7
☑ 2.1	✓ 2.2	✓ 2.3	☑ 2.4	✓ 2.5	✓ 2.6	
✓ 3.1	☑ 3.2	✓ 3.3	☑ 3.4			

## CCSS.ELA-LITERACY.W.8.3.d

Use precise words and phrases, relevant descriptive details, and sensory language to capture the action and convey experiences and events.



Production and Distribution of Writing

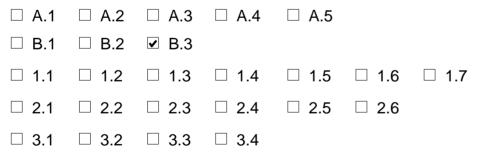
#### CCSS.ELA-LITERACY.W.8.4

Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3.)

□ A.1	□ A.2	🗆 A.3	□ A.4	🗆 A.5		
✓ B.1	✓ B.2	✓ B.3				
☑ 1.1	✓ 1.2	✓ 1.3	✓ 1.4	✓ 1.5	✓ 1.6	✓ 1.7
✓ 2.1	✓ 2.2	✓ 2.3	☑ 2.4	✓ 2.5	✓ 2.6	
✓ 3.1	✓ 3.2	□ 3.3	☑ 3.4			

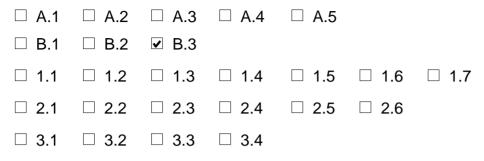
## CCSS.ELA-LITERACY.W.8.5

With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on how well purpose and audience have been addressed.



#### CCSS.ELA-LITERACY.W.8.6

Use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas efficiently as well as to interact and collaborate with others.



Research to Build and Present Knowledge

#### CCSS.ELA-LITERACY.W.8.8

Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.

🗆 A.1	□ A.2	🗆 A.3	🗆 A.4	🗆 A.5		
✓ B.1	✓ B.2	□ B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	□ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	□ 3.4			

## CCSS.ELA-LITERACY.W.8.9

Draw evidence from literary or informational texts to support analysis, reflection, and research.

□ A.1 □ A.2 □ A.3 □ A.4 □ A.5 □ B.1 B.2 □ B.3 ✓ 1.1 ✓ 1.2 ✓ 1.3 ✓ 1.4 ✓ 1.5 2.5 2.1 ✓ 2.2 ✓ 2.3 2.4 ✓ 2.6 ☑ 3.1 ✓ 3.2 □ 3.3 3.4

### **Speaking and Listening**

Comprehension and Collaboration

#### CCSS.ELA-LITERACY.SL.8.1

Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 8 topics, texts, and issues, building on others' ideas and expressing their own clearly.

□ A.1	□ A.2	□ A.3	□ A.4	🗆 A.5		
□ B.1	□ B.2	✓ B.3				
☑ 1.1	✓ 1.2	✓ 1.3	☑ 1.4	✓ 1.5	✓ 1.6	✓ 1.7
☑ 2.1	☑ 2.2	✓ 2.3	☑ 2.4	☑ 2.5	✓ 2.6	
✓ 3.1	✓ 3.2	☑ 3.3	☑ 3.4			

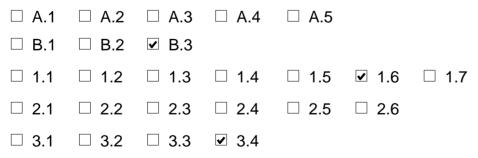
## CCSS.ELA-LITERACY.SL.8.1.a

Come to discussions prepared, having read or researched material under study; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion.

□ A.1	□ A.2	🗆 A.3	□ A.4	🗆 A.5		
□ B.1	□ B.2	✓ B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	□ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	☑ 3.4			

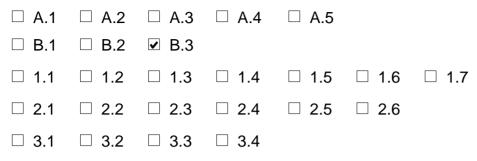
#### CCSS.ELA-LITERACY.SL.8.1.b

Follow rules for collegial discussions and decision-making, track progress toward specific goals and deadlines, and define individual roles as needed.



### CCSS.ELA-LITERACY.SL.8.1.c

Pose questions that connect the ideas of several speakers and respond to others' questions and comments with relevant evidence, observations, and ideas.



#### CCSS.ELA-LITERACY.SL.8.1.d

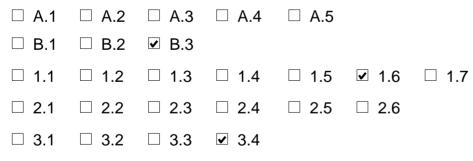
Acknowledge new information expressed by others, and, when warranted, qualify or justify their own views in light of the evidence presented.

□ A.1	□ A.2	□ A.3	□ A.4	🗆 A.5		
□ B.1	□ B.2	☑ B.3				
☑ 1.1	☑ 1.2	✓ 1.3	✓ 1.4	✓ 1.5	✓ 1.6	✓ 1.7
✓ 2.1	☑ 2.2	✓ 2.3	☑ 2.4	✓ 2.5	✓ 2.6	
✓ 3.1	✓ 3.2	☑ 3.3	☑ 3.4			

Presentation of Knowledge and Ideas

#### CCSS.ELA-LITERACY.SL.8.5

Integrate multimedia and visual displays into presentations to clarify information, strengthen claims and evidence, and add interest.



# Common Core State Standards for English Language Arts 8th Grade

#### CCSS.ELA-LITERACY.SL.8.6

Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate.

□ A.1	□ A.2	🗆 A.3	□ A.4	🗆 A.5		
□ B.1	□ B.2	✓ B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	□ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	□ 3.4			

#### Language

Conventions of Standard English

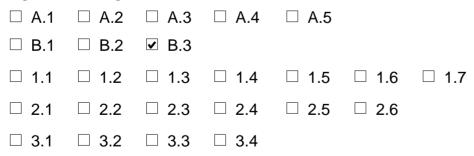
#### CCSS.ELA-LITERACY.L.8.1

Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

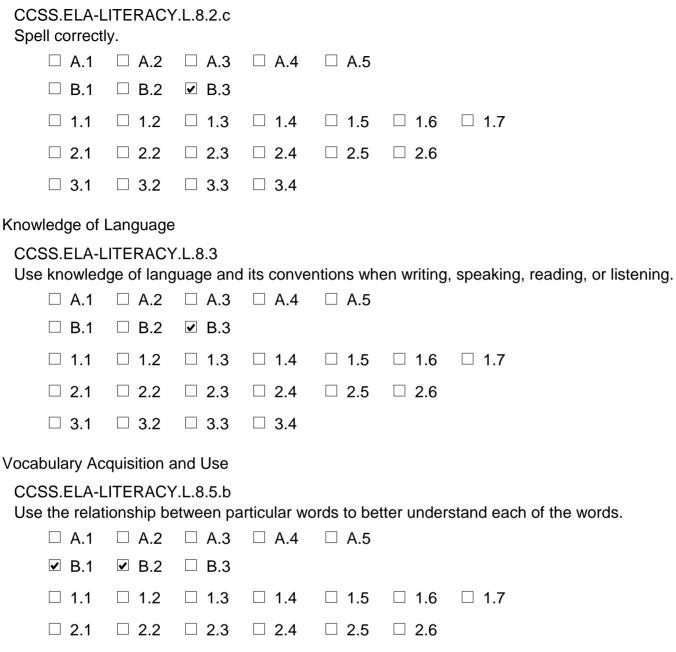
□ A.1	□ A.2	🗆 A.3	□ A.4	🗆 A.5		
□ B.1	□ B.2	☑ B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	□ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	□ 3.4			

## CCSS.ELA-LITERACY.L.8.2

Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.



# **Common Core State Standards for English Language Arts 8th Grade**



 $\Box 3.1 \quad \Box 3.2 \quad \Box 3.3 \quad \Box 3.4$ 

# Common Core State Standards for English Language Arts 8th Grade

## CCSS.ELA-LITERACY.L.8.6

Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.

🗆 A.1	✓ A.2	✓ A.3	☑ A.4	✓ A.5		
✓ B.1	✓ B.2	🗆 B.3				
☑ 1.1	☑ 1.2	✓ 1.3	☑ 1.4	✓ 1.5	✓ 1.6	✓ 1.7
☑ 2.1	☑ 2.2	✓ 2.3	☑ 2.4	✓ 2.5	✓ 2.6	
✓ 3.1	✓ 3.2	☑ 3.3	☑ 3.4			

© Copyright 2010 National Governors Association Center for Best Practices and Council of Chief State School Officers. All rights reserved.

### **Knowledge Constructor**

#### За

Students plan and employ effective research strategies to locate information and other resources for their intellectual or creative pursuits.



## **Innovative Designer**

#### 4a

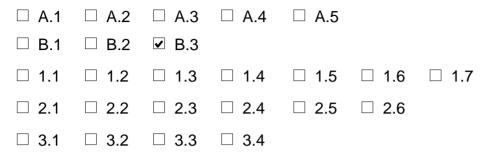
Students know and use a deliberate design process for generating ideas, testing theories, creating innovative artifacts or solving authentic problems.

	□ A.1	□ A.2	🗆 A.3	□ A.4	🗆 A.5			
	□ B.1	□ B.2	✓ B.3					
	□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	□ 1.6	□ 1.7	
	□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6		
	□ 3.1	□ 3.2	□ 3.3	□ 3.4				
4c								
Stu	dents dev	velop, test	and refin	e prototyp	es as par	t of a cycli	cal design pro	cess.
	□ A.1	□ A.2	🗆 A.3	□ A.4	🗆 A.5			
	□ B.1	□ B.2	☑ B.3					
	□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	□ 1.6	□ 1.7	
	□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6		
	□ 3.1	□ 3.2	□ 3.3	□ 3.4				

### **Computational Thinker**

#### 5c

Students break problems into component parts, extract key information, and develop descriptive models to understand complex systems or facilitate problem-solving.



#### **Creative Communicator**

#### 6c

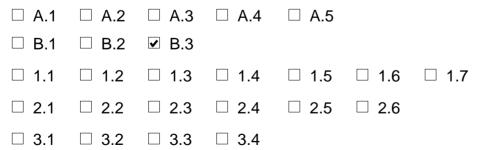
Students communicate complex ideas clearly and effectively by creating or using a variety of digital objects such as visualizations, models or simulations.

□ A.1	□ A.2	🗆 A.3	□ A.4	🗆 A.5		
□ B.1	□ B.2	✓ B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	□ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	□ 3.4			

## **Global Collaborator**

#### 7c

Students contribute constructively to project teams, assuming various roles and responsibilities to work effectively toward a common goal.

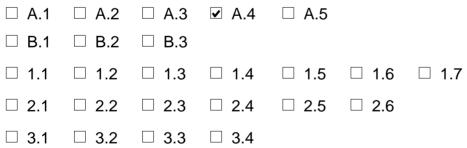


Core Concepts of Technology and Engineering							
STEL-2R							
Compare ho	w differen	t technolo	ogies invol	ve differer	nt sets of p	processes.	
□ A.1	🗆 A.2	🗆 A.3	✓ A.4	🗆 A.5			
□ B.1	□ B.2	□ B.3					
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	□ 1.6	□ 1.7	
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6		
□ 3.1	□ 3.2	□ 3.3	□ 3.4				
STEL-2S							
Defend decis	sions relat	ed to a de	esign prob	lem.			
□ A.1	🗆 A.2	🗆 A.3	□ A.4	🗆 A.5			
□ B.1	□ B.2	✓ B.3					
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	✓ 1.6	□ 1.7	
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6		
□ 3.1	□ 3.2	□ 3.3	✓ 3.4				

## Integration of Knowledge, Technologies, and Practices

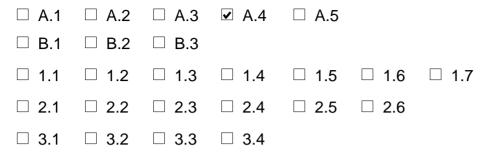
STEL-3E

Analyze how different technological systems often interact with economic, environmental, and social systems.



STEL-3F

Apply a product, system or process developed for one setting to another setting.



## STEL-3G

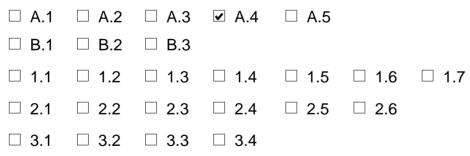
Explain how knowledge gained from other content areas affects the development of technological products and systems.

□ A.1	□ A.2	□ A.3	☑ A.4	🗆 A.5		
□ B.1	□ B.2	□ B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	□ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	□ 3.4			

## Impacts of Technology

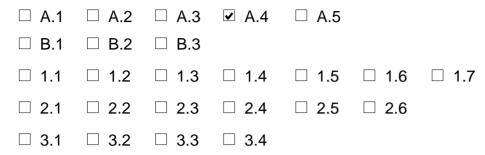
STEL-4L

Analyze how the creation and use of technologies consumes renewable and non-renewable resources and creates waste.



STEL-4N

Analyze examples of technologies that have changed the way people think, interact, and communicate.



## Influence of Society on Technological Development

## STEL-5F

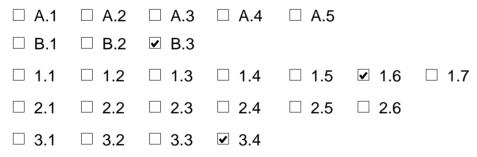
Analyze how an invention or innovation was influenced by its historical context.

🗆 A.1	🗆 A.2	🗆 A.3	☑ A.4	🗆 A.5		
□ B.1	□ B.2	🗆 B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	□ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	□ 3.4			

## **Design in Technology and Engineering Education**

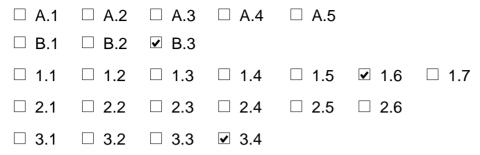
STEL-7Q

Apply the technology and engineering design process.



## STEL-7R

Refine design solutions to address criteria and constraints.



## STEL-7S

Create solutions to problems by identifying and applying human factors in design.

□ A.1	🗆 A.2	🗆 A.3	□ A.4	🗆 A.5		
□ B.1	□ B.2	🗆 B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	□ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	☑ 3.4			

## STEL-7U

Evaluate the strengths and weaknesses of different design solutions.

🗆 A.1	□ A.2	🗆 A.3	□ A.4	🗆 A.5		
□ B.1	□ B.2	☑ B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	✓ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	☑ 3.4			

## STEL-7V

Improve essential skills necessary to successfully design.

🗆 A.5 □ A.1 🗆 A.2 🗆 A.3 🗆 A.4 🗆 B.1 🗆 B.2 ✓ B.3 □ 1.1 □ 1.2 □ 1.3 □ 1.4 □ 1.5 ☑ 1.6 🗌 1.7 2.1 □ 2.5 □ 2.6 □ 3.1 □ 3.2 □ 3.3 ☑ 3.4

### **Engineering Design**

#### NGSS.MS-ETS1-1

Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.

□ A.1	□ A.2	🗆 A.3	□ A.4	🗆 A.5		
□ B.1	□ B.2	☑ B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	□ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	□ 3.4			

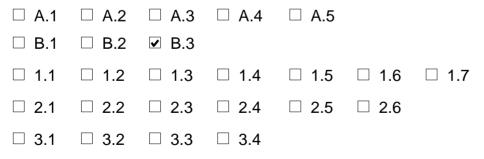
#### NGSS.MS-ETS1-2

Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.

□ A.1	□ A.2	□ A.3	□ A.4	🗆 A.5		
□ B.1	□ B.2	✓ B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	✓ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	□ 3.4			

## NGSS.MS-ETS1-4

Develop a model to generate data for iterative testing and modification of a proposed object, tool, or process such that an optimal design can be achieved.



## **Science and Engineering Practices**

Asking Questions and Defining Problems

### NGSS.P1

Asking questions and defining problems in 6-8 builds on K-5 experiences and progresses to specifying relationships between variables, and clarifying arguments and models.

□ A.1	□ A.2	🗆 A.3	□ A.4	🗆 A.5		
□ B.1	□ B.2	✓ B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	□ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	□ 3.4			

## **Developing and Using Models**

### NGSS.P2

Modeling in 6-8 builds on K-5 experiences and progresses to developing, using, and revising models to describe, test, and predict more abstract phenomena and design systems.

🗆 A.1	🗆 A.2	🗆 A.3	🗆 A.4	🗆 A.5		
□ B.1	□ B.2	☑ B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	□ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	□ 3.4			
NGSS.P2						
Develop	and/or use	a model t	o predict a	and/or des	cribe phei	nomena.
□ A.1	□ A.2	🗆 A.3	🗆 A.4	🗆 A.5		

	L 7.2		L 7.4	□ A.J		
□ B.1	□ B.2	□ B.3				
□ 1.1	□ 1.2	✓ 1.3	✓ 1.4	✓ 1.5	✓ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	□ 3.4			

Constructing Explanations and Designing Solutions

## NGSS.P6

Constructing explanations and designing solutions in 6-8 builds on K-5 experiences and progresses to include constructing explanations and designing solutions supported by multiple sources of evidence consistent with scientific ideas, principles, and theories.

□ A.1	□ A.2	□ A.3	□ A.4	🗆 A.5		
□ B.1	□ B.2	🗆 B.3				
□ 1.1	✓ 1.2	✓ 1.3	✓ 1.4	✓ 1.5	□ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	□ 3.4			

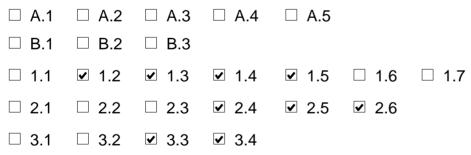
## NGSS.P6

• Construct an explanation using models or representations.

□ A.1	□ A.2	□ A.3	□ A.4	🗆 A.5		
□ B.1	□ B.2	🗆 B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	✓ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	✓ 2.5	✓ 2.6	
□ 3.1	□ 3.2	□ 3.3	□ 3.4			

## NGSS.P6

• Apply scientific ideas, principles, and/or evidence to construct, revise and/or use an explanation for realworld phenomena, examples, or events.



## NGSS.P6

• Apply scientific reasoning to show why the data or evidence is adequate for the explanation or conclusion.

□ A.1	□ A.2	🗆 A.3	□ A.4	🗆 A.5		
□ B.1	□ B.2	□ B.3				
□ 1.1	☑ 1.2	✓ 1.3	✓ 1.4	✓ 1.5	□ 1.6	□ 1.7
□ 2.1	□ 2.2	✓ 2.3	✓ 2.4	✓ 2.5	✓ 2.6	
□ 3.1	□ 3.2	□ 3.3	□ 3.4			

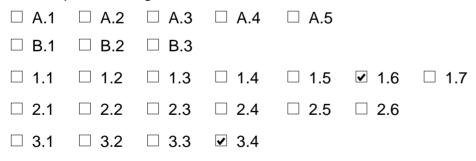
### NGSS.P6

• Apply scientific ideas or principles to design, construct, and/or test a design of an object, tool, process or system.

□ A.1	□ A.2	🗆 A.3	□ A.4	🗆 A.5		
□ B.1	□ B.2	🗆 B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	✓ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	✓ 2.5	✓ 2.6	
□ 3.1	□ 3.2	✓ 3.3	☑ 3.4			

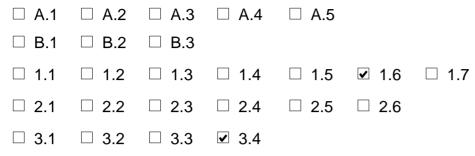
## NGSS.P6

• Undertake a design project, engaging in the design cycle, to construct and/or implement a solution that meets specific design criteria and constraints.



## NGSS.P6

• Optimize performance of a design by prioritizing criteria, making tradeoffs, testing, revising, and retesting.



## NGSS.P7

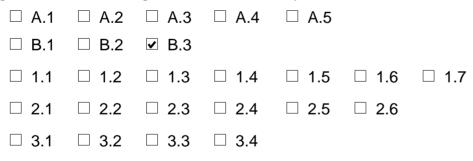
• Evaluate competing design solutions based on jointly developed and agreed-upon design criteria.

□ A.1	□ A.2	□ A.3	□ A.4	🗆 A.5		
□ B.1	□ B.2	🗆 B.3				
□ 1.1	□ 1.2	□ 1.3	□ 1.4	□ 1.5	✓ 1.6	□ 1.7
□ 2.1	□ 2.2	□ 2.3	□ 2.4	□ 2.5	□ 2.6	
□ 3.1	□ 3.2	□ 3.3	☑ 3.4			

Obtaining, Evaluating, and Communicating Information

## NGSS.P8

Obtaining, evaluating, and communicating information in 6-8 builds on K-5 experiences and progresses to evaluating the merit and validity of ideas and methods.



NGSS.P8

• Critically read scientific texts adapted for classroom use to determine the central ideas and/or obtain scientific and/or technical information to describe patterns in and/or evidence about the natural and designed world(s).



## References

International Society for Technology in Education. (2020) *ISTE Standards For Students*. Retrieved from <u>http://www.iste.org/standards/for-students</u>

International Technology and Engineering Educators Association. (2020). *Standards for technological and engineering literacy: The role of technology and engineering in STEM education*. Retrieved from <a href="https://www.iteea.org/STEL.aspx">https://www.iteea.org/STEL.aspx</a>

National Governors Association Center for Best Practices, & Council of Chief State School Officers. (2010). *Common Core State Standards*. Washington, DC: National Governors Association Center for Best Practices, Council of Chief State School Officers. Retrieved from <a href="http://www.corestandards.org/read-the-standards/">http://www.corestandards.org/read-the-standards/</a>